

Abstract: If one claims that some religious belief is justified by the occurrence of a miracle, that religious belief is justified only if the belief that the miracle occurred is justified. Hume famously argued that testimony cannot justify belief in the miraculous (and thus also cannot justify religious belief), but I will argue that nothing can justify the belief that a miracle has occurred—not even seeing a miracle for oneself. To establish this, I will first show how Hume misunderstood what a miracle is and the conditions under which one would be justified in believing that a miracle has occurred. I will then identify the correct necessary and sufficient conditions for such belief and show why these conditions are impossible to meet. I will conclude by considering objections.

Justified Belief in Miracles is Impossible

“But certainly one feels that Hume’s standards of evidence are too high. What, one wonders, would Hume himself say if he saw [a miraculous] event?”

--Richard Swinburne (1968)

Religious belief is often claimed to be justified by the occurrence of miracles. The author of the Gospel of John, for example, took Jesus’ miracles as evidence that he was a divine being (20:31). Modern Christians usually agree (Apologetics Press 2001; *Is There a God?*) and will often cite examples of modern day miracles as evidence of God’s existence and his continued activity in the world (God Heals Man of Cancerous Tumors 2014). Asbury New Testament scholar Craig Keener even goes so far as to argue that modern miracles serve as evidence for the historicity of the biblical miracles (Keener 2011). Such arguments can be valid; for example, God couldn’t cause such things to occur unless he existed, thus miracles would serve as evidence of God’s existence. But belief in miracles can justify religious beliefs only if belief in the miraculous is justified in the first place. Many, following David Hume’s lead, argue that it is not.

Hume famously argued that “no human testimony can have such force as to prove a miracle, and make it a just foundation for any system of religion” (Hume 1993). Now theists, like Swinburne, suggest that Hume’s standard of evidence was too high—so high that perhaps even if he saw a miracle for himself, he would still not believe it. I, however, will suggest that Hume’s standards were not high enough; indeed, even if he had seen such an event for himself, he still should have refrained from believing it was miraculous. Simply put: even seeing a seemingly unexplainable event for one’s self cannot justify one’s belief in the miraculous and thus cannot justify one’s religious belief. To be clear, my primary thesis is that belief in miracles cannot justify religious belief, but I will argue that this is true because it is impossible for one to ever be justified in believing that a miracle has occurred. In fact, it is perhaps wrong to say that I will argue this; I will merely show why this is a consequence of universally agreed upon epistemic facts.

To establish this, I will motivate the establishment of a new, corrected criterion for justifying belief in the miraculous by pointing out two places where Hume’s famous argument goes wrong. Then, after articulating and defending this new criterion, I will show why it cannot be met. I will conclude by considering objections.

Hume's First Mistake

Hume expressed his most “accurate” definition of miracle in a footnote: “a transgression of a law of nature *by a particular volition of the Deity or...some invisible agent*” (Hume 1993, p.77, emphasis added). In other words, for Hume, a miracle is a violation of natural law *caused by God*. But Hume himself neglects the latter half of his definition in the rest of his writings; throughout them he simply equates miracles with “natural law violations.” But this, it seems, was a mistake. Hume was concerned about whether testimony regarding miracles could justify religious belief, yet it is the fact that miracles are caused by God that is most relevant to that concern. In fact, whether an event violates natural law is irrelevant. Regardless of whether it violated natural law or not, if we knew a specific event was caused by God, its occurrence would be evidence that God exists (since God cannot cause an event unless he exists). Consequently, any such event would justify religious belief and, I believe, would also be called a miracle. And so it seems that, properly understood, a miracle is simply an event caused by God.

Some will undoubtedly object because this is contrary to the standard philosophical definition; and it is true that, like Hume, philosophers have also ignored the “caused by God” portion of Hume’s definition and instead formally defined miracles as violations of natural law. Others might insist that my point is moot because divine action necessarily requires law violation; so even if miracles are defined as divinely caused events, they would all also be violation of natural law. Both claims are false, however; divine action does not require law violation and knowing an event is caused by God is sufficient (and knowing that it violates natural law is not necessary) to call it a miracle. For example, God preventing the decay of a radioactive atom to save Schrödinger’s cat would not violate natural law, yet if we knew that God had done so we would classify that event as a miracle. (Indeed, the director of the Divine Action Project, Robert J. Russell, is a proponent of the view that God could cause miracles by causing indeterminate quantum events. See Ignacio Silva (2014).) In addition, God causing someone to win the lottery so that they can pay their medical bills would not necessarily require the violation of natural law, and yet if we knew God had done so, we would call it a miracle.

Now, whether we could know that such events were caused by God is another matter—one that I will address shortly. But for any given event, if we *did know* that God took special care to cause it—regardless of whether it involved the violation of natural law—we would (and should) call that event a miracle. So, miracles are simply divinely caused events.

Although it contrary to the standard philosophical definition, this is not contrary to how “miracle” is used in the English language; Merriam-Webster, for example, suggests merely that miracles are extraordinary events that manifest divine intervention—not law violations. Perhaps surprisingly, my suggested definition also aligns with how the word is used by philosophers in practice—especially those who believe in miracles. For example, I heard this definition tacitly endorsed and defended many times over, in presentations and conversations, at the Ian Ramsey Centre’s conference on special divine action (Oxford, July 13-17, 2014). It was made clear that special divine actions should not be confused with general divine actions, like creating, sustaining or regulating the universe. But anytime the possibility of God making a particular event happen (i.e. a special divine action) was discussed, regardless of whether

the event would break a law of nature, be merely improbable, or was just so important that God wanted to guarantee its occurrence, the event was called a miracle.

But in order for such an event to justify religious belief, one must be justified in believing that the event was miraculous—that it indeed was caused by God. How could such a belief be justified? Attributing causation can be complicated, but at the least: to justifiably believe that A caused B, A must be the best explanation for why B occurred. If there is a better explanation for why B happened than A, one cannot be justified in believing that A caused B. Indeed, when someone claims that they are justified in believing that God caused an event, they are claiming that God's intervention is the best explanation for why that event occurred. "How else," they might insist, "can you explain it?" So now, we ask, how does one determine what is the best explanation for the occurrence of an event?

Fortunately, this question has already been settled. The logic of abduction, inference to the best explanation, is well understood and well defined. It is taught in critical thinking classes, lies at the heart of scientific inquiry and is our best (most successful) method for discovering the truth about the world—particularly for finding causal explanations. Its criteria are often expressed as such:

- Fruitfulness: the hypothesis that makes the most correct novel predictions is the most fruitful.
- Simplicity/Parsimony: the hypothesis that requires or posits the fewest number of entities, events and forces is the simpler, or more parsimonious, hypothesis.
- Conservatism: the hypothesis that coheres best with what we already have good reason to believe, and doesn't conflict with established knowledge, is the more conservative.
- Scope: the hypothesis that most increases our understanding—that explains the most and does not raise more questions than it answers—has the widest scope. (Schick and Vaughn, 2010)

When engaged in abduction, one prefers the explanation that is, all other things being equal, more fruitful, simpler, wider scoping and conservative. When dealing with new scientific developments, sometimes there is not a "clear winner." And, unless a past event leaves physical evidence of its occurrence (that we could predict to observe), fruitfulness will not come into play. But when one hypothesis is clearly more adequate—say, by being the simplest, most conservative and widest scoping explanation—we should prefer it. We may choose to believe something else, but epistemically we will not be justified in doing so.

So, we can now see why Hume's mistake of including "natural law violation" (and largely ignoring "caused by God") in the *definition* of miracle was not detrimental to his argument. He merely confused the definition of a miracle with the conditions under which one is justified in believing in a miracle. In other words, although Hume was wrong and non-law-violating events could *be* miracles, Hume was right that one could not be justified in believing that an event was miraculous unless it violated natural law. Why? Because, if an event does not violate natural law, then it will have a natural explanation—and available natural explanations will always be more adequate than supernatural ones. When compared to supernatural explanations, available natural explanations will always...

- ...be simpler: supernatural explanations invoke an extra entity or force that exists outside the universe that natural explanations do not.
- ...have wider scope: explanations that invoke natural laws can also be used to explain other similar events consistent with the natural laws; supernatural explanations, on the other hand, essentially explain the unexplained with the inexplicable—which does not enhance our understanding.
- ...be more conservative: natural explanations will always cohere with what we have good reason to believe about the world: for example, that it is governed by laws, that it is causally closed, and that matter and energy are conserved. Supernatural explanations will not.

Suppose relatives of yours are flying in and arrive safely. One may thank God, thinking their safe arrival was an event God wanted to guarantee, but the natural explanation for their safe arrival (that involves a sturdy plane, a competent pilot, etc.) will not invoke extra entities, conflict with causal laws and can help explain all other safe travel. So, the natural explanation is epistemically preferable. The other can only be driven by faith (i.e., belief without justification).

Suppose some unlikely event occurs—you win the lottery, your cancer goes into remission, or the USA beats the Russians in hockey in the 1980 Olympic Games. Again, the natural explanations for such events (that, on the large scale, such things are bound to happen) will not invoke extra entities, conflict with causal laws, and will help explain other unlikely occurrences. After all, someone had to win the lottery, many diseases remit, and there are plenty of true “David and Goliath” stories.

If, however, the occurrence of some event has broken natural law, then an event has occurred that our universe could not have produced on its own. When left to its own devices, our universe can only produce events that are consistent with the laws that govern it. So, if we know a law-violating event has occurred, we know that the universe has not been left to its own devices. Intervention from beyond the natural world—supernatural intervention—would not only seem to be the best explanation, but the only explanation. Assuming for the sake of argument that “God did it” will be the best among the competing supernatural explanations, belief that divine intervention has occurred would be justified.

So, in summary, Hume was wrong in defining a miracle as a violation of natural law; a miracle is simply an event caused by God. But this means that one is justified in believing that a miracle has occurred IFF one is justified in believing that divine invention has occurred. However, one is justified in the latter IFF one is justified in believing that a natural law has been violated. So, although “natural law violation” is not a part of the definition of miracle, it is a necessary component of justified belief in miracles. So now, we are left wondering, when is one justified in believing that a natural law has been violated?

Hume’s Second Mistake

Hume’s answer to this question is straightforward: If one is justified in believing that a regularity established by experience has been violated, then one is justified in believing that a natural law has been

broken. Our experience of the world is quite regular: people are stopped by solid walls, people standing in water sink, and dead people stay dead. According to Hume, if one could justifiably believe that a person had passed through a wall, walked on water, or been resurrected from the dead, one would be justified in believing that a natural law had been broken.

Hume's thesis was simple: Testimony can never justify belief that a miracle has occurred. And given the above assumption, Hume's argument is straightforward. Testimony can't justify one's belief in a violation of an experienced regularity because experienced regularities have direct inductive evidence, whereas an attested violation can only have a single instance of indirect evidence. If so, testimony can never justify belief that an experienced regularity has been violated—and thus that a law violation (and thus a miracle) has occurred.

But even if Hume's thesis is true, his argument was faulty. Objections aimed at his error usually take the form of a counter example. Most famous is the story of the Indian Prince who had spent his entire life in the temperate zone of India and had thus never seen water freeze. At first, he refused to believe the Northern European traveler who said the water in the lakes of his home country got so hard during the winter that elephants could walk across them. After all, this went against an experienced regularity—the Prince's uniform experience of water. In India, even when water gets colder, it never gets harder (much less solid). But as more and more travelers independently attested to the same fact, the Indian Prince eventually came to believe in the existence of ice—and justifiably so. So, it seems, testimony can justify the belief that an experienced regularity has been violated.

Hume, in the second edition of his work, addressed this story and suggested that it does not contradict his thesis. Freezing lakes in northern Europe are not really “miraculous”—a violation of an experienced regularity—because they are not

“contrary to uniform experience of the course of nature in cases where all the circumstances are the same... [because the prince] never saw water in Muscovy during the winter...[he] cannot reasonably be positive what would there be the consequence” (Hume 1993, paragraph 10).

In other words, because the Prince's experience was not universal—he had never been in northern Europe during the winter—he can't say that frozen lakes in northern Europe during winter are contrary to his experience. This isn't an example of testimony justifying the belief that a *universally* experienced regularity has been violated, Hume suggests, and only if an event is contrary to our universal experience (like our universal experience that dead people stay dead) would one be justified in concluding that an event was miraculous.

But Hume's mistake is likely clear. No one's experience is universal, regarding anything—even death. So any supposed violation of one's experience could be said to not really be a violation of one's experience because—whatever the supposed violation—one has never had such an experience in exactly that same circumstance. We could say that Jesus' resurrection is not contrary to my experience, for example, because I've never experienced what it's like outside Jesus' tomb on Easter morning.

Now, Hume was right that such stories were not counter examples to his main thesis. After all, the prince story is not one in which miraculous belief is justified by testimony; frozen lakes aren't miracles. What Hume failed to realize, however, is that the prince story does falsify certain assumptions in his argument. Fortunately for Hume, the reason he was mistaken actually shows why his conclusion is true. How?

The prince story is one in which testimony justifies doubt of an established regularity, so Hume was wrong that testimony does not ever have the power to justify such doubt. However, even as the prince justifiably doubted an experienced regularity, he was still not justified in believing that a miracle had occurred. Why? Because he was not justified in believing that a natural law had been violated. This is contrary to Hume's suggestion that, if one is justified in believing that an experienced regularity has been violated, one is justified in believing that a natural law has been broken. Thus Hume was wrong about the conditions under which one is justified in believing that a violation of natural law has occurred; justified belief that an experienced regularity has been violated is not enough. This fact supports Hume's thesis, however, because it means that being justified in believing that a natural law has been broken (thus that a miracle has occurred) is even harder than Hume realized. Simply realizing that a regularity one has experienced has been violated is not enough because our experience is not universal.

Consider a holistic medicine practitioner's lifelong experience, which tells him that holistic medicine works; he recalls a lifetime of patients who got better after he treated them. Would studies showing that holistic medicine doesn't work justify him in believing that a miracle had occurred during those studies? Of course not; if he's rational, he'd conclude that his experience had let him astray. After all, what's the better explanation: that, (a) the laws of nature were violated during those studies or (b) "I don't know everything and made a mistake." If he thought about it further, he might even realize that it was confirmation bias and availability error that led him astray. He believed it worked, so it seemed to.

And so it's not just the non-universality of our experiences that can lead us astray, but also their non-reliability. When I teach critical thinking and scientific reasoning, one of the main lessons I have to drive home to my students is that our senses and memories are not nearly as reliable as we assume they are. Because of the powers and limits of our perceptions, we often see what is not there. Confirmation bias and availability error make us see patterns and regularities that don't exist. Wishful thinking makes us remember things that never happened. Wide-awake eyewitnesses can be completely wrong about an event they saw in broad daylight. Truth be told, we should expect the regularities of our experience to be violated now and again because our experience simply is not that reliable.

This is why science relies on well-controlled repeated experiments that guard against the limits and powers of our experiences. This is also why conservatism is only one of four criteria by which we determine the best explanation. If we always and only favored what coheres with what we think we already know (e.g., what's consistent with experienced regularities), then we could never learn that we are mistaken. All things being equal, we should favor what coheres with our experience; but if I become aware that a non-conservative hypothesis is simpler and more explanatory, then it should be accepted.

And testimony can most certainly make one aware of this. For example, you likely think sugar makes kids hyperactive. But, it turns out, this is false—and your experience of such a correlation is likely due to

confirmation bias. Controlled experiments have been done in which groups of children who have and have not been given sugar are assessed to be equally hyperactive (Yale Scientific 2010). It turns out, this even coheres better with what we know sugar does to the body and brain—but just hearing about such studies is enough to justify your belief that a regularity you experienced has been violated. But, of course, you are not in turn justified in believing that a natural law has been broken.

But if a violation of an experienced regularity is not enough to justify belief that a natural law has been violated, what is?

A New Criterion

In debates about miracles and violations of natural laws, there is often an equivocation between what *the natural laws actually are*, and what *our understanding of those laws is*. It's clear that there is a set of laws that governs the way the universe works. J. L. Mackie (1982) called these “laws of working,” but Hume called (and I've been calling) them “laws of nature.” They are the actual set of regularities that actually governs the way the universe behaves. Whether you think that such laws exist as abstract objects, are true counterfactual propositions, or are simply regularities that perpetuate throughout the universe, these laws of nature have been in effect since the beginning of the universe, and our ignorance of them does not cause them to cease to exist.

On the other hand, there is our understanding of what the laws of nature are. Let's use the phrase “laws of science,” and reserve the term for human articulations of what we, as a community, justifiably believe the laws of nature to be. Such laws of science would include the basic laws of physics which (we think) govern the way particles, wave functions, quantum vacuums and the like behave. (Indeed, if these laws are correct, all laws of science reduce to the laws of physics.) But, among the laws of science, I would also include laws found in other branches of science, like the laws of biology (e.g., death is a permeate state) or the laws of chemistry (e.g., water doesn't spontaneously turn into wine).

It's worth noting that the laws of science are not guesses; they are the result of the tireless efforts of some of the brightest minds in human history working under the guidelines of our most reliable means to discovering the truth about the world: the scientific process. These laws are not the result of experiencing regularities, but are the result of conclusions we have collectively drawn after many repeated well-controlled experiments, mathematical calculations, hypotheses comparisons and even smashing particles together at the near the speed of light. To boot, the laws of science are the foundation of our most significant achievements; because of their reliability, we can, for example, travel between continents in mere hours, save the lives of millions, and have seen back to the beginning of the universe.

But it's also worth noting that the laws of science can be wrong; in fact, they have been. We have been wrong in our estimation of what the laws of nature are, and our current laws are likely inaccurate in some way or another. But the amount of confidence we justifiably have in them does suggest that, if we are to be justified in believing that a natural law has been violated, we must first be justified in believing that a law of science has been violated. If an event is consistent with the laws of science, there is no reason to think that it constitutes a violation of natural law. But since the laws of science have been wrong in the

past, a mere violation of them will not justify the belief that the laws of nature have been violated. We must also be justified in believing that the law of science in question is not wrong—that it accurately describes a law of nature.

With all this understood, we can now clearly understand and express the conditions under which one would be justified in believing that a law of nature has been violated (and thus that a miracle has occurred):

One is justified in believing that a natural laws has been broken (and thus that a miracle has occurred) IFF (a) one is justified in believing that a law of science, X, has been broken and (b) one is justified in believing that X accurately describes a law of nature.

If both conditions are met, one would be justified in believing a law of nature had been violated; and since supernatural intervention would be the best explanation for such a violation, belief that a miracle had occurred would be justified.

Notice that this tells us nothing about the possibility of miracles. As long as the supernatural (and supernatural intervention) is possible, miracles are possible. Instead, this speaks to the question of this essay: is justified belief that a miracle has occurred possible? The answer to this question turns on whether or not both of these criteria can be fulfilled. As we shall now see, they cannot.

Why Justified Belief in Miracles is Impossible

As we have seen, to justifiably believe that a miracle has occurred, one must first justifiably believe that a law of science has been broken. This is quite difficult to accomplish. Most certainly, the testimony of an eyewitness who says that he saw a law of science broken will be insufficient. The hypothesis that the testifier is either lying or mistaken will always be more adequate. Even in the case of multiple eyewitness reports, collusion, exaggeration, trickery and mass delusion will still be more likely. Supposed you even witness the event yourself; you will still not be epistemically justified in believing that a law of science has been broken. The hypothesis that your senses have led you astray, or that there is an explanation consistent with the scientific laws that you are ignorant of, will always be more adequate. In short, personal experience—whether it be yours, someone else's, or a group's—will never overturn scientific consensus. Scientific laws are established in the most rigorous way—a way that does not merely rely on individual observations and guards against the limits and powers of our personal and collective experiences. So the personal experiences of no one person, or collection of persons, will ever be able to overturn them epistemically.

This is especially true if one is claiming that the law was broken because of divine intervention. Such a “miracle hypothesis” will never...

- be simpler: it will invoke supernatural entities—while the competing natural hypotheses work within what we already know exists.

- have wide scope: it will only explain the event in question—whereas the competing natural hypotheses (e.g., that the witnesses were mistaken) can explain any miraculous report.
- be conservative: it will not only conflict with the scientific law it says was broken, but other well established causal closure and conservation laws—whereas the competing hypothesis will cohere with them and other things we know: people often lie and our experiences can easily lead us astray.

After all, when I see something seemingly miraculous, I am in the exact same epistemic position I am when someone claims to have magic powers. Even if they can do something that I can in no way explain—say, walk on water or float between buildings (like Criss Angel), catch bullets with their teeth (like Penn & Teller) or seem to read people's minds (like Uri Geller)—it's more likely that there is a natural explanation that I can't detect. In neither situation am I justified in believing in supernatural powers.

That's not to say that I can never justifiably believe that a scientific law has been broken; such belief has even been justified in the past. Take, for example, when Einstein's Theory of Relativity overturned Newtonian Physics. Although Newton's laws had been accepted for generations as scientific laws, it became possible to justifiably believe Newton's laws had been violated. For example, such belief was justified after the solar eclipse of May 29, 1919, when we observed that the light from the Hyades star cluster did not bend the .86 seconds predicted by Newton. Of course, the justification was not the result of this single observation; had it not been for the development of Einstein's theory of relativity in the preceding years, and the fact that it accurately predicted how far the light did bend (1.75 seconds), we might have justifiably thought there was something wrong with our detection method (The North Coast Journal 2013). In fact, for many, the eclipse observation was not enough, and Einstein's theory would not have been accepted had it not also proven its scope by, for example, explaining the perihelion of Mercury's orbit. But the point is, at the time, it was justified to believe that a law of science had been violated.

But this example demonstrates not only that (and how) the first criterion can be met, but why the second criterion can't in turn be met and why justified belief in miracles is impossible. By becoming justified in believing that Newton's laws were broken, we immediately and automatically become justified in believing that they did not accurately describe a law of nature—that they are wrong. When one shows that a law of science X has been broken, one in turn shows X is not a law of nature.

That's not to say that we can't justifiably believe that a law of science accurately describes a law of nature. By my estimation, I think we are justified in believing that Einstein's law that nothing can accelerate past the speed of light is a law of nature. However, if we were to prove that Einstein's law was violated by, say, discovering something that did travel faster than the speed of light, then—although we would then be justified in believing that a law of science had been broken—we would no longer be justified in believing that it was a law of nature.

Take, for example, the measurements made in 2011, with the OPERA particle detector, which suggested neutrinos travel faster than the speed of light. Even this well controlled experiment, by itself, could not

justify the belief that Einstein's law had been broken; the scientists realized that—even despite their best efforts to conduct a controlled experiment, and their failed efforts to find a mistake in their measurements—they could still be wrong. So instead of concluding that a scientific law had been broken, they asked the scientific community to examine their results, and even repeat their experiments (Scientific American 2011). It turns out that they were mistaken—put simply, an optical wire was not screwed in all the way (Of Particular Significance 2011). But had the experiment been successfully repeated, and no one anywhere could find a mistake, then we would have been justified in believing that Einstein's speed-limit law had been broken. I could have even been justified in believing this based on mere testimony—say, by reading a peer-reviewed article on the topic. But, at the same time, I would have lost my justification for thinking that Einstein's law was a law of nature.

This example demonstrates many things. First, it is extremely difficult to fulfill the first requirement for belief in miracles; establishing that a law of science has been broken takes a carefully controlled scientific experiment, successfully repeated by many others, and meticulously checked for mistakes. We can see why “They saw it with their own eyes” or even adding “I saw it with my own eyes too” is just never going to cut it when it comes to our first criterion. But it also shows us how establishing that a law of science has been broken immediately erases any justification we had for thinking that law accurately described a law of nature. Thus, we see why the conditions that are necessary for justified belief in a miracle are impossible to fulfill at the same time: fulfilling one criterion automatically “un-fulfills” the other. Consequently, justified belief in miracles is impossible.

Responding to Objections

Some theists are perfectly fine with regarding miracle stories as myth; the importance of such stories is, they believe, found in their moral message. Such miracles need not have actually happened for the stories to be revered and retold. Other theists disagree, but are perfectly fine admitting that belief in miracles is a matter of faith—that such belief cannot be epistemically justified by argument or evidence, but instead can only be accomplished by an act of the will. “Faith, after all, is a virtue,” they insist. “And it is a virtue necessary for religious belief.”

Others, however, insist their belief in miracles is epistemically justified. Some argue, for example, that historical evidence points to the reality of Jesus' miracles, including his resurrection (Habermas 2012). Others claim that belief in the miracles of Muhammad is justified by the reliability of the initial reports, their success in winning converts and convincing skeptics, and the reliability of the methods by which they have been passed down (The Religion of Islam 2006). Such believers, of course, insist that my thesis is wrong and so have presented many objections to my argument. In conclusion, I will respond to the best and most common.

Objection 1: What if we can't revise the laws?

When the 1919 eclipse provided justification for believing that Newton's laws had been broken, we already had a refinement of the laws that could replace them: Einstein's relativity. But what if we had no such refinement? What if a single anomalous (non-repeatable) event occurred, and there seemed no

reasonable way to refine our understanding of the laws to accommodate it? Would not we be justified in believing that our understanding of the laws was indeed correct, but that the anomaly was an exception to them? Swinburne (1968) thought so, but his argument was flawed in many ways.

First, Swinburne grossly overestimates what testimony can establish and thus wrongly thinks it can justify belief in law violation. For example, he thinks two hundred skeptical witnesses claiming to have seen a holy person levitate is grounds enough to think that the person indeed did (actually) levitate. But, as we've already seen, collusion, exaggeration, clever trickery and/or mass delusion are all more adequate explanations. After all, there are likely close to a million living eye witnesses in India (many who were initially skeptical) that attest to having seen Sathya Sai Baba performing miracles, including levitation. (He's an Indian holy man who claimed to be a reincarnation of Vishnu, whose attested miracles match and even exceed Jesus' miracles in both number and variety.) Yet Swinburne would undoubtedly conclude such accounts were not credible—and rightly so.

Second, although Swinburne rightly points out that the occurrence of a past anomaly could be testable (even non-repeatable events can leave behind physical evidence or effects), he wrongly suggests that such evidence could provide as much justification as that which is possessed by the laws. He thinks our justification for the laws merely comes from “data”—successful predictive observations of the laws not being broken, each which gives only “limited support” to the notion that the laws are never broken. Since similar successful predictions could be made regarding the evidence or effects of an anomalous event, he suggests the laws and past anomalous events can have equal justification. But our reason for thinking that the laws are true—and, indeed, that they are never anywhere broken—goes beyond specific observations of them not being broken. Their truth provides the simplest, most conservative and wide scoping explanation for how the universe works. Their consistency unifies our knowledge in a way that nothing else does—in a way the occurrence of a single, non-repeatable, past event never could. So no belief that a non-repeatable past event occurred, even if it was mundane, could ever have as much justification as belief in the laws.

In fact, this is true of the simple hypothesis that “the universe is consistently governed by laws,” even if I don't know exactly what those laws are. And this shows us why Swinburne's main thesis is mistaken. Suppose that I come to be justified in believing that some scientific law has been broken. Suppose also that I have no available refinement of the laws that could explain the event in question. I still would not be justified in thinking that the laws of nature have been broken; it's much more likely that I'm simply not smart enough to think of a refinement. In fact, this is exactly what we all would have concluded had the OPERA's observation of faster-than-light neutrinos been confirmed.

Perhaps ironically, Swinburne invokes Sherlock Holmes and implies that investigating a past anomalous event, like Holmes investigates a crime, could reveal that it was a miracle. But Holmes employed abduction and famously never accepted a supernatural explanation, no matter how inexplicable the events in question seemed. He assured us that after “you have eliminated the impossible, whatever remains, however improbable, must be the truth.” But as brilliant as Holmes was, he never considered the supernatural to be more probable than his own ignorance—and rightly so.

Objection 2: Counter Examples

Since I am claiming that justified belief in the miraculous is impossible, my thesis can be falsified by a single hypothetical circumstances in which belief in the miraculous would be justified. Let's consider three extreme examples.

Case 1 (Resurrected Princess): Suppose the major news networks report that Princess Diana is back from the dead. They conduct interviews with someone who looks just like (an older) Diana and her family doctor who says that he certified her death in 1997 and has confirmed "the risen Diana's" identity with a DNA test. Let's say there is even video of her emerging from her grave. Would we be justified in believing that Diana rose from the dead? Of course not. It is much more likely that she had a secret twin, or even that she faked her death (even if I don't know how). She likely had the help of her doctor and some video editing—but perhaps she even fooled him.

Case 2 (Reattached Limbs): Suppose I come upon the scene of an accident and a dismembered body, with each of its limbs detached. I then witness the limbs flop toward the body and reattach themselves. The body then gets up, says hello, and walks away. Am I justified in believing this was a miracle? No. Most likely, I'm hallucinating; after all—even if I am not fasting, overstressed, or having a seizure—Oliver Sacks has shown that hallucinations can happen even in perfectly healthy people (Sacks 2010). Even if there are multiple witnesses to complicate the hallucination hypothesis, it's more likely that a cruel magician is pulling a trick; after all, I've seen Criss Angel, in front of an outdoor crowd, pull someone's legs off and watch them walk away on their hands. And even if I did conclude that a law of science was broken, alien technology that relies on a more advanced knowledge of the laws of nature is still more likely than supernatural intervention.

Case 3 (Writing in the Stars): Suppose I'm star gazing and in my telescope and I see a collection of distant stars rearrange themselves so that they spell out, in modern English:

"Give it up, Kyle. Belief in miracles can be justified, and here's your proof. – God."

I would likely find this flattering and even emotionally compelling, but it still would not confer epistemic justification. Most likely, someone rigged my telescope. Even if the observation is confirmed by many others, collusion is still more likely—or, even alien trickery would be a simpler, more conservative, and wider scoping explanation.

Objection 3: Non-Falsifiability

My responses to such counter examples often lead to the objection that my position is non-falsifiable, and thus irrational. Even if God himself appeared to me, and did everything I asked of him to prove that he was God, I would still think it was more likely that he was an alien with technology I can't understand playing a trick on me. Such unfalsifiable stubbornness can't be rational, can it?

There are a few things to say in response.

First, Duhem-Quine already taught us that everything is unfalsifiable, so the mere fact that my position is unfalsifiable can't be a mark against it. After all, the history of science has shown that counter evidence to a theory can be rationally dismissed if the theory is well established—and “the laws of nature always hold” is.

What's more, I am not engaged in the kind of non-falsifiability that usually discredits a hypothesis as irrational. For example, I am not turning evidence against my theory into evidence for my theory like conspiracy theorists who claim that said evidence was planted by the conspirators to throw us off track.

In addition, I am not, as one critic suggested, “adopting a methodology that closed-mindedly ignores any evidence, no matter how convincing, that a miracle has occurred.” In fact, I'm not adopting a methodology at all. I am showing what beliefs can, and cannot, be justified given the proven methodology that we have already adopted for adjudicating explanations: abduction. Given this method, what possible explanations will always be available, and what supernatural intervention entails, “God did it” will never be the best explanation for any event in the world. My thesis simply follows from the epistemological facts.

I could make a similar point about, say, UFO sightings. It is impossible for belief in aliens to be justified by a UFO sighting because, given the established method for delineating explanations, and what alternate explanation will always be available, “that's an alien craft” will never be the best explanation for something you can't identify in the sky. That your senses are leading you astray, or that there is an earth-like explanation that you simply can't detect, will always be the better explanation. This makes my belief that a UFO is not an alien craft unfalsifiable, but that does not mean that it is irrational. That such a belief cannot be justified is simply a consequence of the relevant epistemic facts.

Objection 4: Prior Knowledge of God's Existence

This last example prompts another objection. It would be impossible for belief that a UFO is an alien craft to be justified—unless, of course, the existence of aliens visiting in flying crafts became a known fact. Consider: a caveman could not be justified in believing that a UFO was a human-made flying machine, but I could; likewise, I cannot be justified in believing a UFO was an alien craft, but Captain Kirk could. Knowledge of the existence of visiting aliens could make the “alien hypothesis” the most adequate. Likewise, although I could not, someone with knowledge of God's existence could justifiably believe divine intervention is the best explanation for a seemingly inexplicable event. If knowledge of God's existence (and the fact that he interacts in the world) was already justified, then belief in miracles could be justified.

Nevertheless, my thesis still holds.

First, my primary thesis is merely that belief in miracles cannot justify religious belief. According to this objection, justification for the religious belief has to come first; it's the religious belief that serves as evidence for the miracle, not vice versa. So my primary thesis still holds.

Second, justified belief in miracles being dependent upon justified belief in God entails that belief in miracles is justified only if belief in God is. Yet many consider belief in God to merely be a matter of faith. Spelling out why would take an entire paper, but...

- ...most think deductive proofs of theism fail. The ontological argument, in all its forms, is either invalid or question begging, and has failed to impress anyone who didn't already believe.
- ...most think inductive proofs of God's existence are impossible. Not only have cosmological and theological arguments been routinely criticized and debunked (Schick 1998 and Manson 2009), but they both necessarily involve a fallacious kind of reasoning—a variety of “appealing to ignorance,” related to the “god of the gaps” fallacy, where one simply interjects their favorite unusual or supernatural explanation when a natural one is not forthcoming. “God did it” will never be the best explanation for the universe's existence or design for much the same reason that it will never be the best explanation for anomalous events.
- ...most agree that belief in God is not properly basic. One's belief in God cannot be justified by one “being appeared to Godly” in the same way that a belief in tree can be justified by “being appeared to treely” (Plantinga 2000). Not only does this grossly overestimate the reliability of our senses—especially any divine sense that we might have—but, again, there will always be simpler, more conservative and wider scoping explanations for such experiences that do not invoke the divine. I have argued elsewhere that religious experiences, including those caused by the *sensus divinitatis*, cannot justify religious belief (reference deleted for blind review).

In short, if justified belief in God is necessary for justified belief in miracles, then justified belief in miracles is still impossible.

Objection 5: You're Applying the Wrong Criteria

This objection comes in a few varieties, but the basic idea is this: You're applying the scientific criteria where it doesn't belong. Miracles are a religious matter, not a scientific one. And since miracles, by definition, can't be repeated, and thus can't be subject to repeated observations or studied in a lab, scientific thinking can't be applied to them.

This objection makes many mistakes. First of all, labeling something as a religious belief does not automatically put it outside of the purview of scientific inquiry. Any claim about how the world is, or what has happened in it, is fair game for scientific investigation—whether it be religious or not. For example, I might be convinced that a prayer will cure my cancer, but a biopsy can confirm or deny the accuracy of this religious belief. Of course, Stephen J. Gould (1997) argued that science and religion occupy “non-overlapping magisteria,” but this is true only on Gould's assumption that religion only makes claims about “ethics and meaning.” Clearly, claims about the occurrence of miracles do not fit into either of these categories; instead, they are claims about how the physical world is or what has occurred

in it—about what events happened and what caused them—and thus can and should be subjected to scientific inquiry.

Second, the fact that something cannot be repeated or studied in a lab does not put it outside the purview of scientific reasoning. This reflects a naïve and limited view of what science is, and what it can do. Scientific reasoning is, at heart, simply abduction, and the criteria of abduction can and should be utilized anytime a causal explanation is put forth. Take, for example, someone's claim that they saw the ghost of their grandmother sitting on the edge of their bed last night at 3am. This event is completely unrepeatable, left no evidence, and in no way can it be studied in a lab. Nevertheless, I can and should bring to bear scientific reasoning to see if the claim is justified. One explanation is that the disembodied spirit of their grandmother actually visited them in the middle of the night; another explanation is that this person had a waking dream that they mistook for reality. We cannot disprove the ghost hypothesis, but of course the fact that something cannot be disproven is not a reason to think that it is true. The criteria of abduction clearly suggest that the waking dream hypothesis should be preferred—it is simpler, more conservative, and wider scoping—making the ghost hypothesis something you will simply have to take on faith.

Now others may claim that it is not fair to use abduction to evaluate miraculous claim because miraculous claims will, by their very nature, always fall short. But this actually grants me my thesis. Miraculous claims are, by their very nature, not adequate. They...

- ...are not simple: they, by definition, invoke extra entities.
- ...have little scope (explanatory power): they simply replace one unexplained thing with another—inexplicable entities and unexplained powers.
- ...are not conservative: they conflict with causal closure and conservation laws.

Thus, they will never be the best explanation. And the fact that miraculous explanations will always fall short according to the criteria of abduction is not a reason to avoid using abduction to evaluate them—unless, of course, your only concern is protecting miraculous belief. This would be like insisting that we use something besides deductive logic to check your deductive argument for validity once you realize that the criteria of deduction will show your argument is invalid. Since the scientific method, along with abduction, is undeniably our most reliable guide to truth, if you are concerned with learning the truth, it must be brought to bear on that to which it is relevant. In short, since miraculous claims insist that divine intervention is the best explanation, no method besides *inference to the best explanation* should be preferred.

Lastly, miracles are not by definition unrepeatable. They were according to Hume; if miracles are simply law violations, and laws are merely observed regularities, any regularly occurring miracle will simply create its own law. But there is no reason God couldn't intervene in the world, the same way, over and over; since a miracle is simply a divine intervention into the world, there is no reason the same miracle can't happen over and over. This, in fact, is what some claim God does when they say they can heal people by invoking God's power. And thus some miraculous claims can be studied in controlled circumstances. This, in fact, is the *raison d'être* of James Randi's "Million Dollar Challenge," which

offers a million dollars to anyone who can prove a supernatural claim under controlled conditions. So far, no one has passed.

Objection 6: Repeated Miracles

This last realization gives rise to another objection. People like James Randi have exposed faith healers, like Peter Popoff, as frauds—his wife reads him prayer requests with an FM transmitter, he puts people with walkers in wheelchairs and then pretends they can't walk, he puts people with actual illness behind ropes so they can't reach the stage, etc. Likewise, the "holy water" emanating from a statue of Christ in Mumbai was shown to be from a broken sewer pipe (Slate 2014). Penn & Teller debunked supernatural claims for eight seasons on their show "Bullshit." But what if one such claim survived scrutiny? Suppose a faith healer did pass the million dollar challenge. Would belief in the miraculous be justified then?

Again, no. Even the knowledge and observational powers of debunking experts are not perfect. After all, Penn & Teller are fooled about once per episode on their show "Fool Us." The doctors Randi uses to verify a person's illness might collude with the healer; the debunkers themselves might get blackmailed. Even if I am an expert debunker myself, it's simply more likely that my knowledge of the laws of nature is inaccurate than it is that the laws were violated. For reasons that should be clear by now, each of these explanations is simpler, more conservative and has wider scope.

Objection 7: Abduction Can Lead you Astray

I have not denied that miracles are possible. But I have argued that, even if an actual miracle happens right before your eyes, you should doubt it; you should apply the method of abduction and that will lead you to conclude that there is a natural explanation—even if you can't think of one. But this means that the method of abduction can lead you astray. It could make you doubt a miracle, even when it's real. Isn't that a reason to avoid it?

No. In fact, that abduction can lead you astray is not even surprising; it is an inductive method of reasoning which, by definition, does not guarantee the conclusion it suggests. Inductive arguments sometimes do lead you astray. But the thing is, inductive methods of reasoning—like abduction—are still our most reliable means to truth about the world. So, unless and until a superior method of reasoning is developed for determining the best explanation, abduction must be the reasoning method of choice when evaluating such claims. (We can see the error of this objection by imagining someone saying that we should not use abduction to evaluate their claim that an alien visitation is the best explanation for a strange experience they had during the night because abduction can sometimes lead you astray.)

Some might claim that I am endorsing "scientism," the idea that science is the end-all be-all of knowledge acquisition and should be the final arbitrator of all things. But this would be a straw-man; in no way have I said anything of the sort. As a philosopher, I know the value of non-scientific reasoning, and I also know that it is useless when dealing with—for example—questions of value and aesthetics. But I also know that the scientific method can and should be brought to bear on things within its domain, and causal explanations for events in the world (e.g., miraculous explanations) are right in the center of

its domain. Again, the only reason one could have to avoid using abduction in such circumstances is the fact that it won't give the desired result.

One could, of course, develop an alternative method of reasoning that favored supernatural explanations, but that method should be preferred only if it more often produces true beliefs about the world. And since it would also likely lead to beliefs about the reality of ghosts, aliens, psychics, and a host of other paranormal and supernatural phenomena, this seems unlikely.

Conclusion

Because of mistakes Hume made in his argument, I articulated a more accurate criterion to determine when one is justified in believing that a miracle has occurred. I then showed that it is impossible for this criterion to be fulfilled, and thus that justified belief in miracles is impossible. Theists who are not concerned with taking miraculous stories literally, or who are comfortable admitting that belief in the miraculous is a matter of faith, will have no objection to my thesis. But to those who think they can (or have) established, through argument and evidence, that miracles have occurred, my thesis serves as a complete refutation. Unfortunately for them, I have not so much argued that justified belief in miracles is impossible, but simply shown how this follows from agreed upon epistemic facts. In much the same way that applying the rules of critical thinking to claims about alien abductions, ghosts sightings and the paranormal show that such claims are not justified, so too does applying those rules show that beliefs in the miraculous are not justified.

I've heard it said that those skeptical about miracles are like an ass—an animal that wouldn't even recognize a miracle if one happened right before its eyes. I, however, have showed that the ass' attitude is epistemically preferable because, indeed, justified belief in miracles is impossible.

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