Has Science Replaced God?

The Warfare Myth, the Galileo File, and What Science Stands On

by Richard Whiting

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I. Two Questions, Not One War

The Catholic position is not that science has limits which faith fills in, but that science and Christian belief are answering different questions; that the historical war between them is a documented invention rather than a record; and that the assumptions science cannot do without—that the world is ordered, and that our minds can reach it—are more at home in a created universe than in an accidental one. This essay documents each claim in turn.

II. What Is Granted

Several things should be granted plainly. Galileo was condemned, and the condemnation was wrong; John Paul II said so publicly in 1992, and the case remains a genuine failure

rather than a misunderstanding to be explained away. Christians did resist geology and then evolution, and some still teach a young earth, which is not the Catholic position and never has been. Where believers have treated Genesis as a scientific report, they have been corrected by the evidence, and deserved to be. What does not follow is the general thesis: that the two enterprises are by nature at war. Particular churchmen behaving badly about particular findings is a fact about churchmen. The larger claim is not supported by the history, and the historians who study the period are the ones who say so.

III. The Warfare Thesis Has Two Authors and a Date

The idea that science and religion have been in perpetual conflict is not an observation handed down from the Middle Ages. It was manufactured in the late nineteenth century by two Americans: John William Draper, in *History of the Conflict between Religion and Science* (1874), and Andrew Dickson White, in *A History of the Warfare of Science with Theology in Christendom* (1896). White was the first president of Cornell and had a practical motive: he was founding a university without religious affiliation and wanted a history that justified it. Draper's book was largely a polemic against the Catholic Church in particular.[1]

Historians of science do not hold the thesis today—not because they have gone soft on religion, but because the evidence went the other way as the period was actually studied. The flat-earth story, the suppression of dissection, the Church banning human anatomy, the burning of Bruno for Copernicanism: each is either false or seriously distorted, and the standard collection cataloguing the myths, *Galileo Goes to Jail and Other Myths about Science and Religion*, is published by Harvard and written by some twenty-five historians of science, most of them not Christians. When a field's own specialists abandon a thesis while the popular culture keeps it, the popular culture is running on the fumes of two Victorian bestsellers.[2]

IV. Galileo, with the Details Left In

The Galileo case is worth stating accurately because it is the one piece of evidence everybody has. Galileo was not an outsider persecuted by churchmen; he was a favorite of them, funded by cardinals, celebrated in Rome, and personally friendly with the pope who eventually tried him. Copernicus had been a canon, his book published with a dedication to the pope, and it circulated unmolested for seventy years before the affair began.

The scientific difficulty was real: heliocentrism was not yet demonstrated. The obvious test, stellar parallax, could not be detected with available instruments—it would not be observed until 1838—and Galileo's own proposed proof, that the tides are caused by the

earth's motion, was simply wrong. Cardinal Bellarmine's position was that in the absence of demonstration the theory should be taught as a hypothesis, and that if it were demonstrated, the interpretation of Scripture would have to be revised accordingly. That is the correct principle, stated by the man usually cast as the villain. None of which excuses the outcome. The Church had no business settling an astronomical question by authority; the trial was a disgrace; and a bad theology of Scripture was doing the damage. But the popular version—a lone scientist tortured for the truth by an institution hostile to inquiry—is not what the documents show, and the fuller correction of the legend (no dungeon, no rack, the sentence commuted at once to house arrest, the *Two New Sciences* written under it) is set out on this site's page on the Church's historical record.[3]

V. Who Actually Did the Science

If the Church were the enemy of inquiry, its record is inexplicable. The university is a medieval ecclesiastical invention, chartered by popes, and it has no counterpart in any other civilization; the experimental method grew up inside it, among men who assumed that a freely created world had to be looked at to be known. Copernicus was a canon. Nicholas Steno, who founded stratigraphy, became a bishop. Gregor Mendel, whose pea experiments founded genetics, was an abbot conducting them in his monastery garden. The calendar the world uses was reformed by a pope working with Jesuit astronomers, and the Vatican has operated an observatory in one form or another since the sixteenth century. These are not exceptions smuggled past a hostile institution. They are what the institution built.[4]

VI. Lemaître's Objection to Pius XII

Georges Lemaître supplies both the best-known modern case and the best evidence against the charge of gap-filling. A Belgian priest and physicist, he proposed in 1927 what became the Big Bang—the expansion of the universe from a primeval atom—and argued for it against Einstein, who told him his mathematics was correct but his physics abominable. That was a disagreement between two scientists, and Lemaître won it.[5]

Then came the episode the invitation on this site's panel promises in detail. In 1951 Pius XII, addressing the Pontifical Academy of Sciences, suggested that the new cosmology confirmed the creation of Genesis—that the physics had, as it were, witnessed the primordial *Fiat lux*. It was Lemaître, the priest who invented the theory, who objected. He held that a physical theory is provisional and a doctrine of creation is not; tie them together and the doctrine falls if the theory is revised, while the theory is suspected of being theology in disguise. He communicated his concern through the Academy, and the pope did not repeat the claim. A priest defended the independence of science from a pope, and prevailed—which is a strange episode to find in the middle of a war.[6]

VII. God Is Not a Gap

The god-of-the-gaps criticism is entirely justified against the thing it names, and Catholic theology has never held it. The idea that God is a cause among causes—one item in the chain, intervening where the natural mechanism runs out—is a distortion that grew up alongside early modern science and was attacked by theologians long before it was attacked by atheists. The classical claim is different in kind. God is not the explanation of a particular event within the universe but the reason there is a universe with events in it: the cause of existence itself, operating through natural causes rather than in the gaps between them. On that account a complete physical account of the world is not a threat to be resisted but exactly what a rational creation ought to yield. When someone discovers the mechanism of a thing, he has found out how God did it. Aquinas made the distinction—primary and secondary causation—seven centuries ago, and it is the reason a Catholic can accept evolution without anxiety.[7]

This is also the answer to the charge that God is a scientific hypothesis, and a poor one. A hypothesis competes with other causes inside the world: it predicts, and it can be crowded out by a better mechanism. The classical claim does not compete there at all, and so predicts no gap and is displaced by no mechanism—asking science to test it is like asking a surveyor to check whether the ground exists. The complexity objection misses for the same reason: God is not an engineered object at the end of a chain of assembly but the simple act of being at its root; only things put together from parts need a prior explanation of their arrangement. And the habits-of-mind contrast, fair against fideism, is answered by the people who did the science: Lemaître revising cosmology and Mendel counting peas did not suspend their method at the laboratory door. Faith fixes its conclusions the way a scientist's trust in the intelligibility of nature fixes his: not as a rival to inquiry, but as the ground that makes inquiry worth the trouble. Doubt about that is not a method; it is the end of method.

VIII. What Fine-Tuning Can and Cannot Prove

Fine-tuning deserves a section of its own precisely because both sides misuse it. The facts are real and stated with their figures in this site's companion essay *Arguments For God*: the constants and initial conditions of physics fall in a life-permitting range so narrow that the standard explanations are necessity, chance, or design, and the first two carry heavy costs. What the facts cannot be made to prove is a demonstration. Fine-tuning is evidence in a cumulative case, strong exactly insofar as the alternatives are expensive; it is not a knock-down proof, and a believer who presents it as one repeats, from the other side, the god-of-the-gaps mistake—hanging faith on the current state of a science that may move. Lemaître's discipline applies to apologists too.

IX. The Catholic Reception of Evolution

The Catholic reception of evolution runs in a straight documented line, and it is not the line the warfare thesis predicts. Leo XIII's *Providentissimus Deus* (1893) laid down the governing rule: truth cannot contradict truth, and where a demonstrated finding of natural science appears to conflict with Scripture, the interpretation of Scripture is to be examined—the same principle Augustine had urged and Bellarmine had stated. Pius XII's *Humani Generis* (1950) declared the evolution of the human body from pre-existing matter a legitimate subject of research and debate for Catholics, reserving the direct creation of the soul. John Paul II told the Pontifical Academy in 1996 that converging discoveries had made evolution "more than a hypothesis." Benedict XVI and Francis have spoken in the same register. At no point in that sequence is there a condemnation of the science; the anxiety about Darwin belongs to a different theology of Scripture than the Catholic one, for reasons the essay *What Is the Bible?* sets out.[8]

X. What Science Stands On

Science operates on assumptions it cannot itself establish, because any attempt to test them would have to use them. That the universe is orderly rather than chaotic; that its order holds tomorrow as it did today; that human minds, evolved for finding food and avoiding predators, are nevertheless capable of grasping the structure of reality at scales no ancestor encountered; that mathematics invented on paper turns out to describe the behavior of matter—a fact Eugene Wigner called an unreasonable effectiveness which we neither understand nor deserve. None of these is a scientific finding. They are convictions about the kind of place the world is.[9]

And the founders of the discipline held them for theological reasons. An intelligible universe was expected because a rational God had made it; and it could be investigated only by experiment because it was contingent—made freely rather than necessarily, so that its workings had to be discovered by looking rather than deduced from first principles. That is precisely the experimental attitude, and Stanley Jaki spent a career documenting the claim that sustained science was born viable exactly once, in the civilization that held those convictions, after arrested beginnings everywhere else. The historical thesis can be debated; the logical one cannot: a discipline that must assume order, stability, and the mind's fitness for truth has not replaced the worldview that predicted all three. It is living on it.[10]

XI. The Reply in Brief

The war is a matter of two books rather than of history, from the 1870s and 1890s, written with a purpose and abandoned since by the historians of the subject. Galileo was real and

the condemnation was wrong, but he was the Church's protégé before he was its defendant, his own proof was mistaken, and the principle that demonstrated science must govern the reading of Scripture was stated at the time by his prosecutor. The god of the gaps was never the God of Christian theology, and the Church's actual reception of evolution runs from 1893 to the present without a condemnation in it. The question science asks is how this universe works; the question it does not ask, and has no instrument for, is why there is a universe that works at all, and why it should be the sort of thing a mind can follow. A believer expects the world to be intelligible and expects mechanisms to be found. He has no reason to wait anxiously for the next discovery, having been told to expect one.

Endnotes

1. On Draper, White, and the manufacture of the thesis, see the historiographical surveys summarized in the site's reference library; White's Cornell motive is from his own preface.

2. Ronald L. Numbers, ed., *Galileo Goes to Jail and Other Myths about Science and Religion* (Harvard, 2009), summarized rather than quoted.

3. The trial particulars follow the surviving record as surveyed in the library's Galileo materials (*Galileo in Rome*; *On Galileo and the Church*); stellar parallax was first measured by Bessel in 1838. The legend's corrections are documented on the church-record page and its essay.

4. On the medieval university and the clerical scientists, the standard histories are summarized; Mendel's and Steno's offices are matters of record.

5. The Einstein remark is reported in the Lemaître literature in several forms and is summarized here as a report, not a text.

6. On the 1951 address (*Un'ora*) and Lemaître's successful objection, the episode is summarized from the historical accounts; Pius XII did not repeat the identification.

7. Aquinas on primary and secondary causation, e.g. *Summa Contra Gentiles* III.70: the same effect wholly from God and wholly from the natural agent, in different orders — summarized.

8. Leo XIII, *Providentissimus Deus* (1893); Pius XII, *Humani Generis* (1950), 36; John Paul II, address to the Pontifical Academy of Sciences, 22 October 1996, the *more than a hypothesis* phrase quoted from the standard translation.

9. Eugene Wigner, *The Unreasonable Effectiveness of Mathematics in the Natural Sciences* (1960), summarized; his closing words supply the *neither understand nor deserve* formulation.

10. Stanley L. Jaki's stillbirths-and-viable-birth thesis is developed in *Science and Creation* and summarized in his *Bible and Science*, held in the site's reference library.

For Further Reading

Galileo Goes to Jail and Other Myths about Science and Religion, edited by Ronald L. Numbers—twenty-five historians on the conflict thesis.

Modern Physics and Ancient Faith, by Stephen M. Barr—a particle physicist on what the science does and does not show.

Faith Versus Fact: Why Science and Religion Are Incompatible, by Jerry A. Coyne—the opposing case, argued at length.

The Vatican Observatory, founded 1891—its staff, telescopes and published research.

Providentissimus Deus, by Leo XIII (1893)—on Scripture and the findings of natural science. Free online at https://www.vatican.va/content/leo-xiii/en/encyclicals/documents/hf_l-xiii_enc_18111893_providentissimus-deus.html.

Catechism of the Catholic Church, §§159, 283–284 on faith, reason and scientific inquiry. Free online at https://usccb.cld.bz/Catechism-of-the-Catholic-Church2.

Does History Condemn the Church?, Where the Galileo legend is corrected.

A History of the Warfare of Science with Theology in Christendom, by Andrew Dickson White (1896)—the conflict thesis's founding text, one of the page's "two authors and a date"; free at Project Gutenberg. Free online at https://www.gutenberg.org/ebooks/505.

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"But thou hast arranged all things by measure and number and weight." — Wisdom 11:20

Glory be to the Father, and to the Son, and to the Holy Spirit, as it was in the beginning, is now, and ever shall be, world without end. Amen.

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A Note on Authority

This essay represents the author's articulation of *the relation between science and Catholic faith*, drawing on Scripture, the *Catechism of the Catholic Church*, the Church Fathers, and the major theological tradition. It is offered as a personal defense, not as an official statement of the Church's teaching. Where this defense is fortunate enough to align with the magisterial teaching of the Church, the credit belongs to the tradition that formed it. Where it falls short, the responsibility is the author's alone.