

INTRODUCTION

All of us are familiar with the all-too-common cultural meme that science and faith are enemies. This is called the *warfare* or *conflict model* of science and faith. According to this model, faith and science are rival, mutually exclusive ways of explaining the universe. The warfare model has become a deeply rooted assumption in the minds of many American Catholics and has taken a particularly strong hold on young people in recent decades. A 2014 study from the Center for the Study of Religion and Society and the National Study of Youth and Religion (NSYR) by sociologist Christian Smith discovered the following:

- Among Roman Catholic emerging adults in the study, 72 percent adopted the “inherent warfare” model of science and religion; that is, they considered them to be contradictory and incompatible.
- Among Roman Catholic emerging adults in the study, 62 percent said that their own views about religion have *not* been strengthened by the discoveries of science.
- Among Roman Catholic emerging adults in the study who have stopped practicing their faith, 78 percent cited the “conflict” of science and religion as one of the reasons why they no longer practice their faith.¹

These findings were reinforced by a study released in 2016 by the Center for Applied Research in the Apostolate (CARA)

at Georgetown University. The study focused on roughly the same age group as the NSYR and found the warfare model to be the typical attitude even among junior-high Catholic youth. Typical responses to questions included, “It [the Catholic faith] no longer fits what I understand of the universe” and “As I learn more about the world around me and understand things that I once did not, I find the thought of an all-powerful being to be less and less believable.”² It is easy to see that these conclusions are not limited to the young, particularly when confronted with the understandings and convictions voiced by our children, students, and members of our youth groups.

Of course, this problem has produced a lot of hand-wringing and discouragement among many Catholic grandparents, parents, pastors, teachers, and catechists. It has also brought a swell of well-meaning but misinformed attempts to defend the Catholic faith in the face of scientific “secularism.” Some, such as the Kolbe Center for the Study of Creation, have taken the route of rejecting modern science, joining forces (if not hands) with non-Catholic Evangelical outreaches such as the Creation Museum in Northern Kentucky. The Kolbe Center approach is referred to as creationism because of its insistence that God created the universe exactly (or almost exactly) according to their interpretation of the first and second creation accounts found in the book of Genesis (Gn 1–3). The Kolbe Center flatly rejects the modern scientific consensus and does so based on the (misunderstood) authority of the Bible, attacking “secular science” as atheistic and lacking solid evidence for its claims.

Creationism is a theological position; it claims to be the proper interpretation of the Bible and of the Christian doctrine of creation. Yet it has been rejected by the three most recent popes. In

1981 St. John Paul II noted that the Bible does not wish to give us a “scientific treatise,” declaring that the Bible wishes to teach us theological truths, not scientific ones: “Any other teaching about the origin and make-up of the universe is alien to the intentions of the Bible, which does not wish to teach how heaven was made but how one goes to heaven.”³ In his Easter Vigil homily in 2011, Benedict XVI declared that the creation account in Genesis 1 “is not information about the external processes by which the cosmos and man himself came into being.”⁴ And in 2014, Pope Francis offered a similar rebuttal: “When we read the account of Creation in Genesis we risk imagining that God was a magician, complete with an all-powerful magic wand. But that was not so.”⁵ These quotes indicate that Catholics who embrace creationism do not represent the Church’s understanding of creation. Arguing against well-established science simply by virtue of one’s own interpretation of the Bible breaks faith and reason apart and fails to distinguish between science and theology.

So, rather than going on the offensive and rejecting science, how should Catholics respond to the warfare model? The first step is to recognize that young Catholics today are rarely, if ever, given a full explanation of what we mean when we call God “Creator,” very often because their teachers, parents, and even grandparents themselves have never been adequately informed. All the way back in 1986, the future pope and renowned theologian Joseph Ratzinger lamented what he called “the suppression of faith in creation,” noting that the theme of creation had been pushed to the margins of theology.⁶ Because of this, Catholic catechesis on creation has become impoverished and defensive, for it lacks the confidence that understanding creates.

Young people need to be nourished by more than the assertion that God created the universe, and they certainly do not need that assertion bolstered by anti-science polemics and pseudo-scientific arguments. Instead, they need to understand that the God of Love whom they encounter in Jesus Christ is the same God who causes the universe to exist and that he can be encountered through it precisely because we know so much more about it today than ever before, thanks to science.

For all those who, like me, absolutely love both my Catholic faith and the grand adventure that is science, may this book be an opportunity to learn something new about God and the universe. And for all those given the precious duty of educating young people in the faith, may this book be an opportunity to enrich your understanding of the Christian doctrine of creation for your own sake as well as for the sake of those you serve. Throughout this text, the great discoveries of modern science will be taken as a catalyst, not an obstacle, to celebrate our faith in God the Creator in new, often surprising ways. We will begin with the doctrine of creation itself, then proceed to theological questions and insights both old and new. All will be undertaken in the spirit of St. John Paul II's vision of a "relational unity" between faith and science. As we ready ourselves to begin, let us call to mind and heart the memorable words he penned in 1988 to Fr. George Coyne, S.J., director of the Vatican Observatory: "Science can purify religion from error and superstition; religion can purify science from idolatry and false absolutes. Each can draw the other into a wider world, a world in which both can flourish."⁷

This book is dedicated to the memory of Richard Baglow, my loving and devoted father who first introduced me to the beauty of creation, bringing me fishing, camping, canoeing, and (my

favorite!) bodysurfing. May this book help all who read it catch the wave of divine creation rippling through and manifested in all things.

1.

LOVE IS THE REASON: UNDERSTANDING THE CHRISTIAN DOCTRINE OF CREATION

Do you want to know what goes on in the core of the Trinity? I will tell you. In the core of the Trinity the Father laughs and gives birth to the Son. The Son laughs back at the Father and gives birth to the Spirit. The whole Trinity laughs and gives birth to us.

—Meister Eckhart¹

This quote from the Dominican preacher Meister Eckhart (ca. 1260–ca. 1328) is one of my favorite images of divine creation. To understand the laughter he refers to, set aside any idea of laughter that comes at the expense of another, or at the expense of truth or goodness, and think about a moment of pure hilarity shared among friends, one in which togetherness is unclouded by vanity or insult and in which laughter is the fruit of joy, born of bonds of love. This is why the universe exists—for that kind of laughter, or rather, the uncaused, eternal perfection of divine happiness, which that selfless laughter reflects.

When I was a teenager back in the early 1980s, laughter of a much different kind was why a much different “account” of creation was my absolute favorite. It begins with familiar biblical-sounding words: “In the beginning, the universe was created,” but then throws a hilarious punchline: “This has made a lot of people very angry and has been widely regarded as a bad move.” Thus begins the second book in Douglas Adams’s *The Hitchhiker’s Guide to the Galaxy* trilogy, a sci-fi comic classic, one of the funniest books I have ever read. The title of the series refers to a handbook for people who, using advanced technology, want to make their way around the Milky Way via space travel and time travel, visiting strange, exotic worlds and life-forms without getting themselves killed or mutilated or stranded in the wrong time period where they might accidentally become their own mother or father. In the five books of the trilogy (yes, you read that correctly!), Adams describes a universe whose basic thread is irrationality and meaninglessness, completely and only ruled by chance, and chronicles the adventures of people who roam that universe looking mostly for cheap thrills and, occasionally, a towel (thus the first rule of the *Hitchhiker’s Guide*: when hitchhiking across the galaxy, never forget your towel).

When I read this satirical “creation account” for the first time, the Police had yet to break up, one could still make out Bob Dylan’s lyrics at his concerts, and I was slowly wandering away from the Catholic faith of my upbringing. In the sentences immediately following the opening lines of the second book, I found what I thought was a slam-dunk indictment of what I had been taught about the doctrine that God is the Creator of all things:

Many races believe that the universe was created by some sort of god, though the Jatravartid people of

Viltvodle VI believe that the entire universe was in fact sneezed out of a being called the Great Green Arkleseizure. The Jatravartids, who live in perpetual fear of the time they call The Coming of the Great White Handkerchief, are small blue creatures with more than 50 arms each, who are therefore unique in being the only race in history to have invented the aerosol deodorant before the wheel.²

To my mind, what I thought Christians believe about creation seemed just as fantastic and irrational as the Jatravartid creation account. Christian belief also seemed fantastic and irrational to Adams, who called himself a “radical atheist” and at whose funeral Richard Dawkins, the famous biologist and New Atheism anti-apostle, gave a eulogy.

Of course, I had an extremely superficial understanding of the biblical accounts of creation, which are symbolic narratives the depths and historical contexts of which I had not the slightest clue. But although I had read the biblical creation accounts several times in Catholic school, no one had ventured to offer me the best guide to these accounts—namely, the Church’s proclamation of the doctrine of creation in her teaching in what is called sacred Tradition. Sacred Tradition is the very “life and consciousness” of the Church. This “life and consciousness” is caused by the Holy Spirit, who dwells in her and unites her to Christ as his body. The Holy Spirit is the one whom Christ himself promised to send: “The Advocate, the holy Spirit that the Father will send in my name—he will teach you everything and remind you of all that [I] told you” (Jn 14:26). While sacred scripture is the Word of God given long ago, sacred Tradition is nothing less than Jesus Christ, the Word of God, living within his Church throughout

history and in the *here and now*. Therefore, Scripture does not stand alone—we discover the meaning of Scripture through the Church’s teaching.

In this chapter we will consider what sacred Tradition, as embodied in the Church’s professions of faith throughout the centuries, teaches us to understand about the divinely revealed truth that God is the Creator of all things, “visible and invisible.” As we do, I will refer back to the Jatravartid “creation account,” Douglas Adams’s funny but misconceived jab at Christian belief, to show how it is the polar opposite of the Christian doctrine of creation. In fact, this entire chapter should be understood as a point-by-point polemic against the Jatravartid creation narrative. I feel this approach is quite appropriate, considering that the very first creation account in the Bible was *also* written as a polemic against a different, much more serious, but equally pagan creation account, as we will discover at the end of this chapter. But let me begin by summarizing the Christian doctrine of creation:

- The Jatravartids saw creation as something coming into being from some greater being, the Great Green Arkleseizure (suffering from a divine bout of flu). But Christians see creation as *ex nihilo*, literally “from NO-thing,” and above all do not see God as a being, not even the Supreme Being, but as the Source of Being to all things.
- The Jatravartids saw creation as a process, something with a beginning, middle, and end (like a sneeze: Aaaah-CHOO!). But Christians see creation as an eternal act, one that brings time itself into existence along with all beings and affects every moment of time; creation is not *in time* but *with time* (*cum tempore*).

- The Jatravartids saw creation as an accident, unintentional, reflexive, a sneeze. Christians see no necessity on the part of God to create—creation is *ex libertate*, out of the perfect freedom of God. And Creation is intentional; it is willed by God.
- Finally, and most tragically, the Jatravartids saw creation as a solitary process—a sneeze is something covered up, something that causes us to apologize, as in: “Pardon me for soiling your shirt!” But Christians believe creation to be from the Trinity, *ex Trinitate*, and so it is the overflow of perfect, self-giving love and togetherness. I will show that creation is something like an act of mercy that causes us and all things to be, although to understand why will take a bit of explaining.

The Christian doctrine of creation, then, involves four component truths: God creates the universe (1) from nothing, (2) with time (vs. “in time”), (3) freely, and (4) as Trinity. None of these is the product of human discovery, but each is the product of divine revelation. These truths were solemnly professed and defined by the Catholic Church at three ecumenical councils: Lateran IV in 1215, Florence in 1442, and Vatican I in 1869–1870. Ecumenical councils are assemblies at which bishops from the whole world come together to authoritatively teach in union with the pope regarding matters of faith and morals. Catholics recognize that when bishops are gathered in councils by the pope, they have “the charism of infallibility” from the Holy Spirit. Thanks to this special and unique grace, they together exercise freedom from error in definitive acts of teaching on matters of faith and morals, and their teaching requires the unswerving “assent of faith,” since God has definitively spoken through them.³ Therefore, the four elements listed above are integral to the Christian faith. Let us start with the most baffling of the four: creation “from nothing.”

CREATION, NOT CHANGE

The Jatravartid cosmology is one in which lesser beings come from some greater being. But foundational to the Christian doctrine of creation is that God is beyond the ordinary meaning of the term “being”; therefore, we misunderstand God when we try to understand God as a being. For Christians, God is *not* the Supreme Being. Rather, God is the Source of Being, the Giver of Reality to all things. Beings can be comprehended and, as Augustine once said, if you comprehend it, it is certainly not God.⁴

My favorite example of the humility involved in this Christian understanding of God is in a fictional dialogue written in 1444 by the philosopher, theologian, bishop, and cardinal Nicholas of Cusa (1401–1464). He called this work “On the Hidden God” (*De Deo Abscondito*). In it a pagan approaches a Christian whom he finds at prayer. When the pagan asks the Christian to identify the God he worships, he receives a startling answer:

Pagan spoke: I see that you have most devoutly prostrated yourself and are shedding tears of love—not hypocritical tears but heartfelt ones. Who are you, I ask?

Christian: I am a Christian.

Pagan: What are you worshipping?

Christian: God.

Pagan: Who is [this] God whom you worship?

Christian: I don't know.

Pagan: How is it that you worship so seriously that of which you have no knowledge?

Christian: Because I am without knowledge [of Him], I worship Him.⁵

The paradox is stunning—only a God who *cannot* be fully comprehended, who is inexpressible Truth, could be the true God and worthy of our adoration. And so it is with the doctrine of creation—it is not susceptible to comprehension. I note this here because the first element of the doctrine—that is, creation from nothing—is misunderstood precisely when we try to comprehend it, to fit it into our tiny minds.

In the many presentations I give on faith and science, I make a distinction between “how” and “why” questions and answers. I am very fond of a quote from Rabbi Jonathan Sacks, who once wrote, “Science takes things apart to tell us how they work; religion brings things together to show us what they mean.”⁶ But St. John Paul II said it first; in his words, “The theological teaching of the Bible, like the doctrine of the Church . . . does not seek so much to teach us the *how* of things, as rather the *why* of things.”⁷ The deepest reason for making this distinction is to explain the Christian doctrine of creation *ex nihilo*—“from nothing.” God uses no preexisting material to create the universe, so no “how” explanations are possible to describe the act of creation. His act of creation causes everything to exist, including matter, space, time, and even the very laws that govern the universe. Without God’s constant divine action, there would literally be “no thing,” as well as no space and no time, whatsoever. God, in one eternal act, creates and sustains all that exists, from the cosmic explosion of the Big Bang and the celestial formation of the billions of galaxies that are flying through space, to the evolution of planetary life and the formation of the earth’s majestic mountain ranges, to the fly that is buzzing around me as I type this. Time and space are not determinative factors when it comes to God’s divine activity

of creation, because “a thousand years in [God’s] eyes are merely a day gone by” (Ps 90:4).

The mystery of creation *ex nihilo* is captured nowhere more beautifully than in a quote from G. K. Chesterton, who compares God’s act of creation of each and every thing out of nothing to the exuberance and love of repetition we see in young children. When a child wants a parent to push them on the swing for hours, saying, “Do it again! Do it again! Do it again!” their exuberance shows an overflow of life (while the parent’s weariness shows that stress and anxieties and age have taken a lot of that exuberance away!). But like a young child, God does not tire of creating each and every thing at each and every moment:

It is possible that God says every morning, “Do it again” to the sun; and every evening, “Do it again” to the moon. It may not be automatic necessity that makes all daisies alike; it may be that God makes every daisy separately, but has never got tired of making them. It may be that He has the eternal appetite of infancy; for we have sinned and grown old, and our Father is younger than we.⁸

Chesterton’s poetic imagery is true—with unlimited divine youthfulness and energy, God creates every daisy and causes every sunrise. He does so without ceasing because he is holding all things in existence through his perfect, eternal act of creation *ex nihilo*. In the words of the Letter to the Hebrews, “By faith we understand that the universe was ordered by the word of God, so that what is visible came into being through the invisible” (Heb 11:3).