

EXECUTIVE SUMMARY

Chapter 1: Building a Foundation

Most people today assume that science and Christianity must be in a state of “warfare.” Much of this perception is the church’s fault. Sometimes churches explicitly teach that embracing Jesus means rejecting science. Other times it is more subtle, and we don’t even realize that we have some unhealthy ways of reading Scripture, or some bad theology about how God acts in nature, and without intending to we create unnecessary warfare. This warfare drives people farther from the Gospel, and it can set up young Christians for a fall if we tell them that the Gospel or the truth of the Bible depends on science being wrong.

Our purpose here is to provide a healthy foundation that will serve us well as we discuss these issues with others and as we work on our own faith, getting a better understanding of what we believe and how that fits in with the world where science plays such a big role.

To begin building that foundation, we offer a framework for thinking about God and nature, shown in Figure 1 below. While Christians have differing views of exactly how God created and exactly how God inspired Scripture, we agree that in some sense nature and Scripture both come from God. Therefore, they are both true and should not conflict. The conflicts arise at a lower level, after human interpretation. If there seems to be a conflict, either the Christian doctrine is wrong (faulty interpretation of Scripture), or the scientific conclusion is wrong (faulty interpretation of nature), or maybe both.

Another helpful idea in relating science and faith is complementarity, which Richard Bube has defined as follows:

Science and theology tell us different kinds of things about the same things. Each, when true to its own authentic capabilities, provides us with valid insights into the nature of reality from different perspectives. It is the task of individuals and communities of individuals to integrate these two types of insight to obtain an adequate and coherent view of reality.

Others have expressed this differently, but the basic idea is that science and theology show us different aspects of reality, like pictures taken from different angles.

Once we have a basic framework, we can look at specific issues in the science/faith dialog. Before doing so, we should establish a few “ground rules” for our discussion. The following items (several of which are inter-related) are suggested as keys to navigating these waters constructively:

1. *Clearly define our terms.* Too often, people talk past each other because they have not made clear what they mean by the words they are using.
2. *Avoid false dichotomies and the fallacy of the excluded middle.* Reject the idea (popular with extremists on both sides) that everything is a binary choice, one extreme or the other.

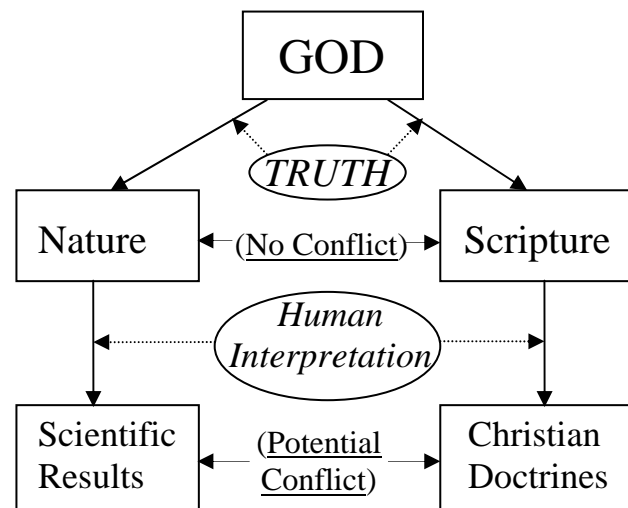


Figure 1 from Chapter 1. Proposed framework for relating science and Christian faith.

3. *Assess any issue on its own merits, without assuming that certain positions must be “packaged” together.* Neither the “left” nor the “right” has the monopoly on truth.
4. *Guilt by association is not a good argument.* People we disagree with on one thing, even on very important things, are not necessarily wrong about everything else..
5. *Don’t ask the Bible questions it isn’t trying to answer.* If we really respect the Author of Scripture, we should always read it in context, with its purposes in mind.
6. *Don’t ask science questions it isn’t capable of answering.* Science is good at answering questions about the “internal affairs” of the physical universe, but questions of ultimate purpose and meaning are completely beyond its scope.
7. *Humility, and respect for fellow Christians (even if not for their positions).*

Chapter 2: Warfare: Phony and Real

While there have been exceptions (like the case of Galileo), for most of the history of Christianity it has coexisted well with science. The idea that “warfare” is the natural relationship between the two is a modern myth, most blatantly promoted in two popular but historically inaccurate books in the late 1800s (*History of the Conflict between Religion and Science* by J.W. Draper and *A History of the Warfare of Science with Theology in Christendom* by A.D. White). One can even make the historical case that the Christian doctrine of creation was instrumental in the development of science.

General harmony continued even after it became clear to scientists (around 1800) that the Earth was much older than a simplistic reading of Genesis would suggest. Even Darwin’s theory of evolution only sparked a modest amount of warfare at first.

In the 50 years or so after Darwin, a number of factors conspired to create additional warfare. Atheists seized on evolution as a weapon and misused it to attack Christianity and the idea of a Creator. Some people began to invoke the theory of evolution in inappropriate ways to justify things that were contrary to Christian values, like Social Darwinism, eugenics, and military aggression. In the fundamentalist/modernist controversies, the modernists embraced evolution, so the fundamentalists ended up rejecting it. By the mid-1900s, there was some “warfare” in the sense that many conservative Christians rejected evolution (or at least some aspects of it), but not nearly the present degree of conflict.

Much of today’s escalated warfare can trace its lineage to a contemporary of Darwin: Ellen White, the “prophetess” who was the major force in establishing the Seventh-Day Adventist sect. In White’s theology, it was essential for the creation to have occurred in six literal 24-hour days. Some of her followers went to great lengths to defend her views, which were in conflict not only with evolution but with much of the rest of science. These efforts were mostly confined to the Seventh-Day Adventists until about 1960, when they were picked up by some fundamentalist Christians (most notably Henry Morris and John Whitcomb, authors of *The Genesis Flood*) who decided that an extremely literal reading of the Bible was essential, beginning with Genesis.

This was the beginning of the modern “creationist” movement. The movement is not defined merely by its belief that God’s creation was in six 24-hour days just a few thousand years ago and that a global Flood shaped all the Earth’s geological features (many Christians have believed these things over the years), but rather by its aggressive insistence that these interpretations are essential to the Christian faith and that the only options are to agree with them or to reject the Bible completely.

Ironically, the extremes who drive our modern warfare (both the “creationist” side and the radical atheist side) have more in common than either might admit. They share some foundational assumptions about reading the Bible and about relating God and nature that should be rejected by sound Christian theology. These are discussed in Chapters 3 and 4.

Chapter 3: Reading the Bible, Especially Genesis

Reading the Bible should be a two-step process. First, we ask what the passage meant in its original context to the inspired writer and the original audience. Context includes culture, history, the literary genre of the passage, and its relationship to other passages and to the overall narrative of Scripture. Then, once we have understood it in its context, we try to discern how we apply the message to our lives today.

Historically, many different interpretations have been proposed for Genesis 1, particularly for the six “days.” The fact that faithful Christians have held so many different positions should tell us that it is wrong to say that any one is the only acceptable Christian interpretation.

The simplest reading, taking it as a description of creation in six 24-hour human days, has some problems of internal consistency, and is totally at odds with abundant evidence in nature. It is untenable unless we are willing to say that God has planted phony evidence in his creation, testifying to natural history that never happened. Perhaps second most popular is the “Day-Age” view, where each “day” is interpreted as a long period of time such as a geologic age. This is usually combined with attempts to make the entire passage “line up” with the findings of science about the history of the universe and the Earth, but it is not possible to make things line up 100% without resorting to contorted interpretations of some verses.

Stepping back, we might question the assumption that complete alignment of Genesis with modern science is necessary. That assumption is characteristic of the view known as *concordism*, which holds that the integrity of the Bible demands that every scientific and historical statement (even if irrelevant to the point of the passage) must line up in this manner. The alternative to concordism is *accommodation*, which has been advocated by many Christians through the years, most notably John Calvin. This view would say that God can and sometimes does accommodate his revelation to the limited knowledge of the audience, for the sake of effective communication. In this view, God would not necessarily “correct” an erroneous or oversimplified idea held by an inspired writer if it was on a matter that was peripheral to the message.

While in principle God could have made everything in the Bible line up with science in a concordist fashion, when we actually look at the Bible it is clear that this was not the case. From the solid dome (firmament) above the Earth in Genesis 1, to Jesus referring to the mustard seed as the smallest of all seeds, we find that on those few occasions where passages in the Bible touch on science, the science is just the (sometimes incomplete) knowledge of the time. Despite the popularity of concordism (especially among those who insist that the Bible be “perfect” by the human-invented standards of modern Western rationalism), God clearly does accommodate his revelation on some occasions. Therefore, we are free to consider interpretative options for Genesis that do not insist on aligning everything with science.

When Genesis 1 is examined in its cultural and historical context, most scholars (except for those who are committed to concordism) see it as a theological message that is not making scientific truth claims. It uses images that would have been familiar from the mythology of the Babylonians and other surrounding cultures, but it uses them in a radical new way to tear down the idolatrous myths, emphasizing that there is only one God who created everything, in stark contrast to the multitude of warring gods in Babylonian mythology. The six “days” provide a

nice topical framework, but they bear no relation to human time (except in providing an analogy for the Sabbath that God calls his people to observe).

Chapter 4: Natural Theology and Theology of Nature

We define natural theology as *attempts to figure out God (or some things about God) by human reason from studying nature*. There is a long tradition of natural theology in arguing for the existence of God; its most famous practitioner was the Rev. William Paley around 1800, but Paley's spirit lives on in the modern "Intelligent Design" movement. Natural theology has many potential problems. These include possible damage to the faith if a natural explanation is found for what was attributed to God's design (as Darwin and others undermined many of Paley's arguments), the category mistake of putting God on the same level as (and in competition with) natural causes, and (perhaps most important) the fact that natural theology can only lead to an anonymous designer, not the God revealed in Jesus.

A more fruitful avenue is to develop a theology of nature, defined as *attempts to understand the role and character of nature (its meaning, purpose, relationship to God, etc.) from a foundation of Christian theology*. This begins with the Christian doctrine of creation – the understanding of the created world as contingent (God could have done it any way God wanted, so we have to look at it to learn about it); orderly (so we can expect studying it to be fruitful); good (so it is worth studying); and not divine (so it won't behave differently if the gods are in a different mood). Additional important elements include God's transcendence (God is over and above and separate from the creation), immanence (God is always intimately present with the creation), providence (nature expresses God's will in providing for God's creatures) and gracious self-limitation (God allows creatures their own integrity).

The most important result of a Christian theology of nature for our purposes is that "nature" and "God" are not rival explanations. This is largely a restatement of the doctrine of providence. It is wrong to view "things God does" and "things nature does" as two separate categories, because God is also responsible for nature. "Natural" explanations don't compete with God; they describe the way God normally works.

The most common error in this regard (both inside and outside the church) is the "God of the Gaps" error, defined as *the assumption that having a natural explanation of something excludes God from being the creator and sustainer of that something*. "God of the Gaps" thinking divides nature into two categories. One category is things we can't explain, gaps in our understanding where we say "that's where God is." The second category is things where we do have a natural explanation, and therefore God isn't in those places (because of the mistaken idea that only "supernatural" things really "count" as God's work). The result of God-of-the-Gaps thinking is that any time science finds a natural explanation for something, one more gap closes up and God gets squeezed closer to nonexistence. This forces Christians who think this way to attack science in order to make room for God.

A Christian theology of nature tells us that we don't need to make room for God, because God isn't just in the gaps, God is the creator and sustainer of the whole fabric of creation, including the things we call "natural." With a God-of-the-Gaps perspective, scientific results count as points against God, but with a proper view of God's sovereignty, they are just uncovering how God did things. Natural explanations may eliminate the God of the Gaps, but they don't eliminate the Christian God.

Once we have a sound theology of nature, we can consider whether it is possible to pursue natural theology while avoiding its pitfalls. Two approaches seem viable. A "modified positive"

approach would consider natural theology as a first step, not an end in itself but as a plausibility argument that might, for some people, remove an obstacle to considering Jesus. It is essential for such approaches to use sound arguments, and to avoid the implication (the God-of-the-Gaps error) that any gap asserted in nature as evidence of God is essential to the faith. A “modified negative” approach would reject independent natural theology (arguments that have no basis in God’s revelation), but would use insights from Scripture as context for proper interpretation of the meaning of things in nature.

Chapter 5: The E-Word

Most modern science-faith disputes feature the word “evolution.” That word can mean many different things in different contexts, and failure to distinguish among different meanings contributes significantly to unnecessary warfare. We identify six different ways the word “evolution” can be used, ranging from things that Christians should have no problem with to things that are totally unacceptable. The table below briefly summarizes the different meanings of the word, along with the degree of scientific certainty (or uncertainty) of each meaning and its compatibility with Christian theology.

We examined a variety of Biblical and theological objections to the theory of evolution (by which we usually mean meaning E-4 in our table), and found most of them to be invalid. There are legitimate points of tension in a few areas (traditional doctrines of Adam and Eve and the Fall, the question of purpose), but there are reasonable ways to deal with them, leaving no compelling Biblical or theological reason why Christians must reject “evolution,” if the word is restricted to its scientific senses (meanings E-1 through E-5).

We briefly discussed the so-called “Intelligent Design” (ID) movement, including its unfortunate name which can falsely imply that only by agreeing with the movement can one affirm that life is the result of God’s design. Negative aspects include a tendency to avoid

Meaning of “Evolution”	Scientific Certainty	Compatible with Christianity?
<u>E-1</u> : Change over time	100%	No problem.
<u>E-2</u> : Common descent, common ancestry	Beyond a reasonable doubt.	No problem unless fundamentalist interpretation of Genesis adopted.
<u>E-3</u> : Darwin’s mechanisms of variation and natural selection	Beyond a reasonable doubt.	Should be no problem.
<u>E-4</u> : Hypothesis that E-3 completely accounts (physically) for development of life on Earth (E-2)	Well-supported, but room for some doubt.	Some friction, mostly goes away if we remember God’s sovereignty over nature and don’t try to make the Bible a science text.
<u>E-5</u> : “Chemical evolution”: similar natural mechanisms for origin of first life.	Very uncertain.	Some friction, mostly goes away as in E-4 above.
<u>E-6</u> : “Evolutionism”, claims that natural explanations like E-4 and E-5 mean no God.	Not science at all, atheist philosophy often falsely attached to science.	Incompatible.

Figure 4 from Chapter 5. Summary of different meanings of “Evolution”.

theology, its emphasis on public relations instead of science, its alliance with extremists in the “creationist” movement while denigrating Christians who believe God made use of evolution in creating, and its tendency to encourage harmful “God of the Gaps” theology. Nevertheless, when it sticks to science, it raises some interesting questions that deserve serious consideration.

Chapter 6: Take-Home Points

As a final summary, the following three points are proposed as the most important things to learn from this course:

1. Complementarity, not warfare. Since God is the source of both nature and Scripture, any apparent conflict between the two must not be real, but rather the result of some flawed human interpretation. Rejecting a “warfare” perspective, we should recognize that science and Christian theology offer complementary perspectives on God’s reality, like pictures taken from different angles. Unfortunately, extremists on both the science side and the Christian side promote harmful warfare between the two. Ironically, these opponents share common ground in that they both make foundational assumptions that are contrary to sound Christian theology. If we can recognize and reject these bad assumptions, if we can get our fellow Christians (including our children) to stay away from these bad assumptions, and if we can get those outside the church to see that what they’re assuming about Christianity is mistaken, most of our problems in this area will vanish. The bad assumptions shared by the warring extremes are the subject of our next two points.
2. The Bible is not a science textbook. Those who use science to attack Christianity are usually attacking fundamentalist readings of the Bible (which are easy targets), and to the extent the church takes that approach to Scripture, insisting that it give answers to scientific questions that the inspired writers weren’t trying to answer, we are digging our own graves in terms of defending the faith. We need to read it in context, including its cultural and historical context, with its purpose and message in mind. We need to allow God to communicate in an incarnational way, at times using figurative language or accommodating parts of the message to the limited capacities of the audience, rather than forcing God’s word to conform to the human-invented standards of modern Western rationalism.
3. God is sovereign over nature. Natural explanations are not rivals to God (the “God of the Gaps” error); they are descriptions of the tools God uses. A “natural” explanation for something, whether it be rain or the evolution of life, should not be a threat to our faith, and anyone (whether atheist or misguided Christian) who claims such explanations mean God is absent is making a philosophical error. When science finds a natural explanation for something, we should not lament or resist it as though the science diminishes God. Instead, we should praise God for allowing us to see into his magnificent and subtle ways of working in creation.