

Inferring the Best Explanation

- PROF.: Scientists believe many things they can't prove. For example, we can't even prove with absolute certainty that Earth orbits the sun!
- VOICE: (SURPRISED) Did you say we can't prove definitely that the Earth moves around the sun?
- PROF.: Yes. Let's discuss why rational people think it does – without having total “proof.” We'll examine a principle known as “inference to the best explanation.”
- FORMAT: THEME AND ANNOUNCEMENT
- VOICE: Professor, what did you mean when you said we can't prove with 100 percent certainty that the Earth orbits the sun, instead of the other way around?
- PROF.: For centuries educated people believed the sun moved around the Earth. By the late middle ages the geocentric theory had become so widely accepted that no one even looked for an alternative.
- VOICE: What evidence convinced them that it needed to be changed?
- PROF.: Every mistaken theory eventually runs into certain facts that it cannot adequately explain. When astronomers observed the way the planets moved, they ran into a puzzle they called “retrograde movement.”
- VOICE: Isn't that some kind of motion in a backward direction?
- PROF.: Yes. For example, when someone on Earth observes Mars, Mars appears to move first in one direction across the sky, stop, and then start moving in the opposite direction.
After a short time, it appears to stop and reverse again into the direction it was originally moving.
- VOICE: Forward, stop; reverse, stop; then move forward again?
- PROF.: Yes. That didn't seem logical to astronomers. So they tried to figure some way to explain that strange behavior.
- VOICE: Some explanation that would keep their preconceived idea that the Earth was the center?
- PROF.: Yes. To preserve that, first they hypothesized that a *theoretical point* was orbiting Earth, and that Mars was orbiting that theoretical point.

VOICE: So Mars wasn't rotating around the Earth or the sun – but around some kind of “theoretical point”?

PROF.: Yes. Next they assumed that this theoretical point was moving in a circular orbit that was centered on the Earth.

VOICE: So astronomers formulated circular orbits around Earth and Mars, with nothing in these orbits?

PROF.: Right. They believed those imaginary orbits explained why Mars and the other planets looked as if they were moving back and forth, when seen from Earth.

VOICE: How did astronomers react when new astronomical data didn't fit their revised geometry?

PROF.: They accounted for the irregularities *by theorizing even more complex movements.*

VOICE: What finally made them realize their complicated theories weren't working?

PROF.: In the 16th century, Copernicus' co-worker, Domenico da Novara [doh-MEN-uh-koh dah noh-VAR-uh], said that no system so cumbersome and inaccurate as the geocentric system had become, could possibly be true of nature. Copernicus wrote that the traditional interpretation – with the sun and the planets moving around Earth – had created a monster.

VOICE: You said at the beginning of the program that we still don't have “absolute proof” that Earth moves around the sun. Then why are we so convinced now that this is the real situation?

PROF.: Because the mathematics is simpler and more consistent.

VOICE: What do you mean?

PROF.: If we assume the sun is the center and Earth and the other planets rotate around it, each planet *keeps moving in a consistent direction.*

VOICE: So if we draw a model that has the sun in the center, each planet moves consistently forward. No planet has to back up and reverse its movement.

- PROF.: Right. If we assume the sun is at the center of our solar system, no planet vacillates among moving forward, stopping, shifting into reverse gear, and then moving forward again.
It's the simplest, most logical conclusion. That's what philosophers call the "inference to the best explanation."
- VOICE: We don't have to stand on the sun and observe the planets rotating around it. We can use our reasoning powers to reach the most logical explanation.
- PROF.: Yes. By the "inference to the best explanation," we accept the concept that Earth and the other planets rotate around the sun, without being able to "prove" it.
That's because that explanation is logical and convincing – and because the alternative does *not* make sense.
- VOICE: That reminds me of a conversation a friend and I had yesterday. He said he needed absolute proof, before he would believe *God exists*.
He said science is the only genuine knowledge. If something can't be tested by the scientific method, it cannot be true or credible.
- PROF.: Molecular biologist Dr. Stephen Meyer points out an error in that thinking. If we say nothing is true except what can be tested scientifically, *that statement in itself cannot be tested by the scientific method*.
- VOICE: That's interesting! The statement "If something cannot be tested by the scientific method, it cannot be true or rational," can't be tested by the scientific method.
- PROF.: It's a philosophical assumption that contradicts itself.
Dr. Meyer continues, "Now, there's no question that science does teach us many important things about the natural world. But the real question is, 'Do these things point to anything beyond themselves?' I think the answer is yes. Science teaches us many true things, and some of those true things point toward God."
- VOICE: What true things "point toward God"?
- PROF.: He talks about "an ensemble of half a dozen evidences that point to a transcendent, intelligent cause."
- VOICE: In other words, an intelligent being that is above nature and made nature.

- PROF.: Yes. What scientists knew in the nineteenth and early twentieth centuries was fairly simple. So thinkers could logically believe that natural laws had produced the various things that scientists observed.
But Dr. Meyer says, “Thanks to the discoveries of the last five decades, we know a lot more today.”
- VOICE: For example?
- PROF.: In various episodes, we have discussed “fine-tuning” in many parts of nature. Dr. Meyer summarizes, “Taken together, what we know today gives us heightened confidence – *from science* – that God exists. The weight of the evidence is very, very impressive – in fact, in my opinion it’s sufficiently conclusive to say that theism provides the best explanation for the ensemble of scientific evidence we’ve been discussing.”
- VOICE: Fine-tuning of one aspect of nature could be an accident, but fine-tuning after fine-tuning after numerous other fine-tunings, is like a solar system of planets revolving around one central sun.
- PROF.: Yes, and the entire “cluster” seems to point to one “best explanation.” It seems to imply someone with super-human intellect is the “central sun” around which other facts revolve. The precise details that are constructed into the universe give strong inferences that an intelligent being has been at work. The intricate ways the various organs of our bodies are built give additional strength to the inference that “the best explanation” is God.
- VOICE: Tell me more about the “inference to the best explanation.”
- PROF.: It’s a form of practical reasoning that we use in life all the time. Dr. Meyer says elaborates, “...if we want to explain a phenomenon or event, we consider a wide range of hypotheses and infer to the one which, if true, would provide the best explanation. ...[W]e do an exhaustive analysis of the possible explanations and keep adding information until *only one explanation* is left that can explain the *whole range* of data.”
- VOICE: Logical reasoning will point to the *one* “best explanation.”
- PROF.: Dr. Meyer continues, “The way you discriminate between the competing hypotheses is to look at their explanatory power. Often, more than one hypothesis can explain the same piece of evidence.” For example, there can be two or more explanations for the beginning of the universe. “But if you keep looking at the data, you find that only theism can explain the evidence for design in biology after the origin of the universe.”
- VOICE: So the belief in one God makes the most sense of the multitude of fine-tuned features we observe in nature.

PROF.: It's the same kind of reasoning that detectives and scientists do. It enables us to achieve a high degree of practical certainty.

Dr. Meyer summarizes, "And when we look at the evidence...from cosmology, physics, biology, and human consciousness, we find that theism has amazing explanatory scope and power. The existence of God explains this broad range of evidence more simply, adequately, and comprehensively than any other worldview..."

VOICE: Professor, thanks for introducing me to the idea of "inference to the best explanation."

PROF.: You're very welcome. Today's discussion reminds me of a statement by the late philosopher C. S. Lewis: "I believe in Christianity as I believe that the sun has risen: not only because I see it, but because by it I see everything else."

VOICE: "I believe in Christianity as I believe that the sun has risen: not only because I see it, but because by it I see everything else"?

Let me think about that a minute. Was he saying that accepting the idea that God exists, illuminates our thinking about other facts?

PROF.: Exactly! When we realize that the sun is the center around which the planets rotate, the entire solar system makes sense. And when we accept the "central fact" that God created nature and established its laws, everything else fits together in a more orderly pattern.

VOICE: So we can infer that God is the "best explanation." And the best explanation is God!

FORMAT: THEME AND ANNOUNCEMENT

© Copyright 2014 Trans World Radio. All rights reserved.