

Believing Is Seeing: A Physicist Explains How Science Shattered His Atheism and Revealed the Necessity of Faith

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Introduction: Why I Wrote This Book

Page xiii · Location 337

As a physicist, mathematician, astronomer, and Christian, I have a worldview broad enough to accommodate both the scientific method and the Bible . . . reason and faith . . . the universe and God.

Page xiii · Location 339

logic does not represent the pinnacle of human intelligence, critical thinking, or wisdom, and it's not faith-free. Second, science is not the enemy of God; instead, it is God's gift to humanity, a brilliant way to explore his transfinite nature and stunning creation.

My Journey

1. California Dreamin' . . . and Beyond > Page 9 · Location 505

dark matter and dark energy seem to constitute 95 percent of the entire universe. That's right, scientists now believe that 95 percent of the universe is invisible to us.

3. The Reckoning: Part 1 > Page 39 · Location 961

The same goes for you. Unless you're willing to believe that something might be true, you'll never bother to investigate and see for yourself whether it is true (or not). You'll remain in a state of confident ignorance.

The Truth about Faith

6. Having Faith in Faith > Page 75 · Location 1608

you should care about faith because everything in your life depends on it. Everything. Your decisions, your relationships, your contentment: Every aspect of your being, right down to the functioning of your brain cells—as you'll see in a minute—depends on this thing called faith.

6. Having Faith in Faith > Page 76 · Location 1613

two main categories of faith: misguided and enlightened.

6. Having Faith in Faith > Page 76 · Location 1614

Atheist and journalist H. L. Mencken claimed that all faith is misguided. "Faith may be defined briefly as an illogical belief in the occurrence of the improbable," he writes. "A man full of faith is simply one who has lost (or never had) the capacity for clear and realistic thought. He is not a mere ass: he is actually ill." [1]

6. Having Faith in Faith > Page 76 · Location 1620

ENLIGHTENED FAITH causes you to believe in hypotheses that are consistent with the best available evidence, even if that evidence is sketchy and ambiguous.

6. Having Faith in Faith > Page 76 · Location 1623

BASED FAITH causes you to believe in trivial truths—garden-variety, logical truths and realities that can be seen, proven, and imagined. Like this syllogism, for example:

6. Having Faith in Faith > Page 77 · Location 1629

SQ-BASED FAITH causes you to believe in profound truths—including Gödelian truths and translogical realities, which cannot be seen, proven, or imagined.[3]

6. Having Faith in Faith > Page 78 · Location 1648

your beliefs define your worldview.

6. Having Faith in Faith > Page 78 · Location 1656

What you believe dictates how you see life, others, and the world around you.

6. Having Faith in Faith > Page 78 · Location 1657

How you see things, in turn, dictates how you react to circumstances, to crises, to everything.

6. Having Faith in Faith > Page 78 · Location 1658

The worst, most dangerous kind of worldview is powered by misguided faith.

6. Having Faith in Faith > Page 81 · Location 1695

The LH sees the world, knows about it consciously, and can easily describe it verbally. The RH is blind to the world yet knows about it unconsciously and can describe it nonverbally.

6. Having Faith in Faith > Page 84 · Location 1742

Enlightened faith happens when you make full use of your IQ and SQ;

6. Having Faith in Faith > Page 84 · Location 1747

Tragically, this misguided, domineering-LH worldview is popular among well-educated men and women who should know better. Their half-blind worldview—their unchecked logical, material, positivist worldview—poisons conversations and cultures all over the industrialized world.

6. Having Faith in Faith > Page 85 · Location 1758

science is not based on logic alone. As you will see in the very next chapter, science is guided by faith, just like religion.

6. Having Faith in Faith > Page 85 · Location 1759

Draper's thesis is also untrue because science and religion have coexisted peaceably, even synergistically, for most of human history.

6. Having Faith in Faith > Page 85 · Location 1761

Albert Einstein, though he revered science, didn't allow his LH to browbeat his RH. In a 1954 essay titled "Science and Religion," he writes:

6. Having Faith in Faith > Page 85 · Location 1763

Science can only be created by those who are thoroughly imbued with the aspiration toward truth and understanding. This source of feeling, however, springs from the sphere of religion. . . . The situation may be expressed by an image: science without religion is lame, religion without science is blind.[19]

6. Having Faith in Faith > Page 85 · Location 1766

Einstein didn't believe in a personal God, which some Atheists play up to imply dishonestly that he was one of them. He was not.

6. Having Faith in Faith > Page 86 · Location 1771

“Albert Einstein called the intuitive or metaphoric mind a sacred gift,” notes author Bob Samples. For Einstein, “the rational mind was [merely] a faithful servant.”[22]

6. Having Faith in Faith > Page 86 · Location 1786

Enlightened faith—the most potent kind of faith—is mightier than any other power in the universe.

7. Having Faith in the Scientific Method > Page 89 · Location 1856

God pity the man of science who believes in nothing but what he can prove by scientific methods! . . . For if ever a human being needed divine pity, he does.

JOSIAH GILBERT HOLLAND

7. Having Faith in the Scientific Method > Page 90 · Location 1874

By the time I headed to Harvard, I knew the SM for what it really is: a brilliant technique for understanding a tiny fraction of the physical world and virtually nothing about the world of metaphysics.

7. Having Faith in the Scientific Method > Page 91 · Location 1892

The SM is notoriously imprecise.

7. Having Faith in the Scientific Method > Page 92 · Location 1899

At its core, then, the SM is a belief system. It's not a wholly objective technique, contrary to claims made repeatedly by propagandists,

7. Having Faith in the Scientific Method > Page 94 · Location 1936

here are three of science's axiomatic beliefs. They cannot be proved; it requires faith to go along with them.

7. Having Faith in the Scientific Method > Page 94 · Location 1937

The universe can be explained.

7. Having Faith in the Scientific Method > Page 94 · Location 1939

“The eternal mystery of the world,” Einstein marveled, “is its comprehensibility. The fact that it is comprehensible is a miracle.”[10]

7. Having Faith in the Scientific Method > Page 95 · Location 1949

For those early scientists, God was a profound, translogical reality—consistent with the best available evidence and therefore powered by enlightened IQ-and-SQ-based faith.

7. Having Faith in the Scientific Method > Page 95 · Location 1958

All in all, then, the main figures involved in designing the scientific method believed in the principle of sufficient reason—as well as the God of Abraham, Isaac, and Jacob.

7. Having Faith in the Scientific Method > Page 95 · Location 1959

They believed his creation was a rational, explainable cosmos and that by studying it, they could better understand him.

7. Having Faith in the Scientific Method > Page 95 · Location 1960

Besides Leibnitz and Ibn al-Haytham, these pioneers included Abu Ali Sina (Avicenna), Robert Grosseteste, Roger Bacon, Francis Bacon, René Descartes, Galileo Galilei, and Isaac Newton. In the fecund soil of these innovators' deep, spiritually intelligent Christian, Muslim, and Jewish convictions, science took root, sprouted, and grew into the mighty tree it is today.[14]

7. Having Faith in the Scientific Method > Page 96 · Location 1966

The simplest possible explanation is always the best.

7. Having Faith in the Scientific Method > Page 96 · Location 1967

It's called Ockham's Razor.[

7. Having Faith in the Scientific Method > Page 96 · Location 1970

why resort to a complicated explanation when a simpler one will do?

7. Having Faith in the Scientific Method > Page 96 · Location 1971

Like all axioms, Ockham's Razor can't be proven; it must be accepted by faith.

7. Having Faith in the Scientific Method > Page 97 · Location 1982

The scientific method is nearly perfect for understanding the physical aspects of our life. . . . But it is a radically limited viewfinder in its inability to offer values, morals and meanings that are at the center of our lives.[18]

7. Having Faith in the Scientific Method > Page 97 · Location 1985

Doing experiments is the best way to understand the universe.

7. Having Faith in the Scientific Method > Page 98 · Location 1999

Scientists in every discipline are now far, far removed from the reality they claim to explain. Paleontologists routinely draw extravagant, global conclusions about an entire species, based on the study of a single jawbone from a single individual dug up at a single location.

7. Having Faith in the Scientific Method > Page 99 · Location 2015

It's no wonder, then, that so many scientists get it wrong.

7. Having Faith in the Scientific Method > Page 100 · Location 2034

The prestigious British journal Nature conducted a survey of 1,576 scientists and discovered that "more than 70 percent of researchers have tried and failed to reproduce another scientist's experiments [one or more times], and more than half have failed to reproduce their own experiments." [21]

7. Having Faith in the Scientific Method > Page 100 · Location 2037

This colossal failure—now called the reproducibility crisis—afflicts research published in the world's most respected, peer-reviewed journals. Which means something is very wrong with how experimental science is being done.

7. Having Faith in the Scientific Method > Page 100 · Location 2040

so-called evidence or facts—can usually be understood in more than one way.

7. Having Faith in the Scientific Method > Page 101 · Location 2041

Inevitably, the published conclusion will be only one possible interpretation of the evidence—and maybe not even the best one.

7. Having Faith in the Scientific Method > Page 102 · Location 2061

A study by Italian scientist Daniele Fanelli discovered that an alarming 72 percent of scientists knew of colleagues who had resorted to “questionable research practices.”

7. Having Faith in the Scientific Method > Page 102 · Location 2062

14 percent knew of colleagues who had outright falsified data.

7. Having Faith in the Scientific Method > Page 102 · Location 2066

Notwithstanding all these problems with experimental science, I still believe the SM is our most brilliant technique for understanding the physical world.

7. Having Faith in the Scientific Method > Page 103 · Location 2072

the axiomatic beliefs of science—the principle of sufficient reason, Ockham’s Razor, empiricism, and countless others I don’t have space

7. Having Faith in the Scientific Method > Page 103 · Location 2073

here to name—are all faith-based. Science is a faith-based enterprise, not some trivial logical algorithm.

7. Having Faith in the Scientific Method > Page 103 · Location 2074

Without faith, science couldn’t exist.

7. Having Faith in the Scientific Method > Page 103 · Location 2076

Lots of other animals have IQ, but none has ever invented a scientific method because none has SQ.

7. Having Faith in the Scientific Method > Page 103 · Location 2081

But you and I do have SQ. And because of that, our species alone invented science—undeniable, extraordinary evidence of our stunning uniqueness.

8. Having Faith in Mathematics > Page 108 · Location 2196

Euclid’s SQ—his religious-like faith in axioms that aren’t logical and can’t be seen or even imagined—proved to be so enlightened that he revolutionized mathematics.

8. Having Faith in Mathematics > Page 112 · Location 2258

Morris Kline, the renowned American mathematician, wrote in his textbook *Mathematics for the Nonmathematician*, “Logic is the art of going wrong with confidence.”[

8. Having Faith in Mathematics > Page 113 · Location 2273

Gödel’s theorems seriously undermine the belief in a theory of everything (TOE)—for example, the grand unified theory (GUT), the Holy Grail of physics. GUT aspires to provide a single, coherent explanation of the four known forces in nature: gravity, electromagnetism, the strong force, and the weak force. Einstein spent his final years doggedly seeking out a GUT, but he failed. Indeed, by proving that logic is not powerful enough to describe arithmetic, let alone the universe, Gödel’s theorems teach us that pursuing any kind of logically self-consistent TOE is as delusional as believing in the Tooth Fairy.

8. Having Faith in Mathematics > Page 113 · Location 2278

Truth is bigger than proof.

8. Having Faith in Mathematics > Page 119 · Location 2364

that's bad news only for people who were misguided enough to believe in the existence of 100 percent faith-free proof. No such thing exists or ever has existed on the Isle of Mathematics, just as Bigfoot does not and never has existed anywhere.

8. Having Faith in Mathematics > Page 119 · Location 2366

As we've just seen, the Sea of Faith on which mathematics floats teems with unprovable, unimaginable, translogical, SQ-based beliefs. Beliefs that defy mere IQ. Beliefs that describe the real world with uncanny truthfulness. Beliefs you must embrace if you wish to behold their astonishing revelations.

9. Having Faith in Physics > Page 121 · Location 2439

Our SQ takes us to faraway places that our IQ can't see, can't prove exist, can't even imagine. It's the engine of humanity's unparalleled curiosity.

9. Having Faith in Physics > Page 122 · Location 2443

SQ's unfathomable, penetrating intelligence opens your eyes to exotic, translogical realities. Once you use it, nothin' is gonna keep you down on the ol' Darwinian farm ever again.

9. Having Faith in Physics > Page 125 · Location 2488

take a look at five shocking claims that quantum physics makes about Wonderland—claims well beyond our ability to fully comprehend. They defy words, they defy proof, they defy even the human imagination. Yet physicists believe in them the way Aristotle once believed in gods.

9. Having Faith in Physics > Page 125 · Location 2490

All residents of Wonderland are paradoxical.

9. Having Faith in Physics > Page 126 · Location 2503

Some residents of Wonderland can teleport and communicate instantaneously.

9. Having Faith in Physics > Page 126 · Location 2516

Residents of Wonderland can exist in many places at once.

9. Having Faith in Physics > Page 127 · Location 2520

The odds of an atom being at any one place are quite high. But . . . there's a chance, albeit infinitely small, that it's somewhere else—maybe even across the universe.

9. Having Faith in Physics > Page 127 · Location 2521

At any given moment, a typical atom is probably where classical physics says it should be. But you can't say it's there with complete confidence because it can be in many places simultaneously.

9. Having Faith in Physics > Page 127 · Location 2529

Experiments in Wonderland are never truly objective.

9. Having Faith in Physics > Page 127 · Location 2530

according to quantum physics, objectivity is something of a myth.

9. Having Faith in Physics > Page 127 · Location 2531

The reason: Physicists and their equipment cannot avoid interacting with whatever they're observing. That interaction inevitably affects the observation.

9. Having Faith in Physics > Page 137 · Location 2680

Leonardo explained his stereoscopic perspective this way: "Since no intellect can penetrate nature and no language can explain its marvels, human thought is guided to the contemplation of the divine." [21]

10. Having Faith in Astronomy > Page 139 · Location 2756

Everything you've learned in school as "obvious" becomes less and less obvious as you begin to study the universe. R. BUCKMINSTER FULLER

10. Having Faith in Astronomy > Page 139 · Location 2762

astronomy is arguably the most emotional and spiritual of all the sciences.

10. Having Faith in Astronomy > Page 140 · Location 2775

95 percent of the universe is imperceptible.

10. Having Faith in Astronomy > Page 140 · Location 2775

95 percent of the cosmos is hidden from us—in the form of dark matter, dark energy, and other covert phenomena. It emits no detectable light whatsoever. It is invisible. [

10. Having Faith in Astronomy > Page 140 · Location 2777

That means astronomers are forced to operate mostly in the dark. Literally. They must rely on faith—ideally IQ-and-SQ-based enlightened faith—to believe and defend their conjectures about our mostly invisible, otherworldly cosmos.

10. Having Faith in Astronomy > Page 141 · Location 2795

University of Oregon physicist and cosmologist Gregory Bothun. The mysteries of cosmology are so profound, he says, that "there remains no clear and preferred model for the origin and evolution of structure in the Universe." [

10. Having Faith in Astronomy > Page 144 · Location 2843

For many centuries, no one ever asked this question. Everyone agreed the cosmos was ageless and static. That what we see today is what has always existed and always will exist.

11. Having Faith in God > Page 161 · Location 3191

In order to judge the heart and soul of the New Testament, I knew I had to focus my hard-nosed examination on its central figure: Jesus Christ.

11. Having Faith in God > Page 195 · Location 3734

logic can only prove trivial truths, not translogical truths; evidence can always be interpreted in more than one way, and it can never prove a complex hypothesis or religion, including Atheism.

11. Having Faith in God > Page 196 · Location 3738

In fact, having such a small worldview, as Atheism advocates, is symptomatic of a cognitive weakness, not a strength.

11. Having Faith in God > Page 196 · Location 3739

It shows that we've closed our

11. Having Faith in God > Page 196 · Location 3739

minds to the very truths that matter most: the profound, translogical truths that involve things that cannot be seen, proven, or even imagined—truths upon which both science and Christianity are solidly built.

11. Having Faith in God > Page 196 · Location 3743

Atheism, then, not only celebrates small-mindedness; it is patently unscientific and un-Christian. It represents not free thinking but narrow, constricted thinking—thinking that is forever enslaved by the five human senses and simple logic.

Your Destiny

12. Having Faith in Your Worldview > Page 208 · Location 4132

Whatever your worldview, it is founded on faith. It is unavoidably founded on ideas and feelings that cannot be proved.

12. Having Faith in Your Worldview > Page 210 · Location 4160

whatever person or principle you hold most dear, that person or thing is your deity, the god at the center of your worldview, the definer of your religion.

12. Having Faith in Your Worldview > Page 211 · Location 4171

people with heliocentric worldviews worship something other than themselves, their feelings, and their dreams. The scientific and Christian worldviews are examples of this because both urge us to cherish selflessness and absolute truth over self-centeredness and personal feelings.

12. Having Faith in Your Worldview > Page 220 · Location 4305

knowing, all-seeing Holy Spirit.