

FAITH AND SCIENCE

Many Christians are leery about science, but I've long been interested in it. In college I majored in engineering and minored in physics. Even today, one of my passions is dialoguing with science-minded atheists and skeptics.

Whatever your own history with science, the fact is that the so-called "conflict" between faith and science is pressing, especially since many people who reject Christianity do so on the basis on science. We have to get clear about this topic if we are going to talk about our faith with confidence. So, in this chapter you will learn

- where the conflict between faith and science came from;
- how to respond to scientism;
- how to answer big myths, like "sciences disproves God";
- the truth about the Galileo affair; and
- why evolution is not a problem for Catholics.

You will finish this chapter with a sigh of relief, knowing you will never have to get rattled about faith and science again when the topic comes up in conversation.

THE ORIGIN OF THE CONFLICT BETWEEN FAITH AND SCIENCE

The obvious place to begin is with the question, “How did the notion that faith and science conflict arise?” Most historians trace this back to the Enlightenment, the eighteenth-century intellectual movement that aggressively opposed religion.

Enlightenment thinkers wanted to usher in a new Age of Reason in which rational thought alone—not God, the Bible, or the Church—was the ultimate source of authority. And to do this they needed to undermine the Catholic Church’s extensive influence on society. The leaders of the Enlightenment achieved this by promoting a false dichotomy between faith and science. They contended that we had a choice: we could either blindly follow fixed Catholic dogmas, or we could use reason to figure things out ourselves through scientific experimentation. Therefore, everyone must decide between either faith or reason, either religion or science, but we can’t have both.

Over the last three centuries that false choice has taken root deep in our culture. Today, you see it prominently among two extreme groups. On the one hand, the New Atheists—people such as Richard Dawkins and the late Stephen Hawking—promote the sciences as a more enlightened alternative to religion. On the other extreme, many fundamentalist Protestants dismiss science as an unreliable, anti-religious conspiracy. Both groups, science lovers who dismiss religion and religion lovers who dismiss science,

have caused many people today to think faith and science are interminably at odds.

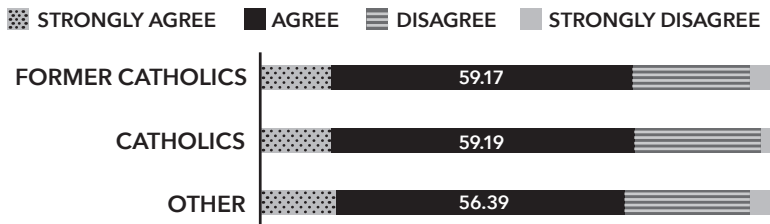
But this is not just a problem on the extremes. When you look at surveys asking former Catholics why they left the Church, inevitably the word *science* pops up in the responses.

Dr. Christian Smith, a leading Catholic sociologist, recently carried out an extensive study of young adults who were raised Catholic but are no longer Catholic today. He made this observation: “This idea came up again and again in our interviews: science and logic are how we really know things about our world, and religious faith either violates or falls short of the standard of scientific knowledge.”¹

Look at this chart from Dr. Smith’s report. Researchers asked young people whether they agreed or disagreed with this statement: “The teachings of science and religion often ultimately conflict with each other.” Here’s what they said:

AGREE OR DISAGREE: THE TEACHINGS OF SCIENCE AND RELIGION OFTEN ULTIMATELY CONFLICT WITH EACH OTHER.

(PERCENTS)



Notice that when you combine the “strongly agree” and the “agree” bars, you see that the overwhelming majority of young people—more than 75 percent—think faith and science are in conflict. Notice, too, that there’s virtually no difference in the responses of former Catholics, Catholics, and non-Catholics. In other words, even young Catholics are convinced that faith and science are in opposition. In fact, you can see on the chart that young people raised Catholic were actually more likely than non-Catholics to believe in the conflict between faith and science!

As Dr. Smith notes, for many people today, “being scientific is seen as being smart, savvy, and realistic about the world we live in. Being religious, by implication, is seen as being gullible, naive, and weak.”²

The Church and the Conflict between Faith and Science

But is this really the case? Well, before answering that question, it’s worth considering what the Catholic Church actually teaches about science. For Catholics true faith and true science are never in conflict. They will never be in conflict because the truths of faith and the truths of science, if genuine, can never contradict each other. They both flow from God, the ground of all truth, and truth can’t contradict truth.

St. John Paul II wrote a magnificent encyclical letter titled *Fides et Ratio*, which is Latin for “faith and reason.” The opening line of the document brilliantly illustrates the Catholic view of science: “Faith and reason are like two

wings on which the human spirit rises to the contemplation of truth.”³

Picture a bird, lifting up into flight, both wings flapping together. The wings are not in conflict; rather, they’re complementary. Both wings work together to rise up to the heights. The same relationship holds between faith and science. Catholics know that to rise to the full contemplation of truth, as the pope says, we need both wings flapping together in harmony.

Catholics don’t shun science. We embrace it, we value it, and we promote it. We aren’t afraid of science and have no problem with genuine scientific truths.

RESPONDING TO SCIENTISM

But then why do so many people think Christianity is incompatible with science? One reason is that appreciation for science often devolves into scientism, which is a very fashionable ideology today.

Defining Scientism

Scientism is the belief that all knowledge about reality—not just some knowledge but all—comes from what the hard sciences, especially physics and chemistry, have proven. Advocates of scientism believe science is the *only* trustworthy way to arrive at truth. Its advocates hold that all other claims, including those about God, morality, politics, beauty, and more, are merely expressions of private opinion or emotion.

You see this scientism in survey responses from former Christians, who often say things like, “Well, as I got older, I knew I had to choose between faith and science, since they’re obviously incompatible, and since I trusted science so much, I had to give up faith.” Others say something like, “Science is the only way to know what’s true, objective, and reliable, and since faith isn’t science, then we can’t rely on it. It can’t arrive at truth.”

Now that you know what scientism is, you will start recognizing it everywhere. For example, on the bestseller rack at your local bookstore you will see a book championing how science unlocks the secrets to life. Or turn on the television or internet and you will find advocates of scientism speaking about science as reverently as any religious person does their faith. Or go to any college campus and you’ll see science departments heralded above the rest, especially above the humanities, as the pinnacle of education.

Responding to Scientism

You can use two main strategies to respond to someone who advocates scientism. First, show how scientism is self-refuting. Here you want to demonstrate that it contradicts itself. Second, raise for discussion things we know are true but that science can’t explain. Let’s consider these approaches one at a time.

Scientism Refutes Itself

It’s fairly easy to show that scientism is self-refuting. You can ask an advocate of scientism, “Are you saying that we should believe only what can be proved scientifically?” If

they say, “Well, no . . .” then you can say, “Great! We agree, then, that there are other ways besides science to arrive at knowledge, such as religion, philosophy, the arts, moral reasoning, and more.”

But if the person says, “Yes, we should only believe what can be proved scientifically,” then you can ask, “Has it been proved scientifically that ‘we should only believe what can be proved scientifically’? What scientific experiment proved that?”

Most likely the person will relent and admit that scientism is not scientifically provable. In that case, you’ve found agreement. You can affirm together that science is just one of many avenues to the truth, and that the supposed conflict between science and other sources of knowledge is just a myth.

By the way, you’ll see we didn’t use the word “scientism” in this exchange. You should note that most people who embrace scientism don’t care for the label and take it negatively, as an insult. So, even if the person embraces scientism, don’t use that term in conversations. Just discuss the idea, not the term.

Overall, your goal is to help the other person see why scientism is self-refuting, that it’s impossible to prove scientifically that scientism is true. This is because scientism is not a scientific statement but a philosophy. It is not science itself, but it expresses a theoretical viewpoint *about* science. So, the only way to accept scientism is to recognize the validity of philosophy. Yet accepting philosophy undermines the whole claim of scientism, that science is the only

way to truth. So, as you can see, there are multiple ways to achieve this goal in conversation, to show that scientism is self-refuting.

Truths that Science Can't Explain

A second way to refute scientism is to help the other person see that they hold truths we all embrace but that can't be explained scientifically.

My favorite example is morality. Virtually all of us believe in certain moral truths. For example, everyone holds that it's always wrong to torture babies for fun. No sane person would ever think it's ever acceptable to brutalize toddlers purely for entertainment purposes. But why is that true? It's certainly not a truth we derive from science. There's no experiment that can confirm it's wrong to torture children. We have to rely on other ways of reasoning such as moral intuition and philosophy, rather than chemistry or physics, to show that it's wrong. Specifically, we depend on the philosophy of ethics to demonstrate that all human beings have inviolable human dignity, which makes it wrong to harm them, especially innocent babies.

Once you persuade another person to see that we all hold to facts that aren't necessarily scientific, you've opened them to other ways of understanding the world besides science. This can help someone escape the shackles of the view that science explains everything.

With scientism behind us, we can move on to some of the other big myths that turn up when discussing faith and science.

ANSWERING THE BIG MYTHS

When someone tells you faith and science are at odds, you should ask for details. Ask the person to explain exactly how and why they are in conflict. In most cases, your conversation partner will mention one of a few common myths. Let's consider four of them and how to respond.

Myth 1: Science Has Disproven God

This myth doesn't just hold that religion is anti-scientific. It goes even further and argues that modern science has shown that God doesn't exist. However, in almost every case, when someone claims that science has disproven God, the God they're referring to is known as the "God of the gaps."

Before modern science, most ancient people attributed to gods all the mysterious phenomena they couldn't otherwise explain. For example, they wondered, "Why did our crops grow so well this year? Well, the gods must have been pleased! Why did we lose that war? Well, the gods must have been angry with us!"

This is known as the "God of the gaps," where a God (or set of gods) is used to fill in the gaps of our knowledge about the world. But over the centuries, as science developed and began to explain many of these phenomena through natural causes, the "God of the gaps" became smaller and smaller. We learned that crops grew well because of favorable weather. Wars were won or lost because of bad strategy

and inadequate weapons. Thus, God was needed less and less to explain things.

Here's the important point: when people today say that "science has disproven God," the God they have in mind is almost always a "God of the gaps." They believe that because science can now explain everything that people once needed divine beings to explain, there is no need for God—he's been disproven. (Ignore, for the moment, the fact that even if we could explain everything without reference to God, it wouldn't follow that God doesn't exist.)

So, how should you respond to this? Two things are helpful. First, you want to acknowledge that you don't believe in God simply because you can't otherwise explain things in nature. Affirm that you have other strong reasons to believe in God (many of these are laid out in the first volume of *What to Say and How to Say It*.)

Second, you want to emphasize that God is not just one scientific hypothesis among many. He's not a material cause within the universe. Because God is immaterial and timeless, he is outside of space and time. Therefore, by definition, he *cannot* be a scientific explanation for the things because science only concerns *natural* explanations for *natural* phenomena, and God is *supernatural*. In other words, God is not just one more natural cause that might be discarded once we discover better natural causes; he's the very ground of existence, the reason why the natural world exists at all. So, God is not in competition with scientific explanations. He's responsible for there being a natural world at all, a world that science can measure and study.

Myth 2: Six Literal Days of Creation

The second myth says, “The Bible teaches the earth was created in six literal days, and science has shown that’s false.” Although some fundamentalist Protestants believe in this view, known as “six-day creationism,” the Catholic Church doesn’t affirm this interpretation of Genesis. (To be fair, some of the Church Fathers did hold a literal belief in six days of creation, but only a few, and that view has never been officially endorsed by the Church.)

In the fourth century, St. Augustine explained why six-day creationism doesn’t make sense. Genesis says that God created light on day one but didn’t create the sun until day four. For this reason, even many early Christians rejected the literalist reading of Genesis. So, you can dismiss the myth with this explanation and affirm that this just isn’t what Catholics believe.

Myth 3: Most Scientists Are Atheists

A third myth holds that most scientists are atheists, so there must be an incompatibility between science and faith. This claim is less of an argument and more of a suggestion that because many smart people don’t believe in God, we shouldn’t either.

But is the claim true? Well, it is true that scientists are more likely to be atheists than believers. In *Science vs. Religion: What Scientists Really Think*, Elaine Ecklund concludes that while only 8 percent of the general population is atheist or agnostic, roughly 60 percent of science professors are. In

other words, scientists are seven to eight times more likely to be atheist than the general population

But interestingly, after interviewing hundreds of scientists and analyzing lots of survey data, Ecklund also found that very few scientists lost their faith through science. Science didn't turn them into atheists. Most were atheist well before they began pursuing science, and it was their interest in the natural world that led them into the field.

Also, Ecklund's book verifies that few scientists have put much time into studying the best arguments for God or for Christianity. It's just not their specialty or focus. They may be smart in one field (science) but not necessarily in others (for example, religion.) Studies show that the people who *have* put in the effort to study the arguments for and against God, especially those working in the fields of philosophy of religion, tend overwhelmingly to be believers.

In any case, your main response to this myth should be to say, "Okay, but what's your point? Even if many scientists rejected God, that's not a great reason for us to reject him. Why think scientists are experts on the question of God?" For every contentious issue, whether it be politics, religion, morality, or even science, there are always really sharp people on both sides of the debate. So, the question shouldn't be, "Which side has more smart people?" The question should be, "Is the view true?" When you hear this myth, try to reroute the conversation away from what position "smart people" take, and instead focus on the actual arguments.

Myth 4: The Catholic Church Is Anti-Science

Let's look at one more myth: "The Catholic Church is anti-science. It's always standing against scientific progress." One response to this charge is to ask the person to get more specific. For instance, ask, "Is there something specific you have in mind? An example where the Church stood against science?" Then you can deal with that specific issue rather than this broad accusation.

However, my favorite strategy here is to introduce some of the many famous Catholic scientists, who by their very existence undermine this myth. For instance, if you conduct a Google search for "Catholic scientists," you will find lists including hundreds of famous Catholic scientists.

Of course, for your conversations you don't need to cite all those scientists' names. Just remembering two or three will be helpful. One of my favorites is Fr. Georges Lemaître, a Belgian priest and physicist. Lemaître formulated the Big Bang theory, which is the most popular theory about the origin of our universe. Notably, Fr. Lemaître had to convince Albert Einstein that his theory was true. Einstein initially disagreed with it, but Fr. Lemaître won him over. So, if someone tells you the Catholic Church is anti-science, you can say, "Well, if the Church hates science so much, how was it that a Catholic priest, Fr. Georges Lemaître, formulated the Big Bang theory?"

Here are two more Catholic scientists to remember. A Catholic priest, Fr. Gregor Mendel, is the father of modern

genetics, and Franciscan friar Roger Bacon is the father of the scientific method.

We will deal with two other Big Myths later in this chapter—the Galileo affair and evolution.

Expert Interview with Stacy A. Trasancos

► **Watch the interview here:** <https://claritasu.com/trasancos>

Dr. Stacy A. Trasancos is a wife and homeschooling mother of seven. She holds a PhD in Chemistry and an MA in Dogmatic Theology. She was a senior research chemist for DuPont before converting to Catholicism. Dr. Trasancos is the author of two books, *Science Was Born of Christianity* and *Particles of Faith: A Catholic Guide to Navigating Science*. She serves as the executive director of the St. Philip Institute of Catechesis and Evangelization in the Diocese of Tyler, Texas.

In this interview, Dr. Trasancos responds to the following questions:

1. How did you first get interested in the convergence of faith and science?
2. Why do you think so many people presume that faith and science are in conflict?
3. Explain how science arose from a specifically Christian context.
4. What should Catholics know about evolution?
5. What are some big mistakes Catholics make when discussing issues of faith and science?
6. What are some talking points that Catholics should remember when discussing faith and science?

Excerpt from the Interview

"I've seen Catholics also say, 'I'm going to disregard science because I'm scared of it, I don't like what it's saying. I'm just going to stick to the faith.' The big answer, the full answer, which is what the Catholic Church is all about, is that we need both. Science is the study of the handiwork of God. And once you understand that, then you're free to explore science, all of it, in every detail. Even the theories that seem questionable, you're free to explore them looking for the truth. And you're also free to be completely grounded in your faith. You need that full picture, both ways." (Stacy A. Trasancos)

THE GALILEO AFFAIR

The Galileo affair is one of the oldest myths surrounding the conflict between faith and science.

The story is legendary. In the seventeenth century, Galileo Galilei was a gifted astronomer who made the earth-shaking discovery that instead of the sun and other planets rotating around the earth (a view known as geocentrism) the earth and other planets actually rotated around the sun (a view known as heliocentrism).

However, the Church didn't like his conclusions because the Bible taught that the sun revolved around the earth. It demanded that Galileo renounce his scientific discoveries. When he refused to do so, the Church had him tortured and imprisoned until he recanted this heretical belief.