

§ 8. Doctrine of Creation
Lecture 17
Hume's Abject Failure

Today we want to look at David Hume's "in principle" argument against miracles. Despite its influence, Hume's argument is generally recognized by philosophers today, in the words of the philosopher of science John Earman, as an "abject failure."¹ Earman is a Professor of History and Philosophy of Science at the University of Pittsburgh and not a Christian (not even a theist), and yet he recognizes that Hume's argument against miracles is, as he puts it, an abject failure. What Earman means by that is that it's not just a minor mistake – this argument is demonstrably, irremediably a failure. Even Hume's admirers today try at most to salvage some insightful nugget from Hume's convoluted discussion, typically Hume's maxim that "no testimony . . . is sufficient to establish a miracle, unless this testimony is of such a kind that . . . its falsehood would be more miraculous, than the fact which it endeavors to establish." But, as we'll see, even that maxim requires re-interpretation.

Hume's "in principle" argument actually involves two more or less independent claims. First, on the one hand, there is his claim that miracles are by definition utterly improbable. Secondly, on the other hand, there is his claim that no amount of evidence could ever serve to overcome that intrinsic improbability. So, on the one hand, miracles are intrinsically, utterly improbable; and secondly, no amount of evidence could possibly overcome that improbability and establish the probability of a miracle. Well, as it turns out, both of these claims are mistaken.

Let's look first at the second claim that no amount of evidence could ever serve to establish a miracle. Stimulated by Hume's argument against miracles, there arose a discussion among probability theorists from Condorcet in the 18th century to John Stuart Mill in the 19th century over how much evidence it would take to establish the occurrence of a highly improbable event.² It was soon realized by probability theorists that if you simply weigh the probability of the event over against the reliability of the witnesses to the event then we would be led into denying the occurrence of events which, though highly improbable, we reasonably know to have actually occurred. To give an example, suppose on the morning news you hear a broadcast that the pick in last night's lottery was 7-4-9-2-8-7-1. This is a report of an event that is extraordinarily improbable, one out of several million, that that number would be picked, and even if the morning news' accuracy is known to be 99.99% reliable, nevertheless the improbability of the

¹ John Earman, *Hume's Abject Failure: The Argument against Miracles* (Oxford: Oxford University Press, 2000).

² See S. L. Zabell, "The Probabilistic Analysis of Testimony," *Journal of Statistical Planning and Inference* 20 (1988): 327-354.

event will swamp the probability of the witness's reliability, so that we should never believe such a report. Even the lottery winner should never believe that, in fact, the report is accurate. In order to believe the report, Hume would require us to have enough evidence in favor of the morning news' reliability to counterbalance the intrinsic improbability of the event itself, which is just absurd.

What probability theorists came to see is that what also needs to be considered is not just the intrinsic improbability of the event or the reliability of the witness, but you also need to consider the probability that if the reported event had *not* occurred, then the witness's testimony would be just as it is. You need to weigh the probability that if the event had not occurred then the witness's testimony would be just as it is. As John Stuart Mill wrote,

To know whether a coincidence does or does not require more evidence to render it credible than an ordinary event, we must refer, in every instance, to first principles, and estimate afresh what is the probability that the given testimony would have been delivered in that instance, supposing the fact which it asserts not to be true.³

So you've got to weigh the probability that the evidence would be just as it is if in fact the event had not taken place.

To return to our example of the morning news, the probability that the morning news would announce the pick as 7-4-9-2-8-7-1 if some other number had in fact been chosen is incredibly small given that the newscasters had no preference for that announced number. On the other hand, the announcement is much more probable if 7-4-9-2-8-7-1 were the actual number chosen. This comparative likelihood easily counterbalances the high improbability of the event reported. So, even though the event itself is highly improbable, nevertheless the improbability that the evidence would be just as it is if the event had not occurred can counterbalance that high intrinsic improbability.

START DISCUSSION

Student: Can you go back and repeat Hume's maxim a little bit slower please?

Dr. Craig: Sure. Hume's so-called maxim is that no testimony is sufficient to establish a miracle unless this testimony is such that its falsehood would be more miraculous than the fact that it endeavors to establish. This maxim is the one nugget out of Hume that philosophers who are admirers of David Hume try to preserve in his argument against miracles. They will acknowledge the argument fails but they'll say, *Well, at least Hume's maxim is correct.* But what I'll try to show is that even this maxim doesn't wear its

³ J. S. Mill, *A System of Logic*, 2 vols. (London: 1843), Bk. 3, ch. 25, § 6, cited in Zabell, "Probabilistic Analysis of Testimony," p. 331.

interpretation on its sleeve and that properly understood it really amounts to a triviality. One more time: no testimony is sufficient to establish a miracle unless this testimony is such that its falsehood would be more miraculous than the fact that it endeavors to establish.

Student: Do you take probabilities to be objective or subjective, because I know there are some philosophers who take probability to be nothing more than . . .

Dr. Craig: I don't think that matters for this discussion at this point. He's asking a technical question about probabilities. Later I'll be referring to what's called epistemic probability which would be the degree to which a rational agent would expect the hypothesis to be true on the evidence. But the failure of Hume's argument will not hinge on that, I think we'll see. The failure of Hume's argument will hinge on the fact that he neglects completely this crucial probability that we just talked about – that if the event had not occurred that the evidence would be just as it is.

END DISCUSSION

Let's proceed to look at this more closely.

The realization on the part of probability theorists that other factors need to be included in the correct calculation of the probability of some event comes to expression in a formula of probability theory known as Bayes' Theorem. Let's let R represent some miraculous event, say the resurrection of Jesus. Let's let E represent the specific evidence for that event. In the case of the resurrection, in my analysis this would be the facts of the empty tomb, the postmortem appearances of Jesus, and the very origin of the Christian faith itself. Those would be comprised in the specific evidence for R. Finally, let B represent our general background information of the world apart from the specific evidence E. So you take our basic knowledge of the world and abstract from that E (take E out of it) and that will leave you with B – the background knowledge of the world.

Bayes' Theorem allows us to calculate the probability of R in a so-called "odds form" which is one of the simplest forms of Bayes' Theorem. But before I put this on the board, I recognize that many of us suffer from what my friend Lydia McGrew calls lurking math-o-phobia; that is to say, when we see an equation our eyes sort of glaze over and it's difficult even to take it in. But in this case I'm going to go through it slowly and I think make it quite comprehensible. So stick with me and we will examine it together.

$$\frac{\text{Pr}(R|E\&B)}{\text{Pr}(\text{not-}R|E\&B)} = \frac{\text{Pr}(R|B)}{\text{Pr}(\text{not-}R|B)} \times \frac{\text{Pr}(E|R\&B)}{\text{Pr}(E|\text{not-}R\&B)}$$

We want to consider what is the probability (which we represent by \Pr) of the resurrection of Jesus on the evidence and the background information. So \Pr is probability, R is the resurrection hypothesis, and the straight line $[|]$ indicates that we're going to consider the probability of R given E and B , or on the assumption of E and B , or relative to E and B . So what is the probability of R given the specific evidence and the background information? We're going to compare that to the probability of not- R . The probability of not- R on E and B – that is to say, what is the probability that the resurrection did not occur given the evidence and the background information? This ratio expresses to us the probability of the resurrection on the total evidence E and B – the background information and the specific evidence.

This ratio will enable us to determine the odds of the resurrection being true on E and B . If the number in the numerator is smaller than the number in the denominator, then it will turn out that the resurrection is improbable. It's less probable. What Hume wants to argue is that the numerator in this case is always inevitably going to be less than the denominator, and therefore it can never be rational to believe in the resurrection. If the ratio were 1-to-1 (say it was 3 over 3), then that would mean that they have an equal chance of occurring and so the odds of the resurrection occurring would be 50/50 or 50%. If you have a 1-to-1 ratio, you've got odds of 50/50 for the resurrection occurring. But if the numerator is smaller than the denominator then the odds of the resurrection occurring are less than 50%. What Hume wants to show is that in principle the numerator is always smaller than the denominator, and therefore given the odds no rational person should ever believe (no matter what the evidence is) that the resurrection has taken place.

Whether or not the resurrection is more probable than not is going to depend upon two other ratios on the right-hand side of the equation. In the first ratio, we consider the probability of the resurrection on the background information alone [$\Pr(R|B)$]. Leaving aside the specific evidence, what is the probability of the resurrection just given the background information? And then we consider the probability that the resurrection did not take place on the background information [$\Pr(\text{not-}R|B)$]. So, what is the probability of the resurrection or not given the background information and leaving aside the specific evidence for the resurrection? This ratio gives us the intrinsic probability of the resurrection. It is the prior probability of the resurrection before you look at the specific evidence. Before you look at any evidence, this is the probability of the resurrection – just the intrinsic probability of the resurrection. So we're simply asking: given our background information of the world without any specific evidence, which is more probable? R or not- R ? In the second ratio, which is multiplied by the first, we consider what is the probability of the evidence given the resurrection and the background information [$\Pr(E|R\&B)$], and we contrast that with the probability of the evidence given that the resurrection did not occur [$\Pr(E|\text{not-}R\&B)$]. So, what is the probability that the

evidence would be as it is if the resurrection did take place, and what is the probability that the evidence would be as it is if, in fact, the resurrection had not taken place? This is called the explanatory power of the hypothesis. How well does the event or hypothesis explain the evidence? Is the evidence more probable on the hypothesis than on the contrary or the negation of the hypothesis? That's the explanatory power. What we have in the right hand side of the equation is the intrinsic probability of the resurrection multiplied by the explanatory power of the resurrection.

Notice that even if the intrinsic probability of the resurrection is very low – suppose relative to the background information, not-R is vastly more probable than R – that doesn't mean that the resurrection is improbable on the total evidence because that improbability could be counterbalanced by the higher explanatory power of the resurrection hypothesis. Even if this ratio $[\Pr(R|B) / \Pr(\text{not-R}|B)]$ is very low, this one $[\Pr(E|R\&B) / \Pr(E|\text{not-R}\&B)]$ could be very high and counterbalancing. For example, suppose that the intrinsic probability of the resurrection is 1-to-90. Nevertheless, suppose that the explanatory power of the resurrection is 90-to-1. In that case, you multiply these together and you get 1-over-1 which means the resurrection has a 50% chance of being true. So you can see that even if the intrinsic probability of the resurrection is extremely low, so long as the second ratio is extremely high it can counterbalance any improbability intrinsically in the resurrection itself. That was the factor that Mill and others identified as being critical. What is going to be the probability if the event had not occurred that the evidence would be just as it is.

START DISCUSSION

Student: I think I remember this coming up when you had a debate with Bart Ehrman. My question may have been his question – how do you assign objective quantities to each of these things?

Dr. Craig: This is a very good question that you are raising. I think, and I'll say this later, that it's really impossible to assign numerical values to these letters. But very few historians do that. Historians don't use Bayes' Theorem. You'll remember when we discussed the evidence for the resurrection, instead we used a model called inference to the best explanation. What we did was we assessed the rival hypotheses in terms of certain criteria like explanatory power, explanatory scope, degree of *ad hocness*, plausibility, and so forth. I think that's the better way to try to run an argument for the resurrection. But where Bayes' Theorem is helpful is in exposing the error of David Hume and his contemporary descendants like Bart Ehrman who still say that because a miracle is intrinsically so improbable therefore no amount of evidence could ever establish it. What we'll see is that that is demonstrably fallacious regardless of your ability to assign numerical values to these. I think what we'll do is talk in generalities here

– *Is this probability terribly low?* – and as long as it's not terribly low I think that the argument for miracles can go through.

Student: It makes sense now placed in this context, knowing the history and knowing that Mill and others responded to Hume the way that they did.

Dr. Craig: I think it's very helpful to see the background of this discussion and how these probability theorists came to this conclusion. In one sense, although I'm going to indict Hume here in a minute, you've got to cut him a little slack because he wrote before the probability calculus had ever been articulated. So it's not surprising that he would have been ignorant of some of these factors. But that provides no excuse whatsoever for Hume's modern progeny such as Bart Ehrman and other New Testament scholars who continue to reiterate this long-refuted argument.

Student: The evidence of miracle is one thing, but the reception or the human consciousness of that miracle is another. The human consciousness of God's work creates history. It doesn't necessarily matter to what's intrinsic . . . human consciousness is independent of what happened because different people interpret differently.

Dr. Craig: That's true. But if Hume and his progeny could show the people who believe in miracles are irrational, that's a serious objection. So it's not just enough to say people have their subjective responses to miracles. I think it's important to show that their argument is actually fallacious.

Student: The disciples knew Jesus, so they have a different dimension of understanding than the onlookers.

Dr. Craig: Yes, but again, remember Hume's argument. No amount of evidence could serve to establish a miracle. Thomas, confronted in the upper room with the risen Jesus standing before him, should conclude that it's a hallucination or some kind of strange experience rather than believe it. According to Hume, no amount of evidence can establish a miracle. What we want to show is why he's mistaken in thinking that, and it's very easy to do so. I'm going to do it in just a minute.

Student: I'm going to try to bring this down to my level. It seems to me really what Hume is saying is that the background knowledge, i.e. nature or the environment, is so strong and we don't see miracles every day – we hear of them, but we don't . . . I've never personally, you might say, experienced one – so in his mind you can explain away the evidence, i.e. it was a hallucination, because he feels that the probability of the background is so infinitely strong that we are just misled by a few people claiming a few things that he feels he can rationally explain away.

Dr. Craig: Right. What you're identifying there is his first claim that miracles by definition are utterly improbable. You're quite right – that is his assumption. We'll look at

that probably next week, but right now we want to consider the claim that no amount of evidence could serve to establish a miracle. Remember, in his argument, when we discussed it, he's willing to grant for the sake of argument that the evidence for a miracle constitutes a full proof. Remember that? He differentiates between a proof and a probability. He says let's give the defender of miracle the claim that the evidence for a miracle is a full proof. He still argues that it's not enough to establish a miracle.

Student: In terms of probability, is there a difference between a 2-to-3 ratio or a 4-to-3 over 7-to-3? Does that matter for sake of argument of it being more probable or not?

Dr. Craig: Yes, that's right. It makes a difference. For example, if something is 2-to-1 then that's not going to be as probable as something that's 7-to-1. So you're quite right, yes. But what I'm trying to do, in answer to an earlier point, is avoid trying to assign numerical values to these because I think that's beyond our ability to do. What we just want to ask in very general terms: is the intrinsic probability of the resurrection outrageously low? As someone just said, is it just hopelessly low? And what is the probability of the evidence given the resurrection hypothesis or not? Is that high? Is it low? What is it? We don't need to give actual numerical values.

END DISCUSSION

Hume, in his argument, never discusses the second ratio. He focuses entirely on the intrinsic probability of a miracle and argues that because this value is so low that therefore the probability of the resurrection on the evidence and the background information is comparably low. He clearly overlooked the explanatory power of the resurrection hypothesis so that his argument is demonstrably a failure. As I said, even if this ratio is incredibly low, so long as this ratio is comparably high it can counterbalance it. So it's just demonstrably mathematically false that the intrinsic probability of a miracle can never be overcome so that the probability of R on E and B is much higher than the probability of not-R on E and B. So much for Hume's vaunted in principle argument.

There is a slogan beloved in the free thought culture: "extraordinary events require extraordinary evidence." I don't know how many times I've heard this said as an excuse for not believing in the miracles and the resurrection of Jesus. Extraordinary events require extraordinary evidence. But what we can now see is that this seemingly commonsensical slogan is, in fact, false as usually understood. In order to establish the occurrence of a highly improbable event, you don't need to have lots of evidence. What the skeptic seems to be saying by his slogan is that in order for us to believe in a miraculous event you've got to have a tremendous amount of evidence. But why think that that's the case? *Because a miracle is so improbable*, the skeptic will say. But Bayes' Theorem shows that rationally believing in a highly improbable event doesn't require an enormous amount of evidence. All that is crucial is that the evidence is far more probable

given the occurrence of the event then it would be if the event had not taken place. The bottom line is that it doesn't always take a huge amount of evidence to establish the occurrence of a miracle.

START DISCUSSION

Student: I would submit to you that Thomas was one of the Lord's disciples. Thomas's response was a very human response, and without the Holy Spirit even he would probably not have believed it even though Christ stood in front of him. It's just the way we are.

Dr. Craig: OK, but these are matters that you and an earlier student are raising of human psychology and the need of the Holy Spirit to soften the hardened heart. No one wants to deny that. What we're trying to show here is that this argument that because miracles are intrinsically improbable relative to our background information that no amount of evidence could serve to establish one, and that's just demonstrably false. It neglects the key factor in the probability calculus and just looks at the intrinsic probability of a miracle, and that is mathematically and demonstrably fallacious.

Student: You can turn this around to the materialist because they believe extraordinarily improbable things if you take the laws of nature. You know that one fertilized cell could be trillions and organize itself into systems and whatever. You could have physical laws. You could have physical constants and ionization constants.

Dr. Craig: Yes. What you're making is the same point that I mentioned earlier that if you do what Hume did and just focus on the intrinsic improbability of the event and neglect this other factor then you're going to be led to deny the occurrence of all kinds of things; for example, your own existence because relative to the general background knowledge of human biology and reproduction, your existence is enormously improbable that one egg and one sperm should have united to produce you. So nobody should believe that you exist relative to the background information. You're quite right. This objection was actually pressed against Hume. Hume, himself, in his essay, says that the King of Siam, who lived in a tropical environment, should not believe the reports of travelers that water could exist in the form of a solid. Suppose travelers returned from the northern hemisphere and tell the King of Siam that water can exist as a solid substance called ice or snow. The King of Siam should not believe them no matter what they said, no matter how many reports they gave, and that they were willing to die for the truth of their reports. Hume said the King of Siam shouldn't believe it because, given his background information of the world, that is impossible. He has absolutely no experience of such a thing. You are quite right that if you follow Hume's argument against miracles you will be led to deny not just the existence of miracles but all sorts of natural events that are highly improbable.

Student: Is there a way to apply this practically? I understand how we're applying it to Christ's resurrection and the miracles in the Bible, but suppose someone comes up today and says, *I'm a miracle worker, I can do this or that, my prophecies are true*, or something like that. Because frankly I'm going to be a skeptic. If somebody says, *I can do this or that*, or, *I saw ghosts*, whatever, I'm going to be like, *Are you really sure about that?* Practically speaking, can you apply this same type of . . .

Dr. Craig: Yes, exactly. Think of someone's example the other week about the spontaneous remission of someone's cancer. You would say what is the probability that his cancer would be remitted given that this faith-healer prayed for him versus the probability that it spontaneously remitted? You could argue that it's not all that much more probable in this case that it's due to the faith-healer than to the spontaneous remission. There might be other reasons that would contribute to that for thinking that, in fact, there is a natural explanation for the supposed miracle. This is going to apply on a case-by-case basis, and the same factors will need to be considered: what is the intrinsic probability of the event occurring given our background information apart from the evidence, then what about the specific evidence that we have that it took place, and how much more probable is that evidence on the hypothesis than on the negation of the hypothesis. So it would apply to modern miracles as well, though for me as a Christian I'm most interested in how it would apply to Jesus' miracles and resurrection.

Student: I always thought it's interesting how this sort of Humean argument . . . and I think even John Earman makes this point, too . . . about how if you take consistently what seems almost stifle scientific knowledge – you think about things like quarks or even black holes (I was thinking quantum mechanics) – all the weird sort of stuff we've discovered in modern physics. It would seem if you take Hume's argument you could just say given the background knowledge of how the world works there's no way you could believe anything weird like that. That's clearly wrong.

Dr. Craig: Because, given the truth of the hypothesis, it has much greater explanatory power than if the hypothesis were false and so that can balance out this intrinsic improbability, as you say, that these weird things occur. Improbable events happen all the time, don't they? We shouldn't say that therefore no amount of evidence can establish that they occurred. Whether or not it does is going to depend on this other ratio that Hume neglected.

Student: It also shows as even with the Indian prince and the water example the somewhat flexibility or the . . . what's the word I'm looking for? . . . the problematic way that Hume assigns probabilities as just background knowledge. Most of us nowadays, we would take water being a solid – going from liquid to solid – it's just part of the background knowledge.

Dr. Craig: Yes, that's right. You would say this is part of our background knowledge today and the King of Siam was extremely limited in what he took to be background knowledge. So, yes, that's a valid point as well.⁴