

In Christ All Things Hold Together: The Intersection of Science and Christian Theology *A Bible Study and Discussion Guide*

This study guide may be used alone or as a companion to *In Christ All Things Hold Together: The Intersection of Science and Christian Theology*, a 2015 report of the LCMS Commission on Theology and Church Relations. The headings for the introduction and six sessions of this discussion guide provide the corresponding page numbers from the CTCR report.

Introduction: The Challenge of Scientism

Session 1: Theological Foundations I

Session 2: Theological Foundations II

Session 3: Historical Context

Session 4: Philosophical Issues

Session 5: Biblical Knowledge and Scientific Knowledge

Session 6: Practical Applications



Introduction: The Challenge of Scientism (pages 5-15)

Bill Nye, the “Science Guy,” said in an interview, “The scientific method ... is certainly, I believe, the best idea that anybody’s ever had. So, if you choose not to accept what you discover using that method, what else are you not going to discover? I guess it threatens everything: Our ability to generate energy, to build cars, to fight diseases, to regulate traffic. So not accepting the method by which we discovered evolution, you really are combating all sorts of things you may not have intended to combat or ignore.”¹

The author of an article in National Geographic writes that “evolution actually happened. Biology is incomprehensible without it. There aren’t really two sides to all these issues. Climate change is happening. Vaccines really do save lives. Being right does matter—and the science tribe has a long track record of getting things right in the end. Modern society is built on things it got right.”²

¹ Elizabeth Quill and Helen Thompson, “Bill Nye on the Risks of Not Debating With Creationists” Smithsonian.com, November 6, 2014, <http://www.smithsonianmag.com/science-nature/bill-nye-risks-not-debating-creationists-180953249/?no-ist>.

² Joel Achenbach, “Why Do Many Reasonable People Doubt Science,” *National Geographic Magazine* (March 2015), at <http://ngm.nationalgeographic.com/2015/03/science-doubters/achenbach-text>.

The above comments, while perhaps extreme in their views, praise science for its unfailing ability to “get things right.” Such comments illustrate the fact that our Western culture is increasingly influenced by *scientism*, “the view that science is the only source of knowledge” (21).³ Scientism “leads people to regard literature, philosophy and religion as unverifiable relics of our pre-scientific past, sources which can no longer contribute to a serious conversation about what is really true” (6). Another popular worldview is *secularism*, the idea that “religious believers can retain the therapeutic benefits of belief in the supernatural within the privacy of their own minds, provided secular ideologies define public fact” (6). According to secularism, faith is an inward, personal and private matter, while life in public, life in “the real world,” is governed by scientific fact and secular worldviews.

Influenced by such worldviews, Christians may begin to think that God and faith have no place in their daily lives and that God is not at work in ordinary events and in their daily callings. Christians with careers in the sciences may find it impossible to believe that a biblical worldview could contribute to the framework of assumptions on which scientific knowledge is built.

Different methods of addressing the relationship of science and religion have been proposed as attempts to relieve the tension between the two fields of study. For example the NOMA, or “non-overlapping magisteria,” view suggests that “religion concerns issues of ultimate value (telling us how to go to heaven), while science tells us how the temporal world operates (how the heavens go)” (7). The NOMA approach sounds inviting because there is some truth to the principle that religion and science have differing areas of concern. “Non-overlapping,” however, is a falsehood that becomes destructive to both. According to NOMA, a Christian scientist would have to live life on two tracks, a faith track and a work track, doing science just as an atheist would. A related proposal suggests that interpreting Scripture in different ways might make it easier to accept claims of science. The NOMA approach wrongly places scientific theories on the same level as the Word of God. God’s Word has an eternal and ultimate validity, while even the best scientific theories are the products of finite, fallen minds and may, at some future date, be overturned in favor of new theories.

The report of the Commission on Theology and Church Relations, *In Christ All Things Hold Together: The Intersection of Science and Christian Theology*, provides guidance in addressing the relationship of science and religion. The report helps Christians address real and perceived tensions between science and theology and encourages them in refuting scientism. We need to recover the understanding of science as a vocation that glorifies God and helps us to serve our neighbor. Christian scientists and philosophers can encourage an ongoing dialogue between Scripture and scientific theories and provide evidence that this is a created world and that human beings are a special part of God’s creation. The CTCR study and this study guide provide opportunities for informed discussion so the Church can more effectively respond to challenges and encourage Christians to pursue careers in science.

³ Page numbers in parentheses are taken from *In Christ All Things Hold Together: The Intersection of Science and Christian Theology*, a report of the Commission on Theology and Church Relations of The Lutheran Church—Missouri Synod (February 2015). The subheadings in bold print in this discussion guide are taken from *In Christ All Things Hold Together*.

The sessions of this study guide will discuss the following topics from *In Christ All Things Hold Together*:

- Theological resources for understanding the nature and purpose of science; considering God's two books (Sessions 1 and 2)
- The historical factors leading to the idea that science and religion have nothing to do with each other (Session 3)
- A response to the assumptions of contemporary worldviews; why Christianity provides a good foundation for science (Session 4)
- Principles of interpreting Scripture and guidance in reading portions of Scripture that have apparent scientific meaning (Session 5)
- Guidance for Christian students, teachers, scientists and laity (Session 6)

Session 1: Theological Foundations I (Chapter 1, pages 16-24)

“In this bewildering world we have to decide what to believe and how to act on that. In principle that’s what science is for. ‘Science is not a body of facts,’ says geophysicist Marcia McNutt, who once headed the U.S. Geological Survey and is now editor of Science, the prestigious journal. ‘Science is a method for deciding whether what we choose to believe has a basis in the laws of nature or not.’”⁴

“Religion is man-made. Even the men who made it cannot agree on what their prophets or redeemers or gurus actually said or did. Still less can they hope to tell us the ‘meaning’ of later discoveries and developments which were, when they began, either obstructed by their religions or denounced by them. And yet—the believers still claim to know! Not just to know, but to know everything.”⁵

“Your commandment makes me wiser than my enemies, for it is ever with me. I have more understanding than all my teachers, for your testimonies are my meditation ... The sum of your word is truth, and every one of your righteous rules endures forever” (Psalm 119:98-99, 160).

As the above comments and the verses from Scripture indicate, there are differing ideas concerning our sources of knowledge. Are the things we know and believe based on science, on the Word of God or on both? Do scientists *know* things, while Christians can only *believe*? “Epistemological” questions are questions about our sources of knowledge, questions about how we know things. They are questions of authority. Do we think that scientific observation and human reason are the most authoritative sources for reliable belief, or do we accept Scripture as the final word? If science appears to be in conflict with the Bible, how do we decide the dispute?

Theologians have said that God reveals Himself in two books, the book of Scripture (God’s Word) and the book of nature (God’s works). Do these two books have equal authority, or does one take precedence over the other? What is the proper relationship between His two books? Increasing numbers of books on science and religion (for example, *The God Delusion*, by Richard Dawkins; *Breaking the Spell*, by Daniel Dennett; and *A Universe from Nothing*, by Lawrence Krauss) assume that science is the highest authority. The New Atheists, such as the authors listed, and other opponents of biblical Christianity state that our beliefs about God are in reality defined by what *science* reveals. These opponents assume that ideas about God arise from the human brain, and that we must determine which idea about God is most useful for ourselves and for the communities in which we live.

How would you respond to the following statement? “Brain imaging techniques, especially functional magnetic resonance imaging (MRI), have located regions of the brain where certain

⁴ Joel Achenbach, “Why Do Many Reasonable People Doubt Science?” *National Geographic* (March 2015), <http://ngm.nationalgeographic.com/2015/03/science-doubters/achenbach-text>.

⁵ Christopher Hitchens, *God is Not Great: How Religion Poisons Everything* (New York: Hachette Book Group, 2007), 10.

thoughts, including emotions and even religious experiences, take place. There is absolutely no sign of any immaterial element in the process, no evidence for stuff called spirit.”⁶

Read Job 38:1-11 and Romans 1:19-20. What kinds of things does the book of nature tell us about God? **Read 2 Timothy 3:14-17.** What has God revealed in His Word that cannot be read in the book of nature?

The authority of Scripture and the proper role of reason (In Christ All things Hold Together, page 17)

“We believe, teach, and confess that the only rule and guiding principle according to which all teachings and teachers are to be evaluated and judged are the prophetic and apostolic writings of the Old and New Testaments alone, as it is written, ‘Your word is a lamp to my feet and a light to my path’ (Ps. 119 [:105]), and Saint Paul: ‘If ... an angel from heaven should proclaim to you something contrary, ... let that one be accursed!’ (Gal. 1[:8]).”⁷

As Lutherans we believe that Holy Scripture is the inspired, infallible Word of God. It is our highest authority and most reliable standard for knowledge. Scripture is in a different category from our human reason. Our human reason and our senses—created by God—tell us how the world of space and time works, but we are limited in this by three factors.

First, we live at particular locations in space and time. Our attempts to reconstruct the past and to anticipate the future are uncertain because we have limited access to data and need to make assumptions that could be false. *Second*, although science has been very successful in discovering laws behind the world as it appears, there is no reason to suppose that these laws give us the final answer as to how the world really is in itself. Given our vantage point, it seems the best we can hope for is to discover patterns and regularities. *Third*, we are prone to bias in interpreting the data. Our sinful desire for godlike knowledge makes us expect more from science than it can or should give. Even theologians may wrongly use reason to interpret Scripture inaccurately. We want the final answers and the final control to lie in the works of our own minds. In science or theology, this is idolatry.

What false scientific assumptions might be—or have been—made due to our limited access to data? What patterns and regularities (such as laws of motion or gravity) has science discovered? Read Genesis 3:1-7. What did Eve and Adam hope to gain from eating the fruit forbidden to them? What do we hope to gain in our daily sinful choices? ***Read Jeremiah 10:1-16.*** How does the prophet compare and contrast idols and the living God?

⁶ Victor Stenger, “Christianity and Modern Science,” *Huffington Post*, April 21, 2014 at http://www.huffingtonpost.com/victor-stenger/christianity-and-modern-science_b_5182177.html

⁷ Formula of Concord, Epitome, *The Book of Concord*, ed. Robert Kolb and Timothy J. Wengert (Minneapolis: Fortress Press, 2000), 486.1.

Our human reason is not the final authority. Human reason is a gift and a servant and, though limited, it can help us find the best ways to serve our neighbor, things about which Scripture is silent. Scripture does not teach us about plumbing or automotive repair. It tells us to love our neighbor as ourselves, but leaves the techniques to our human ingenuity. Science is a servant of God's Word, not a judge over it. Science can serve as an instrument to help us love and serve our neighbor.

Consider your own career and daily activities. Even if you do not work in a scientific field, how have scientific discoveries helped you to love and serve others? How have those in scientific and medical fields helped you, your family or friends?

The proper relationship between God's two books (In Christ, page 20)

How do we read God's two books? If we wrongly assume that Scripture is speaking about a scientific theory when it is not (for example, using Joshua 10:12-14 to explain the movement of the planets) or if we assume that nature can only be understood through scientific theory (dismissing creation's praise of its Creator as in Psalm 98:4 or Psalm 148), we may easily create a false conflict between the two books. Throughout Scripture God communicates with us in the terms of common-sense appearances. He communicates in terms that human beings can understand.

Read Luke 1:1-4 and John 20:30-31. How do the comments of these inspired evangelists illustrate God's common sense communication with us? Read Hebrews 1:1-2. How was God's ultimate revelation of Himself presented in a way that we could understand?

The natural world was created, and is still governed, by the Word of God. His Word, His *logos*,⁸ is inscribed or imprinted in nature and speaks to us of God's glorious design and care: "His invisible attributes, namely, his eternal power and divine nature, have been clearly perceived, ever since the creation of the world, in the things that have been made" (Rom. 1:20). We must not impose scientific interpretations on Scripture, and we must also understand that science is not the *only* way of understanding nature. Scripture opens our mind to the natural world as a source of spiritual and theological knowledge. It speaks of God, His attributes and His works, and it testifies to His ongoing involvement in this world.

Read Psalm 104. What attributes of God are discussed in this psalm? How do the psalmist's words of praise testify to God's ongoing involvement in His creation?

Christians today, reflecting the influence of scientism, are tempted to use science as a way of proving Scripture. To guard against that approach, we must remember these five principles about the relationship between science and Scripture (23-24):

⁸ *Logos* is the Greek term for the divine Word as used, for example, in John 1:1.

1. Scripture, not science, is God's Word.
2. Scripture speaks through inspired human writers, and reflects the way the world ordinarily appears in their experience. We should not assume that Scripture advocates a particular scientific theory, or that its claims are presented in a scientific manner.
3. Science is not the only source of knowledge about nature. Scripture speaks of natural revelation, in which our Creator speaks to us through the medium of the natural world, revealing His orderly design, His power, and His providential care (Ps, 191-2; Rom.1:20).
4. Science can provide knowledge about the "what" and "how" of nature, but only Christian theology—revealed partially in nature and with full clarity and authority in Scripture—can explain the "why" of nature and help us to behold God with majesty and awe.
5. Scientific evidence may be used to support scriptural claims (about nature or all theology), but due to the fallible nature of science, it cannot provide certainty or proof. Scripture is self-authenticating.

Our central focus in reading Scripture is its teachings about the Person and work of Christ and our relationship with Him. Any scientific implications found in scriptural statements should generally be given only secondary attention, and may often be irrelevant to the intended sense and purpose of the text. The primary purpose of science is to tell us how nature appears to be working. Speculations about the meaning and value of nature's working are issues of philosophical and theological interpretation, not part of proper scientific study.

Read Matthew 2:1-10. What "scientific implications" in this account might draw attention away from the intended sense and purpose of this text?

How does the following comment illustrate the way in which scientists may stray into issues of philosophical and theological interpretation? "Furthermore, inflationary cosmology, supported by the new discoveries, implies that we live in an infinite and eternal multiverse composed of an endless number of universes of which ours is just one. This means there was no beginning, no creation. If there was no creation, then there was no Creator."⁹

Read Genesis 1:14-19 and Psalm 19:1-2. What do these verses say about the "why" of nature?

In the next session, Theological Foundations II, we will consider the doctrine of vocation and the proper way for Christians to approach a culture awash in scientism and secularism. We will review the purpose of science as the study of nature—an amazing book composed by a single Author.

Responsive Reading of Psalm 19

⁹ Stenger, http://www.huffingtonpost.com/victor-stenger/christianity-and-modern-science_b_5182177.html.

Session 2: Theological Foundations II (Chapter 1, pages 25-51)

The doctrine of vocation (In Christ, page 25)

“Scientists themselves are starting to lose the trust of many Americans, who, according to researchers at Princeton, believe scientists are highly competent, but not particularly trustworthy. People believe seeking grant funding or pushing a particular agenda motivates many scientists, instead of an unbiased pursuit of truth. Because Christians see statistics like these, many Christians assume there is no spiritual value in believers pursuing a career in the sciences, and that to do so could, in fact, be detrimental to their faith.”¹⁰

“Human life does have a purpose, but it is a purpose that we invent for ourselves. It takes a certain act of courage to look at nature, not see any plan for human beings in there and yet go on and live good lives, love each other, create beautiful things, explore the universe. All these take more courage without having some divine plan that we discover, but one that we rather create for ourselves.”¹¹

“As Christians in the sciences, we have not only an awareness of the source of our creativity, but a realization that we have a profound responsibility to use that creativity wisely to help our fellow human beings and to carry out our role as stewards of creation.”¹²

For Christians, Scripture has final authority, and from Scripture we know that our daily work can glorify God and serve our neighbor. As the above comments indicate, some individuals recognize their work in science as service to God. Others, however, may see no God-given purpose for their lives and careers, and even some Christians may be cautious about pursuing careers in science. However, the vocations of scientist and theologian, as well as all other honest callings, are honorable and godly. Such careers are intended for the glory of God and the well-being of His creatures.

A vocation is a calling from God. We may have many vocations at any one time and our vocations may change over time (for example, as father or mother, son or daughter, student or worker). Our vocations will certainly include our careers. God calls us to serve our neighbor where He has placed us, using the gifts He has provided. Our vocations reflect our call to be stewards of the earth (Gen. 1:28). Such stewardship requires the use of science to understand our world, so that we can make use of its potential to develop culture and preserve the world’s resources for the future. Martin Luther emphasized the priesthood of all believers, which teaches

¹⁰ Ed Stetzer, “3 Reasons for Christians to Engage in Science,” posted May 22, 2015 at <http://www.christianitytoday.com/edstetzer/2015/may/3-reasons-for-christians-to-engage-in-science.html>.

¹¹ Interview with theoretical physicist and Nobel Laureate Steven Weinberg, with Ana Elena Azpurua in “Will Physicists Find God?” *Newsweek*, March 23, 2008, at <http://www.newsweek.com/will-physicists-find-god-84363>.

¹² Randy Isaac, “Creativity and the Development of Technology,” in *When God and Science Meet* (Washington, D.C.: National Association of Evangelicals, 2015), 48 at http://nae.net/wp-content/uploads/2015/06/When-God-and-Science-Meet_bw.pdf.

us about the God-pleasing nature of ordinary, earthly work in the home, society and the workplace:

*“But we are all priests before God if we are Christians. For since we have been laid on the Stone who is the Chief Priest before God, we also have everything He has. It would please me very much if this word ‘priest’ were used as commonly as the term ‘Christian’ is applied to us. For priests, the baptized, and Christians are all one and the same.”*¹³

*“A cobbler, a smith, a peasant—each has the work and office of his trade, and yet they are all alike consecrated priests and bishops. Further, everyone must benefit and serve every other by means of his own work or office so that in this way many kinds of work may be done for the bodily and spiritual welfare of the community, just as all the members of the body serve one another [1 Cor. 12:14-26].”*¹⁴

Professional standards of scientific conduct say nothing about God’s call to be a steward of His creation, or about our obligation to love and serve our neighbor in all that we do. Without understanding their vocation as a calling from God, Christian scientists may benefit from their faith in private but see no meaningful way to relate their faith to their scientific career. Both auto mechanics and quantum mechanics are ways of glorifying God by unveiling the ordering principles God built into nature. Both vocations serve our neighbor through discovering nature’s secrets and developing beneficial technology.

Read 1 Peter 2:9-12. What is the purpose of our priesthood, our royal calling? Read Colossians 3:17-24 and 2 Thessalonians 3:6-12. What do these passages tell us about our daily work?

A Christocentric approach to creation (In Christ, page 35)

Many well-meaning attempts to understand science in Christian terms are deistic. According to Deism, God created the universe and governs it through laws, but otherwise He has no ongoing involvement in His creation. The apostle Paul, however, “tells us not merely that ‘all things were created’ by Christ, but also that they were created ‘for him,’ and that ‘in him all things hold together’ (Col. 1:16–17) ... Christ *is still personally present* as the unifying thread throughout the fabric of creation” (35).

We cannot fully understand what something is except in its relation to God. For example, a scientific analysis of a human being as systems and cells does not reveal that a person is made in the image of God. Modern science speaks of nature as governed by laws—laws that suggest a personal lawgiver—but science cannot detect the purposes of God, who shapes all things to work together for good for those who love Him (Rom. 8:28).

¹³ Martin Luther, “Sermons on the First Epistle of St. Peter,” in *Luther’s Works*, vol. 30, ed. Jaroslav Pelikan (St. Louis: Concordia Publishing House, 1967), 63.

¹⁴ Martin Luther, “To the Christian Nobility of the German Nation Concerning the Reform of the Christian Estate,” in *Luther’s Works*, vol. 44, ed. James Atkinson (Philadelphia: Fortress Press, 1966), 130.

However, it is possible to point to scientific data which, combined with reasonable philosophical assumptions, provides good evidence for God's involvement in the natural world. One example of this is the fine-tuning of the laws of nature for complex, intelligent life. Our solar system, especially the Earth, is fine-tuned to permit life. Another example is found in DNA, which contains detailed instructions for assembling living creatures and maintaining living systems. Former atheist Anthony Flew renounced his atheism "in large part because 'the findings of more than fifty years of DNA research have provided materials for a new and enormously powerful argument to design'" (42).

Image of God theology and Christian anthropology

(In Christ, page 43)

"What difference does it make to think that human beings are specially made in the image of God and still retain important remnants of that image? For one thing, it is clear that God provides us with special gifts so that we can serve as stewards of the rest of the world. This includes the intellectual and moral gifts required to practice science within God-pleasing boundaries, as we cannot steward nature effectively if we do not know how it works and what purpose it serves" (44).

Read Proverbs 30:24-33. *What created wonders are considered by the author of this chapter of Proverbs? What advice does he offer concerning human pride? **Read Psalm 148.** How does the psalmist use created things to shape his praise? **Read Job 38:1-18.** How does God challenge Job's pride?*

"The godlike scope of human thought can tempt some people, including scientists, to believe that they can completely understand and control reality by themselves: the lure of Babel remains strong (Gen. 11:1-9). But Scripture reminds us that although in *some* ways our capacity for thought is godlike, we are not God, and our thoughts can never ascend to His heights" (45). Human beings are called to a "middle road," between confidence and humility. In confident trust, we remember that we were created in the image of God, an image restored in Christ. In grateful humility, we remember that our Creator appointed us as stewards, care-takers, of His creation (Gen. 1:28; Ps. 115:16).

Read Isaiah 55:8-13. *How does the prophet use created things in his declaration of God's power? What do these verses say about God's thoughts and ours? **Read Psalm 8.** Although this psalm speaks of the promised Messiah (Heb. 2:5-9), what does it say about our human knowledge and abilities?*

The theological underpinnings of modern science
(In Christ, page 48)

“The rise of science required a worldview that posited a world that is orderly and will reward rational investigation. That worldview arose from faith in an all-powerful rational God. In ‘Chemical Evolution,’ the Nobel Prize-winning biochemist Melvin Calvin said, ‘This monotheistic view seems to be the historical foundation for modern science.’”¹⁵

Nature can be investigated, an idea that assumes nature makes coherent sense and that there are rules or laws that explain its operation. Christian belief in an orderly Creator made the development of science, which looks for order in the natural world, possible. The Christian idea that nature is a book inscribed with a *logos* by a single Author encouraged earlier scientists to believe that there were universal laws of nature. Galileo wrote that science “is written in this grand book, the universe ... in the language of mathematics” (48). Our Creator gave us a sense of curiosity and wonder that leads us to seek answers to the mysteries surrounding us. “Science is inherently worthwhile because God created the world good: the world is full of things worth knowing about. Science is also a way of glorifying God, by showing His marvelous handiwork ... But above all, science is a vehicle of thought through which human beings are enabled to love and serve their neighbor” (50).

Through science, we develop products to improve our quality of life. Imagine a world without vacuum cleaners, refrigerators, furnaces, air conditioners, washing machines, telephones, televisions and computers! Science cannot heal the infection of sin, but scientific discoveries are able to lessen human suffering. As God’s creatures, we are dependent on one another. Without the scientist, the farmer might have a poorer yield. But without the farmer, the scientist would most likely starve. The Christian scientist should see his or her work as an important, God-pleasing opportunity to contribute to an interdependent community of many other workers.

How does the following comment by Francis Collins reflect the idea that science is a way to glorify God?

Well, as a scientist who's also a believer, the chance to uncover the incredible intricacies of God's creation is an occasion of worship. To be able to look, for the first time in human history, at all three billion letters of the human DNA—which I think of as God's language—it gives us just a tiny glimpse into the amazing creative power of his mind. Every discovery that we now make in science [is], for me, a chance to worship him in a broader sense, to appreciate just in a small bit the amazing grandeur of his creation. It also helps me appreciate though that as a scientist, there are limits to the kinds of questions that science can answer. And that's where I have to turn to God and seek his answers.¹⁶

¹⁵ John Ortberg, “Questions that Faith Asks Science,” in *When God and Science Meet* (Washington, D. C.: National Association of Evangelicals, 2015), 28 at http://nae.net/wp-content/uploads/2015/06/When-God-and-Science-Meet_bw.pdf.

¹⁶ Francis Collins at <http://www.beliefnet.com/News/Science-Religion/2006/08/God-Is-Not-Threatened-By-Our-Scientific-Adventures.aspx?p=2>.

In Session 3, Historical Context, we will examine the historical developments that led to the loss of certain ideas about God and creation. How did we lose the idea that nature is God's world or the understanding that God gave us the intelligence necessary to understand the world He created? What new philosophies arose that viewed God as unnecessary?

Responsive Reading of Psalm 148

Session 3: Historical Context (*Chapter 2, pages 52-71*)

As you read the following three comments from the scientist Isaac Newton (1642-1727) and philosophers David Hume (1711-1776) and Immanuel Kant (1724-1804), notice the sequence of ideas concerning creation, religious beliefs and knowledge.

“To make this system therefore with all its motions, required a Cause which understood and compared together the quantities of matter in the several bodies of the Sun and Planets and the gravitating powers resulting from thence...”—Isaac Newton¹⁷

“It forms a strong presumption against all supernatural and miraculous relations, that they are observed chiefly to abound among ignorant and barbarous peoples.”—David Hume¹⁸

“In a word, scientific knowledge, critically explored and systematically introduced, is the narrow gateway which leads to wisdom, if by such wisdom is understood not merely what one ought to do, but what ought to serve as a guide for teachers, in order to find well and clearly the paths to wisdom on which every man ought to tread, and to preserve others from dead alleys.”—Immanuel Kant¹⁹

Isaac Newton believed that an intelligent “Cause” was required to establish the solar system. A few decades later, David Hume stated that beliefs concerning miracles and the supernatural (such as an intelligent Cause) are found primarily among “ignorant and barbarous” people. Immanuel Kant believed that scientific knowledge alone was “the narrow gateway” to wisdom. How did we lose the sense that nature is God’s world? How did we lose the idea that human reason is God’s gift to enable us to understand nature?

The attack on final causes and the decline of natural theology (*In Christ, page 53*)

The Greek philosopher Aristotle (384-322 B.C.) proposed the idea of final causes in things, that is, the purpose for which something existed. What was the goal or purpose of the thing in question? For example, the goal—or final cause—of a seed is to mature into an adult plant. Although this idea was dominant for a long period of history, some medieval theologians came to view the final causes proposed by Aristotle as a threat to God’s sovereignty because such causes or goals operated independently of God. In the thirteenth century, the Bishop of Paris condemned some of Aristotle’s ideas. The following statements were among those condemned: “The first cause (God) cannot make many worlds,” and “God cannot move heaven in a linear

¹⁷ Isaac Newton, correspondence (1692), quoted in Stephen D. Snobelen, “The Theology of Isaac Newton’s Principia Mathematica: A Preliminary Survey,” *Neue Zeitschrift für systematische Theologie und Religionsphilosophie* (January 2010): 383.

¹⁸ David Hume, *Of Miracles* (1748), quoted in Craig S. Keener, “A Reassessment of Hume’s Case against Miracles in Light of Testimony from the Majority World Today,” *Perspectives in Religious Studies* (September 2011): 289.

¹⁹ Immanuel Kant, *Critique of Practical Reason* (1788), quoted in Jaroslav Pelikan, ed., *The World Treasury of Modern Religious Thought* (Boston: Little, Brown and Company, 1990), 180.

movement. The reason is that this would leave a vacuum.”²⁰ If something within nature could dictate its own final purpose, or if there was something God could not do, then He was no longer free to govern His creation as He wished. For that reason such proposals were condemned.

Other theologians, however, believed that God worked through final causes for the benefit of humanity. Studies of blood, respiration and muscles assumed that these systems existed for a purpose. The search for divine purpose in the natural world provided a religious reason for the pursuit of knowledge. However, some theologians claimed too much, imagining God’s final causes in all sorts of things (for example, seeing God’s hand in the behavior of a wood-eating worm that brought nations together in commerce, trading in the tar or resin that protected ships’ wooden hulls). Such beliefs caused some people to become skeptical and weakened the idea of God’s care and involvement in His creation. Others argued that if nature was God’s design, then God was responsible for evil such as predators, parasites and disease. Still others saw all of this as speculation and unnecessary for science.

*Does the eighteenth century argument about the purpose of the wood-eating worm (page 55 in All Things) carry the idea of God’s involvement too far from biblical truth, or is it a reasonable assumption about a creature’s purpose? **Read Exodus 10:12-20, 2 Chronicles 7:12-14 and Psalm 107:23-32.** What do these verses say about God’s involvement in His creation? What purposes of God are revealed in these accounts?*

The rise of autonomous reason (In Christ, page 59)

Nature was still thought of as “God’s book,” but in the seventeenth and eighteenth centuries, human reason was increasingly exalted. Many scholars came to believe that human reason could discern objective truth without the help of divine revelation. Two important books from the seventeenth century, Francis Bacon’s *The New Organon* (1620) and Rene Descartes’ *Meditations* (1641), reject tradition and external authorities (such as divine revelation) as a basis for knowledge in favor of using unaided human reason and experience. Francis Bacon said a scientist must purge his mind of bias so he does not anticipate what nature must do. The scientist must be open to discovering the truth of natural events. He should collect samples and interpret what he sees. Rene Descartes affirmed God as Creator and sustainer of the world, but believed that people can discern the structure of reality without the help of faith or divine revelation. There was a growing tendency to think that reason could “go it alone.”

Still, for Descartes, God was in charge of the mechanical natural world; He was the primary cause of motion. Isaac Newton (1643-1727) believed that the system of planets and sun arose from the work of an intelligent designer. However, as the Age of Enlightenment continued, the idea of God’s control was increasingly rejected. Matter did not need God to govern it—it was self-sufficient, and a self-sufficient world did not need God’s guidance or presence. Some people embraced Deism, the belief that God created the universe but then withdrew from it and remained uninvolved in His creation. Others dismissed miracles entirely and thought that

²⁰ Alexander S. Jensen, “The Unintended Consequences of the Condemnation of 1277: Divine Power and the Established Order in Question,” *Colloquium* 41:1 (May 2009), 60.

religious texts were legends. God was considered unnecessary—only nature was needed to understand nature.

A contemporary scientist comments, “As science explains more and more, there is less and less need for religious explanations ... As time has passed, we have explained more and more in a purely naturalistic way. This doesn’t contradict religion, but it does take away one of the original motivations for religion.”²¹

Read 1 Corinthians 2:6-16. Is it accurate to say that only nature is needed to understand nature? What advantage does faith in Christ give us? Does faith—with its acceptance of divine revelation—give us an advantage in areas of scientific study or does it apply only in “spiritual” matters?

Naturalistic thinking expanded in influence, as illustrated in the writings of David Hume (1711-1776), who thought that belief in the supernatural was found primarily among “ignorant and barbarous” people. According to naturalistic thinking, one could not use the design of the world as a starting point to establish the existence and nature of God. Two increasingly popular factors worked against such an argument from design. The first was the theory of natural selection in Charles Darwin’s *On the Origin of the Species* (1859). According to Darwin, living creatures were designed by natural causes. Chance variation and natural selection produced creatures adapted to their environments. The second factor was the philosophical developments leading to the rise of scientism, the understanding that science is the only reliable source of knowledge. The philosopher Immanuel Kant (1724-1804) concluded that speculation about God, souls and miracles cannot be “knowledge.” Science provides knowledge about the world, but no one can have such certain knowledge about religion or ethics.

Naturalistic science, combined with scientism, resulted in the belief that the supernatural does not exist, since science cannot detect the supernatural. God himself, therefore, is unknowable. “[T]he cultural residue of scientism is still with us in the widespread assumption that there is no such thing as metaphysical, religious or moral *knowledge*. At the practical level of everyday life, this is the legacy of naturalism, which makes people unable to see how what is believed by faith could be known to be true ... Science is by definition naturalistic and if something cannot be known scientifically, it cannot be known at all. As a result, the resurrection and other miraculous claims of Christianity are relegated to a subjective realm accessible only by faith.” (68) According to this point of view, we can *know* things because of science, but in religious or spiritual matters we can only *believe*.

Read the following comment from a contemporary interview: “[New developments in science] support what Steven Weinberg, the Nobel laureate in physics, said: ‘The more we learn about the universe, the more we realize how pointless it is.’ We’re learning a lot about the universe and what we are seeing is that it’s all a naturalistic process.”²²

²¹ Steven Weinberg, interview with Ana Elena Azpurua, at <http://www.newsweek.com/will-physicists-find-god-84363>.

²² Worrall, <http://news.nationalgeographic.com/2015/05/150531-religion-science-faith-healing-atheism-people-ngbooktalk>.

In view of the above comment by Steven Weinberg, read Romans 1:19-20, Romans 8:20-21, Ephesians 1:7-10 and Philippians 2:9-11. If the universe is not pointless, what is its “point,” its purpose?

Science as a profession
(In Christ, page 68)

Nature is now viewed by many people as merely a “machine” with undirected purposes. When God is removed as the Author of the book of nature, a career in science may no longer be understood as a vocation, a calling from God, but may instead be viewed as simply a profession. Today’s scientists may not see a clear connection between the official standards of their scientific work and those governing their faith. The connection between theology and science is not considered appropriate to a discipline (science) that claims its own authority.

The roots of moralistic therapeutic deism
(In Christ, page 69)

“The energetic anti-God evangelism of [atheist authors] Sam Harris, Richard Dawkins, Christopher Hitchens, and others has emboldened millions of Americans, especially those under forty, to question the existence of God, the role of faith, the value of churches, and the genesis of moral standards.”²³

Questions concerning divine revelation and God’s involvement in His creation extend far beyond those involved in scientific careers. A contemporary survey reveals that the majority of American youth accept a belief system known as *moralistic therapeutic deism*. This worldview is *moralistic*, although the moral decisions are not based on God’s will as revealed in Scripture, but on personal experiences and feelings. People are encouraged to do “whatever makes you feel good about you.” (70) This worldview is *therapeutic* because people want to have their needs met and still want the “comfort” of religion. For that reason, strict *deism*, the belief that God is not involved in the ongoing care of His world, is revised to include a God who is there (when we want Him) to make us feel better.

Faith is reinterpreted as the choice of a happy, positive attitude. Contemporary people have a hard time seeing any deep connection between faith and science, since Christianity is no longer regarded as a source of objective truth. Faith is understood as an attitude of mind that does not embrace definite knowledge. Religion offers comfort only in questions of meaning and value that science does not address.

²³ George Barna and David Kinnaman, *Churchless: Understanding Today’s Unchurched and How to Connect With Them* (Carol Stream, Ill.: Tyndale Momentum, 2014), 8-9.

How do the following comments reflect aspects of moralistic therapeutic deism?

*“Make this final declaration with me ... ‘I declare that I am blessed!’ If you’ll use your words to declare victory and not defeat, you’ll see God do amazing things, and I believe you’ll live the abundant, overcoming, faith-filled life that He has in store.”*²⁴

*Disguised in the secular language of psychotherapy, the search for the sacred has turned sharply inward—a private quest. The goal, over the last forty years, has been variously described as ‘peace of mind,’ ‘higher consciousness,’ ‘personal transformation’ or—in its most banal incarnation—a ‘self-esteem.’ ... In this environment, many searching Americans flit from one tradition to the next, tasting now the nectar of this traditional wisdom, now of that. But, like butterflies, they remain mostly up in the air.*²⁵

In Session 4, Philosophical Issues, we will examine worldviews and ideas that arise from ideologies outside of science, ideas that Christians can or should reject. We will also see that Christianity actually provides key principles that support science.

Responsive Reading of Psalm 96

²⁴ Joel Osteen, *I Declare: 31 Promises to Speak Over Your Life* (Philadelphia: Running Press, 2014), 188.

²⁵ Kenneth Woodward, *Newsweek* (November 1994), 62, quoted in Michael Horton, “Are Churches Secularizing America?” *Modern Reformation* 17:2 (March/April 2008), available at <http://www.modernreformation.org/default.php?page=articledisplay&var2=917>.

Session 4: Philosophical Issues (Chapter 3, pages 72-97)

*“If ever there was a slamming of the door in the face of constructive investigation, it is the word miracle. To a medieval peasant, a radio would have seemed like a miracle. All kinds of things may happen which we by the lights of today’s science would classify as a miracle just as medieval science might a Boeing 747 ... Once you buy into the position of faith, then suddenly you find yourself losing all of your natural skepticism and your scientific—really scientific—credibility.”*²⁶

The above comment suggests that a Christian cannot be a good scientist. Such opinions arise out of ideologies that are outside of science, and Christians can and should reject them. Christianity, however, provides many assumptions that are agreeable with good science. There is no reason for a Christian scientist to divorce faith from scientific work.

Philosophical problems for the scientific vocation (*In Christ*, 72)

*“Notre Dame sociologist Christian Smith has conducted the most substantial study of emerging adults and published the results for 18-23 year olds in his book Souls in Transition. His findings offer a stark challenge to the church: Is it true that ‘the teachings of science and religion often ultimately conflict’? More than two thirds of Smith’s respondents agreed. Would they say, ‘My views on religion have been strengthened by discoveries of science’? Well more than half (57 percent) disagreed.”*²⁷

As indicated in the survey results mentioned above, many people today believe that science and religion “ultimately conflict.” As a result of the Enlightenment, people increasingly came to see human reason as the judge of all things. Behind this idea were two assumptions—that human reason is not seriously affected by sin and that human judgment has authority over Scripture. “The combination of these two assumptions leads to the idea that reason is the best instrument for distinguishing truth and error in Scripture. And in science, it led to the view that a scriptural faith provides no guidance for the scientist. Reason thus becomes the only judge both of God’s Word and of God’s world.” (73)

Read Genesis 6:5, Mark 7:20-23 and James 1:14-15 and 2:10. What do these verses tell us about the full reality of sin and the corruption of the human heart and mind? **Read John 12:48, Acts 13:46, Hebrews 4:12-13, and 2 Peter 3:14-18.** What do these verses have to say about the authority of Scripture over human reason? What happens when human judgment “twists” Scripture or “thrusts it aside”?

²⁶ Richard Dawkins, quoted in David Van Biema, “God vs. Science,” *Time* (November 5, 2006) at <http://content.time.com/time/magazine/article/0,9171,1555132,00.html>.

²⁷ Greg Cootsona, “When Science Comes to Church,” *Christianity Today* (March 2014), at <http://www.christianitytoday.com/ct/2014/march-web-only/when-science-comes-to-church.html>.

The elevation of human reason encouraged the development of ideologies or worldviews that are hostile to the Christian faith or in tension with it—materialism, scientism, methodological naturalism, the non-overlapping magisteria model and parascience. Thoughtful Christian scientists can resist these worldviews.

Materialism (*In Christ*, 74):

*“The question of whether there exists a supernatural creator, a God, is one of the most important that we have to answer. I think that it is a scientific question. My answer is no.”*²⁸

A worldview is an account of the world that involves *metaphysical* (supernatural, intangible or abstract) questions such as these: What is real? How do we know? How should we live? Materialism is a worldview that makes two metaphysical claims—that what is physical defines the boundaries of what exists and that there cannot be anything independent of what is physical. Materialism, therefore, denies the existence of God and the human soul and often denies objective moral values.

Science cannot prove or disprove the existence of God. Is science looking for God? Is it actually capable of detecting His presence? The investigation of a windowless room will not provide evidence against the existence of the sun because such an investigation is not capable of discovering the sun. “To the extent that much of science restricts itself to secondary causes within nature, it is incapable of making pronouncements on transcendent matters like God, the soul, and objective moral values” (78).

Scientism (*In Christ*, 78):

Scientism asserts that materialistic science is the only means of knowing what is real. If science can only discover the material, then immaterial entities (such as God and the soul) are unknowable. But scientism is *not* science. Scientism is a philosophical claim *about* science. Actual science *requires* abstract, immaterial things such as numbers and mathematical relations; even scientific propositions are abstract, and not physical, entities. No one could live as if scientism is true. We deal with people each day, and we assume that these people are rational persons with free will and moral responsibility, that is, they are not purely material objects. Scientists themselves make use of concepts such as numbers, truth and logical implications. Such concepts are not material things. The philosophical claim of scientism is opposed to a Christian worldview. Scientism is incompatible with the biblical teaching that man has a natural knowledge of God.

Read Rom. 1:19-20, Rom 2:14-15 and Ecc. 3:11. What natural knowledge do human beings have about God? People have an awareness of their souls, even though souls are not material. Read Matt. 10:28 and Matt. 16:26. What does the Lord Jesus say about body and soul?

²⁸ Richard Dawkins, quoted in Biema, <http://content.time.com/time/magazine/article/0,9171,1555132,00.html>.

Methodological Naturalism (*In Christ*, 81):

There are attempts to suggest that Christians can accept both scientism (in the field of science) and their Christian worldview (in other aspects of life). One of them is “methodological naturalism” and the other is “NOMA.”

Naturalism is a worldview that denies the existence of God, the soul and objective moral values. *Methodological* naturalism, however, permits scientists to believe in God, angels and other supernatural things, but *within the field of science* they must act as if naturalism is true and that there are no supernatural things. Methodological naturalism argues that since God and souls have free will, and a scientist cannot predict what a free being might do, science should study only material things that behave in regular ways. According to methodological naturalism, any appeal to God is a “science stopper” that might allow a “God of the gaps” explanation in a particular area of study—that is, if we say that God did something, then there is nothing more to be said.

Methodological naturalism is not a *universal* scientific method because it does not apply in all fields of science. For example, in forensic science, archaeology or studies of the origin of the universe, scientists must consider a range of possible explanations. In some circumstances, an intelligent cause might actually be the better explanation. The study of the “fine tuning” of the laws of nature for intelligent life or the investigation of miracle claims may also refer to an intelligent cause.

When considering intelligent design, “some cautions are in order. Inferring the existence of a super-human, intelligent cause is not the same as inferring that this cause is God” (86). However, inferring an intelligent cause is not unscientific. The inference might be mistaken, or shown later to be mistaken, but that is true of scientific inferences in general. In addition, some things, such as the origin of the universe or the fine-tuning of the laws of nature, are poorly explained by causes *within* nature and may best be explained by a supernatural cause.

Methodological naturalism is a useful rule in many areas of science, but it is not a valid principle in *every* area of science. “Thoughtful Christians who hope to present scientific evidence to support their claim of faith that we live in a designed world in which God also intervenes should not be deterred by methodological naturalism from making that case” (91).

The NOMA Model (*In Christ*, 91):

The NOMA model claims that Christians can accept both scientism and a Christian worldview. NOMA stands for non-overlapping magisteria, or non-overlapping spheres of teaching authority. According to this view, the authority of science and religion do not overlap, so religion cannot make claims about the knowledge of the natural world and science cannot make claims about religion. However, NOMA’s advocate, scientist Stephen Jay Gould, did in fact make claims *against* religion, calling human beings “a wildly improbable evolutionary event” (92). He actually believed in *one way overlapping magisteria*, that is, he believed that there is an overlap from science into religion, but not from religion into science.

An absolute divide between science and religion is unfaithful to the goals of theology *and* science. The realms of science and religion do overlap. Holy Scripture has a great deal to say about the natural world and the natural knowledge of God. The Gospel makes historical claims about what Christ did and does within ordinary history.

Read Luke 2:1-2 and Luke 3:1-2. How are the events of Jesus' life and ministry anchored in history? What words in the Apostles' and Nicene Creeds place Jesus within ordinary human history?

Parascience (*In Christ*, 93):

“Parascience” is the study of topics that are outside the reach of traditional science, topics that cannot be tested or explained by scientific method or theories. Parascience treats current science as ultimate truth when, at best, it actually reflects only the latest theory. Parascience moves from descriptions of natural fact to conclusions about the way things should be, as well as concluding what our human nature is and must be. For example, evolutionary ethicists claim to have discovered the origins of moral norms, making their scientific account the ultimate account.

How do the following comments reflect the conclusions of parascience concerning human morals and behavior?

“Science is starting to undercut [the idea of free will], by showing that there’s only one choice we can make, which is the output of our materialistic brains. We are creatures of physics, made of molecules. Therefore, our thoughts and behaviors are also the results of molecular motions.”²⁹

“There is no evidence that prayers are answered ... All our thoughts and memories reside in the physical brain. It is very unlikely that they will survive death. They will die when our brains die ... Mystical experiences provide no evidence that they are not all in the head.”³⁰

“If we put together something like a final theory in which all the forces and the particles are explained and that theory also throws light on the origin of the Big Bang and gives us a consistent picture of cosmology, there will be a little less for religion to explain. But religion has evolved along with science. It is something created by human beings, and as human beings learn more and more their religion changes.”³¹

²⁹ Worrall, <http://news.nationalgeographic.com/2015/05/150531-religion-science-faith-healing-atheism-people-ngbooktalk>.

³⁰ Stenger, http://www.huffingtonpost.com/victor-stenger/christianity-and-modern-science_b_5182177.html.

³¹ Steven Weinberg, in an interview with Ana Elena Azpura, <http://www.newsweek.com/will-physicists-find-god-84363>

**Philosophical contributions of Christianity to science
(In Christ, 94)**

*“You will never understand what it means to be a human being through naturalistic observation,” [Francis Collins] said. “You won’t understand why you are here and what the meaning is. Science has no power to address these questions—and are they not the most important questions we ask ourselves?”*³²

Science, as Francis Collins comments above, does not have the power to address questions of purpose and meaning, but the Christian faith does in fact address these very things. Christianity is actually philosophically friendly to science because it provides key principles that support science. For example, if science is an attempt to understand the natural world, then it must consider the natural world to be fundamentally rational—a world governed by laws and principles that can be understood. A “good explanation of such a coherent, law-governed world is the existence of a single, rational, divine creator. Indeed, the whole idea of a universal law of nature is derived from the prior idea of a single, rational legislator, and if these laws apply throughout nature, then that legislator must be a supernatural being” (94).

Christianity also provides epistemological support, that is, support for questions about our sources of knowledge. The natural world is governed by laws that can be discovered, and “human reason is attuned to the rationality of nature and sufficient to discover its principles” (95). The fact that we are made in the image of God—yet realizing that we are not God—gives us the right balance of confidence and humility to make scientific progress without expecting final answers.

Christianity also provides moral boundaries for science. “It gives reasons to think that we are permitted to do science—because nature is not sacred—and we are required to do science—as it is part of what it means to pursue our vocations as stewards of creation. Furthermore, as with all legitimate vocations, science was instituted as a means of loving and serving our neighbors, and God provides for our neighbors in part through the work of scientists ... God provides boundaries for legitimate science: it must not be used to harm others or the environment in such a way that it harms the welfare of future generations” (97).

How do the following comments support the idea that we live in “a coherent, law-governed world” ordered by “a single, rational, divine creator”?

*“‘When you realize that the laws of nature must be incredibly finely tuned to produce the universe we see,’ says John Polkinghorne, who had a distinguished career as a physicist at Cambridge University before becoming an Anglican priest in 1982, ‘that conspires to plant the idea that the universe did not just happen, but that there must be a purpose behind it.’”*³³

³² National Human Genome Research director Francis Collins, quoted in Cornelia Dean, “Scientists Speak Up on Mix of God and Science,” *The New York Times*, August 23, 2005, at <http://www.nytimes.com/2005/08/23/us/scientists-speak-up-on-mix-of-god-and-science.html>.

³³ Begley, http://www.washingtonpost.com/wp-srv/newsweek/science_of_god/scienceofgod.htm.

“Greek mathematicians divided up the circumference of a circle by its diameter, for example, and got the number pi, 3.14159 ... Pi turns up in equations that describe subatomic particles, light and other quantities that have no obvious connections to circles. This points, says Polkinghorne, ‘to a very deep fact about the nature of the universe,’ namely, that our minds, which invent mathematics, conform to the reality of the cosmos. We are somehow tuned to its truths.”³⁴

“The fact is, as we find better ways to farm, powerful new medicines to heal and more effective ways to power our society, the poor benefit, societies are transformed for the better and the world looks and is more of what God intended it to be. Christians are to champion the good of their city and society as a whole. Leveraging scientific study and achievement for the betterment of people is an entirely Christian thing to do.”³⁵

In Session 5, Biblical Knowledge and Scientific Knowledge, we will discuss the authority of Holy Scripture and compare the kind of knowledge that is important to science with the unique kind of knowing central to our Christian faith.

Responsive Reading of Psalm 14

³⁴ Begley, http://www.washingtonpost.com/wp-srv/newsweek/science_of_god/scienceofgod.htm.

³⁵ Stezter, <http://www.christianitytoday.com/edstetzer/2015/may/3-reasons-for-christians-to-engage-in-science.html>.

Session 5: Biblical Knowledge and Scientific Knowledge (Chapter 4, pages 98-124)

“All Scripture is breathed out by God and profitable for teaching, for reproof, for correction, and for training in righteousness, that the man of God may be complete, equipped for every good work” (2 Timothy 3:16-17).

The Lutheran Confessions state: “First, we confess our adherence to the prophetic and apostolic writings of the Old and New Testaments, as to the pure, clear fountain of Israel, which alone is the one true guiding principle, according to which all teachers and teaching are to be judged and evaluated.”³⁶

“If Christians are to accept science, they have to admit that the Bible is not a reliable source of information about the natural world. And why should we believe it is a reliable source of information about anything? The creation story in Genesis is a myth. And, it is not the only story in the Bible that science can now prove is largely fiction ... Actually, intellectual Christians today are gradually disassociating themselves from the God of the Old Testament, who is certainly an unpleasant character. Thank goodness he is fictional.”³⁷

How do we, as Christians, know certain things? Is there a genuine conflict (as indicated in the third quote above) between what we know from Holy Scripture and what we know from modern science? Sometimes we speak of *knowing* things in science, and *believing* things in the Bible. However, as Christians we also speak of *knowing* God’s will (Romans 2:18) or *knowing* our Creator (Isaiah 40:28). In this session we will compare the kind of knowledge that is important to science with the unique kind of knowing central to our Christian faith.

Knowing as a Christian (In Christ, 98)

There are similarities in learning from each of God’s two books, the book of His Word and the book of His world. In both books there is information that must be analyzed, categorized and arranged in meaningful ways. Another common feature is the use of prior knowledge. The interpreter of Scripture uses what he already knows—including grammar and vocabulary—while studying the text, just as scientists use prior knowledge in their fields of study.

Read Isaiah 53:7-9. *What prior knowledge do we have (from elsewhere in Scripture) that helps us understand the meaning of Isaiah’s prophecy? **Read John 6:49-51.** What prior knowledge do we have from the Old Testament that helps us to interpret Jesus’ words? **Read Acts 8:26-35.** What information was needed for the Ethiopian eunuch to correctly interpret Isaiah’s words?*

³⁶ Formula of Concord, Solid Declaration, *The Book of Concord*, 527.3.

³⁷ Victor Stenger, “Christianity and Modern Science,” *Huffington Post*, April 21, 2014 at http://www.huffingtonpost.com/victor-stenger/christianity-and-modern-science_b_5182177.html.

The way questions are framed has an impact on the answers discovered. Christians may sometimes ask the wrong questions. For example, they may search the book of Revelation for the exact timing of Christ's return. God's two books have the same Author and His truth is to be sought in both books, but for many people this common ground no longer exists because science and theology are viewed as "non-overlapping magisteria" (NOMA), and the two books are thought to be in conflict. Does science have the last word as to what we can really *know*? Theologian and author Francis Schaeffer comments:

When we face apparent problems between present scientific theories and the teaching of the Bible, the first rule is not to panic, as though scientific theory is always right. The history of science, including science in our own day, has often seen great dogmatism about theories which later have been discarded. Thus there is no inherent reason why a current scientific theory should immediately be accepted. And there is no inherent reason why a Christian should be put in a panic because the current scientific theory is opposite to what is taught in the Bible.

When we come to a problem, we should take time as educated people to reconsider both the special and general revelations; that is, we should take time to think through the question. There is a tendency among many today to consider that the scientific truth will always be more true. This we must reject. We must take ample time, and sometimes this will mean a long time, to consider whether the apparent clash between science and revelation means that the theory set for by science is wrong or whether we must reconsider what we thought the Bible says.³⁸

Read Philippians 3:4-11. According to these verses, what does the apostle Paul know? What impact does this knowledge have on his life?

Paul speaks of another kind of knowing, of knowing someone, a person—Jesus Christ—as his Lord. Knowing Christ changes everything for the apostle. This kind of knowing is of greatest importance for Christianity. Science is not the final judge of all knowledge. "At the same time, however, it is important to confess that *reason or rational arguments are not the ultimate basis for the knowing that Christianity claims for itself.* Rather, Christians *know* that the wisdom of God confounds all human wisdom (1 Cor. 3:19). How do we know this? These truths flow out of *knowing* Christ Jesus, who is God's very truth made flesh (John 1:14), God in the nature of a man (Phil. 2:6; Heb. 1:3), and the very wisdom of God (1 Cor. 1:24)." (101)

No knowledge is more certain than knowing Christ by faith. Human imagination cannot rightly know Christ; He can only be known through the revelation of the Word. The clarity and authority of God's Word, centered in Christ and the Gospel, is greater than God's book of nature.

Read John 5:39-47. What did the Jews hope to find in their study of the Old Testament Scriptures? What particular knowledge was missing in their search? ***Read Luke 24:44-49.*** What

³⁸ Francis Schaeffer, *No Final Conflict* in *The Complete Works of Francis A. Schaeffer*, vol. 2, (Wheaton, IL: Crossway, 1985), 130, at <https://reformedreader.wordpress.com/2013/05/15/francis-schaeffer-on-science-and-scripture/>.

does Jesus say here concerning the relationship between Himself and the Scriptures? Read John 20:30-31. What does the evangelist John want us to know and believe about Jesus through reading his gospel?

Just as we hold to Christ, we hold to the Scriptures, knowing them to be the Word of God. “Therefore it is important to state clearly that even as the church confesses its faith in Christ, so also its conviction of the complete trustworthiness of the Holy Scripture is a confession of faith” (102). The authority of Scripture is bound up with the authority of God Himself (2 Pet. 1:16-21; 2 Tim. 3:16-17).

In our culture, many people assume that science has the authority to trump the claims of any other source, including Scripture. To them, Scripture is a human document full of fallible, revisable claims. Yet God knows all truths (Ps. 147:5; John 21:17; Heb. 4:13). He can do what he intends (Ps. 115:3; Jer. 32:17; Matt. 19:26, Rom. 11:36). “Thus He can communicate truthfully through human language and the words of mortal men. God is holy and he cannot deceive us, and indeed, by His very nature, He cannot do so (Num. 23:19; Ps. 25:8; Is. 6:3; Heb. 6:18). Thus God’s Word is *infallible* (trustworthy and reliable; incapable of mistake) and *inerrant* (without error) because He is completely *trustworthy* and *without error*” (104-105).

Some contemporary theologians claim that Scripture is reliable only in spiritual matters, but not in secular matters such as history and science. That claim “drives a wedge between God’s work as Creator and His works of redemption and spiritual renewal. Orthodox Christianity holds the spiritual and the physical together as two spheres in which God is equally at work” (105). The Bible bears witness to the acts of God in human history to accomplish our salvation. Paul asserts that the truth of the Christian faith depends on the historical fact of Jesus’ resurrection (1 Cor. 15:17-20).

Read Acts 2:22-23, Acts 26:19-29 and 2 Peter 1:16-18. What is said in these texts concerning eyewitness accounts of historical events? Read Acts 1:21-22. What particular requirement was necessary for the person who would take the place of Judas among the apostles?

Reading God’s Word—basic principles of interpretation (In Christ, 106)

Christians must keep Christ and Scripture together. “The crucial point to emphasize here is that this orientation toward the centrality of the Gospel of Christ and His justifying work for the world is presented by Scripture itself as the way it should be read. Our whole approach to the interpretation of biblical texts is guided by this important orientation. This is the central interpretive principle for the Christian reader of the Bible” (106).

The following principles that guide us in our reading of Holy Scripture are helpful and generally accepted. These principles are not arranged in order of importance, but as they are actually used in the task of interpretation.³⁹

³⁹ *In Christ All Things Hold Together*, 107. The seven principles are adapted from Lane A. Burgland, *How to Read the Bible with Understanding*, 2d ed. (St. Louis: Concordia Publishing House, 2016).

1. Pay attention to the context, both literary and historical.
2. Begin with the plain meaning of a text.
3. Scripture interprets Scripture.
4. Interpret Scripture in light of the rule of faith.
5. Interpret Scripture in view of Christ.
6. Distinguish Law and Gospel, sin and grace.
7. Attend to the “then and there” meaning as well as the “here and now” meaning.

Concerning the first principle, we must pay attention to the context of any document, including Scripture. For example, in reading one of Paul’s epistles, the interpreter should consider when and to whom the letter was written. What issues were troubling the church to whom Paul is writing? Had Paul already visited that church, or was he planning to do so in the future?

In the second principle, we take the text at face value, accepting its plain meaning. What does the text actually say? We cannot pass judgment on God’s Word; it is God who judges us. Someone who reads about a miraculous claim in a newspaper may doubt such unusual information. When reading a miraculous claim in Scripture, for example, when someone is healed by Jesus, we *can* accept the plain meaning—the truth of the account—because we know that Jesus is Lord of heaven and earth. In establishing doctrines, the Church focuses on the primary and intended meaning of Scripture, and not on symbolic readings. Figures of speech do happen in Scripture—mountains sing for joy and rivers clap their hands—yet other accounts, such as Jesus’ healing miracles, are assumed to mean what they say. Some readers may wrongly attempt to dismiss scriptural texts that create scientific, cultural or personal difficulties by assigning an allegorical or symbolic meaning to them (suggesting, for example, that Adam and Eve were not people from history but merely symbolic figures representing humanity).

The third principle states that Scripture interprets Scripture. For example, we read the story of creation in Genesis 1. Throughout the Bible we find help in interpreting the creation account as we see that God is consistently portrayed as the Creator of heaven and earth (Neh. 9:6; Is. 45:12), who created all things from nothing (Rom. 4:17; Heb. 11:3), by speaking (Ps. 33:6; 2 Pet. 3:5) and in six days (Ex. 31:17; Heb. 4:4).

Read Genesis 2:7 and 21-22, Acts 17:26, 1 Corinthians 11:8 and 1 Timothy 2:13. How does “Scripture interpret Scripture” in these verses? What is the origin of humanity?

According to the fourth principle, we are to interpret Scripture according to the rule of faith, the great “melody line” (110) of Holy Scripture. The rule is a summary of the story of our salvation by God’s grace through faith in Christ Jesus. The Apostles’, Nicene and Athanasian Creeds express the rule of faith, summarizing God’s work of creation, redemption and renewal. As in the creeds, the truths of the rule may be communicated in a variety of ways. The early church father Irenaeus (c. 130-c. 200 A.D.) briefly expressed the rule of faith this way: “First of all, [faith] bids us bear in mind that we have received baptism for the remission of sins in the name of God the

Father, and in the name of Jesus Christ the Son of God, Who was incarnate and died and rose again, and in the Holy Spirit of God.”⁴⁰

Read 1 Corinthians 15:3-8 and 1 Timothy 3:16. How is the rule of faith expressed in these verses?

The fifth principle, interpreting the Scriptures in view of Christ, and the sixth, reading Scripture as Law and Gospel, keep Christ and his saving work at the center of Holy Scripture. “All sound exegesis must begin and ever return to Christ Jesus, the revelation of God (Matt. 11:27)” (110). The twin message of the Law—to reveal and condemn sin—and the Gospel—the promise of God’s grace in Christ—is constantly repeated throughout Scripture.

The seventh principle, paying attention to the “then and there” and the “here and now” meanings of the text helps to prevent superficial readings of Scripture. The Bible was written thousands of years ago in a world different from our own, but its truths, revealed in particular times and places, are for all people of all times. This principle reminds us, for example, that when Scripture tells us not to covet our neighbor’s ox or donkey (Ex. 20:17), this can be understood today to forbid coveting our neighbor’s status, car or other possessions.

Biblical Exegesis and Modern Science *(In Christ, 111)*

How does proper biblical interpretation relate to the discoveries, models and theories of science? Is the Bible discredited because it sometimes appears to be in conflict with scientific knowledge?

God did not reveal Himself in Scripture in a mysterious “heavenly” language, but in ordinary human language shaped by the world as it appears to human beings. For example, the sun appears to move across the sky, leaving its “tent” to run its course (Psalm 19:4-5). God “inspired fallible human beings to communicate infallibly His truth as it was spoken by prophets and apostles and preserved infallibly in the inerrant Scriptures” (112).

Scripture texts that appear to have scientific meaning should be taken as accurate reports of the way things appear to the five senses of human beings. In Joshua 10:12-13, our interpretation should be limited to the fact that, from our earthbound point of view, the sun appeared to stand still. That text is not a scientific explanation of the movement of the solar system. Biblical inerrancy does not mean that we should expect biblical writers to express themselves according to modern scientific theories. “The text is indeed inspired, but what was inspired were human words whose meanings are to be found in their normal usage at the time the original autographs [the original manuscripts] were written—and that usage was not shaped by any of these scientific theories” (113).

It is important to remember the original language of “then and there,” realizing that the biblical use of words was not shaped by modern scientific theories. For example, the “kinds” in Genesis (Gen. 1:11, 21, 24) are not modern scientific categories for classifying living things. We do not

⁴⁰ J. N. D. Kelly, *Early Christian Creeds* (London: Longman Group Limited, 1972), 77.

know the exact marine creature that swallowed Jonah because the words used (*dag gadol*, or great fish, in Hebrew, and *ketos*, or sea monster, in Greek) are not precise terms. Sometimes we may not know specific details, such as an explanation for the star of Bethlehem. The Greek term *aster* could mean a star, a planet or a comet. In Scripture we must also pay attention to cultural details—wedding banquets, sowing seed, plowing with oxen—that are not familiar to us today but help to teach eternal truths.

It is helpful to identify the type of literature that appears in the text, such as historical narrative, poems, regulations and laws, prophecies or psalms, although this alone is not conclusive as to the meaning of the biblical text. It would be wrong to dismiss the creation story as merely a poetic metaphor because the Genesis account conflicts with modern scientific theories. Clues within the text itself will indicate the style and purpose of an account.

Read Exodus 15:1-10. What is the style of literature in this text? How does it express historical events? ***Read Psalm 98:4-9.*** What is the style of literature in this text? Does it present historical events or does it have another purpose or meaning? ***Read 2 Kings 6:1-7.*** What type of literature is used to present this miraculous event?

Does final authority lie with the Word of God or the claims of science? Especially today, all forms of authority are challenged, including the moral authority of Scripture. For example, in recent years some theologians have claimed that Romans 1:26-27 does not speak against sexual activity between people of the same sex but only of first century abuses such as temple prostitution. In this approach, modern beliefs are read back into the text, in this case the modern claim that homosexuality is one of many natural orientations. However, such a conclusion cannot be drawn from the words of the text itself.

Scripture is infallible, but its interpreters are not. Further study may lead faithful scholars to question assumptions or conclusions about a biblical text, yet they must guard against simply re-reading the text in light of the newest scientific theories. The Bible cannot be isolated from science, but it does not speak directly to many of the topics that science addresses. “Scripture is not an encyclopedia of all human knowledge, but it is the inspired record of God’s particular work in history—especially the incarnation and saving work of His Son” (120). Scripture is certainly clear about its central, primary truth—Jesus Christ and His saving work.

Read Isaiah 55:10-11, John 20:30-31 and 2 Timothy 3:16-17. What do these texts have to say about Scripture and its purpose?

“The Bible is clear about those doctrines essential to salvation and Christian living. This means that if there is a text that expresses a doctrinal truth in a way that is less than clear to us, we can be sure that it is also expressed more clearly in some other passage of Scripture” (121). Scripture interprets Scripture, and clear passages will illuminate those that are less clear.

Scripture does not teach only spiritual or moral truths. It reveals truths about the world and about history that are historical and scientific even when telling us about God’s miraculous ways. God is fully involved in His creation. His work of redemption involved His incarnation, His flesh and blood birth among us.

The power of Scripture is not limited to what we find easy to understand. The power of Baptism comes from God’s Word, even though a baptized child may not fully understand that Word. Yet there are areas of uncertainty—God has not revealed everything to us. Sometimes the exact meaning of a passage is the subject of ongoing scholarly debate, but it is unwise to try to “prove” or “disprove” the truth of Scripture by impressing modern, scientific explanations onto the text. When there is no clear way to integrate a claim of Scripture with scientific claims, we must do our best to offer an interpretation of the passage or explain the tension involved—acknowledging that the explanation may be uncertain, yet showing the extent to which that interpretation is grounded in the biblical text, which is reliable.

Read 1 Corinthians 13:9-12 and John 21:25. What do these verses tell us about areas of uncertainty or things we do not know or understand in Scripture?

It is honest and faithful to the goals of both Scripture and science to realize that we must sometimes live with unresolved tensions, knowing that our hope lies not in our perfect knowledge but in Christ Jesus. Scripture alone is the ultimate source and standard for all teaching. The proper role of science, and of human reason, is to be a servant to the faith. We must humbly follow the original, intended meaning of the text, for that is where we meet Christ.

How might you respond to the following statements concerning the truth of biblical teaching?

“Religion doesn’t have a methodology to weed out what’s false. In fact, it’s a way of fooling yourself. They have authority, revelation, dogma, and indoctrination as their methods and no way of proving their tenets false.”⁴¹

If Christians are to accept science, they have to admit that the Bible is not a reliable source of information about the natural world. And why should we believe that it is a reliable source of information about anything? The creation story in Genesis is a myth. And, it is not the only story in the Bible that science can now prove is largely fiction.”⁴²

In Session 6, Practical Applications, we will discuss the opportunities and challenges that science provides for thoughtful Christians. We will examine the ways in which students, teachers, scientific investigators and non-scientific laity might respond to the claims of science.

Responsive Reading of Psalm 119:89-96

⁴¹ Worrall, <http://news.nationalgeographic.com/2015/05/150531-religion-science-faith-healing-atheism-people-ngbooktalk>.

⁴² Stenger, http://www.huffingtonpost.com/victor-stenger/christianity-and-modern-science_b_5182177.html.

Session 6: Practical Applications
(Chapter 5, pages 125-139)

“At a recent scientific conference at City College of New York, a student in the audience rose to ask the panelists an unexpected question: ‘Can you be a good scientist and believe in God?’ Reaction from one of the panelists, all Nobel laureates, was quick and sharp. ‘No!’ declared Herbert A. Hauptman, who shared the chemistry prize in 1985 for his work on the structure of crystals.”⁴³

Being involved in science is a natural outflow of our own human natures and God-given intellect, and Christians in the sciences can be a witness to the world around them. We need good science to care for the needs of people and the world around us. We have many good examples of past and living Christians in the sciences who both love God and are thrilled to be a part of studying the majestic, tremendous natural world.⁴⁴

“I don’t think that by studying science you will be forced to conclude that there must be a God. But if you have already found God, then you can say, from understanding science, ‘Ah, I see what God has done in the world.’”⁴⁵

I build molecules for a living, I can't begin to tell you how difficult that job is. I stand in awe of God because of what he has done through his creation. Only a rookie who knows nothing about science would say science takes away from faith. If you really study science, it will bring you closer to God.⁴⁶

As the above comments indicate, there are conflicting views concerning the compatibility of the Christian faith with a career in science. How should students of science respond when they are taught a theory that is in conflict with their faith? What is the best way for teachers to present controversial scientific ideas? How should the scientists themselves correctly understand their responsibilities? How should non-scientific laity respond to the claims of science found in popular books, articles and news reports?

⁴³ Dean, <http://www.nytimes.com/2005/08/23/us/scientists-speak-up-on-mix-of-god-and-science.html?>

⁴⁴ Dorothy Boorse, “The Wonders of Creation,” in *When God and Science Meet* (Washington, D. C.: National Association of Evangelicals, 2015), 19 at http://nae.net/wp-content/uploads/2015/06/When-God-and-Science-Meet_bw.pdf.

⁴⁵ Cancer biologist Carl Feit, quoted in Begley, http://www.washingtonpost.com/wp-srv/newsweek/science_of_god/scienceofgod.htm.

⁴⁶ James Tour, quoted in Lee Strobel, *The Case for Faith* (Grand Rapids: Zondervan, 2000), 111.

Students (*All Things*, 125)

High school and college students may learn about scientific theories—for example, evolutionary claims about the origin and diversity of life—that are in conflict with their Christian faith. Many students react to such claims in unhelpful ways.

Author Gene Veith presents a constructive approach to dealing with this challenge. Before responding to any scientific claims, the student of science should ask some questions:

- (1) To what extent has a purely scientific theory or observation been combined with non-scientific ideologies or philosophical assumptions?
- (2) Can we distinguish and disentangle the science from the ideology and the philosophy, and if so, how much of our disagreement is primarily with the latter and not the former?
- (3) Even if we still think that the purely scientific claim is overstated and/or false, is there an element of truth in it?
- (4) Can we distinguish domains and applications where the claim is useful (and perhaps true) from others where it is more questionable (perhaps because it is untested, or even untestable, in those areas)? (126) ⁴⁷

When we learn about certain scientific theories, even those with which we disagree, we are better able to understand our neighbors' opinions. We can respond with gentleness and respect (1 Pet. 3:15). Asking questions such as the four above, Christian students can separate truth from falsehood, the scientific from the philosophical and what is useful from what is merely speculative. Christian students—and all believers—are to be in the world, not of it (John 17:14-15) and should therefore maintain a critical distance from the world's ideas and theories.

For example, if scientists suggest that evidence points to the non-existence of God, “there is no reason Christian scientists cannot dispute this, either by critiquing the limitations of that evidence, or by offering other evidence that points in the opposite direction. It is obviously unfair and ideologically biased to claim that scientific evidence can be used to support atheistic conclusions but cannot be used to support theistic ones” (127).

Biochemist Michael Behe comments: “It is often said that science must avoid any conclusions which smack of the supernatural. But this seems to me to be both bad logic and bad science. Science is not a game in which arbitrary rules are used to decide what explanations are to be permitted. Rather, it is an effort to make true statements about physical reality.”⁴⁸

⁴⁷ The four questions are from Gene Edward Veith, “The University of Babylon” in *Loving God With All Your Mind: Thinking as a Christian in the Postmodern World* (Wheaton, Ill.: Crossway, 2003).

⁴⁸ Michael Behe, “Molecular Machines: Experimental Support for the Design Inference,” in *Intelligent Design Creationism and Its Critics*, ed. Robert T. Pennock (Cambridge, Mass.: Massachusetts Institute of Technology

Read John 15:18-19 and John 17:14-19. What does Jesus say about the relationship of believers with the unbelieving world? How might the words of Jesus' prayer in John 17—that we are sanctified (set apart in holiness) in the truth of the Word and sent into the world—apply to our investigations of the truth claims of science and to work in a scientific field?

Within those domains for which evolutionary theory is useful, such as understanding micro-evolutionary change in malaria or HIV, Christian students preparing for a career in medicine should certainly learn the principles, as they will help them in treating patients or in doing lab research for more effective drugs and potential cures. “Using some aspect of a theory that is helpful is not the same as endorsing all that the theory claims, or all that is claimed for it by proponents of ideologies and philosophies in tension with a Christian worldview” (127-128).

Christian students of science can remain faithful and refuse to make an idol out of scientific theory. They should balance two important objectives. They can remain faithful and refuse to make an idol out of scientific theory. They can also develop an appropriate, authentic scientific attitude that emphasizes the limits and fallibility of scientific understanding and at the same time masters current scientific models and the best ways to use them to produce helpful results.

A current high school biology textbook contains units on the nature of life, ecology, cells, genetics, evolution, microorganisms and fungi, plants, invertebrates, chordates and the human body. How might any one of these topics, with its accompanying scientific theories, become an idol? How should a Christian student of science approach such topics?

Teachers (All Things, 128)

Christian teachers of science can help their Christian students understand that they can pursue scientific careers without compromising their faith. Teachers can encourage students to study the lives and contributions of scientists who were, and are, faithful Christians.⁴⁹ Christian teachers should also avoid imparting an anti-scientific perspective to students, and should emphasize the practical blessings for humanity discovered through science. For example, scientific advances in medicine are a good starting point as the Christian teacher encourages students to pursue scientific vocations. Teachers can remind their students that central aspects of the scientific method—for example, the importance of privileging evidence over assumptions and the value of critical, careful, objective research and thinking—are vital in every intellectual pursuit. “Precisely because Christians have a place to stand outside of this world, they can be all the more objective in assessing the world’s ideas” (129).

Press, 2001), 225. Behe’s paper, presented in 1994 at the meeting of the C. S. Lewis Society, Cambridge University, England, is also available online at <https://answersingenesis.org/what-is-science/science-and-the-supernatural/>.

⁴⁹ Students can research and report on the lives and work of Christians in the sciences. Suggested names from the past include Nicholas of Cusa (1401-1464), Blaise Pascal (1623-1662), Michael Faraday (1791-1867), Asa Gray (1810-1888), Gregor Mendel (1822-1884) and George Washington Carver (1864-1943). Suggested contemporary Christian scientists include John Polkinghorne, Andrew Pinsent, Katharine Hayhoe, Dorothy Boorse, Ian Hutchinson and Randy Isaac.

One way to present controversial ideas to students is to *teach the controversy itself*. In addition to laying out an idea and its implications, the teacher can encourage students to learn the best arguments *for* and *against* the idea in question. This approach teaches good critical thinking, and students are not limited then to blind acceptance or rejection of a scientific idea. For example, in presenting a controversial issue such as climate change, the best approach will include arguments from all sides of the controversy. Students can learn to question the sources of scientific claims, such as the influence of rhetoric found in the books and articles of popular science.

*What is meant by the statement that Christians “stand outside of this world”? How might such a vantage point give us a better perspective on controversial issues? **Read Matthew 5:13-16.** How can we stand outside of the world and yet remain its light and salt?*

Investigators (*All Things*, 130)

“I think almost without exception the people I have spoken to are scientists and they do believe in the existence of a supreme being ... If you ask me to explain it—I cannot explain it at all.”⁵⁰

“Scientists working at universities, government agencies, and private companies should be encouraged toward deep reflection on the vocation of scientist. It is invaluable to spend time considering how great Christian scientists conceived of their work in previous centuries. Even more vital is the need to recapture the idea that the Bible deeply affirms science as a God-pleasing contribution to our primary vocation of stewardship, and to encourage scientists to delight in their work as they read God’s book of nature” (130-131). Scientists serve their neighbors by helping the sick, providing relief from pain, increasing food production, enabling safe transportation, identifying criminals and exploring the mysteries of space and time.

What specific scientific contributions have had an impact on your life? If you wish, share a particular illness that was prevented or cured through scientific discoveries. Consider the many ways in which science serves you and your neighbor. How do the results of scientific research aid safe travel? What particular discoveries have helped criminal investigations?

The world is God’s creation and scientists themselves are created in the image of God, yet the fall into sin touches the abilities of scientists. These truths impact scientific investigation. We need to find a middle way between excessive modesty and unwarranted pride.

***Read Proverbs 3:34, James 4:6 and 1 Peter 5:5-10.** What is said in these verses about pride and humility? How might these verses apply to Christian students, teachers and investigators in fields of science? How are both “excessive modesty” and “unwarranted pride” evidence of the fall into sin?*

⁵⁰ Chemist Herbert Hauptmann, quoted in Dean, <http://www.nytimes.com/2005/08/23/us/scientists-speak-up-on-mix-of-god-and-science.html>.

God's moral law provides the boundaries for our vocations, and this includes the moral boundaries for scientific work. Each vocation has special privileges and responsibilities within God's divine purpose. Scientists occupy positions of trust. God has placed scientists in various fields of study that allow them to love and serve their neighbors in ways that are beyond the abilities of most people. Scientists should not reject or ignore the rich resources of Holy Scripture or centuries of reflection on Christian ethics.

If scientific work is reduced to the quest for funding and fame, the scientific vocation will be corrupted. Science is never an excuse to deny the humanity and dignity of a person. The terms "subject" or "patient" should never create the illusion that a person made in the image of God is merely part of an experiment to serve the interests of humanity. "A Christian understanding of scientific vocation should bring with it a high view of human dignity and value, and should guard against the cynical and unbiblical view that some people are more valuable than others. Human persons are more than biological, psychological, and sociological resources to be valued only for their capacities and contributions to society. Rather, each person is a priceless gift of God" (132).

Christians who work in the sciences must understand that their abilities and skill are to be used for the well-being of human beings created by God and endowed by Him with dignity. God has called us to be concerned for others and to serve them—to "walk in love as Christ loved us" (Eph. 5:2). Scientists, and all of us, suffer alienation from one another through increasing bureaucracy, the obsession with statistics and the distancing of technology. God became a real man and lived among us. He spoke words of love and offered both physical and spiritual healing. We too must minister to people for their good. We need to ask ourselves, "Am I helping someone today?"

Read Galatians 5:13-14. Consider some of the contemporary controversies in science and medicine. How does God's moral law help us in addressing such circumstances?

Non-scientists (All Things, 135)

*"Those in your congregation who are doing science—teaching, research, technology, medicine, engineering, chemistry, biology, neuroscience, physics—are doing a noble thing. They are reading the book of nature and the book of Scripture together. They are obeying God's command to exercise dominion, to learn about and steward the earth. Those of us who are not scientists should be grateful and admiring. We should be cheering them on."*⁵¹

In modern society, science affects all of us, and not merely because it develops the technologies and treatments we all use. Science has also emerged as a voice of cultural authority in many of our most important decisions. However, this exposes non-scientists to politically and

⁵¹ John Ortberg, "Questions that Faith Asks Science," *When God and Science Meet* (Washington, D. C.: National Association of Evangelicals, 2015), 30 at http://nae.net/wp-content/uploads/2015/06/When-God-and-Science-Meet_bw.pdf.

ideologically charged claims made on behalf of science. Non-scientists must learn discernment when they hear reports in the popular science media, especially if such reports overstate the degree of certainty possible in science, or if the claims are linked to an ideological or political agenda. Scientists have many non-scientific beliefs and may wish to use the cultural authority of science to support those beliefs. In the process, scientific findings are often joined with controversial philosophical assumptions.

A good strategy when engaging any scientific material that advocates non-Christian conclusions is to consult the best evaluation of that work (for example, in book reviews, articles or blogs) from a qualified Christian thinker. When scientists seek to use science to discredit Christianity or a general belief in God, their non-scientific philosophical assumptions, and not the scientific data, play the decisive role.

What non-scientific philosophical assumptions are found in the following statements?

“The absence of evidence that prayer works can be considered evidence for the absence of a God who answers prayers.”⁵²

Its [science’s] very detachment, what you might call the cold-bloodedness of science, that makes science the killer app. It’s the way science tells us the truth rather than what we’d like the truth to be.”⁵³

C. S. Lewis frequently admonished Christians to read old books, not because old books are always right and new books are always wrong, but because the older books contain a valuable counter-perspective, preserving insights that our own age may ignore. Contemporary debates about the role of science in public life are often lacking a sound historical perspective on the development of science and the interaction of science with theology and philosophy. Science is not done in a vacuum, but is always influenced by a complex variety of non-scientific beliefs. When we are aware of these beliefs, we can more effectively disentangle the actual science from non-scientific ideas and worldviews.

How might the following comments by C. S. Lewis apply to today’s scientific debates and controversies?

“The only palliative is to keep the clean sea breeze of the centuries blowing through our minds, and this can be done only by reading old books. Not, of course, that there is any magic about the past. People were no cleverer then than they are now; they made as many mistakes as we. But not the same mistakes. They will not flatter us in the errors we are already committing; and their own errors, being now open and palpable, will not endanger us. Two heads are better than one, not because either is infallible, but because they are unlikely to go wrong in the same direction.

⁵² Stenger, http://www.huffingtonpost.com/victor-stenger/christianity-and-modern-science_b_5182177.html.

⁵³ Achenbach, <http://ngm.nationalgeographic.com/2015/03/science-doubters/achenbach-text>.

To be sure, the books of the future would be just as good a corrective as the books of the past, but unfortunately we cannot get at them.”⁵⁴

As we learn more about past philosophies and current controversies, we will be better equipped to respond to the issues arising from scientific study. We can encourage more Christians to pursue careers and vocations in science, confident of their calling and with a high moral motivation. We can also help students and teachers find the best strategies for handling controversies, especially as those controversies impact the Christian faith. We can see scientists themselves as a great resource in the body of Christ, as those best qualified to help us understand what science is really saying and best equipped to inspire young people to follow them into scientific vocations.

Read Colossians 1:11-20. *If you were speaking to students of science, how might you explain the statement that in Christ “all things hold together”?*

Responsive Reading of Psalm 8

⁵⁴ C. S. Lewis, “On the Reading of Old Books” in *God in the Dock: Essays on Theology and Ethics*, ed. Walter Hooper (Grand Rapids: Wm. B. Eerdmans, 2014), 220.