

SCIENCE
& FAITH
FRIENDS OR FOES?

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COLLINS

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Science and Faith: Friends or Foes?

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INTRODUCTION TO THE QUESTIONS AND SURVEY OF THE BOOK

ONE EVENING WHEN my daughter was about two and my wife was pregnant with my son, I gave my wife a break by taking my daughter to the mall. We went to her favorite place, the pet shop, to look at all the animals. While we were there, a clerk was showing a snake—some kind of python—to two teenage boys. As these boys were trying to get up the nerve to touch the snake—all the while needling each other about who was the more manly—my daughter asked if she could pet the snake. She reached up and stroked it gently. The boys were ashamed at being shown up by a toddler girl.

Well, yes, I'm a proud father; but I have another reason for telling you this story. I find in it a parable for the way many Christians approach science: we fear it. We fear it, I think, for two main reasons: first, because we found science classes hard in school. That is something we have in common with everyone, including those who do not share our Christian commitment; but the second reason touches on our faith directly: we fear that science will somehow undermine our faith. The fact that many writers hostile to Christianity—such as Richard Dawkins and Carl Sagan—make just that point, only adds to the fear.

I think my daughter's interest in the python models true Christianity better than these common fears do. Her curiosity about the little wriggler, and her delight in touching it—which is how she feels about most animals, including bugs—were untainted by any fears or misgivings. And in this book I will argue that this is just how it ought to be: in fact, if we have a proper hold on Christian belief we will love the natural world and respect the study of it; and by it we will also come to these studies with

full mental vigor, confident that God's truth can hold up under any challenge—and not only that, but also that his truth will both illuminate and enrich those studies.

But of course to support this positive view of the sciences, and of Christians' active work in them, I will have to consider just what is a "proper hold on Christian belief," and that is what I aim to do in this book. I will start by looking into some of the philosophical issues that come into play in this discussion. This is because we need to know what faith and science are, how they relate to one another, and what claims either has a right to make about "truth." My theme, which I will develop throughout the book, is that good science and good faith both need sound critical thinking.

From there I will move on to discuss the biblical teaching that most impacts our view of science: namely the teaching about creation—how the universe came into being; and about providence—how God keeps the universe in being and interacts with it, and how he expects us to interact with it. And of course this raises questions about the age of the earth, miracles, psychology, and evolution—the places that most people think of as conflicts between faith and science; so I will go on to discuss these topics.

I will finish by considering what it means to live in a created world. That is, I will outline a Christian view of the world, give some ideas about educating children in the sciences, and reflect on how Christians can impact their culture in this arena.

You can see how I have arranged the material: philosophical issues, then theological ones, then areas where science and faith interact, and finally the conclusion. Some of my students who read a draft of this book wondered why I didn't arrange it by topic—so that, for example, the chapters discussing the biblical view of the age of the earth (chapters 4–7) would lead directly into the chapter on cosmology and geology (chapter 15). My reason is that the chapters on interaction depend on a wide range of theological and philosophical discussions. But if you prefer to read the chapters in that order, go right ahead; but, whatever you do, please be sure to read chapters 2–3 first. If you're like me, you want to get to the real stuff, and skip the preliminaries; but these chapters are not preliminaries, they are crucial to my overall case.

I am writing this book for people who do not have specialist training in theology or philosophy. I think, for example, of Christian parents who want to know how their children should study science; of college students thinking about entering the sciences, or challenged in their faith by them;

of teachers and those who write books for children. I would also be pleased if any who have doubts about Christianity, because of what the spokesmen for science tell them, might read this book and find that believing in Christ is reasonable after all. Finally, I have Christian friends who are scientists, and they mostly feel that their non-Christian colleagues at work think they're crazy for their faith, and the people they share their pews with think they're suspect for their scientific work: I'd like to help them achieve some sense of peace.

This means I will restrict myself to ordinary language and keep technical terms to a minimum. (I have done without footnotes altogether. If you want to pursue things further—or to make sure that I've done my homework—I've included "Notes and Comments" for each chapter as an appendix.) But in all this I intend to *translate* the discussion for your benefit, not to *dumb it down*. Some of the issues are complicated, and we can't do justice either to them or to God or to those we love if we don't want to think them out. I aim, then, to help you do some serious thinking; but so does Jesus, who wants his followers to be "wise as to what is good" as well as "innocent as to what is evil" (Rom. 16:19; compare Matt. 10:16). As C. S. Lewis said, Christ "wants a child's heart, but a grown-up's head. He wants us to be simple, single-minded, affectionate, and teachable, as good children are; but he also wants every bit of intelligence we have to be alert at its job, and in first-class fighting trim."

You may feel that I've given you more material than you want. My defense is that I am concerned to help with *how* to think about these questions, even more than *what* to think.

When I need to discuss a disputed point of biblical interpretation, I will generally use a fairly literal translation such as the English Standard Version (ESV), or sometimes the New American Standard Version (NASB) or the Revised Version (RV). Citations of the Apocrypha/Deuterocanonical books will be from the New American Bible (NAB) or Revised Standard Version (RSV), or from the RV if I need greater literalism. Unless I mark a Bible quotation otherwise, I'm using the ESV.

I write from the standpoint of "mere Christianity": that is, I write as a Christian who shares in common with all Christians such basic convictions as: the Bible is God's special revelation to man; the ecumenical creeds (such as the Apostles' Creed, Nicene Creed, Athanasian Creed) express the Bible's teaching about Christ and the Trinity; and Christ saves his people and calls them to pursue holiness and to serve him in the church and in the world. For all that divides Christians from one another,

these common beliefs give them a common cause: to combat the unbelief that riddles our contemporary world. I sympathize with the elf Haldir in Tolkien's *Lord of the Rings*, who apologized for having to treat the Fellowship of the Ring with suspicion when they entered Lothlórien: "Indeed in nothing is the power of the Dark Lord more clearly shown than in the estrangement that divides all those who still oppose him." This means that I will stick with the Bible; if I cite a church's confession, it is because it says nicely what needs to be said, not because it in itself settles the discussion.

There are a few points in the theology section where I cannot claim to speak for all believers, but have to take sides in disputes that divide them. I have generally indicated when this is so.

Don't misunderstand me: I am a loyal member of my denomination, and think its distinctives matter a great deal; but presenting them is not my goal in this book. I have found spiritual help in a wide range of Christian authors: the ardent Roman Catholics Blaise Pascal, Romano Guardini, and G. K. Chesterton; the staunch Protestants J. Gresham Machen, John Murray, and Francis Schaeffer; and the irenic Anglicans C. S. Lewis and J. I. Packer—not to mention the giants Thomas Aquinas, Martin Luther, and John Calvin. (I am sorry to say that my reading in Eastern writers is primarily limited to the exegetical writings of Chrysostom and Theophylact.) I hope to give back to the whole church something of what I have gained.

You deserve to know who I am and what right I have to write this book. I was born in the Baby Boom generation and grew up in a nominally Christian home, receiving a decent education in good public schools. I have always been interested in science, math, and languages. I was an amateur herpetologist as a teenager (I loved snakes, lizards, turtles, frogs, and salamanders; bless my mother for putting up with me), and went to MIT where I got my bachelor's and master's degrees in electrical engineering. I came to a living Christian faith during my second year there. After a few years of work I went to seminary, and then earned a Ph.D. in Hebrew linguistics (which is a "science") in a department of Oriental studies at an English university. I now teach at a theological seminary; and besides the usual classes in Biblical studies (I am at heart a grammarian of Hebrew and Greek), I also teach a class called "Christian Faith in an Age of Science." I have been studying and writing about Genesis 1–3 for several years now, and have also written a technical book on nature and miracle (*The God of Miracles*). My wife and I have two

children, and at present we school them at home. As I write this, my daughter wants to be a veterinarian, and my son wants to be an inventor—both noble careers. I can't think of anything I want more than for these children to grow up serving Christ faithfully in this world.

Annette, a friend of ours, provoked me to write this one day, when she phoned us to ask what she should teach her children about fossils and the history of the earth. I had intended to write a technical book on science and faith (as I indicated in the footnotes of *The God of Miracles*), but Annette's question made me think that a book on a general level would do more good. If God wills, I'll yet write that other, more technical, book.

SCIENCE, FAITH, AND RATIONALITY

A Short Course in Good Thinking

THE IMPORTANCE OF PHILOSOPHY

This chapter and the next cover some issues in the philosophy of science; but if I'm going to write about that, I'd better first defend myself against a flurry of objections. If I don't defend myself, you might easily fall prey to the temptation to skip these chapters so you can get right to the red meat. But these chapters are foundational to most of what I will argue later, so please bear with me.

Philosophers, with their endless questions and uncertainties, frustrate people in the sciences: if these philosophers had any experience in the lab, they wouldn't get so hung up over whether the scientist actually knows anything or deserves to be believed. In my six years as an undergraduate and graduate student at MIT, never did anyone official suggest that any of us would learn something worth knowing from a philosopher. So why should I think there is anything to be gained from even mentioning philosophy?

And in the Christian world there won't be a much warmer reception. Doesn't Scripture warn us not to be taken captive through philosophy (Col. 2:8)? Isn't philosophy just the wisdom of this world, which gets in the way of genuine faith (1 Cor. 1:21)?

Let me start my defense by saying that there is a difference between *philosophy* and *philosophers*. Philosophy is the discipline that studies how to think clearly: to know what is a good argument that deserves our agreement because it makes its point, and what is a bad argument that we should reject. If an ornithologist (a scientific bird-watcher) tells me that my favorite canary is safe with his falcon, I want to know how he knows: is it just because he's never seen his falcon go for a canary, or what? This is, as it turns out, a question in the philosophy of science: has the ornithologist made a sound con-

clusion? Actually, in matters of faith we have similar issues: if someone tells me I should (or should not) have my children baptized, I want to know how he arrived at his opinion. That, too, is a kind of philosophical question, one in the subject that theologians call “hermeneutics” and “theological method”; but at bottom it’s all about drawing sound conclusions.

G. K. Chesterton put it well:

Men have always one of two things: either a complete and conscious philosophy or the unconscious acceptance of the broken bits of some incomplete and often discredited philosophy. . . . Philosophy is merely thought that has been thought out. It is often a great bore. But man has no alternative, except between being influenced by thought that has been thought out and being influenced by thought that has not been thought out.

In reference to a man who responds to miracle claims with, “But my dear fellow, this is the twentieth century!” Chesterton observed:

In the mysterious depths of his being even that enormous ass does actually mean something. The point is that he cannot really explain what he means; and *that* is the argument for a better education in philosophy.

Now if we look at it this way, we can see that what Paul warned the early Christians about was bad philosophy, namely the kind that kept people from believing that the Christian message is true. And what about the philosophy that my fellow MIT students and I despised? Is that bad philosophy too—or were we following a bad philosophy of our own? To answer that we need this chapter.

Here is my basic claim, which I intend to develop throughout this book: our conclusions, whether in science or in religious faith or in any other area, are sound only to the extent that they follow the principles of good reasoning. (Just what those principles are will come soon.) In this I am following the lead of C. S. Lewis, who observed,

The distinction thus made between scientific and non-scientific thoughts will not easily bear the weight we are attempting to put on it. . . . The physical sciences, then, depend on the validity of logic just as much as metaphysics [philosophy] or mathematics. If popular thought feels ‘science’ to be different from all other kinds of knowledge because science is experimentally verifiable, popular thought is mistaken. . . . *We should therefore abandon the distinction between scientific and non-scientific thought. The proper distinction is between logical and non-logical thought.*

I put the last two sentences in italics because they sum up my case. Science and faith are “good” to the extent that they obey the rules of rationality. So the key to a solidly Christian way of thinking about science is sound critical thinking.

Now there are two groups who will disagree with this idea. Some will say that science *defines* what rationality is. The answer to that is simple: they have made a claim, and the way to decide whether the claim is true or not is to evaluate whether it makes sense. So the very claim itself has to answer to the rules for rationality. Others will say that there is no such thing as “rationality,” because that is a human invention (this group is called “postmodern”). The problem with that objection is that in everyday life we know it’s not true: we know that getting hit by a flying stone is bad news, and typically we take steps to avoid it; we know that some materials make better knives than others (flint is better than sand, and steel is even better). A good philosophy will start from everyday rationality and build on it, and refine it. The principles of sound thinking that come next are just such a development.

PRINCIPLES OF SOUND THINKING

To return to my example of the ornithologist, how will I know whether I should believe his assurances about his falcon and my canary—that is, how will I know whether or not I am reasonable to believe him? And the answer is, of course, if he has followed the rules for drawing sound conclusions from his experiences. So then: what are the rules?

To begin with, we need to understand what are the parts of an argument. (I use the word “argument” to mean the process of drawing a conclusion, not the quarrels that erupt between brothers and sisters.) Then we can decide whether the parts are all in good working order.

The first part of the argument is its *data*—that is, the raw facts. What has my bird-watching friend seen his falcon eat? What has he seen it pass by even when it’s hungry? A good argument has data that are honestly reported—no fudging, no editing out of inconvenient facts—and are as complete as possible. It is of course a judgment call when someone decides what is “complete enough”; in fact, that is one thing that makes science interesting, because people do not always agree in their judgment calls, and sometimes people make mistakes in them. It is often true that my data are second-hand: someone reports it and I believe it. (Much of what I know about the animal world comes from such reports—Audubon Society *Field Guides*, documentary

films, and so on.) In this case my data are good if I have sound reason to believe that the source is trustworthy.

The second part of the argument is the *premises*—the things you take for granted, often without even thinking about them. Both I and the ornithologist take it for granted that falcons eat something; we also, based on our experience of falcons and birds like them, assume that they eat other animals. So some premises may seem too obvious to need stating; but we have to be careful even then: what's obvious to you may not be obvious to me, and not only because I'm thickheaded. For example, suppose someone says, "The universe started either by the Big Bang or by divine creation." He's taking for granted a number of things, such as that creation and a Big Bang are the only alternatives, and that creation *by means of* a Big Bang is not possible. He's also taking for granted that the universe exists, and that it started. Our speaker has taken these assumptions as starting points, perhaps because he has thought it through before, or perhaps because he hasn't. But in any case he owes it to you to acknowledge his premises and expose them to evaluation.

I want to introduce a special kind of premise that I call a *touchstone truth*. By this I mean the sort of thing you have to take for granted before you can even start thinking: you take for granted that you exist, that you are a self (which means that you make real choices that matter, and that when you reason soundly you come to valid conclusions), and that other selves exist and can communicate with you. (These are just examples: there may be more.) I call them "touchstones" because if they're not true then there's no way you'll know if anything else is true. It follows that if someone contradicts one of these touchstone truths, then his argument falls apart. You don't have to argue to prove that a touchstone truth is a valid premise, although you may have to show that some particular belief has the right to touchstone status. (You can see that some premises *do* need to be shown valid.)

Here is an example of why I call these premises touchstone truths: J. B. S. Haldane, a British biologist who in the early twentieth century helped develop what is now known as neo-Darwinism, said:

If my mental processes are determined wholly by the motions of atoms in my brain, I have no reason to suppose that my beliefs are true . . . and hence I have no reason for supposing my brain to be composed of atoms.

The notion that our thoughts are determined by the way the atoms in our brains move about is called "materialism"; and if materialism is true, then I cannot know whether my thoughts are true. It also follows that my choices

are the products of these atomic movements as well, so that they cannot really be called “choices” at all (who thinks a rock *chooses* to fall when I let it go?). But this means that my belief that I am a self is false. The trouble is, you have to rely on that belief to *argue* that materialism is true. So we’re far more reasonable to conclude that materialism is false (or if it’s true, who cares?).

The next part of an argument for us to consider is its *terms*—the definitions of the words used for the argument. We want to know if they are clear or not; if they are used consistently; and if they are standard usage for the words, or specific to one person or a small group. We have to recognize that most words have more than one meaning, and in order to know what someone is saying we have to know which meaning he is using. For example, in *Mere Christianity* C. S. Lewis has a chapter on “The Great Sin,” which is pride. But, as he shows, the word “pride” has more than one meaning: the sin of pride is that of comparing yourself to others in order to prove that you’re superior to them, and of wanting the world to revolve around you. But there’s a “pride” that we take, say, in our parents or children or school; and if by that we mean that we “have a warm-hearted admiration for” them, that’s not the *sin* of pride—though we may be boring if we talk too much about them. (We may, of course, commit the sin of pride if we use our children’s talents to prove how superior we are.) We also have to be careful of taking a word that is in ordinary use and giving it a peculiar sense that no one ever uses: for example, some historians use the word “history” to mean an account of things without any reference to God. In such a case they could say, “Even though ‘In the beginning God created the heavens and the earth’ is not a *historical* statement, I’m not saying it didn’t happen”—and this sounds to most people like nonsense.

You will find that in the chapters that follow, I keep trying to make sure we know what we mean by our terms. I realize that this may make me tiresome—J. Gresham Machen once acknowledged, “nothing makes a man more unpopular in the controversies of the present day than an insistence upon definition of terms”—but I want us to think clearly.

The fourth part of an argument is the *logic*—the process of arranging conclusions in a step-by-step sequence to produce an inference. If I add two marbles to a cup holding two marbles, it is sound logic to believe that the cup now has four marbles in it (taking as a premise that no one is interfering). If I see a hawk eating a rabbit, I infer that at least this hawk eats rabbits from time to time; but if I watch a number of hawks in different places eat rabbits, I infer that rabbit is part of their diet. (To have an idea of how big a part of their diet it is requires that I compare the number of rabbit kills to the num-

ber of other kinds of kills.) If the last cookie is missing from the cookie jar, it is reasonable to suppose that someone took it; but it is not reasonable to blame my brother, who lives two thousand miles away. To know whom to hold responsible I need to know who has been in the kitchen since I last checked, and something of the habits of the potential suspects. My children don't pinch cookies from the jar, while my wife does snack on them; so she's the most logical candidate.

There are different kinds of inference: the marble example is *deductive*, depending on the rules of math, while the hawk diet is *inductive*, making generalizations from observations. The who-ate-the-cookie example is more complicated; it is like what detectives do, and we can call it a *historical inference*, trying to explain the cause of a specific event in terms of what I know about the possible causes. We have to follow the rules for the particular kind of inference we're making.

The fifth part of an argument is its *scope*—the realm of ideas in which our inference is supposed to apply. We might also call this the *with-respect-to-whatness* of our inference. (Sometimes the best way to answer a question is with “With respect to what?”) For example, if an astronomer tells you that the earth is not the *center* of the universe, his scope is the realm of physical location. If a theologian tells you that the earth is the *center* of the universe, his scope is the realm of God's attention. To say that these two have contradicted each other you have to show that they have similar scopes—and I think anyone who tries to show such a thing with these two statements is talking foolishness.

And finally, there is the *gradation of confidence*—what level of confidence I am entitled to give this conclusion in view of the data, the premises, and the kind of inference. For example, if I have seen two hawks eat nothing but rabbits, I can be confident that they eat rabbits. But if I want to be confident that hawks primarily eat rabbit, I have to watch many hawks, and see what they do when given a choice between rabbit and squirrel, and find out if hawks live where rabbits don't. In the case of adding marbles to the cup, my inference is certain provided my premise that no one interferes is solid. In the case of the missing cookie, the level of confidence to which I am entitled depends on whether I have considered all the options, and how well I know the possible suspects.

If you study critical thinking or logic you will get a list of “fallacies” to look out for. These fallacies generally have to do with failures to be careful in one or more of the components of sound thinking that we are discussing. For example, the “fallacy of equivocation” happens when we use a word

without paying attention to the distinction of meanings: it is a problem in the “terms” component, and our “pride” example illustrates an equivocation if we call being “proud” of my daughter’s courage when she gets a painful shot an instance of sinful pride. The fallacy called “non sequitur” (Latin for “it does not follow”) is a problem in the “logic” component: if I see a hawk catching a rabbit, it does not follow from this fact that the same hawk—let alone other hawks—will not eat squirrels.

There’s a Latin phrase that warns us against a very common logical mistake: *abusus usum non tollit*, “abuse does not take away proper use.” The idea is that we must distinguish between the actual idea we are discussing, and the trappings that wrap around it. For example, people have used the Bible to defend the African slave trade; but the only way that fact can be a sound argument against the Bible is if defending the slave trade is part and parcel of the Bible’s teaching. If defense of slavery is an abuse of biblical teaching, then we can say that defending the slave trade is inconsistent with the Bible. People have also used Darwinism to defend racism; and the only way that can be a sound argument against Darwinism is if the racism is bound up with the very essence of Darwinism. The English proverb that goes along with this is “one bad apple doesn’t spoil the whole bunch”: you can’t refute Christianity, or Darwinism, or anything else, just by pointing to the buffoons who have used it for base purposes; you have to examine the ideas themselves. (Recall how I began this chapter by making a distinction between *philosophy* and *philosophers*.)

There is another kind of logic problem that we need to think about, because of how it applies to the sciences—especially to those with a historical component. Suppose you find a stone on the ground, and after looking at its sharp edges you decide that some person sharpened it. You then want to figure out why he sharpened it and how it came to be where you found it. In each of these inferences—that it was sharpened, the purpose it was sharpened for, and what train of events led to it being where you found it, your reasoning probably follows a sequence like this: you imagine a scenario, you look for reasons to support or refute that scenario, you consider other possible scenarios, and you try to support or reject each of those scenarios. For example, to decide that someone sharpened the stone, you imagine some natural process—say, wind and weather—that could have made it sharp like it is. You test that scenario by asking whether these natural processes produce such a clear pattern, and whether they would have made the stone in such an oblong shape. You don’t think so—and besides, you’ve seen other similar stones that you know were sharpened by a person.

The key thing is that you have to give reasons to go from “I can imagine this scenario” to “this is a possible chain of events that led to this,” and from there to “this is the likely chain of events.” Unless you can give those reasons, you don’t have the logical right to make the shift.

TESTING A TRUTH CLAIM

When I am faced with a claim that something is true, how can I know whether or not to believe it? Well, I should at least decide whether or not the argument that produced the truth claim is sound. Now, just because the argument might have some flaws in its components doesn’t mean that the conclusion is untrue. For example, I have seen an argument for the truthfulness of Scripture based on fulfilled prophecy, where I disagreed with the writer’s way of interpreting prophecy (which was an unargued premise for him), and therefore thought his argument was a bad one—but I still think that Scripture is true. To show that this writer’s conclusion about the truthfulness of Scripture is false would require someone to show that the flaws in his argument undermine his conclusion altogether, or else to show that there is a better explanation for the data of prophecy (which doesn’t happen in the case of Scripture’s truthfulness).

Can we go beyond deciding that an argument is not simply false, to deciding that it is likely true? I think we can, if the argument meets the following conditions.

(a) The set of data is large enough, and the conclusion covers all of the data. For example, I have observed enough hawks and accurately reported what I have seen them eat.

(b) The argument openly says what premises must be true for the argument to hold, and offers reasonable grounds for believing those premises. For example, my premise that no one is interfering with the marbles in the cup is good if I am looking inside the cup.

(c) The argument covers the data without introducing unnecessary complicating assumptions. This is often called Ockham’s razor: it means that the simplest conclusion that covers the facts is to be preferred. For example, when the cookie is missing, it is simpler to suppose one person pinched it than to imagine a UN conspiracy.

(d) The logic of the argument is sound and self-consistent.

(e) When the conclusion challenges other beliefs I hold, it shows why the other beliefs are wrong; but in any case it is consistent with my touchstone beliefs. This is just another way of saying that reasonable people don’t want

to hold contradictory beliefs if they can avoid it. For example, if I thought hawks ate only rodents like mice and chipmunks and then I saw hawks eating rabbits—rabbits aren't *rodents*, they're *lagomorphs*, with two pairs of upper front teeth instead of one pair—then I have to reject my previous belief. But if someone argues from brain science that my beliefs are determined by the chemical properties of my brain, than I should reject the argument, even if the advocate wears a lab coat—because it contradicts a touchstone belief.

Sometimes, though, even if my other belief is not a touchstone, I might hold on to it and reject the new conclusion. For example, if my detective work on the missing cookie leads me to conclude that a space alien pinched the cookie with a transporter beam, I may decide that my disbelief in transporter beams is strong enough to make it reasonable to reject the conclusion. If a psychologist tells me that a tendency to alcoholism is related to one's genes, and I think it is a moral issue, I have to be careful to sort out just what is and is not in conflict. (I will look at this kind of question when I discuss the human and social sciences.)

(f) It lists the possible refutations and counterarguments fairly and honestly, and answers them. For example, someone might argue that the cookie disappeared because my son broke his habit of not pinching from the cookie jar; but if his habit is well-established, and he denies having done so, and he is truthful, and I know that my wife gets hungry, then the counter explanation doesn't look promising.

(g) It helps if we can describe a way of testing it. For example, if I have concluded that hawks eat rabbits, I should be able to set up a blind in a place where there are hawks and rabbits, and see it happen. I could test the two marbles plus two marbles gives four example, too, if I wanted to—but, since it's a deductive inference, I wouldn't be testing the inference itself but instead would be testing my premise that nothing is interfering.

In the rest of this book I will put these principles to work to help us achieve good faith and good science.

But for now I want to emphasize again that this is what you do—or at least should do—every day.

A WORD ABOUT RATIONAL CHRISTIAN FAITH

I have stressed that good faith as well as good science needs sound rational thinking. I know that many will either not understand this just yet or will think they are reading something heretical: after all, faith is in the heart, not the head, they will say. Or they will point out that God reveals Christianity

through Scripture, not through human reason. I will talk more in the next chapter about what “faith” is, and how it relates to reason. Before I move on, though, let me say a few things in clarification, so that you don’t hear what I’m not saying.

To begin with, by “reason” and “rationality” I don’t mean what theologians usually mean when they contrast reason with revelation: they are speaking of the process of reasoning that takes for its premise the notion that only what we can discover by study *without God’s help* is reasonable. I am instead speaking of the process of thinking soundly in general. So this objection is based on failure to be clear that I use the word “reason” with a different meaning than the objector does. In fact I don’t believe for a second that it is at all “reasonable” to do without God’s help in understanding his world!

Another thing to clarify: I haven’t at this point said anything about the role of reasoning in how we come to believe in Christ; instead I have been focusing on the responsibility every convinced Christian has, to use and develop his reasoning ability in service to his faith and life. I will come back in a later chapter to the role of rational arguments in coming to faith.

The theological discipline that studies how to use rational arguments to support faith is called apologetics. Christians don’t all agree on what place these arguments should play in bringing someone to believe in God. Some say that no arguments are needed; some say that sound faith requires evidence; some say that you have to challenge the unbeliever’s worldview before he can even think rightly about God.

One of the things that distinguishes these schools of thought is their answer to the question, “Where does belief in God come in?” Some say that belief in God is actually a *datum*—that is, you just know God directly, and what you need is to get in touch with that knowledge that you’ve been suppressing. Others say that belief in God is a *premise*—unless you take God’s existence for granted, you have no basis for sound reasoning of any sort. Still others say that belief in God is an *inference*—a conclusion from a chain of reasoning—which is why you need evidence and strong arguments.

As it turns out, each of these schools of thought has something to offer—rather than “either-or” I prefer the “both-and” approach. This is because these different schools seem to mean different things by “belief in God” (an expression we’ll examine in the next chapter).