In a world before Copernicus and Galileo, conflict between religious and scientific worldviews was generally unknown. It was assumed that the biblical accounts of the cosmos accurately represented the reality of a geocentric (earth-centered) universe. Copernicus hammered a crack in that worldview; Galileo's observations eventually split it apart.

The huge challenge these early scientists posed to the Bible's portrayal of space was compounded by the observations of Charles Darwin and the implications of his work for the history of the world. Darwin's *Origin of the Species* (1859) was almost immediately recognized as a challenge to the widespread assumption that the present world is pretty much the same as the one represented at the end of the first chapter of Genesis, a world then (and in some quarters, still!!) thought to have been created in the year 4004 BCE. To the contrary, Darwin marshaled evidence that all species of creatures, including humans, evolved over a huge length of time. Darwin's work raised other troubling questions for many Christians. If Darwin was correct, what were the implications for the truth of the Bible? In what way can human beings be said to have been created in the image of God? And what might all of this say about the nature of a creator God?

Beyond these specific religious questions, scientific inquiries into space and time more generally left open the nature of the relationship between religion and science. Up until the relatively recent past, events for which
there were no scientific explanations—diseases and weather, to name but
two examples—were relegated to the mysterious will and purposes of God.
However, as all branches of science “closed the gaps” in areas that had been
consigned to the mysterious operations of God, the need for God’s activity as
an explanation came into question, as did the role of religion itself.

Four models

Ian Barbour’s influential book Religion in an Age of Science (1990) still pro-
vides the most widely recognized taxonomy for the relationship of religion
and science. Barbour describes four models for relating science and religion.
The first is the conflict model. It pits scientific materialism against biblical
literalism. In this model, neither side finds grounds for compromise; religion
and science are considered irreconcilable, and individuals must choose one
or the other.

Barbour’s second way of relating religion and science is the independence
model. It views science and religion as occupying independent spheres of
knowledge and discourse. The two enterprises speak different languages and
address different areas of human inquiry; science and religion both make
valid truth claims within their respective realms. Independence describes
the position fostered by Galileo when he famously quoted Cardinal Bar-
onius, “The Bible was written to show us how to go to heaven, not how the
heavens go.” More recently, Stephen J. Gould articulated a version of the
independence solution. Religion and science, he wrote, represent nonoverlap-
ning magisteria (“NOMA”): the sciences treat the material world while reli-
gion involves itself with questions of ultimate meaning. The separate realms
should refrain from commenting on or making judgments about questions
falling under the other’s magisterial authority.

A third model for relating religion and science is dialogue. It holds that
religion and science can be in conversation with each other about those

1. Ian G. Barbour’s Religion in an Age of Science (San Francisco: Harper & Row, 1990) was
subsequently expanded and republished as Religion and Science: Historical and Contemporary
Issues (San Francisco: HarperSanFrancisco, 1997). For the following see the latter volume,
pages 77–105.
2. Galileo Galilei, Discoveries and Opinions of Galileo, trans. Stillman Drake (Garden City,
Ballantine, 1999), 5.
Together by Grace

questions that fall outside the methods of science. One point of intersection occurs where science observes that much of the universe is orderly and religion asserts that such order is contingent upon the will and purposes of God. With respect to the creation, for example, the theological assertion that God chose the initial conditions and laws of the universe does not violate scientific laws or explanations. Dialogue over such matters may arise from the experience of awe shared by many scientists and people of faith (although these are not mutually exclusive categories). Ursula Goodenough’s *The Sacred Depths of Nature* represents this mode of relating science and religion.4

Barbour’s fourth model is integration, the idea that some measure of blending of the content of theology and the content of science is possible. This may take the form of natural theology, a claim that the existence of God can be inferred from the presence of design in nature. This notion is close to the argument of those who, in recent decades, have self-identified as Creationists and, more recently, as Intelligent Design theorists. Beyond this, integration may be articulated as a theology of nature, the position that scientific theories and discoveries may lead to the reformulation of theological doctrines. Finally, integration may entail a systematic synthesis of both science and religion, resulting in an inclusive metaphysics such as process theology.

North American Lutherans exhibit no homogeneity in their judgments about religion and science. For example, the Lutheran Church—Missouri Synod (LCMS) explicitly rejects Gould’s NOMA model on grounds that it “is incompatible with a comprehensive biblical worldview, according to which Christianity is a framework of ‘total truth’ about reality.”5 The LCMS aligns itself with the conflict model. Scripture is a priori the sole fount of infallible, inerrant, and divinely inspired truth and thus always subordinates

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science. Scientific evidence in conflict with scripture is dismissed on grounds of "the fallible nature of science."  

The position of the Evangelical Lutheran Church in America (ELCA) approximates Barbour’s independence model. On the one hand, the ELCA accepts the scriptures “as the inspired Word of God and the authoritative source and norm of its proclamation, faith, and life.” Nevertheless, the scriptures reflect the culture in which they were composed. For example, science long ago disproved the flat-earth cosmology of Genesis. Even so, “The sciences, by definition, do not constitute understandings (or imply judgments) about God. There is no inherent conflict between scientific findings and the understanding of God as creator, redeemer and sanctifier.”

Science and religion both make valid truth claims within their respective realms. The intersection is the summons for faithful people to use science to care for human communities and God’s creation.

7. ELCA Constitution, 2.03.