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The Argument from Miracles*

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Philosophers and theologians have advanced a variety of arguments for God's existence. The arguments vary along a number of dimensions. Some are a priori; some are a posteriori. Some depend on a particular definition of God; others are more general. But they have features in common. They are independent of any particular religious tradition, depending on nothing more than a generally classical conception of God.[1] They attempt to relate a potential believer to God by way of a definition or description. They thus appear, if successful, to yield *de dicto* rather than *de re* knowledge of God. And they bear little relation to the reasons for which most believers believe.

My aim, in this paper, is to revive an argument for God's existence that does not share these features. It is primarily historical; it does not depend on any particular definition or description of God. It yields, if successful, *de re* knowledge of God within the context and history of a particular religious

[1] I say "generally classical" because the arguments vary in what they require. The cosmological argument understands God as the creator, first cause, or necessary being. The ontological argument understands God as the perfect being, the greater than which cannot be thought. The teleological argument understands God as the designer of the universe. As Kant stresses, only the ontological argument appears to offer much hope for tying together the properties classically attributed to God. There is no obvious argument from being the creator to being the designer, or vice versa; being an architect is independent of being a builder. Still less does either property entail perfection and its implications (omnipotence, omniscience, or moral goodness, for example). Kant may be too optimistic about the ontological argument's ability to do this; does perfection entail creation? In any case, whether the argument from miracles is able to tie together the properties of God is something I shall discuss later in this paper.

tradition. And it does express an important reason why many believers believe in God. Indeed, it formed the central argument for Christianity both in ancient times and in Enlightenment debates about the justification for religious belief.

The argument I will defend is the argument from miracles, also known as the historical argument. It has been receiving increased attention. Bayesian methods have revealed weaknesses in David Hume's critique of the argument, and the so-called higher criticism that cast doubt on the historicity of the Bible increasingly appears methodologically unsound.[2] My goal in this paper is to cast the argument from miracles in a general form, bring out its recursive character, show that similar considerations apply to base and recursive portions, and demonstrate, in particular, that the argument becomes quite strong when applied to events in series.

I. THE ARGUMENT

The primary, and perhaps the only, argument for the existence of God in the Old and New Testaments and the early Church Fathers is the argument from miracles. In his first letter to the Corinthians, for example, Paul writes:

First and foremost, I handed on to you the facts which had been imparted to me: that Christ died for our sins, in accordance with the scriptures; that he was buried; that he was raised to life on the third day, according to the scriptures; and that he appeared to Cephas, and afterwards to the Twelve. Then he appeared to over five hundred of our brothers at once, most of whom are still alive, although some have died. Then he appeared to James, and afterwards to all the apostles. In the end he appeared even to me. (I Corinthians 15:3–8)

Paul takes this as the "first and foremost" aspect of the Gospel he preached in Corinth, the set of facts on which he bases his faith. The Easter message that Christ rose from the dead, Paul holds, is absolutely essential: "And if

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[2] For excellent summaries of some of the issues, see Swinburne (2003) and McGrew (2009). There is a larger point lurking here. Many contemporary intellectuals think religion runs afoul of sophisticated, modern, scientific thinking. The rationale for that view depends largely on nineteenth-century and early twentieth-century developments—most notably, higher criticism, sociological and anthropological theories of religion, and Freudian psychology—that on careful examination today appear anything but scientific. Far from being sophisticated, in short, this sort of intellectual hostility to religion may be a remnant of outmoded conceptions of what counts as scientific. But defending that claim goes far beyond the scope of this paper.

Christ was not raised, then our gospel is null and void, and so is your faith; and we turn out to be lying witnesses for God" (I Corinthians 15:14–15). But Paul assures us that Christ *was* raised to life; there is the solid testimony of a multitude of eyewitnesses to Christ's resurrection. Christian belief, Paul maintains, rests on firm empirical evidence.

Philosophers, however, have not given such empirical evidence much respect for the past quarter-millennium. Hume, in particular, is generally thought to have dealt a knockout blow to attempts to base religious faith on the occurrence of miracles. Intellectual historian John Herman Randall, Jr., representatively takes Hume to have delivered a "coup de grace," for he:

proved so conclusively that intelligent men have rarely questioned it since, that a miracle, in the sense of a supernatural event as a sign of the divinity of its worker, cannot possibly be established.[3]

Together with the assaults on natural theology launched in Hume's *Dialogues Concerning Natural Religion* and Kant's *Critique of Pure Reason*, Hume's punch devastated not just a belief in miracles but any attempt to rest religious faith on a rational or objective foundation.

But Hume does not argue that miracles are impossible. Indeed, his account of natural laws as nothing more than regularities in nature precludes that strategy. Instead, Hume argues that it would never be rational to accept a miracle report, that is, a bit of testimony that a miracle had occurred. It is far more likely, he contends, that the Apostles and the five hundred were mistaken or lying than that anyone was actually raised from the dead.

Though there are some critical voices, most published discussions of Hume's critique find it compelling. Here are two typical conclusions, on opposite ends of the twentieth century. Leslie Stephen: "The statement that a man has been raised from the dead would prove that its author was a liar." Howard Sobel: "If anyone were to tell you that a man had died and come back to life you had better not believe him."[4]

I shall argue that these conclusions are far too sweeping. Hume's argument is compelling at best in establishing what Roy Sorensen calls "case-by-case skepticism" about miracles of a certain kind.[5] That is, Hume shows that it would never be rational to accept a single miracle report in isolation, where the miracle in question involves a violation of natural law. That, however, does nothing to undermine the miracles that form part of the foundation of Christian belief.

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[3] Randall (1926: 293).
[4] Stephen (1903) and Sobel (1987).
[5] Sorensen (1983).

I shall formulate the argument from miracles, as a first pass, as follows:

1. There are kinds of possible circumstances and events the best explanations for which invoke supernatural agency.
2. Some circumstances and events of those kinds have actually occurred.
3. Therefore, there is a supernatural agent.

This argument raises some obvious questions. What kinds of circumstances and events? When is agency of any kind the best explanation for an event? Can supernatural agency ever be the best explanation for something? Why should we even believe that supernatural agency is possible? What is it to be supernatural? Even if some events are best explained by appeal to supernatural agency, why think that the same supernatural agent is active in each case? Why think that the supernatural agent in each case is God? I cannot answer all these questions here. I shall be content to suggest answers to some of them, taking for granted our common-sense intuitions about attributions of agency and even of supernatural agency.

The second premise, that circumstances and events of the relevant kind have actually occurred, raises further issues of its own.[6] Contemporary Judeo-Christian believers base their beliefs on occurrences in the relatively distant past. That allows us to divide the question, and move to the forefront the epistemological questions that concerned Hume. Under what conditions is it rational to believe that events of the relevant kind have actually occurred? To answer that question, we need to know under what conditions it would be rational to give credence to testimony that such events have occurred—the question upon which most of the literature concentrates—and also under what conditions it would be rational to understand one's *current* experience as being of the relevant kind, of a kind best understood in terms of supernatural agency. There is, for example, not only the issue of whether *we* should accept the account of Moses's encounter with the burning bush (Exodus 3:2) but whether Moses *himself* should have understood his experience in terms of supernatural agency, and even whether Moses should have believed that a bush was burning without being consumed, rather than concluding that he was suffering some sort of illusion or hallucination.

The argument from miracles, like any historical argument, thus has a kind of recursive structure. There is a base case, an argument that certain kinds of events have a certain property. There is also an inductive step, an

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[6] From now on, for simplicity, I shall speak solely of events.

argument that certain kinds of events have that property if other preceding events have had it as well. The property I am interested in here is that of supporting rational credence in supernatural agency. So, the argument will proceed by identifying initial cases directly supporting such rational credence and then specifying conditions under which rational credence may be transmitted through testimony. By analogy to Robert Nozick's historical theory of justice, we might think of these as conditions of acquisition and transfer of rational credence.[7] The idea, then, is that one's epistemic situation supports rational belief in supernatural agency if and only if that situation is an initial acquisition of rational credence—that is, includes experience of an event that directly supports such belief—or is a transfer of rational belief in supernatural agency from someone who holds a corresponding belief rationally.[8]

I want to caution against a possible misunderstanding, and, in the process, complicate this picture somewhat. To say that some events might support rational credence directly is not to say that they support it immediately or in isolation. It might be, for example, that an initial experience of the relevant kind would not support rational credence, but that later, similar experiences would. As Hume stresses in his critique of causation, one instance of an event of kind *A* followed by an event of kind *B* does not tend to produce belief in a necessary connection between *A* and *B*. Repeated instances do. Similarly, one encounter with a bush that burns but is not consumed might not support rational belief in supernatural agency, but a series of events beginning with that one might.[9] We might follow the literature on miracles here and speak glibly of "events or series of events," "miracles or series of miracles," etcetera. But this obscures the issues considerably by ignoring the context-sensitivity of the relevant epistemic notions. Whether or not an event supports rational credence in something is plainly context-sensitive; it depends

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[7] See Nozick (1974: ch. 7). The analogy suggests the possibility of a third condition, of rectification or, in this context, reformation of rational credence of supernatural agency. I think there does indeed need to be such a condition, since chains of belief may be corrupted in a variety of ways, but spelling it out goes beyond the scope of this paper. Formulating a reformation condition would nevertheless be an extremely important thing to do. Indeed, one can read many of the figures on both sides of Reformation-era debates as trying to formulate such a condition or argue that such a task is impossible on pain of skepticism. See Popkin (2003).

[8] A reformation condition, of course, would lead us to add a third condition—that one's epistemic situation might include grounds for rational belief on the basis of reformation of earlier beliefs.

[9] The series would, of course, not have to consist simply of burning bushes; the kinds *A* and *B* might be described more abstractly, and, in Moses's case, would include turning the rod into a snake and back again, predicting the plagues, and so on.

not on that event in isolation but on previous events. We'll investigate some aspects of this context-sensitivity below. For now, let's simply say that an event may support rational credence in supernatural agency by being a contributing term in a series of events that support such credence.

II. MIRACLES

The argument from miracles begins by asserting that there are kinds of possible events the best explanation for which would be supernatural agency. What kinds of events are those? When, if ever, could we best explain an event by invoking supernatural agency? Traditionally, events of this kind are known as miracles. What is a miracle? All the argument requires is that miracles be such that the best explanations for them invoke supernatural agency. Adopting that as the definition of miracles for the purposes of the argument allows us to simplify it:

1. *Definition*. Miracles are events the best explanation for which would invoke supernatural agency.
2. *Possibility*. Certain kinds of possible events are miracles.
3. *Actuality*. Events of those kinds have actually occurred.
4. Therefore, there is a supernatural agent.

This definition of miracles is admittedly epistemological. One could take that at face value, or see it as a placeholder for a more basic metaphysical definition. Here I shall treat its metaphysical neutrality as a virtue, for it is consistent with various ways of accounting for agency in general and supernatural agency in particular. The definition is also weaker than most in the literature. It is worth pausing to explore the contrast.

Hume defines miracles as violations of the laws of nature:

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.[10]

But this seems neither necessary nor sufficient for miracles in the traditional sense. Certainly it is neither necessary nor sufficient for having supernatural agency as a best explanation. It is not necessary, for many Biblical miracles involve no violation of laws of nature. If we look, for example, at the plagues of Egypt, we find several—plagues of flies (Exodus 8:20–5), livestock illnesses

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[10] Hume (1748: 90).

(9:1–7), boils (9:8–12), hail (9:22–6), and locusts (10:12–15)—that require no suspension of the laws of physics. Neither do some of the miracles of Elijah or Elisha—the bear attack (2 Kings 2:23–5), for example, or neutralizing the poisoned stew (2 Kings 4:38–41). Neither is it sufficient. The laws of planetary motion are well understood. Suppose astronomers were to discover a slight deviation in a single orbit of Neptune, say, for which they could give no account. They would of course hypothesize a force causing the deviation. But suppose, after extensive investigation, that no cause could be found. It might be rational to conclude, after enough investigation and theoretical reflection, that there had been a violation of natural law. But barring any effect that could lead us to think of the planet's deviation as fulfilling some purpose, we would not tend to count it as a miracle. Thinking of miracles as violations of natural law cannot explain the relevance of purpose here. But thinking of them as events the best explanation for which invokes supernatural agency does, for agency is purposive action.[11]

There is another problem with Hume's definition. Some of the laws of our best current scientific theories are statistical. It is not clear what it would mean for a single event to violate such laws. According to statistical mechanics, it is possible that all the air in this room gathers in one corner—it is just extremely unlikely. Suppose it were to happen, causing a group of criminals to collapse from lack of oxygen. Would that count as a violation of natural law? It is not inconsistent with the laws of nature, but they assign it such low probability that it might be reasonable to take the event as a sign of supernatural agency. A similar point could be made about quantum tunneling. Extremely low probability events do not violate laws, but might or might not seem to point to supernatural agency, depending on whether we can construe them as purposive.

Timothy and Lydia McGrew define miracles as events that would not have occurred in the natural order of things. This is very close to my definition, for, if an event would not have occurred in the natural order of things, one might think, the best explanation for it must not be completely natural.[12] Their definition is in one way broader than mine, however, for events

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[11] Giving a general account of agency, much less supernatural agency, goes beyond the scope of this paper. I take it, however, that, on any reasonable account of agency, being able to be seen as purposive will count in favor of ascribing an event to agency.

[12] There is a subtle issue here about the meaning of counterfactuals and the status of unlikely events. Would an extremely unlikely event count as something that would not happen in the course of nature? It would not normally happen, of course. A similar point could be made about quantum tunneling. We might not know whether the event would have occurred in the order of nature; we might even wonder whether that question has any determinate answer.

that lack fully naturalistic explanations might best be explained in terms of supernatural agency, but they might simply be inexplicable. Or, the best explanations for them might not invoke agency, even if they invoke something supernatural. Let's return to the minor and evidently purposeless deviation in Neptune's orbit. If we can find no naturalistic explanation, we might conclude that the event could not be explained at all. We might, alternatively, hypothesize some sort of impersonal force having a source outside the natural order as usually understood. The McGrews' definition would count the deviation miraculous. My definition would not.

The McGrews' definition may be narrower than mine in another way, depending on what they take the scope of the natural order to be, for the natural order, on their view, is by definition unmiraculous. One could see the cosmological argument, the anthropic argument, and the argument from design, however, as arguments that the best explanation for the natural order itself invokes supernatural agency. If those arguments were successful, then, my definition, for better or worse, would account the existence of the natural world itself as miraculous. I view that as a strength; others may disagree.[13] In any case, nothing in my argument here will depend on this feature of the definition.

III. HUME'S ARGUMENT

Redefining miracles in my way or in the McGrews' way might seem to lead to a quick refutation of Hume's critique. Hume's argument addresses the transfer principle, and shows, at best, that it would never be rational to accept a report of a violation of a law of nature. If some miracles involve no violation of natural law, this is consistent with rational credence of some miracle reports.

Such a response, however, concedes far too much. Most Biblical miracles, and especially most of the miracles of Jesus, do violate natural law. It is hard to give any naturalistic explanation of the Passover, of Elisha's raising the son of the Shunammite woman from the dead (2 Kings 4:18–37), or, especially, of Jesus's resurrection. So, we must face Hume's argument squarely. If it succeeds, it not only undercuts any justification for faith based on miracles,

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[13] I see whatever emotional power these arguments have as resting on the intuition that the universe's existence is miraculous. One could accommodate this intuition in the McGrews' definition by saying that the upshot of the cosmological, anthropic, and teleological arguments is that the natural order itself would not exist in the natural order of things, for the natural order depends in one way or another on the supernatural.

but implies that faith in the Biblical story is irrational. We might still affirm with Paul that "Divine folly is wiser than the wisdom of man" (I Corinthians 1:25), but we would have to agree with Hume that faith is folly.

Let me begin by outlining Hume's argument, which, he believes, "must at least silence the most arrogant bigotry and superstition, and free us from their impertinent solicitations" by being "an everlasting check to all kinds of superstitious delusion."[14] Hume is not arguing that miracles are impossible. It has been argued that miracles are violations of laws of nature; but laws of nature, by definition, are universally valid; therefore, miracles cannot occur.[15] But that is not Hume's point. All reasoning concerning matters of fact, Hume insists, rests on experience, and is properly understood as a matter of probability. "A wise man, therefore," says Hume, "proportions his belief to the evidence."[16] We have no basis for saying that miracles are impossible, therefore; we can say only that they are very unlikely. The evidence is overwhelmingly against them.

Hume argues that miracles are so unlikely that we never have good reason to believe in them. Our only evidence for miracles—certainly, for the miracles of the Old and New Testaments—is the testimony of eyewitnesses reported in the Bible. But we have ample experience of people testifying falsely. We must assess the credibility of these reports in the way we assess the credibility of any testimony.

Now, at first glance, this would seem to lend credence to Biblical miracles, for we have reports of these miracles occurring; we have no corresponding eyewitness reports that contradict them. We have no records of men claiming to have impregnated Mary, for example, or claiming to have seen Christ's body in the tomb a week after Easter. But the story is not so simple, for miraculous events are extremely—Hume might even say incredibly—unlikely. And the credibility of testimony depends in part on the likelihood of what is being reported:

Suppose, for instance, that the fact, which the testimony endeavours to establish, partakes of the extraordinary and the marvellous; in that case, the evidence, resulting from the testimony, admits of a diminution, greater or less, in proportion as the fact is more or less unusual…I should not believe such a story were it told me by Cato, was a proverbial saying in Rome, even during the lifetime of that philosophical patriot. The incredibility of a fact, it was allowed, might invalidate so great an authority.[17]

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[14] Hume (1748: 86).
[15] This argument strikes me as unpersuasive for another reason. If we take laws of nature as strictly universal and necessary, the defender of miracles can simply deny that there are any true laws of nature.
[16] Hume (1748: 87).
[17] Ibid. (89).

Thus, I believe my brother if he tells me that his daughters have colds, but not if he tells me that a flying saucer followed him to work. Some things are so unlikely that we consider them incredible. That applies, Hume argues, to the Resurrection and other purported miracles. Hume holds that miracles are so unlikely that no amount of testimony would convince a rational person of their occurrence. He concludes:

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…[18]

IV. TRANSFER: MULTIPLE WITNESSES

Hume's argument, however, fails, even for miracles that violate the laws of nature. I am arguing that the central miracles of the Judeo-Christian tradition survive Hume's assault. Hume fails to show that belief in them is irrational. I am not arguing that belief in them is rationally compelled; that depends crucially on empirical matters concerning the likelihood of certain kinds of events, the reliability of witnesses, and the accuracy of the historical record. I am not, in short, concerned to argue in favor of the actuality premise, the premise that miracles have actually occurred. That is a matter, from my point of view, of detailed historical investigation and debate. But I am arguing that we cannot rule the argument from miracles out without such historical investigation and debate. Belief in Biblical miracles is not a priori irrational. Faith in miracles is not necessarily folly.

I will be concentrating on two flaws that rescue the central miracles of the Christian tradition from Hume's assault.

First, Paul is right to stress the number of eyewitnesses. Hume shows that it would not be rational to take a single witness as more credible than an established law of nature. But it might be rational to accept the testimony of several witnesses that a law of nature had been violated. The central miracles of the Judeo-Christian tradition are attested by multiple witnesses; Hume's argument leaves them untouched.

Most of the central miracles on which Christian faith depends are not the mystical experiences of a guru or divine revelations to a single prophet but publicly observable occurrences witnessed by many people. Jesus, to be sure, seeks to preserve "the Messianic secret," limiting the number of people who witness certain miracles and know he is the Messiah. He allows only Peter,

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[18] Ibid. (98).

James, and John to accompany him when he revives the twelve-year-old girl, Jairus' daughter (according to Mark 5:35–43 and Luke 8:49–56; but cf. Matthew 9:18–19, 23–5). He asks the blind man from Bethesda not to tell anyone in the village that Jesus restored his sight (Mark 8:22–6; cf. Matthew 9:27–31). He gives the disciples strict orders not to tell anyone who he really is (Mark 8:30; Matthew 16:20). But even the most private miracles, such as the Transfiguration, are witnessed by several disciples.

To understand the effect this has on the credibility of miracle reports, we must put Hume's argument in more formal probabilistic terms. A variety of contemporary writers (Richard Swinburne, Howard Sobel, David Owen, George Schlesinger, Peter Millican, Philip Dawid and Donald Gillies, among others),[19] have interpreted Hume's argument in modern probabilistic, and specifically Bayesian, terms. Hume's argument is in various ways un-Bayesian; he distinguishes "proof" from "probability" in a way that makes no Bayesian (or for that matter Humean!) sense, and speaks of "subtracting" and "demolishing" probabilities. Nevertheless, a Bayesian framework allows a useful and formally precise reconstruction of something very close to Hume's argument. And no alternative probabilistic framework makes any better sense of Hume's language. To assess Hume's success, therefore, let's recast his argument in Bayesian terms.

Bayes's theorem allows us to calculate the conditional probability of an event in a context (K) from various other conditional probabilities in that context. In our setting—assessing the credibility of testimony concerning miracles—the conditional probability we are interested in is credibility, the probability that a miracle occurred given the testimony that it occurred ($P[M/(T\&K)]$). Bayes's formula equates that with a ratio involving the prior probability of such a miracle ($P[M/K]$) and the reliability of the witness: the likelihood of the witness saying that the miracle occurred, when it did occur ($P[T/(M\&K)]$), together with the likelihood of the witness saying that the miracle occurred, when it did not occur ($P[T/(-M\&K)]$):

$$P\left[M/(T \,\&\, K)\right] = \frac{P\left[T/(M \,\&\, K)\right]P\left[M/K\right]}{P\left[T/(M \,\&\, K)\right]P\left[M/K\right] + P\left[T/(-M \,\&\, K)\right]P\left[-M/K\right]}$$

The more reliable the witness, the greater the credibility of the testimony. But also, the more unlikely the event to which the witness is testifying, the smaller the credibility of the testimony.

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[19] Swinburne (1979, 2003), Sobel (1987, 1991), Owen (1987), Schlesinger (1987), Millican (1993), Dawid and Gillies (1989), among others.

Before considering numerical values, let's simplify a bit. Let c_K, credibility in context K, represent *P[M/(T&K)]*, and let p_K, the prior probability of a miracle occurring in K, represent *P[M/K]*. Let's assign it the value 10^{-m}. Let l_K, the probability that the witness giving a miracle report is lying in K, represent *P[T/(−M&K)]*, and assume it has the value 10^{-r}. Then, assuming that the probability that someone witnessing a miracle will report it is relatively high, and that l_K is significantly greater than p_K, Bayes's formula allows us to approximate the credibility of a witness in context K as follows:[20]

$$c_K \approx \frac{p_K}{l_K} = 10^{r-m}.$$

Now, to get actual probabilities out of Bayes's theorem, we need to have values for the prior probability of the miraculous event occurring and values for the reliability of the witness or witnesses. Assessing these is of course immensely difficult. But let's make a rough estimate for a report claiming someone to have been raised from the dead.

First, we need to estimate the prior probability of such an event. The Bible contains several such reports, but their veracity is in question. Since the beginning of time there have been, within an order of magnitude or so, about ten billion human beings on the planet. And there have been only a few scattered reports of resurrections, whose credibility is in question. So, let's estimate the probability of resurrection, given the available evidence, at 1 in 10 billion: 10^{-10}.[21]

The reliability of witnesses is perhaps easier to estimate. People are generally reliable, especially on matters such as whether someone is walking on or through the water, whether someone is alive or dead, etcetera. Indeed, as Donald Davidson has argued, the possibility of linguistic communication depends on such reliability. In the case of a miracle report, we must estimate the probability that someone, a disciple of Jesus, say, will report a miracle if it occurs. Presumably the probability is very high, though it is not 1, as Peter's denial of Jesus illustrates. So, let's estimate the probability, cautiously, at .99.[22] What about the probability that someone will report a miracle even if one does not occur? David Owen and others have assumed, given the values we've estimated so far, that this will be unlikely, having probability

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[20] All calculations below use Bayes's formula, not this approximation, though the approximation makes deriving answers very close to the actual values extremely easy.

[21] This figure is somewhat arbitrary, but its actual value, within a very broad range, makes relatively little difference. McGrew (2009) estimates the Bayes factor, given all available evidence concerning the resurrection, at 10^{43}; if that is correct, then only values less than 10^{-43} would have a significant impact on the argument to follow.

[22] Perhaps surprisingly, this value makes little difference to the calculation when p_K is small, for it occurs in both numerator and denominator multiplied by p_K.

.01. Hume clearly thinks it is higher; disciples having a tendency to inflate the reputation of their leader. Still, very few spiritual leaders have been alleged to have the ability to raise people from the dead. (No such reports are associated with Confucius, Laozi, the Buddha, Zoroaster, or Mohammed, for example.) So, let's estimate this, cautiously, at .1.

Now, given these estimates, Bayes's theorem tells us that the probability of someone's being raised from the dead, given testimony to such an event, is approximately 10^{-9}: one in a billion. Hume appears to be vindicated. The probability we should rationally assign to someone's being raised from the dead, even given testimony that it has occurred, is very low. Even if we abandon our cautious estimates above, raising the witness's reliability to .999 and lowering the likelihood of a false report to .01, the odds of the report's being correct are approximately 10^{-8}, one in a hundred million. Hume is right 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 endeavours to establish" (90)—so long as the miracle in question is isolated, violates a law of nature (or at least has an extremely low prior probability), and is attested by a single witness.

But now, suppose that we have not one witness but several. As John Earman and Rodney Holder have observed, having multiple witnesses changes the outcome of our assessment of miracle reports dramatically.[23] Oddly, few other philosophers have thought the number of witnesses makes any difference. Dawid, Gillies, and Sobel, for instance, speak simply of "a witness or group of witnesses." Yet an analogy to law should suggest that this is absurd. It matters how many independent witnesses testify similarly. One witness who identifies the perpetrator has some effect on the probability of guilt or innocence; a dozen who independently do so have a much more powerful effect.

If we were to take Hume's argument as showing that testimony can never establish the likelihood of a miracle, as he wants us to, it would prove too much. Hume's argument depends solely on the thought that miracles are extremely unlikely. So, his argument should apply to anything that has a very low prior probability. It thus, if successful, will imply that we can never be rationally justified in believing that an extremely unlikely event has actually occurred. But that is outrageous.

Consider a situation that might be represented by similar calculations: a case of medical diagnosis.[24] Suppose that a highly reliable test diagnoses you as having an exceptionally rare disease. Say that the reliability of the test

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[23] Earman (1993) and Holder (1998).
[24] Cf. Millican (1993).

is .999; it is wrong in only one case in a thousand. And suppose the disease is very rare, afflicting only one person in a million. What is the probability that you actually have the disease? According to Bayes's theorem, only about $10^{3-6} = 10^{-3}$, that is, about one in a thousand! Although the test is right 999 times out of a thousand, its positive result in your case will be a false positive 999 times out of a thousand.

This result is surprising. But think of how the test might function applied to all the roughly 300 million residents of the United States. About 300 would have the disease, and the test would accurately give a positive result for (nearly) all of them. But 299,999,700 people would not have the disease, and the test, wrong only one time in a thousand, would nevertheless produce about 300,000 false positives. So, the test, applied to the population of the U.S., would come up positive 300,300 times, and be right in only 300 of them. We tend to ignore base rates (that is, low priori probabilities) in our thinking, something some psychologists have dubbed a "cognitive illusion." So, one test, even if it is highly reliable, is not very good evidence that any particular person has a rare disease.

But it would be absurd to conclude from this that we can never have good reason to believe that any particular person has a rare disease. True, any single test, taken by itself, is poor evidence. But, faced with a positive result, what might we do? We might repeat the same test. We might administer additional tests. We might look for symptoms. In short, we might gather additional evidence.

Analogously, faced with a miracle report, we ought rationally to gather additional evidence. Just as we might seek additional tests, we might, for example, seek testimony of additional and independent witnesses. Suppose we have n independent witnesses, all of equal reliability. Then Bayes's theorem tells us that the credibility of their reports, taken together, is:

$$P\big[M/(T \& K)\big] = \frac{P\big[T/(M \& K)\big]^{n} P\big[M/K\big]}{P\big[T/(M \& K)\big]^{n} P\big[M/K\big] + P\big[T/(-M \& K)\big]^{n} P\big[-M/K\big]}$$

Approximating as before, we get something that breaks down as nr approaches m:

$$c_K \approx \frac{p_K}{l_K^{n}} = 10^{nr-m}$$

Let's apply this to the medical diagnosis case. We have 300,000 false positives and only 300 true positives. Suppose we apply a second medical test

the reliability of which equals that of our first test, getting it right 999 times out of a thousand, but the errors of which are probabilistically independent of those of the first test. The second test will give a positive result in (almost) all the 300 true positive cases. It will also give a false positive result in 300 of the 300,000 false positives from the original test. So, we end up with 600 positives, of which half are real. The probability of having the disease, given positive results on both tests, is about .5. The second test, or "witness," if you like, raises the probability from one in a thousand to an even bet.

The same principle applies to the case of Biblical miracles. Given our cautious estimates, it would take ten witnesses to make the miracle have close to .5 probability (actually, .4749), and twelve (!) to make it highly likely (.9888). Given our incautious estimates—appropriate for the most trusted disciples, such as Peter, James, and John, say—these levels are reached much more quickly. Five independent witnesses give the miracle an even chance of occurring; six make it highly probable.

One might object that the disciples are not independent witnesses, but very much under one another's influence; that the four Gospels are not entirely independent, but depend on many of the same sources; that many miracle reports were recorded long after the miracles are supposed to have taken place; and so on. There is something to these objections, though less, perhaps, than many think. Minor differences in the Gospel accounts offer evidence of independence. All the Apostles who faced imprisonment, beatings, and martyrdom for their testimony had strong incentive to recant anything for which they did not have overwhelming independent evidence. The Gospels appear to have been written within the lifespans of those who knew Jesus and witnessed the events recorded in them. But return to Paul's argument concerning the Resurrection. Writing perhaps just twenty to twenty-five years after the event, he points to hundreds of witnesses. Not all are independent, but many are. The credibility he attaches to the Resurrection is thus, reasonably, very high, even setting aside his own experience on the road to Damascus.

Paul was in a far better epistemic state with respect to Christ's Resurrection than we are, say, with respect to the attack on a canoeing President Carter by a crazed, swimming rabbit in 1980. That was surely an improbable event, a little further removed in time, witnessed by only a few government employees whose reliability may not compare very well with that of the disciples. Yet most of us—rationally—believe that it occurred. If we are to throw out belief in Biblical miracles on Humean grounds, we should throw out many of our historical beliefs on those very same grounds, for they would fail Hume's test too, and for the very same reasons.

Whether the New Testament provides us with adequate historical evidence of independent witnesses is, in any case, a matter of assessing the

actuality premise. I cannot enter into the historical discussion here. My point is simply that the argument from miracles could provide rational justification for accepting the occurrence of miracles if a relatively small number of independent witnesses testified to them.

So far, keep in mind, I have been discussing the toughest case: resurrection from the dead. The more typical miracles of healing involve events whose prior probability is far higher, since spontaneous remission, psychosomatic illness, and so on are well documented. Suppose such a probability is not one in ten billion but one in a million. Then, even on our cautious estimates, a miracle has an even chance if there are six independent witnesses, and is highly likely (.99) if there are eight. If the prior probability is one in a thousand, then, again on our cautious estimates, it takes only three independent witnesses to give an even chance, and five to make the probability .99.

Although most contemporary philosophers have overlooked the power of multiple witnesses in establishing the rationality of belief in miracles, an early critic of Hume, William Paley, noted it eloquently:

If twelve men, whose probity and good sense I had long known, should seriously and circumstantially relate to me an account of a miracle wrought before their eyes, and in which it was impossible [I would prefer to say "unlikely"] that they should be deceived [i.e., they have high reliability]; if the governor of the country, hearing a rumor of this account, should call these men into his presence, and offer them a short proposal, either to confess to the imposture, or submit to be tied up to a gibbet [thus greatly reducing the probability of their testifying falsely, i.e., $l_K = P[T/(-M \ \&K)]$]; if they should refuse with one voice to acknowledge that there existed any falsehood or imposture in the case; if this threat were communicated to them separately, yet with no different effect; if it was at last executed; if I myself saw them, one after another, consenting to be racked, burnt, or strangled, rather than give up the truth of their account;—still, if Mr. Hume's rule be my guide, I am not to believe them. Now I undertake to say that there exists not a skeptic in the world who would not believe them, or who would defend such incredulity.[25]

From a Bayesian point of view, Paley has it exactly right. If one person were to behave this way, we could always chalk it up to mental illness. Two? A remarkable coincidence, hard to understand. Three? Surely they must have seen something. Twelve? What kind of evidence do you want?[26]

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[25] Paley (1794: 6).

[26] An anonymous reviewer objects that Paley presents evidence of strong conviction, but not of independence. The Apostles met their fates, however, separately and alone, which seems to me evidence of independence in a way that collective torture and execution might not be.

V. TRANSFER AND ACQUISITION: SERIES

The second point I want to stress is that Biblical miracles rarely occur in isolation. They occur in patterns. The central miracles of the Judeo-Christian tradition occur in series. They are not isolated events. In fact, in the Scriptures miracles are relatively rare. There are three main series of miracles: (1) the miracles of the Exodus from Egypt, comprising the plagues, the escape across the Red Sea, the provision of water and manna, and the Ten Commandments; (2) the miracles of Elijah and Elisha; and (3) the miracles of Jesus and the Apostles.[27] George Schlesinger contends that the occurrence of miracles in series makes no difference: "additional reports do not raise the chance that at least one miracle has occurred."[28] But that is incorrect. In fact, they raise the chance that each such miracle has occurred.

Moses, Elijah, Elisha, Jesus, and the Apostles all work series of miracles. Sorensen and Holder argue that this counters Hume's argument, for we might have evidence that at least one miracle in a series occurred even if we cannot establish which one. I want to argue for a stronger point: each miracle in a series, and each miracle report attesting to it, lends evidential support to *all* the miracles of the series.

Return to the medical diagnosis analogy. You have been diagnosed, by a reliable test, as having a very rare illness. As we have seen, the likelihood that you have the disease is nevertheless quite low (in our example, one in a thousand). We might administer a second, independent test (or simply rerun the first, if errors are random); a positive result on that test would raise the probability of your having the disease to roughly .5, and a third, independent, positive report would make the probability .999.

But suppose that a second test is not available, and suppose that errors on the one test we have are not random, but caused by complex individual variations for which we cannot easily screen. Is there anything we might do to gain more information about the likelihood of having the disease? Of course. We might examine your medical history carefully for signs that would raise your prior probability of getting the disease. We might watch

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[27] I am setting aside two important kinds of divine interaction that run throughout Scripture but deserve their own treatment: divine inspiration and prophecy. If the canon is correct, every book of the Bible is an instance of divine inspiration. And prophecy is important not only to the books of the Prophets but also to much of the remainder of the Bible. Both inspiration and prophecy arguably involve miracles. But they are special in ways I cannot treat adequately here. I will simply note that repeated instances in these cases seems to make no epistemic difference, perhaps because there are easily available naturalistic explanations for people writing books and making predictions that turn out to be true.

[28] Schlesinger (1987: 230).

you carefully for symptoms associated with the disease. In short, we might look to your history and to your future for anything correlated with the disease. If we find a family history of the disease or an earlier episode of a related illness, we increase our assessment of your likelihood of having the disease. We do the same if you begin to display characteristic symptoms.

Consider a different analogy. Suppose John reports that Mark hit a baseball 500 feet. Knowing that such an event is very unlikely, I refuse to believe it. And unfortunately there are no other witnesses I can ask. But I can see whether anyone has reported Mark doing something similar in the past, and wait to see whether there are reports of his doing it in the future. If I find other occasions on which Mark has hit a baseball very far, or performed other astounding feats of strength, I increase the credibility that I assign to John's report.

In the case of miracle reports, I submit, we can do exactly the same thing. We may or may not be able to find other witnesses; some miracles (such as the Transfiguration) have a few witnesses, others (the burning bush, for example) just one. Faced with a report, or collection of reports, we can look to the history of the person performing the miracle to see whether there are other reports of that person performing miracles. We can wait to see whether similar things occur in the future. If there are other reports, that may increase the probability that the report we start from is true.

Here is an advantage of my definition of miracles as events the best explanations for which involve supernatural agency. The occurrence of improbable events in series does not always increase the credibility of reports of each event. Suppose that a friend tells me that he won the lottery. His winning the very next week does not lend additional support to the report of his winning last week, for every play of the lottery is independent of every other. Because miracles lend rational support to belief in supernatural agency, however, they are not independent in that way. Series of unlikely events can be purposive, and can give us grounds for seeing the entire series as consisting of purposive acts of a single agent.

I am thus arguing for something stronger than Sorensen and Holder's point that, if there are several miracles supported by independent testimony, the probability of the disjunction of the miracle reports—that is, the claim that at least one of the miracles occurred—may be high even if the probability of each miracle, considered in itself, is very low. It is not just that, if we find reports of a series of miracles, there may be a significant probability that at least one happened. My point is that the miracles in the series may set a context for each other. The Egyptian who hears Moses threaten a plague of flies quite reasonably laughs; how can the acts of Moses or the Pharaoh cause that? But after seeing the flies, the boils, the illnesses, the hail, and the locusts, an Egyptian who does not tremble at the threat to the first-born is a fool.

Similarly, one might reasonably balk at believing that Jesus turned water into wine. But after hearing about the healings, the feeding of the five thousand, and the resurrections, that first miracle no longer seems so surprising.

In general, we assess prior probabilities and reliabilities in context. Most writers who give a contemporary reconstruction of Hume's argument suppress reference to context, assuming that it stays constant and makes no difference to the results. But that understates the credibility of miracles considerably. In assessing the credibility of reports of the Passover, for example, we must estimate the prior probability of the event. But, in so doing, we must ask, not "What is the likelihood of a plague striking down all the first-born overnight, leaving others, and those who have painted their doors with lamb's blood, unharmed, given that Moses predicts it?" but "What is the likelihood of such a thing, given that Moses predicts it—and that flies came as Moses predicted, boils came as Moses predicted, illnesses came as Moses predicted, hail came as Moses predicted, locusts came as Moses predicted, darkness came as Moses predicted, etc.?" Which way would you bet? The probability may not be high, but it is surely significant. The prior probability in context is much greater than the prior probability would be in isolation.

In assessing the credibility of reports of Christ's Resurrection, similarly, we must ask, not "What is the likelihood of someone's being raised from the dead?" but "What is the likelihood of someone who has been born of a virgin mother, displayed exceptional wisdom, healed the sick, fed the five thousand, walked on water, and raised others from the dead, being raised from the dead?" The probability is still not that high—consider the surprise, indeed, the shock and even fear of the women and the disciples on finding an empty tomb on Easter morning—but it is surely much higher than one in a billion.

Like multiple witnesses, then, the occurrence of miracles in series can have dramatic effects on the credibility of miracle reports. In this case, however, it does so by altering the context and thus affecting prior probability assignments. Recall that, if the prior probability of an event is one in ten billion, 10^{-10}, then, under our cautious estimates, ten independent witnesses are required to raise the probability to .5. Twelve are needed to raise it to a near certainty. If the prior probability is one in a million, then only six witnesses are needed. In general, each order of magnitude in prior probability corresponds to a witness. So, if the prior probability rises to one in a thousand, three witnesses suffice. If it rises to one in a hundred, two are enough. If it rises to one in ten, then even one witness report makes the event more likely than not to have occurred.

To see why this is so important, consider a miracle such as the Resurrection, to which we assign a prior probability of 10^{-10}. Suppose that occupies a place in a series of miracles, such as the turning of water into wine, the feeding of

the five thousand, and so on, in decreasing order of probability. Say that the first miracle has a prior probability of one in a hundred, and each further miracle in the series has the same prior probability given the context comprising the previous miracles of the series. Then the miracle could appear as early as fifth in the series. If, moreover, each miracle in the series has at least three witnesses, even the miracle with prior probability of 10^{-10} is overwhelmingly likely to have occurred. Each witness to a miracle earlier in the series raises the probability of the final miracle's occurrence.

I am not, of course, arguing for the absurd thesis that the probability of a conjunction is sometimes higher than the probability of each conjunct. I am arguing that, sometimes, the probability of a conjunction, given the evidence for all conjuncts taken together, is higher than the probability of some conjunct given a subset of that evidence. For any p and q, $Pr(p \wedge q) \leq Pr(p)$; but it may happen that $Pr((p \wedge q)/(e_p \wedge e_q)) > Pr(p/e_p)$. Reports of miracles can provide evidence for other miracles directly or indirectly, by providing evidence of agency or power, for example, in a way that alters the context for other miracle reports. Far from being absurd, this is a special case of the insight that lends plausibility to coherentist accounts of justification.

One advantage of my account is that it explains a widespread ambivalence that many religious people feel about reports of miracles. We doubt whether Jonah was really swallowed by a large fish. We do not put much stock in claims to private mystical experience. We express skepticism about faith healing. We puzzle at people who see Mary's face on a tree. We laugh when, in a dream, God tells Homer Simpson, "Well, Homer, I'd better be going. I'm scheduled to appear on a tortilla in Mexico."

Yet Christian faith rests, at least in part, on reports of miracles found in the Scriptures. Those miracles, moreover, fit together in such a way as to support the conclusion that they are purposive acts of a single supernatural agent. From the perspective of the historical theory, the miracles that deliver Israel from the bonds of Egypt form an essential part of the relationship between God and His chosen people. The miracles that Elijah and Elisha perform continue that relationship, keeping faith alive under the dissipating pressures of the cults of Ba'al and the crises of the house of Ahab. Most crucially, the miracles of Jesus's birth, ministry, and Resurrection, and the subsequent miracles of the Apostles, help define what it is for Jesus to be the Christ, the Son of the living God. Without those miracles, what is left of Christian faith? We may not go so far as Paul, who says that "If the dead are never raised to life, let us eat and drink, for tomorrow we die" (I Corinthians 15:32). But if we have no evidence for miracles, we have no evidence of God's interaction with Israel, with the world, or with us. We have no basis for any *de re* attitudes toward God at all.

A typical Christian, then, tends to reject miracle reports in isolation but accept the series of miracle reports that constitute the backbone of the faith, seeing them, quite reasonably, as purposive acts of a single supernatural agent. Incoherence? Hypocrisy? Not at all. It is an entirely rational thing for a Bayesian Christian to do.

VI. ACQUISITION

So far I have followed the literature in concentrating on the issue of transfer rather than acquisition. I have been arguing, contra Hume, that it can be rational to invoke supernatural agency in response to miracle reports when they are attested by multiple witnesses or occur in series. But what about acquisition? Is it ever rational to think that an experience one is undergoing or has undergone is miraculous? Are there really events the best explanation for which might invoke supernatural agency? Specifying kinds of events that would have this property is difficult; to accomplish it would be to specify the range of possible miracles. We can at least say, however, that, normally, miracles are events that would not have occurred in the natural order without supernatural intervention, and that exhibit evidence of purposiveness. The miracles in the Biblical series I have discussed all fit that characterization. They are acts the best explanations for which involve supernatural agency, in fact, the agency of a single supernatural agent.

There are two arguments against a principle of acquisition, contending that it could never be rational for even the person undergoing it to describe an experience as a miracle. I shall argue that both arguments fail.

The first argument follows Hume in arguing that we could never acquire a rational belief in supernatural agency on the basis of any available evidence. It would always be more rational to doubt the testimony of one's senses—to suspect illusion, hallucination, madness, confusion, dreaming, or some similar epistemic dysfunction—than to accept supernatural agency or the evidence that points to it. This is Hume's argument applied to the senses rather than to witnesses. It has the merits and the demerits of that argument. Supposing that the senses are normally but not perfectly reliable, and that miracles are extremely unlikely, the probability that what one seems to be experiencing is really happening may be very low.

As I have argued, however, that argument is not decisive. We can respond just as we do when we doubt our senses for other reasons. Sometimes we can check one sense with another—reach out to see whether our sense of touch confirms what we see, for example. We can check our senses against

those of others if there are other witnesses to the same events. "Do you see what I see?" "Did you hear that?" We can moreover see whether the extremely unlikely event is singular or whether it is followed by other unlikely events. Just as the testimony of witnesses can constitute strong evidence in favor of a miracle report if there are multiple witnesses or multiple miracles, so the evidence of the senses for a miracle can be quite strong if corroborated by others or by our own senses on other occasions.

Again, the Humean argument seems to go too far. It argues against belief in extremely unlikely events solely because they are extremely unlikely. So it seems to indict belief in the occurrence of any extremely unlikely event.

Suppose that you buy a lottery ticket. The probability of your winning the lottery is extremely low. But it seems absurd to suggest that nothing you could experience could provide rational justification for thinking that you won the lottery. Given any one bit of evidence, let's say, the probability that you are suffering an illusion, a hallucination, a dream, madness, etcetera, is significantly higher than the probability that you have actually won. But it would be preposterous to conclude that you could never be in an epistemic position to conclude that you had won the lottery. You could check the ticket again. You could ask someone else to check the numbers. You could hand the ticket over to the officials in charge to see how they behave. You could see the bank statement after the money was deposited into your account. No one thing could be enough to support rational belief that you had won. But the accumulated evidence could.

A Humean argument against acquisition thus fails for exactly the reason the argument against transfer fails. We can find support for a belief in supernatural agency in the same ways in which we can seek support for believing that other highly improbable events have occurred. The women who find Jesus's tomb empty are "bewildered" and run to get others (Matthew 18; John 20); Thomas, doubting the testimony of others, wants confirmation from his own senses: "Except I shall see in his hands the print of the nails, and put my finger into the print of the nails, and thrust my hand into his side, I will not believe" (John 20:25). Subsequent appearances of Jesus seem, quite reasonably, to increase the confidence of the disciples. All this is entirely rational on Bayesian grounds.

The second argument would depart from Hume, arguing against belief in miracles not because their occurrence is extremely unlikely but because they involve attributions of supernatural agency. One might argue that nothing could count as evidence of a supernatural purpose—that nothing could count as a sign of God's activity in the world. Now, it is hard to see how to construct such an argument in general, without relying either on the metaphysical impossibility of miracles (as putative violations of universal and

necessary laws, say) or on the first argument that focuses on rational belief. But the argument makes a sweeping claim, placing all the following examples in the same position from an epistemic point of view. Admittedly, purported signs of God's purpose are often ambiguous. But there appear to be significant evidentiary differences between the following fictional cases, drawn from *The Simpsons*:

- Homer, in *Lisa's Sax*: "Musical instrument? Could that be a way to encourage a gifted child? [to the heavens] Just give me a sign! [At that moment, the store owner happens to put a sign in the window reading "Musical Instruments: The Way To Encourage A Gifted Child."] Eh, it works for me."
- Homer, in *Homer Bad Man*: "You mean…I'm on my own? I've never been on my own! Oh no…on own…on own! I need help…oh, God, help me. Help me, God!" [The phone rings; Homer answers it very slowly.] Homer: [very slowly] "Y'ello?" Man: "Hello, Homer. This is God…frey Jones from the TV magazine show 'Rock Bottom'."
- Lisa, in *Homer the Heretic*, surveying a raging fire at the Simpson house: "Truly this was an Act of God." The fire spreads to Ned's House. Homer: "Hey. Flanders is a regular Charlie Church, and God didn't save his house." A tiny cloud forms over the Flanders House; the rain douses the fire, and the damage is sealed with a rainbow. Homer: "D'oh!"
- Ned, in *A Star is Burns*: "Now, Maude, in our movie you lay Moses in the basket, then put it among the reeds, OK? Lights, camera, ac-diddelydoddely-doodely-action, Jackson!" [Maude puts the basket in the water; it is quickly swept away.] Todd: "Help meeee…eeee…ee ee…" [The sound vanishes as Todd passes behind some trees.] Ned: "Flanders to God, Flanders to God, get off your cloud and save my Todd!" [Lightning fells a tree across the river, blocking Todd's path.] Everyone: "Yay!" Ned: "Thanks, God!" God: [making the OK sign through the clouds] "Okily dokily!"

If the first two examples seem relatively easy to explain naturalistically, the last two do not. Moreover, they seem to exhibit obvious signs of purposiveness. They appear to satisfy ordinary criteria for attributing agency. The burden is surely on the opponent to show why no such case could possibly count as evidence of supernatural agency.

I do not have a criterion by which to distinguish cases like the first two from those like the last two. The last two examples are of course far less likely, within the natural order, than the first two. They offer stronger

evidence of purposiveness. They are harder to interpret as mere coincidences. These are relevant factors, but far less than a criterion.

We should not expect, however, to be able to draw a sharp line between cases that would provide evidence for supernatural agency and those that would not. All that we need is the possibility of cases that would. Bertrand Russell was once asked what he would say if, after death, he found himself confronted by God, who demanded to know why he did not believe in Him. "Not enough evidence, God! Not enough evidence!" was his reply. Note that he did not say, "There *could not have been* any evidence." Nor did he say, "What evidence do I have that I am talking to God *even now*?" Those answers sound specious. But they are exactly the answers the argument under consideration would demand.

There is a strong analogy, moreover, between these kinds of cases and the question of whether a physical system is closed. Within a physical system, it is possible to have evidence of various kinds (e.g., of the effects of acceleration throughout the system) that external forces are operating—indicating, in other words, that the system is not closed. The same is true of ecological systems, to take another kind of case, in which there can be empirical evidence for or against the operation of external forces on the system. There is nothing intrinsically mysterious about arguments that given systems are or are not closed. There appears to be nothing mysterious, therefore, about arguments that the order of nature itself is or is not closed. There can be evidence in favor of supernatural agency just as there can be evidence of interference, even intentional interference, with physical or ecological systems.

VII. CONCLUSION

I have argued that, although Hume shows it would be irrational to accept a single report of a single, isolated occurrence of a violation of a law of nature, nothing at all follows about the credibility of the central Biblical miracle stories. Multiple witnesses attest those stories, and they fall into series, supporting one another. Hume's argument shows that believing in isolated violations of laws of nature on the basis of a single witness's testimony flies in the face of reason. Skepticism about claims of isolated miracles, mystical experience, or privately transmitted visions is justified. But what is right in Hume's argument is fully compatible with rationally believing that God revealed Himself to Moses, sent him to Pharaoh, sent the plagues on Egypt, brought the Israelites out of Egypt, rescued them from Pharaoh's army, and led them (circuitously!) to the promised land. It is fully compatible with rationally believing that Elijah trounced the priests of Ba'al at Mount

Carmel or that Elisha raised the son of the Shunammite woman from the dead. And it is fully compatible with rationally believing that Christ was conceived by the Holy Ghost, was born of the Virgin Mary, and rose from the dead on the very first Easter morning.

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