

We've now discussed three of the central arguments for the existence of God. Beginning today, we will examine the case against belief in God.

Next time, we'll begin a discussion of what is by far the most important argument for atheism: the argument that existence of God is inconsistent with the kind of evil we find in the world.

Today we will focus on an argument, not against the existence of God, but against a certain very common kind of belief about God: the belief in miracles.

What do I mean by "miracle"? Here's how Aquinas defines it:

"those things are properly called miracles which are done by divine agency beyond the order commonly observed in nature."

This is a good a definition of "miracle" as any, and we will take this to define the term for our purposes.

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"those things are properly called miracles which are done by divine agency beyond the order commonly observed in nature."

Most people who believe in God believe that one or another miracle has occurred in human history. Christians believe that Jesus was raised from the dead, and performed various miracles in his life on earth. Many Muslims believe that Muhammad split the moon in response to religious persecution. Christians, Muslims, and Jews all believe in the miracles described in the Torah. Hindus believe in various sorts of miracles, including events of miraculous healing. Buddhists ascribe various miracles to the Buddha, including the ability to fly and read minds.

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But what evidence do religious believers have that these miracles have really occurred?

For most, the answer to this question is: they believe it on the basis of testimony of witnesses.

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David Hume was an 18th century Scottish philosopher, and is widely regarded as the greatest English-language philosopher who ever lived.

He wrote his greatest work, the *Treatise on Human Nature*, when he was 23 years old.



The work on miracles, which we read for today, was not published in Hume's lifetime.

Let's turn to our key question: can any of us ever rationally believe that a miracle has ever occurred?

Perhaps (though we will find reason to question this later) one could know that a miracle occurred by witnessing a miraculous event. But let's assume for now that none of us have ever actually witnessed a miracle. Then it seems that our only evidence for miracles is the testimony of people that do claim to have actually witnessed a miracle. So, it seems that to see whether we have good reason for believing in miracles, we have to first figure out when we are justified in believing something on the basis of testimony.

This is one of the central topics addressed by Hume. Here's what he has to say about it:

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"we may observe, that there is no species of reasoning more common, more useful, and even necessary to human life, than that which is derived from the testimony of men, and the reports of eye-witnesses and spectators. ... I shall not dispute about a word. It will be sufficient to observe, that our assurance in any argument of this kind is derived from no other principle than our observation of the veracity of human testimony, and of the usual conformity of facts to the reports of witnesses." (74)

Hume's basic idea seems to be this: we believe things on the basis of testimony because, in the past, we have found that testimony is normally correct: normally the facts conform to the testimony we receive.

Is Hume right about the fact that we have found testimony to be, usually, correct?

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Does this mean that we should always believe whatever we are told?

No. Testimony is just one piece of evidence among others. And, Hume tells us, in cases in which testimony contradicts some of our evidence, we have to determine which piece of evidence is stronger:

"A wise man, therefore, proportions his belief to the evidence. ... He weighs the opposite experiments: He considers which side is supported by the greater number of experiments: To that side he inclines, with doubt and hesitation; and when at last he fixes his judgement, the evidence exceeds not what we properly call *probability*." (73-4)

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This suggests the following rule about when we should, and should not, believe testimony about some event occurring:

#### Hume's principle about testimony

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"That no testimony is sufficient to establish a miracle, unless the testimony be of such a kind, that its falsehood would be more miraculous, than the fact, which it endeavors to establish ..." (77)

What it would mean for the falsehood of the testimony to be "more miraculous" than the occurrence of the relevant event? It would mean that the probability of the testimony being false is even lower than the probability of the event in question happening. And this is exactly what Hume's principle about testimony should lead us to expect.

# Hume's principle about testimony

We should not believe that M happened on the basis of testimony unless the probability of the testimony being false < the probability of M occurring.

We now want to know why Hume thinks that a principle of this sort shows that we are never justified in believing testimony about miracles.

To do this, we need to figure out how to determine the relevant probabilities: the probability of the testimony being false, and the probability of the relevant event not occurring. Recall the quote about evidence discussed earlier:

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Hume's idea seems to be this. When we are trying to figure out the probability of some event happening in certain circumstances, we ask: in the past, how frequently as that event been observed to occur in those circumstances? Our answer to this question will give us the probability of the relevant event.

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Suppose we want to determine the probability of a fair coin flip coming up heads.

We ask: in the past, what percentage of fair coin flips have come up heads?

We find that ½ of them have. So, we take the event of the next fair coin flip coming up head to have a probability of 50%, or 0.5.

In general, to figure out the probability of some type of event E occurring, we look at the number of situations in which E could have occurred, and divide the number of times E happened by the total number of possibilities.

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"A miracle is a violation of the laws of nature; and as a firm and unalterable experience has established these laws, the proof against a miracle, from the very nature of the fact, is as entire as any argument from experience can possibly be imagined ... There must be a uniform experience against every miraculous event, otherwise the event would not merit that appellation." (76-7)

Hume's point is that miracles are always departures from the ordinary laws of nature. But the ordinary laws of nature are regularities which have been observed to hold 100% of the time. Of course, we have not observed testimony to be correct 100% of the time. Hence, the probability of testimony regarding a miracle being false will always be greater than the probability of the miraculous event; and then it follows from Hume's principle about testimony that we should never accept the testimony.

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# And this is just what Hume concludes:

"... therefore we may establish it as a maxim, that no human testimony can have such force as to prove a miracle, and make it a just foundation for any system of religion."

Here Hume seems to be relying on the following reasonable sounding principle:

#### The zero probability principle

If some event has never been observed to occur before, then you should assign that event a probability of 0%.

This principle, plus Hume's principle about testimony, is all he needs to show that it is never rational to believe that a miracle has occurred on the basis of testimony.

If some event has never been observed to occur before, then you should assign that event a probability of 0%.

You have never observed a miracle to occur.

You should assign any miraculous event a probability of 0%.

The probability of any piece of testimony being false is always > 0%.

# Hume's principle about testimony

We should not believe that M happened on the basis of testimony unless the probability of the testimony being false < the probability of M occurring.

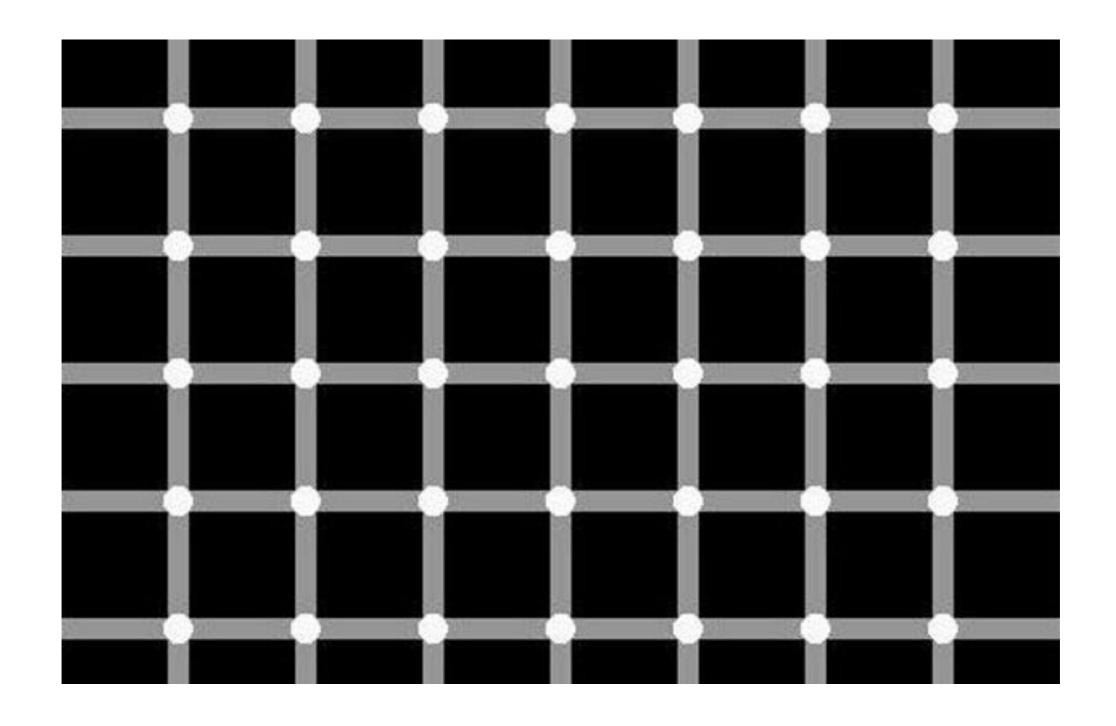
You should never believe that a miracle has occurred on the basis of testimony.

- 1. If some event has never been observed to occur before, then you should assign that event a probability of 0%. (The zero probability principle)
- 2. You have never observed a miracle to occur.
- 3. You should assign any miraculous event a probability of 0%. (1,2)
- 4. The probability of any piece of testimony being false is always > 0%.
- 5. We should not believe that M happened on the basis of testimony unless the probability of the testimony being false < the probability of M occurring. (Hume's principle about testimony)
- C. You should never believe that a miracle has occurred on the basis of testimony. (3,4,5)

If some event has never been observed to occur before, then you should assign that event a probability of 0%.

Let's focus in on the first premise of this argument.

Interestingly, this principle also seems to be enough to establish a stronger claim: one is never justified in believing in the existence of miracles, even if one is (or takes oneself to be) an eyewitness. Can you see why?



An example of a grid illusion.

If some event has never been observed to occur before, then you should assign that event a probability of 0%.

Perceptual experiences of the world, like testimony, don't conform to the facts 100% of the time. So, the probability of a miraculous event M occurring will always, given the above principle about probabilities, be less than the probability of one's perceptual experience being illusory, since the latter will always be > 0. Hence, it seems, one would never be justified in believing in the existence of a miracle, even on the basis of direct perceptual experience.

This might at first seem like a good thing for Hume's argument: it shows not just that one can never believe in miracles on the basis of testimony, but also that one can never believe in them for any reason at all!

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But in fact this brings out a problem for the zero probability principle, which can be illustrated by example.

You are a citizen of Pompeii in AD 79, and there is no written record of the tops of mountains erupting and spewing forth lava. Accordingly, following the zero probability principle, you regard the chances of such a thing happening as 0%. On the other hand, you know that your visual experiences have been mistaken in the past, so you regard the chances of an arbitrary visual experience being illusory as about (say) 1%. Then you have a very surprising visual experience: black clouds and ash shooting out of nearby Mt. Vesuvius. What is it rational for you to believe?

If some event has never been observed to occur before, then you should assign that event a probability of 0%.

This sort of case seems to show that the zero probability principle is false. Other such examples involve falsification of well-confirmed scientific theories.

So, if Hume's argument depends on the zero probability principle, it is a failure. But this doesn't mean that Hume's argument is a failure. Sometimes an argument relies on a false premise, but can be fixed by finding another premise which both avoids the problems with the original one, and still delivers the intended conclusion. Let's see if, by examining our earlier version of the argument, we can find a fix of this sort.

- 1. If some event has never been observed to occur before, then you should assign that event a probability of 0%. (The zero probability principle)
- 2. You have never observed a miracle to occur.
- 3. You should assign any miraculous event a probability of 0%. (1,2)
- 4. The probability of any piece of testimony being false is always > 0%.
- 5. We should not believe that M happened on the basis of testimony unless the probability of the testimony being false < the probability of M occurring. (Hume's principle about testimony)
- C. You should never believe that a miracle has occurred on the basis of testimony. (3,4,5)

Suppose that, if you have never observed some event to occur, you should assign it, not 0, but at most some probability N — where N is some reasonably small number.

Call this the "low probability principle."

Let's substitute this in for the zero probability principle and see what happens.

- 1. If some event has never been observed to occur before, then you should assign that event a probability of N%. (The low probability principle)
- 2. You have never observed a miracle to occur.
- 3. You should assign any miraculous event a probability of N%. (1,2)
- 4. The probability of any piece of testimony being false is always > 0%.
- 5. We should not believe that M happened on the basis of testimony unless the probability of the testimony being false < the probability of M occurring. (Hume's principle about testimony)
- C. You should never believe that a miracle has occurred on the basis of testimony. (3,4,5)

Is this argument valid?

What would we have to add to make it valid?

- 1. If some event has never been observed to occur before, then you should assign that event a probability of N%. (The low probability principle)
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Here is a reasonable attempt.

Is this argument valid?

It is not, because one can get testimony from multiple witnesses. Suppose that we have three independent witnesses, each of whom are 90% reliable, and each independently reports that M has occurred. Then the probability of each witness being wrong is 10%, but the probability of all three being wrong is only 0.1%.

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The problem is general. For any nonzero value of N, a sufficient number of witnesses will always, given Hume's principle, make it rational to believe in a miracle on the basis of testimony.

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However, some historically important examples of miracles seem to have had only one, or very few, witnesses. (Note that the response to the previous argument relies, not just on multiple pieces of testimony, but multiple independent pieces of testimony.)

Might an argument of Hume's sort be used to show that it is irrational for us to believe in miracles of this sort?

Even this can be called into question, because there is good reason to doubt whether Hume's principle about testimony is itself true.

# Hume's principle about testimony

We should not believe that M happened on the basis of testimony unless the probability of the testimony being false < the probability of M occurring.

Here's an example. What do you think that the probability of the truth of testimony from the writers of the South Bend Tribune is?

Let's suppose that you think that it is quite a reliable paper, and that its testimony is true 99.9% of the time, so that the probability of its testimony being false is 0.1%.

Now suppose that you read the following in the South Bend Tribune:

"The winning numbers for Powerball this weekend were 1-14-26-33-41-37-4."

#### Hume's principle about testimony

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"The winning numbers for Powerball this weekend were 1-14-26-33-41-37-4."

What are the odds of those being the winning numbers for Powerball? Well, the same as the odds of any given combination being correct, which is 1 in 195,249,054. So the probability of the reported event occurring is 0.0000005121663739%.

So, if Hume's principle about testimony is correct, one is never justified in believing the lottery results reported in the paper, or on the local news, etc. But this seems wrong: one can gain justified beliefs about the lottery from your local paper, even if it is the South Bend Tribune.

You may want to think about how, if at all, Hume's principle could be modified to avoid these counterexamples. If it cannot be fixed, then Hume fails to show that it is never rational to believe in miracles on the basis of testimony.

This, of course, does not show that we are currently rational to believe in miracles on the basis of the sorts of testimony we might use as evidence. To decide this question, at least three further issues would need investigation.

What are the rules
which govern rational
acceptance of testimony? If
Hume's principle about
testimony is not right, then
what is?

How good is the evidence for events which seem to be exceptions to the usual natural order? How many witnesses were there? How reliable were they? Did they have anything to gain by lying? Etc.

When is good evidence that some event is an exception to the usual natural order also good evidence of supernatural intervention?

These are all very difficult questions to answer. What I think the discussion of Hume shows is that to decide the relevance of miracles to religious belief, questions like these are the important ones. There is no argument - at least no obvious argument - of the sort Hume sought against belief in miracles.