

# Historic Doubts Relative to Richard Whately: Did the Archbishop Believe in Miracles?

Rebecca d. Jarmas  
George Mason University

October 8, 2005

## **Abstract**

Hume's Maxim ("Of Miracles") dismisses religious miracles as 'just foundations' for establishing religious systems. Differentiation, a positive evolutionary force so necessary for biological, economic, and socio-political survival and growth, perversely results in mutual destruction when applied to religious belief systems and their associated foundational miracles, according to Hume. Whately parodies Hume's skepticism using inductive reasoning to demonstrate the rigidity of Hume's credible testimony construct. In presenting his case that the evidence for the existence of Napoleon Bonaparte is inconclusive, Whately challenges the reader to reconsider beliefs based on undisputed arguments. Rational choice theory provides a way to synthesize cross-denominational testimony into a possible rationale for belief in miracles. A side-by-side analysis of the three positions embraces uncertainty in choice and questions the meaning of truth.

JEL Classification: z12

Keywords: Miracles, testimony, religion, rational choice

---

I thank Colleen Berndt, Robin Hanson, David Levy, Eric Schliesser, Craig Smith, and participants in the 2005 Summer Institute at George Mason University for their helpful comments on an earlier draft. I naturally retain responsibility for any remaining errors or omissions.

*It is always mortifying not to be believed, and it is doubly so when we suspect that it is because we are supposed to be unworthy of belief and capable of seriously and wilfully deceiving. To tell a man that he lies, is of all affronts the most mortal. But whoever seriously and wilfully deceives is necessarily conscious to himself that he merits this affront, that he does not deserve to be believed, and that he forfeits all title to that sort of credit from which alone he can derive any sort of ease, comfort, or satisfaction in the society of his equals. The man who had the misfortune to imagine that nobody believed a single word he said, would feel himself the outcast of human society, would dread the very thought of going into it, or of presenting himself before it, and could scarce fail, I think, to die of despair. It is probable, however, that no man ever had just reason to entertain this humiliating opinion of himself. The most notorious liar, I am disposed to believe, tells the fair truth at least twenty times for once that he seriously and deliberately lies; and, as in the most cautious the disposition to believe is apt to prevail over that to doubt and distrust; so in those who are the most regardless of truth, the natural disposition to tell it prevails upon most occasions over that to deceive, or in any respect to alter or disguise it.*

Adam Smith, *The Theory of Moral Sentiments* (VII.iv.26)

## I. Prologue

The term “miracle” has become part of our vernacular through overuse, its precise meaning lost. Miracle cures, miracle babies and economic miracles have shifted focus away from their necessarily rare nature. Do we know what miracles are? How would we recognize a miraculous event should one occur? For most of history, humans have wondered about miracles.

A more recently pondered question is whether it is rational to believe in miracles. To properly address this question, the answer must be placed in a specific context – rationality can only be judged with respect to a set of information; without this anchor, rationality lacks meaning. Let us assume we pose this question first to a *naturalist*.<sup>1</sup> It is definitionally impossible in the naturalist world view to reconcile any events (including prophecies, visions or miracles) with divine intervention – God never intervenes. To the extent something like a miracle occurs which is not explainable within the naturalism model, the only alternative explanation is error in perception or testimony. Now let us ask a *supernaturalist*<sup>2</sup> the same question. The context completely shifts to one where it is *possible* (but not *necessary*) to rationalize belief in miracles. The point to make is that presuppositions about what is/is not possible according to one's Panglossian belief structure directly impact individual perceptions of truth.

The study of miracles immediately raises flags about the fickle nature of human testimony relative to the laws of nature. When spectacular events are witnessed now or long ago, and then reported to others who did not directly observe them, how can we trust these records? Is there a way to examine testimony so that we feel as sure about an event's likely occurrence as we would if we had witnessed it ourselves? These fundamental questions were posed in the late 18<sup>th</sup> century by philosopher David Hume (1711-1776), and revisited by economist/theologian Richard Whately (1787-1863)<sup>3</sup> nearly three-quarters of a century later.

Miracles form the basis of all major world religions (Christianity, Judaism, Buddhism, Hinduism, and Islam) by anchoring the central tenets which differentiate one system of beliefs from another. Interestingly, comparison of the miracle stories recounted in the various religious scriptures reveals common themes of healings, feedings, rescues, theophanies, and even resurrections and ascensions. The pervasiveness of these stories suggests that miracles not only strengthen the foundation of religious belief systems, but also perpetuate them.

This assertion is directly contrary to that proffered by Hume (acknowledged to disfavor all forms of religion). In his essay “Of Miracles,”<sup>4</sup> he develops ‘Hume's Maxim’ which wholly dismisses miracles as ‘just foundations’ for establishing organized religion. The case he makes in this essay has become the standard for all subsequent discussion about miracles.

Richard Whately<sup>5</sup> forges his position as the outspoken Anglican Church's Archbishop of Dublin, with a background in political economy, into a forum for social reform. His 1819 [anonymous] pamphlet *Historic Doubts Relative to Napoleon Buonaparte [sic]*, (hereafter

*Historic Doubts*) satirizes the inductive logic behind “Of Miracles” but at the same time quite seriously challenges Hume’s stringent parameters for credible testimony.

This paper presents arguments that organized religion is path-dependent on miracles and cannot survive over the long run without them. Although it is readily conceded that witnesses can both deceive and be deceived when they give testimony, by exercising the same care and diligence in evaluating evidence obtained from witnesses as is done with directly observed evidence, it is possible to conclude the evidence given is truthful. Specifically, the usual scientific protocol of guarding against bias, contamination, omission or manipulation of data fosters, in the same way, the necessary conditions for reliably validating testimony. Similarly, scientific evidence may support hypotheses which are generalizable, but not necessarily universal. This simply means results are context-dependent. This dependency supplies the link between what is seldom observed (highly improbable) and the measure of any model’s merit – its predictive value.

Arguably, the same philosophy can be applied to studying religion. Miracles, in lending micro-foundational support to organized religion, admittedly rely on a very special level of testimony, given their extremely rare and often fleeting occurrences. This poses no philosophical problem for the scientist who comfortably tests hypotheses about both the tiniest particles of matter and the vastness of space. Just as black holes cannot be studied in a Petri dish, miracles cannot be studied in a vacuum, for it is the frictional interaction with environment - time, place, and people which allows miracles to be interpreted at all.

Finally, by examining alternatives to the truth of miracles and evaluating their relative merit, a rational explanation for belief can be teased out (see Davis, 2004). If the null hypothesis is there is no truth to miracle stories, there must be alternatives which seek to falsify this claim. Perhaps all of the miracle stories in all of the world religions are part of one elaborate hoax? What if early disciples were hallucinating about what they had witnessed, and through reinforcement, came to believe and evangelize the truth of their visions? Could pagan ideas of immortality have informed stories about healings and resurrections? The reader is left to further musings on this, but by using the inductive logic endorsed by both Hume and Whately, alternatives which fail to account for matters of fact, lapses in evidence, or inaccurate testimony should be subject to at least the level of scrutiny used in prosecuting miracles as fundamental religious truths.

## **II. A Model of Competitive Destruction and the Fine Art of Rhetoric**

### **Hume’s Argument**

Hume’s “Of Miracles” (hereafter cited as *EHU* 10.x, where ‘x’ denotes paragraph number) is written in two parts, each with a definite purpose. Part 1 lays out the general determinants of

credible testimony as specifically applied to evidence about miracles. Part 2 portentously turns its focus towards the historical (and by liberal extension), projected inadequacy of testimony about those miracles which form the foundation for religious beliefs. Before proceeding, it is instructive to look at how Hume defines a miracle.

Interestingly, Hume gives *two* definitions of miracles, both appearing in Part 1. The first definition (*EHU* 10.12) states “A miracle is a violation of the laws of nature; and as a firm and unalterable experience has established these laws, the proof against a miracle, from the very nature of the fact, is as entire as any argument from experience can possibly be imagined.” As a point of clarification, Hume does *not* ground this definition in an *a priori* framework, which would start with the claim that a miracle is a violation of a law of nature, assert that laws of nature apply with exceptionless regularity, and conclude that miracles never occur (*QED*). Hume draws only a *conditional* conclusion at the end of part 1 acknowledging, under specified circumstances, that it could be possible to validate miracles on the basis of testimony.<sup>6</sup>

The second definition at the end of Part 1 (*EHU* 10.12) appears in a puzzling footnote as (emphasis is Hume’s):

Sometimes an event may not, *in itself, seem* to be contrary to the laws of nature, and yet, if it were real, it might, by reason of some circumstances, be denominated a miracle; because in *fact*, it is contrary to these laws. Thus if a person, claiming a divine authority, should command a sick person to be well, a healthful man to fall down dead, the clouds to pour rain, the winds to blow, in short, should order many natural events, which immediately follow upon his command; these might justly be esteemed miracles, because they are really, in this case, contrary to the laws of nature. For if any suspicion remain, that the event and command concurred by accident, there is no miracle and no transgression of the laws of nature. If this suspicion be removed, there is evidently a miracle, and a transgression of these laws; because nothing can be more contrary to nature than that the voice or command of a man should have such an influence. A miracle may be accurately defined, *a transgression of a law of nature by a particular volition of the Deity, or by the interposition of some invisible agent*. A miracle may be either discoverable by men or not.

This well-hedged definition (with at least 10 ‘weasel words’) can be sorted out with the help of Fogelin (2000). In the same footnote, Hume cites divine intervention as both a prerequisite for, and immaterial to, judging an event miraculous. This tactical contrast between religious and non-religious miracles is really a prelude to his condemnation of the former in Part 2.

One other terminological point is useful at this juncture – Hume’s idea of a proof. Throughout his writings, Hume classifies the components of argument as demonstrations, proofs, or probabilities. Demonstrations are descriptions of relationships among ideas and do not depend on experience. Earlier in his *Enquiry* (*EHU* 6n.10) Hume defines proofs as being based on experience which is beyond doubt or opposition. This idea becomes especially critical to his Part 2 reasoning against religious miracles. All residual experience-based arguments which have elements of uncertainty are treated as probabilities<sup>7</sup>. To continue building Hume’s case, we look briefly at each part of his essay in turn.

## Part 1: Miracles and Credible Testimony

Hume's case against miracles begins with a qualifying statement about the complexity and fallibility of causal reasoning:

Though experience be our only guide in reasoning concerning matters of fact; it must be acknowledged, that this guide is not altogether infallible, but in some cases is apt to lead us into errors (*EHU* 10.3).

Conclusions derived through causal reasoning, then, must be adjusted in proportion to the evidence so gained. As a practical matter, this means we should amend our degrees of belief in order to reflect an event's inherent improbability. Given these constraints and perfect conformity between facts (experience) and reports by witnesses, testimony can be relied upon for belief formation (this is *proof*). Specifically, warns Hume, extra diligence should be exercised in cases where the improbability of testimony from witnesses increases because the reported nature of the event is not merely 'marvelous' but 'miraculous.' In doing so, Hume instructs us to weigh the arguments in favor of and against the existence of miracles, subtracting the lesser from the larger, with the residual dictating which side to support. Specifically,

That no testimony is sufficient to establish a miracle, unless the testimony be of such a kind, that its falsehood would be more miraculous, than the fact, which it endeavors to establish: And even in that case, there is a mutual destruction of arguments, and the superior only gives us an assurance suitable to that degree of force, which remains, after deducting the inferior (*EHU* 10.13).

In weighing the arguments and forming beliefs, we are to make judgments based on experience as to the agreement of testimony to usual facts and the consistency of the various parts of the reported story to the whole narration (this 'imperfect conformity' is *probability*).

To aid in our evaluation, we are given specific criteria regarding testimony to look for, very nicely summarized by Fogelin (2003) into 'direct tests' and 'reverse tests'. Direct tests of narrated evidence look for agreement among large numbers of witnesses of irreproachable character who hold no interest in the outcome of the test and present evidence in an assured manner about an event. This test works by examining both the quality of the report given and the overarching qualifications of the individual testifying, most particularly whether it is even likely he could have witnessed the event. Testimonial evidence is fortified, but not proven, by the satisfaction of these criteria; contrary proof can sometimes be mounted by conducting a reverse test. A reverse test is an abstraction from the testimony itself. Instead, focus is on the probability an event could have occurred, absent any witnesses to testify. As an empiricist, Hume looks to evidence gained from such sensory observation ("impressions") as the ultimate source of experience.

As mentioned, despite authentication of testimony, contrary findings in the reverse test derived from an opposition of experiences leads to a clash of "proof against proof" (*EHU*, 10.11).

According to Hume (and appealing to common sense), if the falsehood of witness testimony is even more miraculous than the event related, then further consideration of the evidence is merited, with the caveat that any counterproofs necessarily diminish the initial proof. Hume handles this 'admissibility' of evidence differently in Parts 1 and 2. In Part 1, perhaps for argument's sake, Hume concedes there are circumstances (Hume apparently has in mind the eight days of total darkness described later in Part 2 (*EHU* 10.36)) which could align so that independently generated proofs of miracles are in opposition. Specifically, events which in themselves have high improbabilities of occurrence may simultaneously satisfy all of the requirements for credible testimony. The question is not settled here because the purpose of Part 1 seems to be mostly the conveyance of general standards for validating claims of events, especially miraculous events.

### Part 2: Miracles and Revealed Religion

At the end of Part 1, we are left with Hume's assurance that he does not object methodologically or philosophically to testimony by competent witnesses about *ordinary* events, although he does discount testified evidence relative to observed evidence. With respect to *miraculous* events, however Hume concludes that empirically, there have been no instances of testimony which pass the direct test (*EHU* 10.15). It is important to pause here and mention Hume's concern with the 'passion of surprise and wonder' (*EHU* 10.16) which biases individuals towards believing in miracles. This distortion happens because miracles elicit such agreeable emotions; even with evidence to the contrary, there is a propensity to *want* to believe. This correlates with Hume's postulate that ideas can attain the status of beliefs if they are viewed as 'lively' or 'vivacious.'<sup>8</sup> Hume's way out of the reverie is by reverting to his arguments about the underlying causal principles of human behavior and institutions, reflecting his commitment to a deterministic model of behavior (see Hume's *Treatise* 2.3.1.18 "Of Liberty and Necessity" for a discussion of causality and chance). For Hume, causality is necessarily experiential and is founded on regularities (realized expectations) among events and care must be taken to recognize and detach any passions from this experience.

In the realm of Humean calculus, conflicts in information sources, without a valid basis to prefer one source over another, lead to a mutual destruction of evidences and impose a further obligation to turn our inquiry towards the integrity of the report, rather than its content. Since by any standards miracles are highly improbable occurrences, testimony about them naturally triggers a high degree of scrutiny. Hume's further scrutiny leads him to the claim that reports of miracles are chiefly sourced from "ignorant and barbarous nations" (*EHU* 10.20) which, he claims, attribute all sorts of perfectly natural occurrences to divine intervention.

We come finally to the climax of the essay, commonly known as 'Hume's Maxim.' Noting that different religious systems embrace different sets of miracles, Hume questions the legitimacy of any religious system founded on miracles. In his words, "...[I]n matters of religion, whatever is

different is contrary; and that it is impossible [ancient religions] should, all of them, be established on any solid foundation” (EHU 10.24). To complete the cross-annihilation process, in Hume’s thinking, these blatantly contradictory stories undermine rival belief systems by ‘canceling out’ their respective constitutional miracles. This arrow to the heart of organized religion seems on every level to challenge the observed (experiential) evolutionary nature of social systems in which successful strategies are retained and unsuccessful ones are weeded out. From this perspective, ‘differentiation effects’ over long periods of time are *a posteriori* universally positive, creative forces in almost any context one can bring to mind. There exists a wide variety of observable phenomena in which differentiation reflects progress up a learning curve. These phenomena range from the most elemental form of biological diversification in which organisms differentiate at the cellular level in response to environmental stimuli for specific purposes to more complex, social stratification in which various forms of organization are tried and improved upon as knowledge is accumulated. Inexplicably, Hume portrays *religious differentiation* as the sole exception to these norms. His exact words are worth stating (emphasis mine):

Upon the whole, then, it appears, that no testimony for any kind of miracle has ever amounted to a probability, much less to a proof; and that, even supposing it amounted to a proof, it would be opposed by another proof; derived from the very nature of the fact, which it would endeavor to establish. It is experience only, which gives authority to human testimony; and it is the same experience, which assures us the laws of nature. When, therefore, these two kinds of experience are contrary, we have nothing to do but subtract the one from the other, and embrace an opinion, either on one side or the other, with that assurance which arises from the remainder. But according to the principle here explained, this subtraction, *with regard to all popular religions, amounts to an entire annihilation; and therefore we may establish it as a maxim, that no human testimony can have such force as to prove a miracle, and make it a just foundation for any such system of religion.* (EHU 10.35)

In this passage, Hume projects the historical dearth of reliable testimony about religious miracles forward and ends up with the gloomy prognosis that *organized religions should self-destruct!* It is in the clear observation that organized religions have survived the tests of time that we should look for explanatory evidence in its micro-foundations. In excluding religion as a valid context for belief in religious miracles, Hume brazenly betrays his bias and accompanying disfavor with respect to revealed religion.

### Critique

Hume’s allowance of miracles as long as they do not serve as bases for religion is controversial, to be sure. Critics of Hume’s view typically seek to prove that his arguments are circular (Johnson, 1999) or resort to attacks on his reputation and logical methodology (Earman, 2000). Any circularity of which might be construed is usually argued by dissociating Part 2 from Part 1. Clearly, the two parts of the essay work together to make Hume’s scathing point. Other interpretations seek to apply probability analysis to proofs (Babbage, 1838 is the classic but see also Dawid, 1989 for a more recent interpretation), constructs which Hume clearly states are

beyond doubt, based on experience-to-date. Considerable controversy over whether the Bayesian reliance on prior probabilities is relevant to determining credibility of testimony has fueled numerous debates in the literature (see Earman, 2000 and Owen, 2002). Finally, an attempt to define miracles differently than Hume obviates comparative analysis on any level. For example, in putting forward this alternative definition, Johnson (1999) merely muddies the waters:

I will say, then, that for any person  $x$ , for any time  $t$ , for any possible event  $m$ ,  $m$  is a *miracle* for  $x$  at  $t$  if and only if  $m$  actually occurs at some time and  $m$  is a violation of (an exception to) something which is for  $x$  at  $t$  exceedingly well established, relative to a body of inductive evidence, as being a law of nature. (This, of course, does not imply that a miracle for  $x$  at  $t$  must *occur at t*.) More pithily, I will say that *a miracle is a violation of an apparent law of nature*, where the indexing to person and time, and the epistemic aspect above, is built into the word “apparent.”

Throughout the text Hume maintains his case against miracles through the application of inductive logic, which allows him to reason about arguments with conclusions which may have a lesser degree of certainty than the evidence on which they are premised. The very nature of this logical framework requires bridging a gap between what is observed and what is predicted (Garrett, 2002), making it much more suited to our purposes than other methodologies.

In Part 1, Hume prepares the groundwork for his discussion of miracles by examining the relative worth of observable evidence and testimony. For illustrative purposes, he questions the authority of the *New Testament* Gospels – testimony of eyewitnesses to the miracles of Jesus Christ. Doubting both the occurrence of miracles (they violate natural law) and the reliability of the Apostles’ testimonies (they had an interest in promoting early Christianity, so were not neutral observers<sup>9</sup>), in Hume’s mind miraculous events fail both direct and reverse tests. In Part 2, the specific argument is generalized to an indictment of miracles as foundations for religious systems. This is done by introducing several new considerations which build on the arguments presented in Part 1: the idea that historically, testimony about miracles has not met the conditions for proof; the passions of surprise, through the mechanism of sympathetic pleasure, favorably bias our view towards a belief in miracles; the preponderance of miraculous stories among ‘uncivilized’ nations casts full doubt on their truthfulness; and the miraculous claims of rival religions are incompatible. These points lead Hume to the sweeping conclusion that stories conveyed by testimony possess neither credence nor veracity in establishing probability or proof.

### **Whately’s Argument**

As we will discover in the next section, identifying the historical context of prose is critical to truthful interpretations. To understand Whately’s essay, *Historic Doubts Relative to Napoleon Buonaparte* [sic]<sup>10</sup> (hereafter *Historic Doubts*) and his motivation in rebutting Hume’s arguments on miracles, it is first necessary to look at Whately’s broader philosophy. His concern with rhetoric as a tool for advancing arguments, but largely devoid of scientific inquiry, is reflected in the almost satirical tone of *Historic Doubts*. As a proponent of liberal theology, Whately mirrors Hume’s inductive logic in advancing a general proposition about miracles based on specific

factual and inferred (biased) knowledge. In distinguishing testimony about *matters of fact* from that about *matters of opinion*, he disaggregates “*conceivably sensory*” evidence (positive claims) from exercises of *judgment* (normative claims), but makes no prediction about relative certainties in these claims. With respect to evaluation of testimony, Whately regards this as a judgment call because it relies on subjective estimations about the likelihood/unlikelihood that witnesses are motivated and able to give accurate accounts of matters of fact.

Differing evidentiary standards for common versus uncommon events suggests a lack of rationality. While we may accept the truth of a *common* event absent sufficient evidence, we simultaneously reject the truth of an *uncommon* event, despite sufficient evidence. Under this analytical framework, common and uncommon events are not subjected to the same burdens of proof. What types of evidence then could be offered? Without direct observation, both common and uncommon events require the testimony of at least one eyewitness who is neither deceptive nor deceived. This condition met, objectivity demands the uncommon event is as credible as the common event, or in different terms: “*An event the most common in the course of human life, an event the probability and possibility of which no man will deny, REQUIRES AS MUCH EVIDENCE in order to be proved, as any event the most uncommon, or any kind of thing or event that has never been heard of before.*” (Chilton) Uncommon events can similarly be either consistent or inconsistent with an individual’s experience base. Assuming unimpeachable testimony, then, the key relevance lies in the credibility and mental state of the receiver of testimonial evidence, who becomes indirectly the eyewitness. To summarize the process of information exchange, a credible first-hand observer gives reliable testimony to another (the receiver), who is also credible. There are no grounds for the receiver to reason the first-hand observer is less credible than himself, so the evidence given in testimony therefore must be as good as or better than could be obtained by direct observation. This is Hume’s point about not being able to rule out sources, so unless the stories conflict, each source is equally reliable. Under these circumstances, there is no more reason to disbelieve an event derived from testimony which is inconsistent with experience, than one that is consistent with experience (Chilton). The most any inconsistency can reveal is the receiver simply has no experiential frame of reference and his search for evidence may be incomplete.

Whately next builds an effective case for a Napoleonic “media blitz” by applying a systematic analysis of credibility to journalism (common event) and concludes the incentives to sensationalize battle stories override all concerns of accuracy or verifiability. This is a capable reply to Hume’s ‘passions’ argument – everyone loves a good battle story. In recounting stories of a grand cycle of defeats and decisive victories, and the incredulity that the French people would repeatedly reinstate and re-outfit their general, Whately sees what can only be explained using miracles. Successive violations of ‘moral’ laws of nature (which he views as exceptionless) are just as contradictory as physical violations of laws of matter, and in this manner, appear quite miraculous.

Whately does as Hume suggests and looks for some natural cause<sup>11</sup> to explain how one man could have singly accomplished so many “wondrous” feats (the comparison to Jesus is too obvious here) because it seems to him that some law of nature has been perverted. He discovers that newspapers advantage the legitimacy conferred upon them by the virtues of the “free press” but in fact, there are numerous examples of false or contradictory reports. The more often a statement is repeated and reprinted, with the passage of enough time, stories are no longer questioned – they are accepted as truth without further query. There is a sort of ‘free ridership’ problem which comes into play – although a given belief may be held by a crowd of people, perhaps only a few of them have adequately researched and reflected on its likely truth, while the remaining population goes along with the story because they are unmotivated to give its credibility further thought or they believe the source from which they derive their information is generally accurate. As a result, the majority relies on an authority which they grant to the minority. Care must be taken to distinguish reports of direct witnesses (which may number as several persons) against those of persons who insist an event occurred because they believe the stories they heard about it (which may number in hundreds of persons). This is not what Hume means by ‘large numbers of witnesses.’ Common experience tells us we seem to more readily agree with conjectures made by more than one source, even prior to examining the relevant evidence. In such cases, *truth could be established independently of facts.*

Whately tells us that with regard to matters of fact we must look at honesty, accuracy, and means of gathering information to ascertain witness credibility (*Historic Doubts*). For matters of judgment, we must additionally assess the witness’s ability to form an opinion, e.g. his authority. Elaborating,<sup>12</sup> we ask:

1. Does the witness have the means to obtain correct information – independent of testimony; did this particular witness have the *means* and opportunity to observe the reported event?
2. Is it in the self interest of the witness to reveal the truth – could the witness have a personal *motive* to distort his reporting of the facts of the event introducing bias into his testimony to strengthen his case?
3. Are several testimonies in agreement (without concert)– to the extent an event was witnessed by more than one person, do the details of their stories coincide?

Regardless as to how these questions are answered, there remains a possible/probable case for very public, highly circumstantial, politically motivated, staunchly maintained stories to be published in the newspapers, such as that which set off the Napoleonic news blitz outlined above. Whately remarks he has never seen such “roundness and completeness” of events, even in fiction, which motivates his argument that the necessary conditions for authenticating newspaper testimony do not hold (*Historic Doubts*). It is clear there is a “Napoleon Bonaparte” personage in

the history books. The question Whately raises is the number of men it would take to accomplish Bonaparte's feats, given the supposed timeframe? If we are to believe accounts based solely on testimony, perhaps there were actually two or three gregarious individuals who become collectively known as "Napoleon." If we fully invest in Hume's logic, Napoleon is merely a character of historical fiction. Whately evaluates testimonial evidence for Napoleon's exploits point by point with respect to the three criteria. Ruling out collusion among newspapers as a source of prejudice, he notes that the discordance among the various accounts should raise our suspicions as to their accuracy. In fact, he finds the discrepancies reside not in small details but in major transactions in which the hero Napoleon is clearly placed in conflicting roles.<sup>13</sup> It is the complete lack of challenge to Napoleon's existence by the period media that to Whately is a strong reason to approach these stories with great skepticism.

Contrasting this dialogue for a moment with Whately's assessment of testimony as given in the Gospels, a clear distinction is made between the motivations of Jesus' early disciples as contrasted with journalistic accounts of Napoleon's military conquests. While he presumes readers of the French and English newspapers are relatively more educated than the disciples, with erudition comes a certain predisposition to ideas. These early Christians, credulous and prejudiced, held their opinions in opposition to the teachings of Jesus, to which Whately remarks: "[t]he more easy of belief any one is in respect of what falls in with his wishes or preconceived notions, the harder of belief he will be of any thing that opposes these" (Pomeroy, 1985). Whately agrees with Hume in evaluating justified belief against imagination or invention: "Any thing unlikely to *occur*, is, so far, the less likely to have been feigned or fancied: so that its antecedent improbability may sometimes add to the credibility of those who bear witness to it. And again, any thing which, however likely to *take place*, would not have been likely *otherwise*, to enter the mind of *those particular* persons who attest to it, or would be at variance with their interest or prejudices, is thereby rendered the more credible" (Pomeroy, 1985).

### Critique

The crux of Whately's criticism lies in his response to Hume's contention that "...in matters of religion, whatever is different is contrary..." and *ff* (EHU 10.24). He points to inertia as an explanation for the general reticence of the public to question Hume's dismissal of miracles, claiming a lack of "...vigour of mind enough boldly to throw off vulgar prejudices, and dare be wiser than the multitude, persuade themselves that what so many have acknowledged must be true" (*Historic Doubts*) and challenges them to cast off "...the shackles of authority, to examine carefully the evidence of whatever is proposed to them before they admit its truth."

But still, we believe the story of Napoleon, usually without question. So why do we have difficulty in believing in miracles? Surely it is contrary to the laws of nature that one man could live such a life; and if not, it is arguably more probable that the Napoleon story is riddled with politically-motivated lies. Even Hume agrees that only if the lie is more improbable (miraculous)

can testimony be used to establish the miracle. The case of Napoleon seems to support falsification over fact.

Miracles occur as rare and isolated events which are spread out over large spans of time; revelations don't occur every day. How is it that the incredible events attributed to Napoleon only occurred during one historic period when war and conquest are such recurrent themes in world history? Why are there not more legends like Napoleon Bonaparte?

### **III. An Economist's View**

The rationale for discussing individual belief in miracles from an economic view fundamentally derives from the work of two winners of the Nobel Prize in Economic Science - Milton Friedman and James Buchanan. Buchanan<sup>14</sup> elaborates on Friedman's distinction between positive economics ("what is") and normative economics ("what ought to be") by hypothesizing that evidence in the social sciences can be subjected to similar tests of truthfulness as evidence in the natural ("hard") sciences. Knowledge of an event may be acquired experientially from two sources: by direct observation or, more commonly, through the testimony of others. Direct observation forms the surest basis for belief formation but is not necessarily the soundest basis for truth;<sup>15</sup> senses can be deceived. While testimony from others may be viewed as a weaker form of evidence, its basis for belief formation and truth need not be any less sound than sensory evidence. If an alleged event is common to human experience, there is a built-in propensity to accept reports of it as true. In the literature, this is known as "The Principle of Credulity,"<sup>16</sup> which simultaneously recognizes the fallibility of sensory experience as a basis for belief formation and, absent sufficiently contrary data, rationally accepts such evidence *prima facie*. It is the foundation of our justice system – innocent until proven otherwise – and is the only alternative to being completely skeptical about experience. In contrast, uncommon events carry a presumption of incredulity and their impossibility is immediately presumed or associated testimony summarily dismissed. Social science differs from the hard sciences in that scientific methodology does not end conclusively with positive results based solely on evidence; the whole point of undertaking empirical analysis of social systems is to objectively inform the normative (policy) options which lead to the specification of general *rules*.

What positive economics *can* contribute to social science is the identification of consequences accompanying any given rule. Rules always have consequences – intended and unintended, accompanied by some degree of uncertainty. Once we understand these costs, we may wish to reconsider our support for the rule. The study of organized religion is made easier in one respect – the normative part of the problem is known. What we "ought to" do is spelled out with varying degrees of transparency in the rituals, traditions, doctrine, Scriptural writings, and denominational norms which have evolved over time. If we take this as our starting point, can we

use economic tools to validate religious claims? Specifically, can we come up with irrefutable evidence about the occurrence of miracles? Before we turn to this, let us see what economic principles have to say about Hume's Maxim and Whately's rhetoric.

### **Economizing Hume's Maxim – A Model of Competitive Destruction**

In a world of scarcity, the economist recognizes that an environment of unencumbered competition performs several crucial roles in the marketplace. Although traditionally focused on the market for exchanging goods and services for money or barter, this way of thinking is useful in looking at political markets,<sup>17</sup> social exchange, and even biological evolution. "Tradition is not something constant but the product of a process of selection guided not by reason but by success. It changes but can rarely be deliberately changed. Cultural selection is not a rational process; it is not guided by but it creates reason."<sup>18</sup>

According to Hume's Maxim, religion seems to be the sole exception to the benefits of differentiation and survival of the fittest through competition. Instead, he claims, this phenomenon results in cross-annihilation of religious foundations. Competition generates crucial signals for market participants about relative values and indicates both current utility and prospective survival information. In its stylized form, all market participants have perfect and complete information, there are a large number of small traders and no individual trader can significantly influence the market, exchange is conducted in homogeneous goods which are perfectly substitutable, resources are entirely mobile, and there is free entry and exit from the market. Although a rough approximation of most markets, it is not a bad depiction of modern religious development, especially in the United States. Essentially, growth (not Hume's mutual destruction) has been the result of diversity in the market for religion (see for example Iannaccone *et al*, 1995). The market for religious services is generally fungible with little or no real cost to switching from one belief system to another. At a macro level, religion provides somewhat homogeneous commodities in salvation, sacrifice, charity, and morality. Differences lie in the details – specific practices, protocols, and behaviors derive from different interpretations of prophecies and revelations. Given this framework, we are left with a rationalization of miracles as having either *positive*, or at minimum, *no impact* on belief viability. Hume's methodology implicitly assumes individuals are capable of two rather miraculous tasks: (1) estimating the improbability of an event and (2) reacting to testimony about this event with an appropriate degree of skepticism. This formulaic approach relies on a level of conditionality which though difficult to get just right, is completely rational – when placed in proper context.

### **Whately and the Art of Rhetoric**

As a matter of context, 1819 England was both debt-ridden and doubt-ridden, in the midst of a postwar depression brought on by fighting Napoleon's armies.<sup>19</sup> Reports of the fallen emperor's banishment to the British island of St. Helena were tempered by memories of

Napoleon's earlier escape from his Elban exile. In the midst of this anxiety leapt *Historic Doubts*. With uncanny timing, on the surface the pamphlet poked fun at the jaunts of the Corsican general but underneath, it weighed empirical probabilities about his existence in the manner of Hume's *Of Miracles*.

Whately's use of irony to indirectly refute claims made by Hume is an effective strategy<sup>20</sup> in winning support for his arguments. The piece was written from the perspective of a collective "we" are all in "this" together, as illustrated by: "What, then, are we to believe? If we are disposed to credit all that is told us, we must believe in the existence not only of one, but of two or three Bonapartes; if we admit nothing but what is well authenticated, we shall be compelled to doubt the existence of any."<sup>21</sup> His references to newspaper conspiracies and political cover-ups on both sides of the English Channel questioned the colorful accounts of Napoleon's exploits while mocking how Europeans citizens accepted, and even lusted after, what were essentially unsubstantiated reports.

From an economic standpoint, the brilliance in Whately's style is the juxtaposition of a flurry of opposites which both exacerbate the underlying anxiety and invite further study. By presenting both sides in his narrative, Whately appears impartial and fair-minded. For example, in the third and fourth paragraphs of *Historic Doubts* (Pomeroy, 1985), we see the following pairings:

- favorable/unfavorable portrait
- virtues/vices
- rashness/courage
- heroism/pride
- friends/enemies

which set up a comparative model of Napoleon as:

- extraordinarily talented and courageous/moderately able and cowardly
- consummately skilled/wild and full of folly.

Contained within the essay, then, are the components of cost/benefit analysis, the familiar tool of the rational economics approach.

If *ex post* information about battles follows a normal distribution, with most reports corroborating one another, but some underplaying or over-emphasizing important details, we can see by inspection that most of the reports about Napoleon fall into the latter category. Whately's essay is filled with superlatives like (all from Pomeroy's reprint of *Historic Doubts*):

- overthrowing "powerful coalitions" with the "utmost ease" frequently in a "single campaign"
- becoming a "virtual sovereign" of most of the continent of Europe
- invading with "prodigious armies" and "threatening total subjugation"

Napoleon is twice deposed and twice exiled and carries out 17 major geographically dispersed military campaigns in a quarter of a century.<sup>22</sup> In positive terms useful to an economist, these reports are derived from dubious sources and related events which in themselves, are highly improbable.

### **The Rationale for Rational Choice**

Rational choice theory<sup>23</sup> explains human interaction in terms of weighing probable costs against benefits for a given exchange. In economics, this exchange generally involves goods and services. Pioneering application of rational choice precepts to religion (see Iannaccone, 1995, 1998; and Chaves, 1995 for a contrary view) have helped to dispel the notion that choices about religious beliefs are somehow less than rational. In particular, this puzzle about miracles lends itself well to economic analysis if miracles are viewed as exchanges of both *information* and *approval* which lead to a contract between the Divine and humanity. For miracles, this exchange relationship is inherently asymmetric – supernatural vs. natural. There is a market failure with no one to intervene. Or are there divine interventionists?

Part of the context dependency of miraculous stories includes the sages, saints, and prophets common to all major religions. These special individuals serve as conduits between terrestrial and celestial realms. Although their power of intercession is believed to be divinely granted, it is only legitimized by localized belief among their followers. Thus, although the Hebrew Bible heralds Moses as the first and greatest prophet (predating Jesus Christ by 13 centuries), without the deliberate choice by the Israelites to interpret his signs and wonders as miracles worked through him by Yahweh, Moses' legacy would likely be that of a great magician. It is the conscious choice to maximize one's personal situation, given an ordered set of preferences and a relative evaluation of available information which causes belief in miracles to be rational. As survival can be generalized as a "top tier" preference for most individuals, to the extent faith in miracles promotes that end, it is certainly rational.

Following in Hume's footsteps then, the choice by a great number of disinterested witnesses of unimpeachable character to believe in miracles, with no motive to deceive, should lend the highest possible degree of credibility to their stories. This raises a most salient point – did the early witnesses meet the conditions of credible witnesses? Certainly they were not disinterested – in the case of the participants in the Exodus, people were fleeing tyranny, but their only haven lay in a barren wilderness.<sup>24</sup> As for unimpeachable character, surely this would be compromised by most individuals in survival mode – if one is hungry or thirsty enough, almost anything can be agreed to. Deception is similarly probable: "buying in" to the miracle stories meant you would not be ostracized, starved or murdered and even if the manifestations of God attributed to Moses were viewed as magic, it would not be healthy to say so. What does this say about Hume's credibility criteria? Simply, it is context-dependent.

The common theme of deities conveying “God’s will” both directly and through human miracle-workers also begs the reciprocal question as to whether belief in miracles is a rational act. If “God’s will” serves as *the* set of constitutional rules of behavior, then miracles are the mechanism by which deviations from the rules are managed. Recalling that miracles can either promote goodness (“proactive miracles”) or end evil (“reactive miracles”), timely demonstration of miraculous events bounds the information contained in the rules, eliminating uncertainties due to systematic error.<sup>25</sup> As an approval mechanism, miracles raise the marginal cost of deviation resulting in improved alignment of preferences between deity and humanity. This conditioning effect leads to a bounded rationality in religious exchange, motivating individual preferences towards belief in miracles because the alternative is to experience the full wrath of God, or at least, the aspersion of one’s neighbors. Adherence to Scripture relies on the narrated experiences of prophets and commoners as examples of divinely-sourced punishment for inappropriate preferences.<sup>26</sup>

As powerful behavior modifiers, historically, miracles seem to appear during times of doubt. A lapse in beliefs creates a need for proof of some sort. Sometimes the form of the proof is small and seemingly inconsequential, appearing as a dream or prophecy to one individual. At other times in the history of religion, there has been an enormous need for proof to sustain the belief system of an entire tribe. This need is met by aggrandized events like theophanies or parting of the seas or, on the rarest occasion, resurrections. This observation brings to mind the workings of a ‘market in miracles’ whereby the supply of miracles is demand-driven. The cycle may be envisioned to work something like this:

- prevailing dissatisfaction in a group of people leads to the emergence of a leader
- the coincidence of leadership skill and a claim to supernatural inspiration leads to an attribution of divine powers
- group cohesion is reinforced by collective experience of the transformative powers of the leader’s actions
- the transformation is described in a context consistent with the overall beliefs of the group, and in a manner designed to reinforce cohesion and adherence to principles.

Miracles outside of religion are little more than elaborate magic tricks, serving no other purpose than to entertain. The key question is not whether miracles actually occur; there is likely no absolutely undefeasible position on this issue. It is the interpretation of miracle stories and miracle workers promulgated in the context of a specific overall world view which encompasses the supernatural, and the subsequent effect on the behavior of individuals, which matters most. In the limiting case, if everyone in a particular religious group believes in miracles, e.g. the resurrection, as long as they behave *as if* the stories are true, then this constitutes truth which can be reliably used as evidence to predict future behavior.

#### **IV. Miraculous Results: Do Miracles Exist?**

It is noteworthy that both Hume and Whately, given their respective prevailing political climates, sought to withhold their work in one manner or another. Hume deferred publishing “Of Miracles” by eight years<sup>27</sup> until he felt the political climate was more favorable. Whately maintained anonymity for seven years. Some two centuries later, their work remains a focal point for debate.

“Absolute truth, if it could be represented, cannot be coerced. It is in wondering about an ordinary event that we can even conceive of wondering at an extraordinary event” (Wittgenstein, 1929). This is the foundation of the scientific method. Claims that the ‘age of miracles’ is past generally cite scientific progress as providing explanations for events which, previously inexplicable, were attributed to divine intervention. If Hume’s world of mutual destruction of belief systems were truly at work, the world would be steadfastly tending towards the “one true religion,” a universal truth which has no empirical support. As long as there are differentiated belief systems or non-believers, this cannot happen. A market view reveals that variations in preferences, demographic attributes, cultural and social needs, and constitutional systems all support differentiation in religion. Removing miracles as an underpinning of this diversity seems to take us further from reality than accepting that miracles have truth in context. The highly evolved nature of the world’s religions can hardly be viewed as founded in either ignorance or barbarism.

Scholars look to inductive reasoning as the way to argue in an environment of disbelief (see for example Descartes’ *Discourse on Methods and Meditations*), because “what was never questioned was never proved” (Prince, 1985). The underlying assumption of incredulity makes religion better suited to the sort of skeptical dialogue perfected by Hume than to the Bayesian probability analysis advocated by his critics. Let us first examine what we believe to be the facts. As argued, whether or not Hume finds religion founded on miracles palatable or not (he does not), in fact, the five major world religions (Christianity, Judaism, Buddhism, Hinduism, and Islam) all rely to a greater or lesser extent on miracle stories and miracle-workers. Further, according to various Scripture readings, these stories echo familiar themes – miracles seem deliberately timed to reward or elicit faith, are never vainly performed for their own sake, and often are tested publicly in contests against magic (Woodward, 2000). Additionally, historic figures graced with miraculous powers share characteristics (generally solitary, ascetic individuals who, at times, struggle greatly both with their faith and with the burden placed upon them as prophets) which are too similar cross-culturally to ignore. The number of miracles performed has declined over time to a point today where they are almost unheard of. While the earliest miracles (e.g. *Old Testament* manna from heaven) were witnessed by large groups of people, more recent miracles (e.g. *New Testament* healings) seem to be tailored to individuals. This ability to discern patterns lends credence to the claim that miracles are much more than a clever invention of

ancestral imagination. Instead, they have afforded meaning to the wondrous and unexplainable events which have been alleged to occur by diverse populations throughout history, and they continue to exert a powerful influence on modern religious belief systems.

## Notes:

---

<sup>1</sup> *Naturalism* is the doctrine which espouses “nature” as the only entity which exists and that it is timeless and unplanned. Nature is continuous through time and space and uniform and predictable. It comprises all so there is no complementary set of *unnatural*; all things can be explained in terms of nature (Davis, 2004).

<sup>2</sup> *Supernaturalism* is the doctrine which acknowledges the existence of something outside of and transcendent over nature – called “God”. Nature’s uniformity can be interrupted by God in a time and manner which is inexplicable and unpredictable using natural law (Davis, 2004). “

<sup>3</sup> In addition to his appointment as Archbishop of Dublin for the Anglican Church in 1831, Whately was a member of the House of Lords and endowed a chair in political economy at Oxford University.

<sup>4</sup> This piece was originally published in David Hume’s *An Enquiry Concerning Human Understanding* (1748) after being withheld for political motivations from his earlier *Treatise of Human Nature*.

<sup>5</sup> Richard Whately (1787-1863) wrote on a diverse array of topics including argument (*Elements of Rhetoric*, 1828) and logic (*Elements of Logic*, 1826), evidence for Christianity (*Introductory Lectures on Christian Evidences*, 1838) and skepticism about Gospel history (*Historic Doubts Relative to Napoleon Buonaparte* [sic], 1819).

<sup>6</sup> Later in Part 2 (*EHU* 10.36), Hume constructs a stylized model of a miracle in which eight days of total darkness descends over the entire Earth, beginning January 1, 1600, and is witnessed without variation by a large number of credible witnesses from civilized nations with no means or motives to deceive, in order to illustrate this point.

<sup>7</sup> Garrett (2002) contains a concise summary of Section VI of the *Enquiry*’s “Of Probability” which distinguishes the probability of chances from the probability of causes, with the latter having experiential and experimental components (pp. 309-11).

<sup>8</sup> Fogelin, p. 56.

<sup>9</sup> Other scholars contend the Apostles’ testimony meets credibility criteria. They were tormented for their belief in Jesus’ miracles and put themselves at great personal risk in writing down the miracle stories.

<sup>10</sup> Originally published anonymously in 1819 by Oxford bookseller John Parker, the identity of the author led to much speculation. It wasn’t until 1826 that Whately revealed himself as the writer. The earliest editions of Whately’s essay contained this deliberate spelling of Napoleon I’s surname in its Corsican version. Corsica, an island passed back and forth between Italy and France, was Napoleon Bonaparte’s birthplace and in using the Italian spelling, Whately is mocking the fact that the man who twice became Emperor of France was not a ‘true’ Frenchman. Later editions dropped the “u.”

<sup>11</sup> This is Hume’s story of the Indian prince (*EHU* 10.10 and footnote 2), which briefly relates a story that the prince was confronted by a situation outside the realm of his experience when he was told a tale of frozen rivers. The prince persisted in questioning the storyteller and was finally convinced by strong testimony. For an Indian who has never seen frost, this is an *extraordinary* event but not a *miraculous* event.

---

<sup>12</sup> Compare to Locke's criteria (*Essay Concerning Human Understanding* 4.15.4) as presented in Pomeroy, Appendix B: 1. The number; 2. The integrity; 3. The skill of the witnesses; 4. The design of the author; 5. The consistency of the parts and circumstances of the relation; 6. Contrary testimonies.

<sup>13</sup> Whately cites the battle over the Lodi bridge as an example of conflicting reports as to whether Napoleon led the charge or fought from the rear (*Historic Doubts*).

<sup>14</sup> This information is taken from the author's class notes in Professor Buchanan's Spring 2005 "Constitutional Political Economy Seminar" at George Mason University, Fairfax, VA.

<sup>15</sup> Chilton, p. 290.

<sup>16</sup> From Alston (2004) - The Principle of Credulity is discussed by Richard Swinburne in *The Existence of God* (1979) and hypothesizes an initial credibility which is rationally justified unless until it is sufficiently challenged by rebutters or the argument is reduced in force by underminers.

<sup>17</sup> Modern founding fathers of political economy or 'public choice' are (see for example): Black (*Journal of Political Economy* (1948) article "On the rationale of group decision making;"; Downs (*An Economic Theory of Democracy*, 1957); Olson (*The Logic of Collective Action*, 1965); and Buchanan and Tullock (*The Calculus of Consent*, 1962).

<sup>18</sup> Hayek, p. 166.

<sup>19</sup> Pomeroy, p. xii.

<sup>20</sup> Pomeroy, pp. xxxvi-xxxvii Whately accomplishes the three goals of classic rhetoric: *benevolent*, *attentum*, *docilem*; he gains the empathy of his readers with a topic that piques their interest, and wins their trust so they will listen to his entire argument.

<sup>21</sup> Pomeroy (Whately) p. 20.

<sup>22</sup> As reported [http://www.napoleonguide.com/leaders\\_napoleon.htm](http://www.napoleonguide.com/leaders_napoleon.htm)

<sup>23</sup> Rational choice theory assumes: (1) Individuals are purposeful and goal-oriented; (2) Individuals have hierarchically ordered sets of preferences (utilities) and are consistent in ordering them (no intransitivities); (3) Individuals make rational calculations as to choice and maximization of their expected utility sets; (4) Social institutions emerge from rational choices made by utility-maximizing individuals (principle of methodological individualism) and these institutions provide parameters for subsequent rational decision-making.

<sup>24</sup> "Jumping out of the frying pan and into the fire" seems an appropriate summary of this period in biblical history.

<sup>25</sup> Systematic errors are reproducible inaccuracies that occur consistently in the same direction, often due to a problem which persists throughout the entire experiment. The absence of systematic error is the same as perfect foresight. To the extent miracles perfectly and simultaneously offset behavioral deviations, perfect adherence to the constitutional norm would occur. In practice, time lags between deviation and correction make this ideal unachievable. For completeness, systematic errors are contrasted with random errors, which are statistical fluctuations (in either direction) in the measured data due to the precision limitations of the measurement device. Random errors can be minimized by looking at large samples of information. For example, a single individual may deviate from the constitution, but averaging over thousands of individuals, there is statistical adherence.

---

<sup>26</sup> See for example the *Old Testament* (Numbers 20:9-12) account of Moses' forbidden entrance into the Promised Land as punishment for his vanity.

<sup>27</sup> Originally intended for Hume's *Treatise of Human Nature* (1739-40), which in his words fell "dead-born from the Press," thereby thwarting his ambition to achieve literary fame, "Of Miracles" was considered to controversial by its author for the earlier publication. Its inclusion in *An Enquiry Concerning the Human Understanding* (1748) attracted the whirlwind of attention Hume sought. (From *The Life of David Hume, Esq. Written by Himself* (London, 1777) as published in David Hume's *Essays: Moral, Political, and Literary* (1985).

## References:

Alston, W. P. (2004). Religious Experience Justifies Religious Belief. Contemporary Debates in Philosophy of Religion. M. L. Peterson. Malden, MA, Blackwell Publishing: 135-145.

Babbage, C. (1838). The Ninth Bridgewater Treatise: A Fragment. London, Frank Cass & Co. Ltd.

Buchanan, J. M. (1997). Has Economics Lost Its Way? Reflections on the Economists' Enterprise at Century's End. Humane Studies Fellows Research Colloquium.

Chaves, M. (1995). "On the Rational Choice Approach to Religion." Journal for the Scientific Study of Religion **34**(1): 98-104.

Chilton, W. Miracles - Penny Cyclopaedia. The Reasoner.

Davis, S. T. (2004). Is It Rational for Christians to Believe in the Resurrection? Contemporary Debates in Philosophy of Religion. M. L. Peterson. Malden, MA, Blackwell Publishing: 164-173.

Dawid, P., Gillies Donald (1989). "A Bayesian Analysis of Hume's Argument Concerning Miracles." The Philosophical Quarterly **39**(154): 57-65.

Earman, J. (2000). Hume's Abject Failure: The Argument Against Miracles. New York, Oxford University Press.

Fogelin, R. J. (2003). A Defense of Hume on Miracles. Princeton, Princeton University Press.

Garrett, D. (2002). Hume on Testimony Concerning Miracles. Reading Hume on Human Understanding. P. Millican. Oxford, Clarendon Press: 301-334.

Hayek, F. A. (1979). Law Legislation and Liberty: The Political Order of a Free People. Chicago, University of Chicago Press.

Iannaccone, L. R. (1995). "Voodoo Economics? Reviewing the Rational Choice Approach to Religion." Journal for the Scientific Study of Religion **34**(1): 76-88.

\_\_\_\_\_ (1995). "Religious Resources and Church Growth." Social Forces **74**(2): 705-731.

\_\_\_\_\_ (1998). "Introduction to the Economics of Religion." Journal of Economic Literature **XXXVI**: 1465-1496.

Johnson, D. (1999). Hume, Holism, and Miracles. Ithaca, Cornell University Press.

- 
- Martin, M. (2004). It is Not Rational to Believe in the Resurrection. Contemporary Debates in Philosophy of Religion. M. L. Peterson. Malden, MA, Blackwell Publishing: 174-187.
- McKerrow, R. E. (1981). "Archbishop Whately: Human Nature and Christian Assistance." Church History **50**(2): 166-181.
- Miller, E. F., Ed. (1985). David Hume's Essays: Moral, Political, and Literary. Indianapolis, Liberty Fund.
- Owen, D. (2002). Hume versus Price on Miracles and Prior Probabilities: Testimony and the Bayesian Calculation. Reading Hume on Human Understanding. P. Millican. Oxford, Clarendon Press: 335-348.
- Pomeroy, R. S., Ed. (1985). Historic Doubts Relative to Napoleon Bonaparte. Berkeley, Scolar Press.
- Popkin, R. H., Ed. (1980). David Hume: Dialogues Concerning Natural Religion. Indianapolis, Hackett Publishing Co.
- Prince, M. B. (1992). "Hume and the end of Religious Dialogue." Eighteenth-Century Studies **25**(3): 283-308.
- Raphael, D. D., Ed. (1982). The Theory of Moral Sentiments. The Glasgow Edition of the Works and Correspondence of Adam Smith. Indianapolis, Liberty Fund.
- Smith, A. (1982). Essays on Philosophical Subjects. Indianapolis, Liberty Fund.
- Stark, R. (1985). The Future of Religion: Secularization, Revival, and Cult Formation. Berkeley, University of California Press.
- Strobel, L. (1998). The Case for Christ: A Journalist's Personal Investigation of the Evidence for Jesus. Grand Rapids, Zondervan.
- Whately, R. (1819). Historic Doubts Relative to Napoleon Buonaparte. Historic Doubts Relative to Napoleon Bonaparte. R. S. Pomeroy. Berkeley, Scolar Presa: 7-42.
- Wittgenstein, L. (1929). Lecture on Ethics. Cambridge University.
- Woodward, K. L. (2000). The Book of Miracles: The Meaning of the Miracle Stories in Christianity, Judaism, Buddhism, Hinduism, and Islam. New York, Touchstone.