

1. BUILDING A FOUNDATION

Motivation

When I was in the 8th grade, I had a friend named Oliver who was rather vocal about being an “atheist.” In our small town in Missouri in the 1970s, most people at least called themselves Christians. So Oliver was weird; we called him “Ollie the atheist” and gave him a hard time as only junior-high kids can do. One thing I remember Oliver saying was that when he grew up he wanted to write the “Un-Bible,” a book that would show how stupid Christianity was. What was he going to put in his Un-Bible? Arguments against the resurrection? Supposed inconsistencies in the Bible? All the evil that people have done in the name of Jesus? No, it was going to have pictures of fossils. This young man, 13 or 14, had already decided that science and faith were enemies – that the more science found, the more it contradicted Christianity, the more it pushed God out of the picture.

Now, fast-forward about ten years. I became a Christian in High School, and eventually went to Berkeley to get a Ph.D. I shared a lab there with a man from Taiwan named Albert. One day there was an evangelist making noise on campus, and Albert asked me out of the blue, “How can you be a Christian and believe all that creationism stuff?” I managed to mumble something about how “that stuff” wasn’t what Christianity was about. But Albert’s question illustrated a serious problem. Albert knew that some Christians said silly things about science. Even worse, that was the first thing that came to Albert’s mind about Christianity. Not the death and resurrection of Jesus. Not even the Golden Rule or the Ten Commandments. The “Gospel” Albert had heard was a false Gospel, one that was centered in a particular interpretation of Genesis rather than being centered in Christ. Because that false Gospel included things that were ridiculous in his eyes, he didn’t want anything to do with Christianity.

Of course, another problem was that, in the 2 or 3 years I’d known Albert, I had failed to share my faith with him well enough to correct his misconceptions. Fortunately for me, that’s not our topic here.

What do these stories have in common? Both Oliver and Albert had what is known as the “warfare” view. This is the idea that science and Christianity are inevitably in conflict, that whenever science advances forward it drives faith backward until there’s no room left for God at all. In my life as a scientist, and in my life as a Christian, I have come to see that the “warfare” model is wrong, and it’s very harmful.

Sadly, much of this warfare is our fault. Sometimes churches pretty 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 that pushes people like my friends farther from the Gospel.

So, rather than writing about what Oliver and Albert got wrong, I’ll mainly focus on how we can get a healthy understanding so we don’t drive people like them away from Jesus. Because I work in the scientific community, I can testify that this is a problem. You hear missionaries talk about unreached people groups; among the scientifically literate we have a large group of people who aren’t hearing the Gospel because they can’t get past the huge credibility barrier put up by the things some Christians say about science.

However, unreached scientists are not the only casualties in this warfare; it endangers many people inside the church, especially our children. Science is a part of our world, and issues of science and faith will inevitably arise. Are we giving young people a healthy foundation, so

their faith will stand up against aggressive atheists like Oliver, or against the less hostile unbelief we see in many of our neighbors? Or are we building a house of cards for them, one that will collapse the first time they take a college science class?

I fear that many Christian children today are growing up with a house of cards, and some of them will eventually study the real world and learn that the church has misled them. If we've taught them that the Gospel or the truth of the Bible depends on those things, they may abandon the faith (this is not an infrequent occurrence), and much of the blame will lie with the church for giving them a flawed foundation. Jesus had some words that might apply to those who set people up to stumble on issues like this: "*Stumbling blocks are sure to come; but woe to him by whom they come! It would be better for him if a millstone were hung round his neck and he were cast into the sea, than that he should cause one of these little ones to stumble.*"¹

Our purpose here is to provide a healthy foundation that will serve us well as we discuss these issues with others (including our children) 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 large role.

A Framework for Understanding

How do we begin building that foundation? Rather than jumping headlong into controversial issues, I think we are better off starting with the big picture, the overall relationship between science and Christian faith. As a framework for viewing these things, let's consider the diagram in Figure 1.² I don't claim that this framework is perfect (we will critique it in a moment), but we have to start somewhere and I think this is a good beginning.

Since we are building our framework from a Christian perspective, God is at the top. On the left side of the diagram, we indicate that nature has come from God. While Christians have differing views of exactly how God created, we all agree that nature is God's creation. As we start down the right side, while Christians have differing views of exactly how the inspiration of Scripture works, we all agree that that the Bible is in some sense from God, revealing things God wants us to know.

If we just stopped at this level, we should have no problems. Because the same God is the Author both of nature and of Scripture, there should never be any conflict between the two.

However, our attempts to understand reality don't stop at that level; we desire deeper understanding. This involves interpretation. Our interpretation of nature is the process we call "science," and we also interpret Scripture to develop Christian doctrine. Of course, once fallible humans are involved,

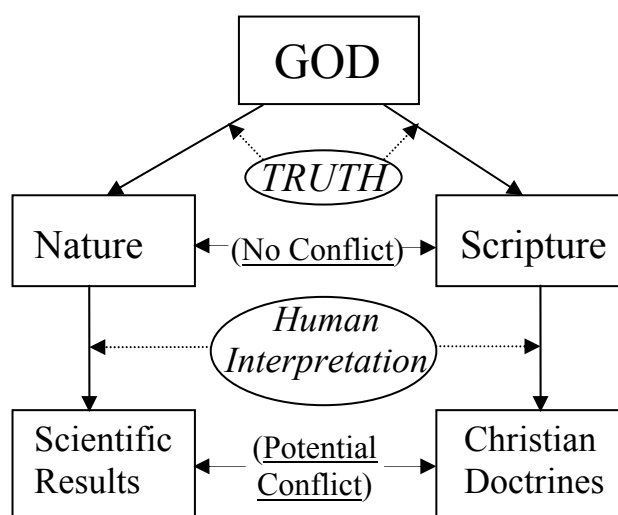


Figure 1. Proposed framework for relating science and Christian faith.

¹ Luke 17:1-2.

² Figure 1 is adapted from a similar illustration in a talk by Deborah Haarsma of Calvin College at the 2003 annual meeting of the American Scientific Affiliation.

the results of the interpretation cannot be guaranteed to be free of error.

In this framework, the source of our alleged “conflicts” between science and faith becomes clear. They arise at the lower level, after the 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. We need to be open to either of those possibilities for misinterpretation. While science may get many things right, it is done by humans and it isn’t infallible (most scientists recognize that most of the time). Nor is our Christian doctrine perfect, as evidenced by disputes between denominations (for example over infant baptism) where at least one interpretation must be wrong.

The potential for error in human interpretation on each side can be illustrated with historical examples. Our first example is that of Galileo, who was persecuted by the Roman Catholic church for advocating the theory of Copernicus that the Earth revolves around the Sun. While there were many complicating political factors, the church claimed to be upholding the teaching of Scripture that the Earth was stationary at the center of the universe, as reflected for example in the Sun standing still for Joshua and in Psalm 93:1.³ We now recognize that this conflict was due to faulty human interpretation of Scripture; these passages are not making claims about the structure of the Solar System.

Another instructive example is the question of whether our physical universe is eternal, or whether it had a beginning. 100 years ago, cosmology was dominated by “steady-state” theories in which the universe was eternal. This was in conflict with the traditional Christian doctrine that God created everything “in the beginning.” In this case, it turned out to be the science that was wrong; the scientific evidence is now clear that our universe did have a definite beginning with the so-called “Big Bang.”

Sometimes, we may have to reserve judgment about apparent conflicts. We trust that God is consistent and there is a resolution, and we continue to seek truth on both sides of the diagram.

Critiquing the Framework

While I think Figure 1 is a helpful way of looking at things, it is useful to think about its possible deficiencies. What does it leave out, and how might it be misleading?

First, it leaves out God’s most important revelation – Jesus Christ. Jesus is intimately involved in the creation and sustenance of nature,⁴ and Jesus is also the focal point and purpose of Scripture (rather than Scripture being an end in itself).⁵ Any Christian framework that omits Jesus is in some sense incomplete.

Second, the diagram might imply that the right and left sides are of equal importance. As a Christian, the things I learn from Scripture (how to follow Jesus) are of more ultimate value than anything I might learn from nature.

Third, by showing a flow strictly limited to each side of the diagram, our picture may be too compartmentalized. While the two sides may be mostly separate, if they ultimately have the

³ *He has established the world; it shall never be moved.*

⁴ *All things came into being through him (John 1:3); For in him all things in heaven and on earth were created, things visible and invisible, whether thrones or dominions or rulers or powers – all things have been created through him and for him. He himself is before all things, and in him all things hold together. (Col. 1:16-17).*

⁵ *You search the scriptures because you think that in them you have eternal life; and it is they that testify on my behalf. Yet you refuse to come to me to have life. (John 5:39-40); But these are written so that you may come to believe that Jesus is the Messiah, the Son of God, and that through believing you may have life in his name. (John 20:31).*

same author we should allow for some interaction and overlap of concerns, and for one side to shed light on the other. Scientific results may help illuminate our faith, and our faith can provide context for understanding and applying science.

Fourth, the diagram fails to show the dynamic present relationship of God on each side. The Bible tells us we need the Holy Spirit to really grasp the Word of God,⁶ so it's not a matter of studying a dead book, our interpretation should be aided by the Spirit. Nor did God simply create and leave nature on its own; God is continually active in creating newness and in sustaining his creation (this will be discussed in Chapter 4).

Finally, a significant source of conflict is not visible on this diagram. Conflict also arises when people fail to respect the boundaries – when the theology side tries to answer scientific questions, or when scientists try to pass off philosophical opinions (such as those concerning ultimate meaning) as though they are the result of science. As a result of one side usurping the territory of the other, it is not just Christian doctrine and scientific results that come into conflict – it can be bad science masquerading as Christian doctrine, or bad religious doctrine masquerading as a result of science.

The Two Books Metaphor

Figure 1 is not the only way of picturing the relationship between science and Christian faith; many people throughout history have developed models for the relationship. One of the most influential is known as the “two books” metaphor, which is usually attributed to the early scientist (and devout Christian) Francis Bacon:

Let no man ... think or maintain, that a man can search too far, or be too well studied in the book of God's word, or in the book of God's works, divinity or philosophy; but rather let men endeavor an endless progress or proficiencie in both; only let men beware ... that they do not unwisely mingle or confound these learnings together. (Francis Bacon, 1605)

This is a time-honored analogy, but we might think about the relationship between the two “books.” Do we read them entirely separately? Is this analogy too compartmentalized to produce a coherent account of all of God's reality? Should one or the other be read first? It has been suggested⁷ that we should think of the “book of nature” as a sequel, where we read the book of Scripture first in order to get a true understanding of the characters. If we read the book of nature independently and try to figure out God solely on that basis, that can lead to trouble (as will be discussed in Chapter 4).

Complementarity

Another helpful idea in relating science and faith is complementarity. Richard Bube⁸ defines complementarity 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, consistent with our diagram, is that science and theology show us different aspects of reality, like pictures taken from different

⁶ I Cor. 1:18; I Cor. 2:10-16.

⁷ I believe this perspective on the “two books” was first suggested by Nancey Murphy of Fuller Seminary.

⁸ In his book *Putting it all Together* (see Bibliography)

angles. This can also be thought of in terms of different categories of questions addressed; science addresses questions about the internal workings of the physical universe while theology primarily addresses questions about God and God's relationship to creation (especially his human creatures). It is important to recognize that complementarity is not compartmentalization, because ultimately God's truth is a unified whole and we need to integrate the complementary perspectives together as we try to understand all of reality.

Principles for Moving Ahead Constructively

Now that we have a basic framework, we can start to look at specific issues in the science/faith arena. Before doing so, we should establish a few "ground rules" to guide our discussion. The following seven items (several of which are interrelated) are suggested as keys to navigating these waters constructively:

1. *Clearly define our terms.* Often, discussions and arguments on issues of science and faith are unfruitful because the people involved are talking past each other, using the same word but with different assumptions about what the word means. The word "evolution" is particularly subject to such misunderstanding (as we will discuss in Chapter 5), but terms like "Darwinism," "creation," and "naturalism" are also sources of confusion and miscommunication.
2. *Avoid false dichotomies and the fallacy of the excluded middle.* A false dichotomy is a phony either/or choice between two things that are not really mutually exclusive. For example,⁹ consider the question "What was the cause of Abraham Lincoln's death?" Was it a bullet, or was it John Wilkes Booth? Forcing a single choice between these two answers would be a false dichotomy, one that is similar in structure to misconceptions that sometimes arise in science/faith discussions ("Did natural processes make the tree, or did God?"). Closely related is the fallacy of the excluded middle, where something is portrayed as a binary choice between two extremes when in fact there are intermediate positions. An example would be the assumption that the only two options for relating science and faith are hardline fundamentalist creationism or totally Godless evolutionism. In most matters, there is really some middle ground, but the extremes have a vested interest in advancing the false idea that there are only two choices, so they can portray the opposite extreme as so scary that you have to join their extreme instead.
3. *Assess any issue on its own merits, without assuming that certain positions must be "packaged" together.* Both in secular politics and in the church, too many people assume that there is a "liberal" package and a "conservative" package of positions, and one must choose one entire package or the other. This is simply a false assumption (similar to the "fallacy of the excluded middle" mentioned above); for example it is quite possible for a "conservative" Christian to care about economic justice and environmental stewardship even though those concerns are often associated with the "left." Christians who consider themselves "conservative" or "liberal" do themselves (and God) a disservice when they automatically turn to the right or the left without considering the merits of each issue.
4. *Guilt by association is not a good argument.* This is related to assessing issues on their merits. A position on some issue may be held by some people with very liberal theology

⁹ I owe this illustration to Dr. George Murphy.

that we would reject, but that doesn't mean the particular position is wrong. As another example, the leading biologist in the so-called "Intelligent Design" movement¹⁰ is a follower of the Unification Church (a "Moonie" in common parlance), but that doesn't mean we can ignore him or assume he is wrong when he talks about biology (if he talks about theology, that's a different matter).

5. *Don't ask the Bible questions it isn't trying to answer.* This should be obvious, but some people make what has been termed "the encyclopedic error," treating the Bible as a source of answers to all possible questions, rather than as a source of the things we need to know in order to follow Jesus. If we really respect the Author of Scripture, we should always read it in context, with its purposes in mind. If we ask the Bible questions that the inspired writers were not trying to answer, we should not be surprised if we don't get a useful reply.
6. *Don't ask science questions it isn't capable of answering.* Just as the Bible is not intended to answer all possible questions, neither is science. Science is good at answering questions about the "internal affairs" of the physical universe. However, questions of ultimate purpose and meaning are beyond the scope of science, so it is fruitless to look to science for such answers, and it is wrong to claim that science provides them.
7. *Humility, and respect for fellow Christians (even if not for their positions).* There can be strong feelings on these issues, and it is important to be Christlike in the way we treat one another. While we may feel that positions taken by some Christians are silly and even harmful, we must remember that these are our brothers and sisters in Jesus, and we cannot allow our discussion to degenerate into personal insults or attacks on the integrity of fellow Christians. We must also realize that, as convincing as we might find our positions, we are fallen humans, and we could be wrong. This demands humility on the part of all involved.

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¹⁰ Dr. Jonathan Wells of the Discovery Institute.