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# CHAPTER 9

Miracles as Evidence for the Existence of God

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Miracle claims are common throughout the world and in most religious traditions. The most common miracles appear to be those of healing, but other types also appear across cultures and ages. The discussion in this chapter is limited to monotheistic systems and to Western thought. The European rationalist age was the first in which philosophers and scientists openly doubted the reality of miracles. In that context the sciences, rather than religion, became the model of truth wherein miracles were dismissed as unscientific superstition. Granted, not everyone today thinks that the sciences explain everything worth knowing. Nevertheless, rationalism and a mechanistic worldview created skepticism toward the very idea of miracles, and this attitude is with us still.

As we dig into the subject, the first task is to clarify just what counts as a miracle. Is a beautiful sunset, or a newborn healthy baby, a miracle? To deepen our understanding we will investigate what some of the great philosophers have had to say about miracles, including a careful examination of David Hume's famous argument against rational belief in miracles. After considering miracles in general we investigate what evidence, if any, miraculous events provide to support the idea that God exists.

# THE CONCEPT OF MIRACLE

Growing up, one of my favorite TV shows was *The X-Files*. This science fiction and horror series depicted two FBI agents, Fox Mulder and Dana Scully, investigating cases involving elements of the paranormal. Unlike his partner, Mulder is open to paranormal phenomena like monsters, extrasensory perception (ESP), and extraterrestrials; his mantra: "be open to extreme possibilities." But what of this term *paranormal*? And what has this to do with miracles? It is not uncommon for "paranormal," "miraculous," and "supernatural" to be lumped together in the study of fiction or analysis of media. Because words like these are used in multiple ways, our task is to distinguish the idea of miracles from the paranormal, the supernatural, or the just plain weird.

The word *miracle* comes from the Latin verb *mirari*, "to wonder." At the roots of Western culture, in the Jewish faith, the term *signs and wonders* described early stories and teachings about divine miracles. To be clear, neither the Hebrew Bible nor ancient cultures



*The miracle of birth. Newborn French partridge chicks.* MATT LIMB OBE/ALAMY STOCK PHOTO.

made distinctions between "natural" and "supernatural," given their lack of modern notions of the laws of nature. As Walter Moberly notes (2011), in the Christian Bible signs and wonders (signa et miracula) were simply God's gracious action in history, with no distinction made between what we would call natural and supernatural events. In the Middles Ages, Benedicta Ward (1982 and 2011) observes, miracles were simply part of the way people perceived the world, as shot through with the mystery and activity of God. They had as much to do with signs and meaning as with the wondrous acts of God. Perhaps we can capture this by starting with a theological definition of miracle: a miracle is a wondrous and gracious act of God supporting divine revelation. By "supporting divine revelation" we have in mind the common appeal to miracles as support of a prophet and a divine message.

Even now we associate miracles with wondrous events. Moreover, when we call something a miracle it is generally a *good* thing. However weird or wondrous they might be, we don't typically call painful or evil events a miracle. You might say that the word *miracle* has good built into its very meaning. The same is not true of the words *paranormal* or *supernatural*, which can be light or dark, good or evil.

So a miracle is a beneficial event, but can it be any such event? There is a loose and popular sense of miracle that applies to wondrous events that are perfectly natural. For example, one of the agricultural exhibits at the Minnesota State Fair is the Miracle of Birth Center. Yet we are interested in miracles in the modern, academic sense, which flows from the roots of science in the Middle Ages. Christian theologians of that era distinguished God's ordinary action in sustaining the natural world—secondary causes—from God's supernatural acts by omnipotent power—the primary cause.

#### THOMAS AQUINAS AND MODERNITY ON MIRACLES

For the most important philosopher and theologian of that age, Thomas Aquinas (1225–1274), only God could do miracles. In part, he was providing a learned discussion that drew on this new distinction between primary or secondary causes. Only the first cause, that is, God, can act in miraculous ways far beyond the powers of creatures. "The word 'miracle' connotes something altogether wondrous, i.e., having its cause hidden.... This cause is God. Thus the works God does surpassing any cause known to us are called miracles" (*Summa theologiae*, p. 1a, q. 105, a. 8).

Thomas Aquinas thought that the more an event is beyond nature's capacities, the more wondrous (*miraculum*) it will be. The distinction, as Edward Grant notes (1996), helped give rise to scientific thinking in Europe, and established the modern sense of miracle. Today philosophers for the most part define a miracle in the modern sense, that is, a violation of the laws of nature (Basinger 2011; McGrew 2016). Reasons to call this into question are discussed later; for now, let us substitute "secular cause" for "secondary cause" because the medieval term logically implies a first cause, that is, a creator. Whether or not there is a creator is, of course, the very question at hand, and therefore we cannot presuppose one answer in our terminology.

Getting back to miracles, scientific knowledge changes, and we are never certain that our best scientific theories are wholly true, as philosophers of science often point out (Hesse 1965; Cartwright 1983). With this in mind we might more modestly claim that a miracle's cause is beyond what secular causes can bring about as far as we can tell. So for modernity a miracle is not only a beneficial and wondrous event, it is a supernatural event in this sense: an event beyond what secular causes can make happen as far as we know.

When it comes to the paranormal and the supernatural, then, we have a clear distinction. Both are extraordinary events, beyond ordinary experiences or our scientific knowledge. The paranormal, however, is *in principle* still brought about by secular causes, even if they are, for example, superintelligent aliens. In studies of literature, film, and other fiction media, ghosts, vampires, zombies, and the like are called supernatural, but in our philosophical inquiry they are only paranormal. Oddly, for our inquiry, the paranormal is "natural," that is, brought about by secular causes at least in theory.

### ACT OF GOD?

So far we have followed medieval philosophy in distinguishing between the first cause (God) and secular causes. But should we now follow Thomas Aquinas and most of the Western tradition in insisting that a miracle is brought about by God? We can see this notion in the age of reason as well. In chapter 37 of Leviathan, Thomas Hobbes (1588-1679) offers this definition of miracle: "A miracle is a work of God (besides his operation by the way of nature, ordained in the Creation), done for the making manifest to his elect the mission of an extraordinary minister for their salvation" ([1651] 1994, 296-297). In his definition, Hobbes provides a mix of the modern and the theological. He follows Thomas Aquinas (via John Calvin [1509–1564]) in defining the very concept of miracle as one that includes both the existence and action of God. Only God can do a miracle. For a monotheistic theology it is natural to build God into the very definition of miracle. But ours is an inquiry in philosophy regarding miracles as evidence for God. In this specific context, this common definition commits the logical fallacy of begging the question-that is, to define miracles as evidence for God presupposes the existence of God. Moreover, the definition presupposes a very specific theological understanding of who God is and how God acts in creation. Because the community of philosophers includes many religions and none at all, we can hardly presuppose a specific theological understanding of God however dominant it may have been in the time of Thomas Aquinas, Calvin, or Hobbes. So the modern standard philosophical definition of miracle is problematic, and the problem is one we often encounter in dictionaries. For our purposes, concerning miracles as evidence for God, we need to change the definition to one that is less rhetorically loaded (see Larmer 1988).

What we are left with is a notion of miracle as a beneficial event that is wondrous and whose causes are "hidden" (Thomas Aquinas), that is to say, beyond the capacity of any secular power as far as we know. I propose we use the term *strictly extraordinary event* (*extraordinary* literally means out of course, outside the order of things), or SEE, to refer to an event that is very highly improbable given our best understanding of secular causes (Padgett 2012). SEEs cannot be predicted in detail and will be rare events rather than regular ones. This notion has to do with our understanding of the laws of nature.

#### MIRACLES AND LAWS OF NATURE

On my preferred theory, the laws of nature are descriptive generalizations and often can tell us only of what is probable. They describe, as well as possible, the nature, limits, and capacities of secular things (Harré and Madden 1975; Cartwright 1989). Because some laws are deterministic while others are probabilistic, across a vast cosmos and deep time SEEs are bound to happen occasionally. In other words, *weird stuff happens*. If we may return to fiction for a moment, the character Col. Next, the father of literary detective Thursday Next in the series of novels concerning her exploits, responds this way to a skeptic: "On the contrary,' replied my father, 'given the huge timescale of the cosmos, impossible things are commonplace" (Fforde 2002, 370–371). Unlike Col. Next, my only claim is the more modest view that SEEs will be rare but real events that cannot be replicated in a scientific context. We are now ready to state our definition of miracle: *A miracle is a beneficial, wondrous, strictly extraordinary event*.

So far we have described three senses of the word *miracle*. The first is the loose and popular sense, which we can bypass. The second is the theological sense that defines a miracle as God's act yet ignores the modern natural/supernatural divide. The third is a modified modern definition that does not assume that God exists. Now we are ready to dig into what some of the classic philosophers of the age of reason have argued about miracles.

# MIRACLES AMONG THE PHILOSOPHERS

With the Enlightenment, a skepticism regarding the possibility of miracles arose that was not present in previous European thought to any significant degree. The stunning achievements of scientists like Isaac Newton (1642–1727) gave rise to an understanding of the world as resembling a machine governed by the laws of nature. The notion that there were natural laws is older, of course, but the term *laws of nature* became focused and often quite different from what came before, as Craig Keener (2011) notes. A good representative of the growing skepticism toward miracles based on a new understanding of nature and natural law is Baruch Spinoza (1632–1677).

#### **SPINOZA**

Following René Descartes (1596–1650), for Spinoza the rejection of a general skepticism about all knowledge meant a turn to reason, science, and mathematics as a foundation for truth. Spinoza, himself a Jew, saw the essence of religion as a good life in obedience to the moral law. In his *Tractatus Theologico-Politicus* (Theologico-political Treatise), Spinoza devoted an entire section to the question of miracles in scripture. He wrote: "The sphere of reason is ... truth and wisdom; the sphere of theology is piety and obedience" ([1670] 1955, 1:194). He was willing to subject the stories of scripture to "scientific" (i.e., critical academic) analysis and did not accept their historical value just because they were in holy writ.

In his rational philosophy, God is the author of "the universal laws of nature, according to which all things exist and are determined"; the "necessity and eternal truth [of these laws] flows from their Author" ([1670] 1955, 1:44, 81). Spinoza did not deny that some of the biblical "signs and wonders" did indeed happen in history. Rather, the signs and wonders that occurred did so in accordance with the laws of nature, even if we do not yet know them fully. All events are, for him, determined by those universal laws of nature established by God's eternal decree.

Later philosophers like Voltaire (1694–1778) added their mechanistic worldview more fully to this argument, strengthening it only by insisting that no event contrary to the laws of nature could ever happen (see *Voltaire's Philosophical Dictionary* [1764] 1901,

4:272–281). Supernatural miracles are simply defined as somehow violating the laws of nature. As such they are contradictions in terms, because God would never interfere with his own divine decrees that universally determine the outcome of all events and set up the eternal "machine" of the cosmos.

Today most scientists and philosophers accept that there are undetermined events in nature, which allow for quantum effects, mutations, dynamical systems, and (among other things) inherent imprecision in weather prediction. There are random events at the quantum level that are caused but not causally necessitated, along with "chaotic" or physically dynamic systems in many layers of the cosmos. This allows for a high degree of predictability, but not universal determinism. There seems to be some free play in the passage of natural events in space-time (see, e.g., Strzalko 2009; Polkinghorne 2002). What this means for the laws of science, as the philosopher Richard Swinburne (2004) argues, is that we seek the simplest, best, and most comprehensive laws, knowing that there will be some nonrepeating counter instances. This means miracles do not "break" the laws of nature. As the physicist and theologian John Polkinghorne argues, "Science simply tells us that these events [miracles] are against normal expectation. We knew this from the start. Science cannot exclude the possibility that, on particular occasions, God does particular, unprecedented things. After all, God is the ordainer of the laws of nature, not someone who is subject to them" (2005, 100).

#### LOCKE

A contemporary of Spinoza, John Locke (1632–1704) proposed a more accepting view of miracles. Following in the tradition of Calvin, he did not believe that miracles happened in modern times. Still, he defended the miracles of the biblical stories of Moses and Jesus in his *Discourse of Miracles* (1706). Locke thought it was reasonable to believe some things on the basis of testimony when the message of the spiritual teacher seems to be from God. In his *An Essay Concerning Human Understanding*, a distinction is made between faith and reason in keeping with his early modern philosophy. For him human reason is

the discovery of the certainty or probability of such propositions or truths, as the mind arrives at by deduction made from such ideas, which it has got by the use of its natural faculties, viz. by sensation or reflection. *Faith*, on the other side, is the assent to any proposition, not thus made out by the deductions of reason, but by the credit of the proposer, as coming from God, in some extraordinary way of communication. ([1690] 1975, 4.18.2)

In keeping with the difference between the deliverances of human reason based on sensation and reflection on one side, and faith in divine revelation on the other, Locke went on to discuss propositions we believe "above reason." Some ideas are according to reason, some above reason, and some contrary to good reason. Locke used these examples of his distinction: "Thus the existence of one God is according to reason; the existence of more than one God contrary to reason; and the resurrection of the dead, above reason" ([1690] 1975, 4.18.2; cf. 4.17.23).

How then did Locke define a miracle? He did not think of them as violations of the laws of nature. At the beginning of his *The Reasonableness of Christianity, with A Discourse of Miracles*, he defines a miracle as: "a sensible operation, which, being above the comprehension of the spectator, and in his opinion contrary to the established course of nature, is taken by him to be divine" (1958, 79). In this definition Locke does not say that they are violations of the laws of nature, but only that they *seem* contrary to the ordinary

operations of nature as we know them. Notice also that for Locke a miracle by definition is an act of God, something that in our definition we have excluded so as to leave it for further interpretation. And though Locke did not believe that miracles happened in his own day, and was quite dismissive of credulity and gullibility in matters of faith, he did appeal to the biblical miracles of Moses and Jesus as part of the reason for accepting the reasonableness of Christianity *among the other religions*. He did not appeal to them to prove that God exists in the first place. As Keener (2011) notes, much the same is true of the ancient use of miracles as evidence: they supported a particular faith rather than proving that God(s) exist.

# HUME, PROBABILITY, AND EVIDENCE FOR A MIRACLE

Having explored Locke's positive Enlightenment approach, we turn to David Hume (1711– 1776), the most famous skeptic of reports of miracles. Hume's *An Enquiry Concerning Human Understanding* is an important work in the history of Western philosophy, and his arguments have generated tremendous interest, and critical response, since the work was first published in 1748. In section 10, "Of Miracles," he puts forward what is undoubtedly the most widely discussed and influential argument against belief in miracles in the Christian tradition. The main purpose of his argument is to undermine the work of Christian apologists (such as Locke) who defend the rational acceptance of revealed religion based on the evidence of miracles, especially the resurrection of Jesus (see Flew [1967] 2006). But Hume sought to do more than cast doubt on this particular miracle story. He claims that his central argument establishes a general rule against the rational acceptance of miracle reports. Historians have shown that Hume's arguments concerning miracles are not new with him but drawn from the long debate between English deists and Christians apologists concerning the resurrection of Jesus (Burns 1981). But he presents them in a rhetorically powerful philosophical manner, which shaped all subsequent discussion of the subject.

Hume holds for the most part to a short and clear definition of miracle given at the outset: "A miracle is a violation of the laws of nature" (Hume [1748] 1999, 173). He adds in a footnote, "by a particular volition of the Deity, or by the interposition of some invisible agent" (115 n.); but this adds nothing to the argument. At first glance Hume's definition looks like it is about reality, not about what we know or experience of the world. But in fact it turns out that it has to do with human knowledge.

Hume's argument constantly appeals to the sure and uniform experience we have of natural regularities. By a law of nature he did not mean objectively real principles of natural order but only those regularities of *our experience* that provide a firm and sure connection between the order of events of a similar kind. "Experience [is] our only guide in reasoning concerning matters of fact" ([1748] 1999, 167). Thus, when our idea of nature's order is "founded on an infallible experience," then the wise person "expects the event with the last degree of assurance, and regards his past experience as a full *proof* of the future existence of that event" (170).

A law of nature, then, is a conclusion beyond reasonable doubt (proof) that we will experience a regularity regarding the way one event of a certain type (say, dropping a rock) is followed by another (the rock falls)—what Hume calls their "constant and regular conjunction" ([1748] 1999, 171). Note that "proof" for Hume is knowledge beyond a reasonable doubt, not absolute certainty (131 n.) In the end, Hume's definition of miracle is as epistemological as Locke's—it is just not as obvious.

Returning to human knowledge and belief, we note that, for Locke and Hume, a wise person proportions their beliefs to the available evidence. The stronger the evidence, the stronger our belief should be, and the weaker the evidence the less we should believe the supposed fact to be true. With respect to the evidence from human reporting, the believability of the report of a *marvelous* event "admits of a diminution, greater or less, in proportion as the fact is more or less unusual" ([1748] 1999, 171). So what about a miracle as he defines it? We should reject belief in any possible report of a miracle ("violation of a law of nature") on rational grounds. "With the wise and learned," he says, his argument can serve as "an everlasting check to all kinds of superstitious delusion, and consequently, will be useful as long as the world endures. For so long, I presume, will the accounts of miracles and prodigies be found in all history, sacred and profane" (169).

So Hume's first argument (there are two in his section 10) allows a miracle testimony to be so great as to allow of proof in his sense, that is, beyond a reasonable doubt. This first argument is purely theoretical. If the testimony or report, "instead of being only marvelous, is really miraculous; and suppose also, that the testimony, considered apart and in itself, amounts to an entire proof; in that case, there is proof against proof, of which the strongest must prevail, but still with a diminution of its force, in proportion to that of its antagonist" ([1748] 1999, 173).

In plain English, evidence for a law of nature is so strong that we should never believe the report of a miracle, no matter how many independent expert witnesses testify to it. Hume's point is that, even when testimony for a miracle report is so strong as to be beyond a reasonable doubt, we must set against this report all the contrary evidence for the law of nature that it violates. In this case, a rational person will proportion their belief to the evidence from experience and so "deduct the smaller number from the greater, in order to know the exact force of the superior evidence" ([1748] 1999, 170). In other words, we believe an idea is more or less likely to be true based on the strength of evidence. When the evidence as a whole supports two contrary conclusions, then the probabilities balance out. Given the evidence we have for both the specific law of nature violated and testimony for the event itself, the resulting likelihood is neither probable nor improbable but in the middle. This is often called Hume's "balancing principle," and it's his first general argument against historical evidence for a miracle. We can allow as strong a case for the miracle's happening as experience can provide, and then all we will have is the balance of "proof against proof." So the balancing principle (reasonable in itself) is that an event is likely on rational grounds only if the probability of the evidence outweighs the improbability of the event against our background knowledge.

Now, Hume insists that laws of nature will always outweigh proof from testimony. According to him "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" ([1748] 1999, 114). Turning now to the resurrection of the dead, he argues that "it is a miracle, that a dead man should come to life; because that has never been observed, in any age or country" (174). He concludes part one of "On Miracles" with his famous maxim: "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" (174). Even if the historical evidence for a miracle is as strong as it could be, the result will be a balance in the middle (see McGrew 2016; Holder 1998; cf. Millican 2002). A rational person will then simply withhold belief.

Hume's first argument, then, is that testimony for an event that violates the laws of nature has against it the sure and certain uniformity of our experience to the contrary. People dead three days stay dead. In the second argument he turns on testimony itself, when it reports a miracle. Regarding published reports, attested to by witnesses, of cures obtained by the sick, the blind, and the deaf at the tomb of a French priest, he asks: "And what have we to oppose to such a cloud of witnesses, but the absolute impossibility or miraculous nature of the events which they relate?" ([1748] 1999, 125). Although Hume is not quite justified in saying a miracle is "impossible," his point is that the evidence for nature's regularity is so strong that the testimony in this case will be doubted rather than the law. After all, testimony can always be mistaken.

Hume goes after the reliability of miracle reports in the second part of "On Miracles," especially the kind of testimony one could gain for biblical miracles (174-178). First, he claims that there is in recorded history no miracle story whose witnesses are so learned, virtuous, objective, and above deception or gain as to warrant our full trust. The sources of testimony for miraculous events are often not learned or scientific. After this general claim, he points out that people in all cultures love to tell tales, gossip, exaggerate, and the like. The recounting of a miracle story, he says, would spread like wildfire among common folk. Thirdly, he claims that miracle reports "abound among ignorant and barbarous nations" where credulity and superstition, he says, are rampant. Finally, he notes that the religions of the world all claim to be supported by miracles, and yet they contradict one another in their religious systems. Given that one appeal to miracles for supporting authority contradicts another, their claims would seem to cancel each other out. This does seem a bit quick on Hume's part, in that most miracles do not support specific doctrines such that those of another religion would contradict their evidence. Islam and the Baha'i faith, for example, regard Jesus as one of God's prophets, and Muslims acknowledge his miracles; believers in many faiths admire and embrace his moral teachings.

Hume concludes his argument by imagining a scenario in which Queen Elizabeth I has died and been buried, but then returns one month later to sit once again on her throne, according to "all the historians of England." In this scenario, the whole court and all her physicians would swear as eyewitnesses to her death and return. "All this might astonish me," Hume says, "but I would still reply, that the knavery and folly of men are such common phenomena, that I should rather believe the most extraordinary events to arise from their occurrence, than admit of so signal a violation of the laws of nature" ([1748] 1999, 128; see also 185). The parallel with Jesus is barely masked. In short, because the laws of nature are so well established (according to his understanding) and the folly and knavery of human beings well known, it is far and away most likely that the reports are false, the result of deception or honest mistakes. Indeed, one wonders if Hume would admit a miracle he experienced himself that was verified by independent, expert witnesses and physical evidence.

#### **RESPONDING TO HUME**

How shall we respond to Hume's two-pronged argument? Is it as strong as he claims? Certainly the force of his argument has persuaded many eminent philosophers over the centuries. For example, in a chapter titled "Of the Grounds of Disbelief," John Stuart Mill (1806–1873) states: "We cannot admit a proposition as a law of nature, and yet believe a fact in real contradiction to it. We must disbelieve the alleged fact, or believe that we are mistaken in admitting the supposed law" (Mill 1974, bk. 3, chap. 25, sec. 2).

One might challenge Mill here by arguing, as Swinburne (1970) does, that, if the law is simple and elegant, is well supported by evidence, fits well with other truths and established theories, and is sufficiently wide in scope, it is reasonable to keep the law for now and admit to a single anomaly that is not repeatable in the scientific sense. For miracles, the same initial conditions in the same context will not result in the same outcome as they would have to in order to call a law of nature into question. Not everyone who goes to Lourdes with cancer is healed. With all due respect to Mill, this more forgiving approach is more in keeping with the practice of scientists themselves, who do not scrap well-confirmed theories in the face of an unexpected experimental result, as Thomas Kuhn (1970) notes. Witness, for example, the long debates about Copernican astronomy or steady-state cosmology. The idea that a single counter instance would call the laws of nature into question is overly hasty.

We can go further than this and call into question Hume's definition in the first place. Let's replace the words "laws of nature" with a longer phrase that describes Hume's own epistemology of what a law of nature is: "one's experience of the world's regularity and testimony regarding it," or EWR (experience of the world's regularity) for short. After all, that's what Hume is relying on. His empiricism allows him no other basis. So now let's define a miracle as a violation of EWR. Does EWR justify his confident claims? It looks like they are an overgeneralization from an unscientific sample of experience. His confidence may not be warranted by his limited experience and his having heard limited testimony, especially if the occasional "violation" is reported by reliable witnesses. Because EWR is going to be limited it cannot rationally take the epistemic weight Hume's argument places on "laws of nature." In the words of Antony Flew, one of Hume's philosophical defenders, "it need be neither arbitrary nor irrational to insist on a definition of a 'law of nature' such that the idea of a miracle as an exception to a law of nature is ruled out as self-contradictory" ([1967] 2006, 268). On the contrary, it would be quite question-begging and arbitrary to start one's inquiry "Of Miracles" with such a definition given Hume's philosophy. Hume leaps to conclusions unwarranted by his own argument and his empiricism.

#### THE BEST POSSIBLE TESTIMONY: A CASE IN PURE THEORY

This is especially so when, with the first argument, we allow the testimony for a miracle to be as strong as it might be. Here we are arguing a purely theoretical point, having to do with the mathematics of probability. We are not talking about what we would normally expect to happen in the real world. It turns out that in a purely theoretical case, the probabilities might not in fact add up to a balance as he claimed.

We can imagine numerous independent, expert, and impartial witnesses each of which describes exactly the same miraculous event. Philosophers familiar with probability theory and the probability calculus have argued since the nineteenth century, beginning with Charles Babbage (1837), that Hume's claim is too strong. For the sake of argument let's define a "trustworthy" impartial witness as one that reports their observations truly and reliably 99 out of 100 times. Now it turns out that the probability of 100 trustworthy witnesses all describing their observations of the same miraculous event in some detail, all independent of each other, and all being wrong is very, very small indeed. One must multiply the improbability of all of them being unreliable in their descriptions of the event (1/2,000) with the improbability of their all mis-describing it *in the same way*. The resulting improbability can be made as small as one likes by adding details to the description and additional eyewitnesses.

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In such an ideal and theoretical case, for a rational and scientific person the odds of all the evidence being wrong will outweigh (in this ideal case) the EWR. Babbage pointed out this result long ago, and it has been confirmed by application of the logic of probability by Swinburne (1970) and John Earman (2000). In part one of Hume's "On Miracles," his argument simply does not add up. Calculating the probabilities in this ideal and hypothetical case does not reach a midpoint of one-half on a scale of one to zero. In an arbitrary theoretical case where one is allowed to make the testimony very strong indeed, it would be irrational to deny the testimony for the event just because it was a counterinstance to our EWR. Even philosophers who believe that Hume is basically right about miracle reports, like Flew, admit that his argument contains "a rather wooden dogmatism of disbelief" ([1967] 2006, 271).

#### MIRACLES AND TESTIMONY AGAIN

If the argument of Hume's part one does not pass critical evaluation, what about his specific arguments against actual testimony regarding miracles? Even when we put aside Hume's overly sweeping rhetorical claims and his intellectual elitism, which presupposes that only the testimony of Europeans with good educations is creditable, the main critical point he makes about historical evidence is worthwhile. Hume is promoting what we would now call a critical historical weighing of the evidence of testimony. He is right that historical evidence for a very unlikely event will have a higher standard of proof than something we have good reason to expect would happen. Although his points are too broadly drawn, his cautions regarding human credulity and the doubtful character of human memory are apt.

That Hume was right about a more modest principle for careful historians does not imply that a wise person will immediately dismiss historical evidence for miracle claims, as Hume argues. On the contrary, a scientific attitude will have to be "look and see." We would have to investigate the evidence and weigh it against our background knowledge. Given enough physical evidence, eyewitness reports, and other factors in favor of a SEE taking place, a rational person should conclude that this anomaly did indeed happen. The abundant testimonial evidence from around the globe and across time would suggest that some people have been justified in accepting a SEE as probably a real event. But this does not mean we have any idea of the cause of this extraordinary event. Even if the SEE is wondrous and beneficial, it is still quite another logical step to move from (i) on the evidence a miracle probably did happen to (ii) God brought it about. This further step alone allows miracles to be evidence for God.

# MIRACLES AS EVIDENCE FOR GOD

As a rigorous analytic-philosophical defender of the possibility of miracles and their evidential value, Swinburne accepts the definition of miracle as a violation of the laws of nature by God, when those laws are deterministic. For probabilistic laws he holds that a miracle would be a near-violation if its improbability is high enough. Applying logical probability to the question in the Bayesian tradition, Swinburne shows that the existence of the true miracle does lend some positive probability to the proposition that God exists. Even for Swinburne the amount of positive evidence a single miracle grants to the probability of theism may be small. It will depend on the context and the specific event, which would require investigation. In no small part, I believe this results from the difficulty of not only

establishing a real event as a miracle (in my sense) but showing that the miraculous event was brought about by God. It's always possible to accept a miraculous event as having occurred but without having any clear idea as to how it was caused. Skeptical nontheists will be able to accept this event simply as inexplicable and without having to assume God exists. Colin Brown, who defends the miraculous, notes that a clever modern skeptic "grants the possible facticity of the report, but at the price of denying its miraculous [God-caused] character" (1984, 282).

If our audience is philosophy as a whole, or the learned public, then we can make no specific theological assumptions. In our secular age we need to think of what would count as evidence for God's existence for reasonable, open-minded folks of all faiths and none. We focus, again, on monotheism for the sake of simplicity. For many miracles, if we set aside the chance option, the only causal explanation we can imagine is the agency of a being so powerful that that being can alter the course of natural history to bring about a wondrous, beneficial event. There are not many reasonable alternatives to thinking of this as an act of God.

If we adopt a Bayesian understanding of logical probability, we can give a more rigorous answer to our question based on mathematical reasoning (at least in part).<sup>1</sup> According to Bayes's theorem, there can be a two-way relationship between a hypothesis and evidence that supports it. Say there is some evidence (*e*) that when found supports a hypothesis (*h*). For example, I see the newspaper on the lawn (evidence) and I conclude that the paper carrier came by early this morning (hypothesis). However, this is another logical relationship as well. When the hypothesis is true, it can make the evidence more likely, too. So when I see the paper carrier come down the street, it makes it more likely that I will find a newspaper on my lawn. Not only does the evidence make the hypothesis more likely to be true, but the hypothesis can make the evidence more likely. To take another example, let's say I see a flash of lightning in a specific area, and my hypothesis is probably true then the presence of storm clouds in a given area should make lightning more probable than it would be for lightning strikes in general terms (prior probability). We can then test to see if this result is verified, thus providing evidence in favor of my hypothesis.

Now let's apply this principle to the case of miracles as evidence for monotheism. Take the following consideration for rational reflection, and bracket out any unbelief you may have about God. Assume God is standardly omnipotent, perfectly good, omnipresent, and the like (monotheism), and a specific miracle occurs. Is the miracle in question more probable given our background knowledge of the world (k) with monotheism (h) than the prior probability of the miracle on k alone? Put more simply, assuming a miracle has happened, is the miracle more or less likely to have happened if God existed or not? Applying Bayseian logic, Swinburne (2004) shows that the existence of the true miracle of a certain kind does lend positive probability to the hypothesis that God exists. This miracle needs to be of the kind that God would likely bring about. How much probability the fact of the miracle lends will depend on the strengths of the evidence for the miracle and the theological claim that God would probably bring about events like this. The amount of positive evidence from the miracle for the hypothesis may be small, however, and it will depend on the detailed evidence both for the event and for its being a theological miracle, one brought about by God (see also Swinburne 2003). The amount of evidence the miracle provides for monotheism will depend on the context and the specific event, which would require investigation.

In no small part, I believe this complex and perhaps disappointing result arises from the difficulty of not only establishing a real event as a miracle (in my sense) but showing that this miraculous event was a *theological* miracle. In addition, for any unlikely event it is hard to say for sure *how* improbable it is given our overall knowledge of the world. But this judgment is crucial in determining the amount of positive weight the miracle gives to the probability of monotheism. It's always possible to accept a miraculous event (again under our definition) as having actually happened while having no clear idea as to how it could've been brought about.

## GOD DID IT. THAT SETTLES IT?

As Michael Levine notes, "It is always possible to hold out for a naturalistic explanation" (2011, 298). Likewise a believer may reasonably interpret a *perfectly natural* event as a theological miracle: laws of nature do not have to enter into it if other criteria are met. I can accept the healing of my grandmother, for which many have been in prayer, as a theological miracle *even though* I know God used secular causes to bring it about, such as physicians, pharmaceuticals, and so forth. This works only for theological miracles, of course, because by definition they have nothing to do with "laws of nature" and the like. But given our *philosophical* definition of miracle as a SEE (no God implied), the massive evidence for miracles around the world and across time suggest that many people have been justified in



Praying for a miracle. Sick Husband, by Vasily Maximov, 1881. SOVFOTO/UNIVERSAL IMAGES GROUP/GETTY IMAGES.

believing a miracle happened to them (especially when supported by physical evidence). Indeed, I know of one such case myself, involving an agnostic medical professional who was diagnosed with inoperable brain cancer. Her Catholic family prayed for a miracle, and one month later she was cancer-free, contrary to all medical expectations. This is indeed a wondrous, beneficial, and strictly extraordinary event. Yet contrary to the claims of Levine and other philosophers, the most interesting philosophical question is not about whether anyone is actually justified in believing, on the evidence, whether a miracle happened—at least not on our philosophical definition. Rather, the most interesting question is *whether it was caused by God*.

On the other hand, does a miracle as we have defined it provide evidence for God? Assuming strong evidence of many kinds that the event happened, a reasonable nontheist might conclude that we have no idea what the cause of this event might be, but because God does not exist it was not a theological miracle. The monotheistic scholar, on the other hand, will need less evidence (given her background beliefs) to conclude that this was a theological miracle.

Note that this is an interpretive move. We are interpreting (rationally) that an event that probably took place has a certain meaning and a certain cause given a certain set of beliefs. I do not have to hold those beliefs myself to enter into this analysis. Next, the fact that a miracle probably occurred provides some positive evidence for the probability of monotheism given that God is likely to bring about events like this. As Swinburne concludes,

In so far as we have historical evidence ... to the occurrence of an event E that is such that, if it occurred, it would probably be a violation of natural laws and that is of a kind that there is some probability that a God would have reason to bring about, that makes it more probable than it would otherwise be that there is a God. (2004, 287)

So even a miracle in our philosophical sense might provide some evidence for God, that is, make God's existence more probable than it would be otherwise. Granted, a miracle on Hume's definition (used by Swinburne) would provide more evidence, but then establishing the probability of the miracle itself is far more difficult.

#### Summary

Let's return for a moment to the understanding of miracle given by Thomas Aquinas. There are two elements of interest, one about nature and the other about God. Thomas Aquinas and most theologians and philosophers after him defined a miracle as somehow supernatural, or in modern terms, a violation of the laws of nature. Technically a miracle is not paranormal. We argued that the laws of nature taken as a whole are indeterminate and the world is not much like a machine. Even if we assume that the cosmos is a closed causal system, SEEs (strictly extraordinary events) will happen within it. We defined a miracle as a wondrous and beneficial SEE. SEEs are possible but highly improbable. Evidence to establish them would need to be strong, but it can be established and probably already has been (contra Hume).

Even when we do establish that a miracle probably did take place, Thomas Aquinas moves much too quickly to claim that the hidden cause of the event is God. The application of the theological claim "God brought this about" takes places inside a larger theological frame of reference (it's a hermeneutical argument). When done on a rational basis, this is an interpretive move that requires not only a bare theism, but some understanding of the gods or God as in classical monotheism. By knowing the kind of being God is we are in a better place, rationally, to say that this is the kind of event that God would probably bring about. The knowledge of God is, of course, specific to particular religious faiths and ways of life. So to claim that an event is a theological miracle is a theological judgment, built on but not reducible to historical, scientific, and/or philosophical considerations.

It might look like miracles would provide no evidence for God's existence to a pluralistic and learned community of well-educated and wise thinkers. Yet Swinburne has shown that in Bayesian logic miracles could provide some support. Assume that the miraculous event has been demonstrated. Assume that this is the kind of event God would likely bring about. Then the hypothesis of monotheism makes the miracle more probable than it would otherwise be. Thus, in turn, the fact of the miracle provides some evidence for the hypothesis of monotheism. This evidence may be small, however, depending on the event and evidence in question. The overall case for God's (non)existence will have to be complex and multidimensional: one miracle would not prove anything by itself. Perhaps miracles as evidence function best as they did in the ancient world: to promote religious faith rather than provide public evidence for a God whose existence some doubt or deny.

# Endnote

 A bit more technically, according to Bayes's theorem, when a hypothesis is neither true nor false but probable, we can assign it a prior probability based on background knowledge (k) alone. If evidence (e) is relevant to the increase or decrease of the probability of hypothesis (h), then our background knowledge plus e will make h more probable than it was before. This is the posterior probability (i.e., now considering e). It turns out that if e is relevant to the probability of h, then we can use e as a factor in calculating the probability of h. What is more, if the probability of e on k with h is greater than the prior probability of e, then the fact of e makes h more probable than it otherwise would be.

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