



REVIEW: Steve Fuller, *Science*

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Source: *Spontaneous Generations: A Journal for the History and Philosophy of Science*, Vol. 5, No. 1 (2011) 91-94.

Published by: The University of Toronto

DOI: [10.4245/sponge.v5i1.14294](https://doi.org/10.4245/sponge.v5i1.14294)

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Published online at jps.library.utoronto.ca/index.php/SpontaneousGenerations
ISSN 1913 0465

Founded in 2006, *Spontaneous Generations* is an online academic journal published by graduate students at the Institute for the History and Philosophy of Science and Technology, University of Toronto. There is no subscription or membership fee. *Spontaneous Generations* provides immediate open access to its content on the principle that making research freely available to the public supports a greater global exchange of knowledge.

REVIEWS

Steve Fuller. *Science*. 170 pp. Durham, UK: Acumen Publishing, 2010.*

Mike Thicke[†]

Historian and philosopher of science Steve Fuller has long embraced his role as a public intellectual. As part of that mission, he testified in the 2005 Dover school board trials, arguing that intelligent design could legitimately claim scientific status. He has since written two books on the intelligent design controversy. *Science*, his latest effort, is part of *The Art of Living* series. It is ostensibly an exploration of what it means to “live scientifically,” but is more accurately described as an argument for the necessary connection between science and theology.

Fuller’s central argument should be no surprise to those familiar with his previous commentary on intelligent design. It is a two-pronged pragmatic argument. On the one hand, Darwinism is dispensable: most work in biology does not rely on Darwin’s theory of evolution (think molecular biology). On the other hand, religion is indispensable for scientific progress: without believing that the universe has been designed to be intelligible to humans, there is no motivation for scientists to attempt to comprehend it. However, in *Science* Fuller goes further than this. He also claims that a designer with intelligence resembling our own is the best explanation for the success of science.

Fuller’s main argumentative strategy is historical counterfactualism. This operates in two ways. First, he argues that if, for example, Epicurianism had historically been the dominant philosophy in Europe rather than Christianity, science could not have been as successful as it was. While many have argued for a close connection between Christianity and science in Europe’s history, it is quite another thing to argue that there is a *necessary* connection. One of the more interesting parts of this argument is Fuller’s endorsement of Thomas Henry Huxley’s claim that if Darwin had preceded Newton, Newton would not have had the motivation to pursue his work because he would have had no reason to think the human mind was specially equipped to understand the universe.

Jumping from historical connection to necessary connection is not an easy move to justify, nor does it seem to be a move favored by most historians. Huxley argued that scientists convinced by Darwin’s “metaphysically leveling”

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view of the world would need to find a new motivation for doing science; he was not saying that science was necessarily doomed. Fuller never directly confronts the problem of making this jump. He does, however, address how his argument can be reconciled with the fact that many modern scientists are atheists. In Fuller's view science retains its theological underpinnings in its quest for universalism. If science were truly pursued in the Darwinist spirit, Fuller argues, explanations would stop at local validity. Since Fuller's argument rests on scientists' *motivations*, this implies that scientists theorizing on a grand scale must be at least subconsciously theists.

The other way counterfactualism operates in *Science* is through Fuller's habit of speculating about his historical subjects' psychology. Often this is benign, as when Fuller claims that if Newton were alive today he would be disappointed that we value his work despite his theological conclusions rather than because of them. But sometimes it seems silly, as when Fuller claims that Galileo would have found the US National Academy of Sciences comparable to the Vatican. And sometimes it verges on deceptive. Fuller claims that "while in possession of Mendel's original papers, Darwin could not fathom why Mendel might have supposed that something as apparently mysterious as life's generative principle could be subject to rigorous mathematical laws" (p. 49). Historians seem to agree that, although Darwin was in possession of Mendel's papers, those papers were never cut, and thus Darwin *could not* have read the copy of Mendel's work in his possession. Fuller makes it sound as if Darwin read Mendel and could not fathom his work. But what Fuller must actually be claiming here is that *if* Darwin had ever read Mendel *then* he could not have fathomed him.

Although *Science* is argumentative, it isn't structured as an argument. It is structured as an exploration, and it contains many different arguments, each in some way related to the connection between theology and science. One of Fuller's most provocative side arguments is that the intelligent design movement is part of a wider anti-establishment movement he calls "protscience." The prefix "prot" comes from "Protestant" and indicates an analogy between protscience's rejection of scientific authority and Protestants' rejection of papal authority. According to Fuller, protscientists are not anti-science: they are revolting against the scientific establishment and insisting on a more personal relationship with science rather than accepting the word of scientific elites.

The three main groups identified as part of the protscience movement are AIDS activists, climate change skeptics, and intelligent design advocates. I found this grouping troubling. Steven Epstein's story of AIDS activists refusing to accept the authority of medical researchers, successfully educating themselves, and ultimately reshaping national medical policy struck me as a heroic tale of democratizing science (Epstein 1998). These activists fit Fuller's anti-establishment portrayal perfectly: they weren't anti-science, but they didn't trust that the established medical community was properly serving their

interests. They informed themselves and were able to interact with professional scientists on an equal footing. In contrast, neither climate skeptics nor intelligent design advocates productively interact with professional scientists. Rather, they appear to fight them using any rhetorical strategy available and often don't seem particularly well informed. I have a lot of trouble accepting Fuller's collection of these groups under the same banner. I don't reject it outright, but I need more convincing.

A major point of frustration when reading *Science* is the lack of citation. The main text contains no references; only the "Further Reading" chapter gives any information about Fuller's sources. This might have been mandated by the series' editor, but it is out of step with current common practice even for science writing aimed at a general audience. It is often difficult to figure out whether a position Fuller attributed to some historical figure reflected historical evidence, or whether Fuller was putting his own words in his subject's voice, as in the Galileo example.

While reading *Science* I was trying to identify Fuller's target audience. It clearly isn't academics, and the text is too argumentative to be aimed at those mainly interested in the historical connection between theology and science. A plausible guess is that Fuller is aiming at those already amenable to intelligent design. While peppering the text with anti-atheist slights, Fuller is consistently flattering towards intelligent design advocates, portraying them as making an informed and principled choice as a way of reconciling science with their personal beliefs without resorting to naive creationism.

This led me to wonder why Fuller is pursuing this intelligent-design-boosting project at all. Most of Fuller's career has been devoted to critiquing scientific practice through social epistemology, not to discussing theology. Fuller has traditionally been concerned with knowledge as social power, the relationship of individuals to society, and the governance of science, not with the existence of God. In this context I find Fuller's protoscience argument fascinating, not because it valorizes intelligent design advocates to the democratizing science movement, but because it valorizes the democratizing science movement to intelligent design advocates. What a coup if Fuller could recruit the intelligent design movement to his own anti-establishment project! Whether this was Fuller's intent or not, I suspect that if *Science* has a lasting impact this will be it.

Overall I found *Science* to be a provocative, if often frustrating, tour of the relationship between theology and science. At only 146 pages, and with Fuller's eclectic and digressive style, many of his arguments felt less than complete. I would particularly like to see more from Fuller about protoscience. Finally, academic readers will have to avoid knee-jerk reactions to Fuller's unpopular stance and loose appeals to history, and take *Science* as an accessible introduction to his thoughts about science and religion.

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REVIEW: Fuller, Science

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REFERENCES

Epstein, Steven. 1998. *Impure Science: AIDS, Activism, and the Politics of Knowledge*.
Berkeley, CA: University of California Press.