

Bayesian Reasoning's Power to Challenge Religion and Empirically Justify Atheism

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Abstract: Bayes' Theorem is a simple mathematical equation that can model every empirical argument. Accordingly, once understood it can be used to analyze, criticize, or improve any argument in matters of fact. By extension, it can substantially improve an overall argument for atheism (here meaning the belief that supernatural gods probably do not exist) by revealing that god apologetics generally operates through the omission of evidence, and how every argument for there being a god becomes an argument against there being a god once you reintroduce all the pertinent evidence that the original argument left out. This revelation further reveals that god apologetics generally operates through the omission of evidence. This paper demonstrates these propositions by illustrating their application with examples.

Keywords: Bayes' Theorem, Bayesian Reasoning, Atheism, Logic, Apologetics

Introduction

Bayes' Theorem (discovered by Thomas Bayes before his death in 1761 and developed by Pierre-Simon Laplace in 1774) is an equation that models all correct empirical reasoning. Take any argument for any conclusion about any question of fact, and Bayes' Theorem describes everything going on in it that decides how likely that conclusion really is. Once you understand this, it is like understanding how a car's engine works: you can pop the hood on any argument and see what is wrong with it or what it would take to fix it and make it work. This follows whether it is an argument you are making to others to persuade or convince them of some matter of fact, or an argument you are making to yourself in developing your own conclusions and beliefs, or an argument someone else is making or has made that you are being confronted or challenged with.¹

¹ Carrier, *Proving History*, 106–14; Bovens and Hartmann, *Bayesian Epistemology*; Zenker, *Bayesian Argumentation*; Levitin, *Field Guide*; Tucker, *Knowledge*; Jaynes, *Probability Theory*; and Hunter, *Political-Military Applications*.

Most reasoners (especially atheists) will be more familiar with various forms of straightforward, deductive, syllogistic reasoning; for example, “if p is q , and q is x , then p is x ,” or “if q when p , and there is no q , then there is no p ,” etc. But that is of no direct use in answering questions of fact. Deductive logic can tell us what must be the case “if” something else is the case; but what you usually want to know is whether that “something else” is the case. And deductive logic cannot answer that question—or at least, once you deconstruct the convoluted syllogism you would need to do that, you will end up discovering exactly what Bayes and Laplace did hundreds of years ago. The principal problem is that, excepting basic Cartesian facts about present human experience, all matters of fact can only ever be known to a probability, and simple deductive syllogisms do not validly induce a probability. But a Bayesian syllogism does.

This article will explain Bayes’ Theorem in the simplest terms possible and illustrate how it can be used to analyze arguments generally, and then it will show how this knowledge can be used to transform any argument for the existence of a supernatural god (meaning any sentient being powerful enough to create or alter our universe who is not just another evolved or constructed physical machine in the way humans are) into an argument against the existence of that god, by merely reintroducing evidence that the original argument left out, thus illustrating that all reasons given for believing that such a god exists depend on the omission of evidence.

Bayes’ Theorem in a Nutshell

Bayes’ Theorem can be formulated mathematically in many different ways, but they all reduce to each other and are therefore interchangeable with suitable translation. But the formula most readily understandable to most people relies on the human brain’s more natural capacity to understand probability in terms of “odds” or “frequencies,” whereby the chance something will turn out to be true might be, for example, “2 to 1” or “2 in 3” and the like.² The expression “2 to 1” means the same thing as “2 in 3” and translates to a probability of roughly 67%; likewise, “1 to 99” means “1 in 100” and translates to a probability of 1%, and “4 to 7,000” means “4 in 7,004” and translates to a probability of roughly 0.057%, or about a seventeenth of a percent.³ Human

² On this disposition: Weber, Binder, and Kraus, “Why Can Only 24%?”

³ Numbers in quotation marks are being given here as numerals to facilitate the reader’s comprehension of the mathematical points to be made.

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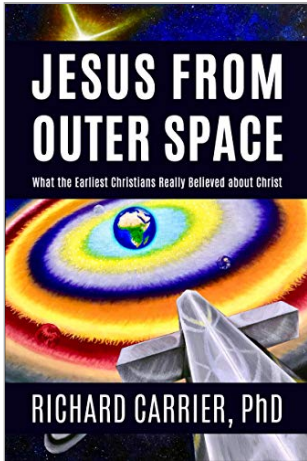
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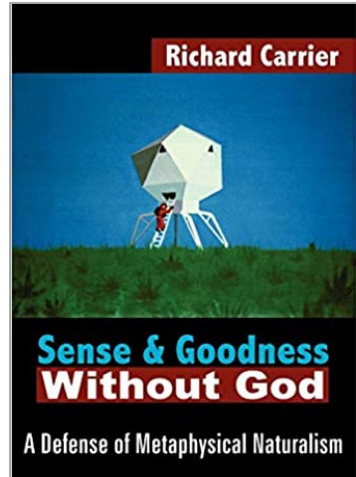
ABOUT THE AUTHOR

Richard Carrier is the author of *Sense and Goodness without God* (AuthorHouse 2005), *On the Historicity of Jesus* (Sheffield-Phoenix 2014), *The Scientist in the Early Roman Empire* (Pitchstone 2017), and many other books, chapters, lectures, and articles, including peer-reviewed work in philosophy and the history of Christianity. As an independent scholar he teaches online courses in philosophy and history and regularly publishes articles on his namesake blog richardcarrier.info. He holds a B.A. in history with a minor in classical civilizations from U.C. Berkeley, and an M.A., M.Phil., and Ph.D. in ancient intellectual history from Columbia University. He is a fellow of the Westar Institute and a current member of the Society of Biblical Literature and the Global Center for Religious Research. He specializes in the modern philosophy of naturalism, the origins of Christianity, and the intellectual history of Greece and Rome, and is a veteran of the United States Coast Guard.

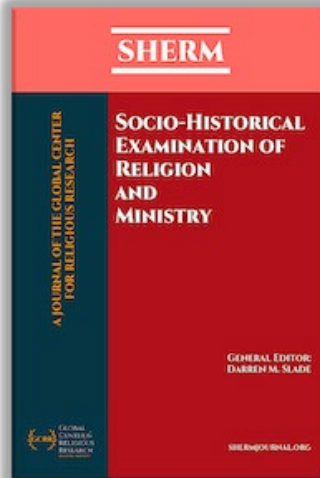
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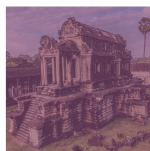
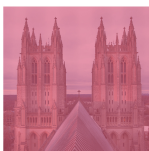


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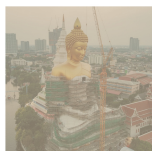
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