

PSYCHOLOGY THROUGH THE EYES OF FAITH

Revised and Updated Edition

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PART 1 / Introduction

Chapter 1

LESSONS FROM THE PAST: SCIENCE AND CHRISTIAN FAITH

I am free, I am bound to nobody's word, except to those inspired by God; if I oppose these in the least degree, I beseech God to forgive me my audacity of judgment, as I have been moved not so much by longing for some opinion of my own as by love for the freedom of science.

NATHANIEL CARPENTER, PHILOSOPHIA LIBERA, 1622

Reality is a nuisance to those who want to make it up as they go along.

AUSTIN FARRER, SAVING BELIEF, 1964

Over the last century—psychology's first full century—definitions of the field have varied. For its first forty years psychology was, as William James declared in his pioneering 1890 text, *The Principles of Psychology*, “the science of mental life.” During the next forty years, from the 1920s into the 1960s, it was the science of behavior. Today's textbooks commonly synthesize this history by defining psychology as the science of behavior and mental processes. Note what all these definitions have in common: that psychology aspires to being a science.

Toward the end of the twentieth century, the Harvard psychologist Howard Gardner cautioned that “psychology has not added up to an integrated science, and is unlikely ever to achieve that status.” Yet he noted that it was important to recognize “insights achieved by psychologists; to identify the contribution which contemporary psychology can make to disciplines which may some day achieve a firmer scientific status; and finally to determine whether at least parts of psychology might survive as participants in a conversation which obtains across major disciplines.”

Psychology's claims to be a science are justified today by its solid achievements in both pure and applied research. Claiming the status of a science implies also acknowledging the limits of science. These limits are not imposed by Christian belief but are shared by humanists and scientists alike. There has, however, been a trend in recent years for some—notably, postmodernists—to argue that scientific knowledge is subjective. Some Christians, mistakenly believing that by weakening the objectivity of scientific knowledge they might strengthen the claims of religious knowledge, have at times succumbed to the temptation to endorse such views. Max Perutz, a Nobel laureate in molecular biology and himself a Christian concerned about the postmodern challenge to the future of science, notes: "This is a caricature of modern science . . . the bulk of scientific knowledge is final. If it were not, jet planes could not fly, computers would not work and atomic bombs would fail to explode."

As part of that conversation, this book asks, "What is the relationship between Christian faith and psychology?" To answer that we must take a brief look at the history of relations between faith and science.

When they are asked, "What is the relationship between faith and science?" many people—Christians and non-Christians alike—answer, "Conflict." They think of Galileo, condemned for questioning the church's conviction that the sun revolves around a stationary earth. They think of the reaction against Darwin's ideas at the Scopes trial and among today's anti-evolutionists. They think of the encroachment of natural explanations of disease, of earthquakes and storms, and of human behavior—realms once reserved for supernatural explanation. If religious and scientific explanations occupy opposite ends of a teeter-totter, then as one goes up the other must come down.

Contrary to this popular view that religion and science are antagonistic, many intellectual historians argue that the seventeenth-century development of modern science was supported by Christian ideas. If, as had often been supposed, nature is sacred, then we ought not tamper or experiment with it. If, however, nature is not an aspect of God, but rather is God's intelligible creation—a work to be enjoyed and managed—then by all means let us explore this handiwork. If we wish to discover its order, let us observe and experiment, believing that what-

ever God found worth creating we can find worth studying. Moreover, let us do so freely, knowing that our ultimate allegiance is not to any human authority or doctrine, but to God alone.

It was this biblical view of God and nature that in part motivated the participation in the scientific enterprise of several of the founders of modern science (among them Blaise Pascal, Francis Bacon, Isaac Newton, and even Galileo) and many of the founders of American colleges, 90 percent of which were church-founded at the time of the Civil War. Whether searching for truth in the book of God's word or the book of God's creative works, these scientific pioneers viewed themselves in God's service. Believing that humans, too, were finite creatures of God, not extensions of God, they did not depend solely on intuition and reason but also on observation. They assumed that we cannot find the whole truth merely by searching our minds—for there is not enough there—or merely by guessing or making up stories.

For Bacon and others the aim was humbly to submit their ideas to the test, knowing that if nature did not conform to them then so much the worse for their ideas. Having dominion over nature meant not to force nature into their own doctrinal categories, but rather first to understand it, then to adapt their conceptions to what their observations and experiments revealed. For example, "Bacon learned the lesson that we should seek for the sciences not arrogantly in the little cells of human wit, but with reverence in the greater world," noted the historian of science R. Hooykaas. Bacon expected the restoration of science to come by "true humiliation of the spirit." If scientists' data told them that the earth was not stationary, then they must abandon the notion that heavenly bodies circled the earth. Reason, they believed, must be aided by observation and experiment in matters of science, and by spiritual revelation in matters of faith.

This Hebraic-Christian foundation for scientific pursuits applies also to the scientific study of *human* nature, because humans, too, are part of the created order. This can be both a humbling and an uplifting thought. In the Hebrew Scriptures, humans are created by God "from the dust of the ground." Thus after gazing at the heavens the psalmist could wonder, "What are human beings that you are mindful of them?" Yet this human creature was a special creation, a majestic

summit of God's creative activity of whom the psalmist could in the next breath rhapsodize, "Thou hast made him little less than God, and dost crown him with glory and honor. Thou hast given him dominion over the works of thy hands."

St. Augustine echoed some of these views when he wrote: "... men go out and gaze in astonishment at high mountains, the huge waves of the sea, the broad reaches of rivers, ... the stars in their courses. But they pay no attention to themselves." "Oh, Lord ... the field of my labours is my own self. I am investigating myself, my memory, my mind." "What is my nature?" While views about the earth and the sun would change fairly quickly, opinion about soul, mind, and body would prove resistant to rapid revision. For example, the anatomist Andreas Vesalius published *On the Fabric of the Human Body* in 1543, the same year Copernicus published *On the Revolutions of the Heavenly Spheres*. Both were an affront to the revered views of Aristotle. Yet it took four more centuries before Vesalius's revolutionary views, tracing the nerves to the brain, would begin to displace the mind and soul from the heart to the brain, while the views of Copernicus and Galileo at once began a successful revolution in our views of the cosmos.

So what is the relationship between science and faith? The historian John Hedley Brooke identified three distinctive themes recurring in the relationships between science and religion:

1. *inevitable conflict*, a view undermined by historians of science in recent decades;
2. *complementarity*, the view that if only scientists and theologians would formulate their statements more clearly, they would realize they were complementary; and
3. *complexity*: to quote Brooke, "Serious scholarship in the history of science has revealed so extraordinarily rich and complex a relationship between science and religion in the past that general theses are difficult to maintain. The real lesson turns out to be the complexity."

Two things are clear. First, the birth of science in the seventeenth century was significantly and profoundly influenced by theological concerns. Second, there is an ever-present danger of seeking to use the

history of science selectively, so that it is hijacked for apologetic purposes. We humans are firmly placed within the natural order. As God's creatures, we are dependent upon God's sustaining power, moment by moment. Our dependence upon and allegiance to God frees us from bondage to anybody's word, except to what we find in God's books. We are freed even to investigate that most marvelous wonder of nature—human nature. To paraphrase R. Hooykaas, what the Bible urges upon us is a complete transformation in our relations to God and our fellow creatures, and to the world that God has made. This transformation means a liberation from old superstitious bonds and from any kind of idolatry, including the idols of common opinion and official doctrine. We who have been touched by the Spirit may respect human authorities in church, state, or science, but we will not be so deeply impressed by them that we give up our independence. Our liberation implies also a new obedience by which we must be willing to submit all our prejudices and all our prior criteria of reasonableness to the test of divine revelation, including the reality of the universe around us.

Chapter 2

LEVELS OF EXPLANATION

Reality is a multi-layered unity. I can perceive another person as an aggregation of atoms, an open biochemical system in interaction with the environment, a specimen of Homo sapiens, an object of beauty, someone whose needs deserve my respect and compassion, a brother for whom Christ died. All are true and all mysteriously coinhere in that one person.

JOHN POLKINGHORNE, *ONE WORLD:
THE INTERACTION OF SCIENCE AND THEOLOGY*, 1986

Scan any textbook of psychology and immediately you will be struck by an incredible variety of approaches. At the back of the book one typically reads of social-psychological investigations of how people are influenced by their groups. Near the middle of the book, one finds the work of those who study learning, thinking, and memory. But these topics can also be analyzed in terms of their biological components. Thus near the beginning of the book one is introduced to neuropsychological principles of brain organization and nerve transmission, and to the chemical messenger system by which nerve cells communicate. And as the researches of evolutionary psychologists enlarge and enrich our understanding of human nature we are alerted to the possibility of discovering the evolutionary origins of some complex and remarkable human traits

You might say that each of us is a complex system that is part of a larger social system, but also that each of us is composed of smaller systems, such as our nervous system and body organs, which are composed of still smaller and smaller systems—cells, biochemicals, atoms, and so forth. Any given phenomenon, such as thinking, can be viewed from the perspective of almost any one of these systems—from social

influences on thinking to biochemical influences. The variety of possible perspectives—or *levels of analysis*, as they are also called—requires that we choose which level we wish to operate from. Each level entails its own questions and its own methods. Each provides a valuable way of looking at behavior, yet each by itself is incomplete. Thus each level complements the others; with all the perspectives we have a more complete view of our subject than any one perspective can provide.

Take memory: neuropsychologists study the neural networks that store information and the function of particular brain regions for particular kinds of memory. Cognitive psychologists study memory in nonphysical terms, as a partly automatic and partly effortful process of encoding, storing, and retrieving information. Social psychologists study the effects of our moods and social experiences upon our recall.

Psychologists working at each of these levels accept that even if their explanations were to become complete in their own terms, this would *not* invalidate or preempt the other levels of explanation. The neuropsychological perspective, for example, is extremely valuable for certain purposes, but is not so valuable for understanding, say, social relations.

With so much of contemporary psychology being concerned with biological issues, we should also note that it is not at all uncommon within biology to find different kinds of explanations grouped in terms of “modes” of explanation rather than “levels” of explanation. One well-known scientist, G. G. Simpson, distinguished three modes of explanation commonly used by biologists: the first consists of answers to “how?” questions in terms of the mechanism involved, often labeled as *reductionist* explanations; the second, of answers to “what for?” questions where one is looking for an answer in terms of function, referred to as *compositional* explanations; and the third, of answers to “how did this come about?” questions—that is to say, answers in terms of the *formational* history of the organism.

Whether one chooses to speak in terms of “levels” or “modes” of explanation, the key point is to recognize that an explanation that may be exhaustive at any one level cannot claim to be a full and exclusive explanation of what is being studied. This is an important point, since it has implications when we seek to relate scientific explanations to

religious ones. No scientist has a logical basis for insisting that scientific explanations provide grounds for denying the activity of God in sustaining his creation, or for disproving God's existence.

It's like viewing a masterpiece painting. If you stand right up against it you will understand better how the paint was applied, but you will miss completely the subject and impact of the painting as a whole. To say the painting is "nothing but" or "reducible to" blobs of paint may at one level be true, but it misses the beauty and meaning that can be seen if one steps back and views the painting as a whole. To consider a phone caller's voice as reducible to electrical impulses on the phone line is extremely useful for some scientific purposes. But if you view it as nothing more, you will miss its message. For the electrical engineer's purposes, the message is irrelevant, much as God's activity is, in one sense, superfluous to a scientific account of the mechanisms by which God's creation operates. Yet for the sorts of questions that Leo Tolstoy agonized over—"Why should I live? Why should I do anything? Is there in life any purpose which the inevitable death which awaits me does not undo and destroy?"—we find the "God hypothesis," the perspective of faith, helpful.

What is true of psychology is also true of the other academic disciplines, each of which provides a perspective from which we can study nature and our place in it. These range from the scientific fields that study the most elementary building blocks of nature up to philosophy and theology, which address some of life's global questions.

Which perspective is pertinent depends on what you want to talk about. Take romantic love, for example. A physiologist might describe love as a state of arousal. A social psychologist would examine how various characteristics and conditions—good looks, similarity of the partners, sheer repeated exposure to one another—enhance the emotion of love. A poet would express the sublime experience that love can sometimes be. A theologian might describe love as the God-given goal of human relationships. Since love can often be described simultaneously at various levels, we need not assume that one level is causing the other—by supposing, for example, that a brain state is causing the emotion of love or that the emotion is causing the brain state. The emotional and physiological views are simply two complementary perspectives.

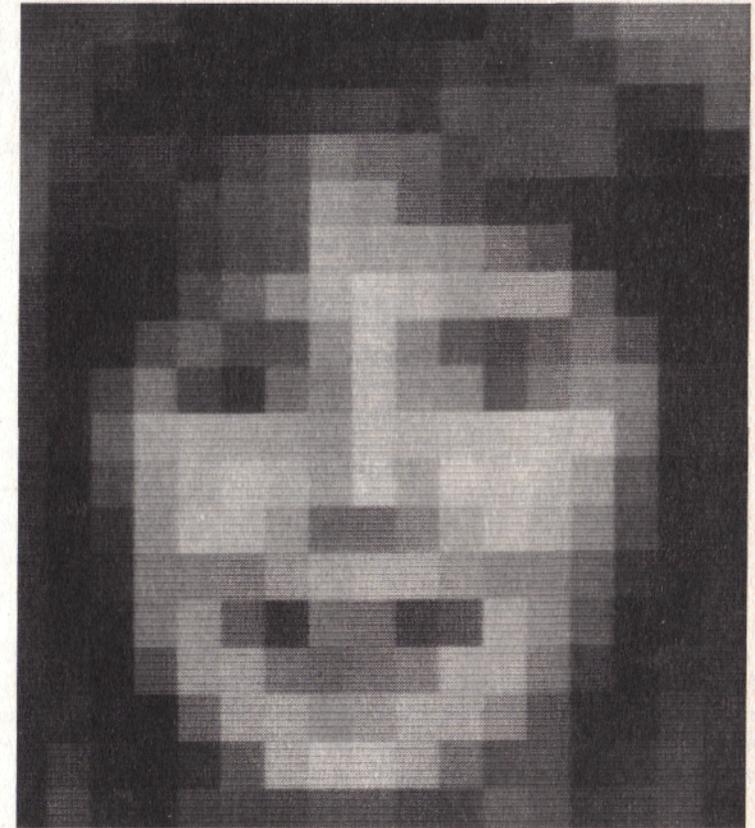


Figure 1. Levels of Analysis. What do you see? On close inspection, this image appears to be "nothing but" its computer-produced blocks. Viewed from a different level of analysis—from ten feet or more away—we gain a more holistic perspective and see what it truly is: a photo of ten-year-old Laura Myers. Note that each perspective is valid. Look only close up and you will miss the whole picture. (Portrait courtesy of Cecil W. Thomas, Ph.D., Department of Biomedical Engineering, and Grove C. Gilmore, Ph.D., and Fred L. Royer, Ph.D., Department of Psychology, Case Western Reserve University, Cleveland, Ohio.)

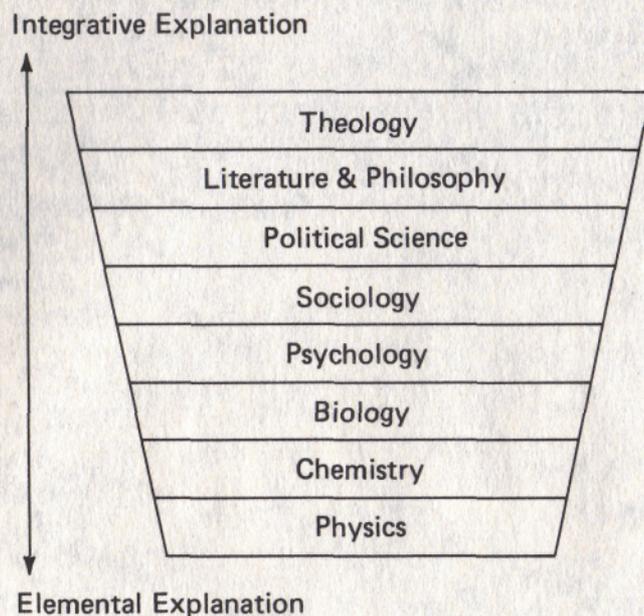


Figure 2. Partial Hierarchy of Disciplines. The disciplines range from basic sciences that study nature's building blocks up to more integrative disciplines that study whole complex systems. Successful explanation of human functioning at one level need not invalidate explanation at other levels.

Nature is, to be sure, all of a piece. For convenience, we necessarily view it as multilayered, but it is actually a seamless unity. Thus the different ways of looking at a phenomenon like romantic love (or belief or consciousness) can sometimes be correlated, enabling us to build bridges between different perspectives. Attempts at building bridges between religion and the human sciences have sometimes proceeded smoothly. A religious explanation of the incest taboo (in terms of divine will or a moral absolute) is nicely complemented by biological explanation (in terms of the genetic penalty that offspring pay for inbreeding) and sociological explanation (in terms of preserving the marital and family units). Other times the bridge-building efforts extending

from both sides seem not to connect in the middle, as when a conviction that God performs miracles in answer to prayer is met with scientific skepticism and psychological explanation of how people form illusory beliefs. To say that religious and scientific levels of explanation can be complementary does not mean there is never conflict or that any unsupported idea is to be welcomed as truth. It just means that different types of explanation may actually fit coherently together. In God's world, all truth is one.

So we arrive at a simple but basic point that resolves a good deal of fruitless debate over whether the religious or the psychological account of human nature is preferable: different levels of explanation can be complementary. The methods of psychology are appropriate, and appropriate only, for their own purposes. Psychological explanation has provided satisfying answers to many important questions regarding why people think, feel, and act as they do. But it does not even pretend to answer life's ultimate questions. Let us therefore celebrate and use psychology for what it offers us, remembering that it is but one aspect of a larger whole.

Chapter 3

SHOULD THERE BE A CHRISTIAN PSYCHOLOGY?

It is doubtless impossible to approach any human problem with a mind free from bias.

SIMONE DE BEAUVOIR, *THE SECOND SEX*, 1953

A century ago the study of human nature, broadly conceived, was regarded as psychology's central task. With that meaning it made good sense to compare, for example, Christian psychology with Islamic psychology and Hindu psychology. The focus of discussions was on questions such as how mind, spirit, and body interact. We take up some of these issues in chapter 5. Today, as we have seen, psychologists are much more modest and restricted in their aims as they seek to build a solid scientific base for their discipline. In this latter, more limited sense there is not a Christian psychology any more than there is a Christian physics or a Christian chemistry. Just as physics can be used to trigger nuclear explosions or to relieve suffering through radiotherapy, so psychology can be used to manipulate individuals or groups or to relieve anxiety and depression. Psychology is morally and ethically neutral. Psychologists hold a wide variety of different moral and ethical views. These widely varying outlooks are often called *worldviews*.

Hidden Values and Assumptions

Students of any scientific discipline, including psychology, ought never forget that science involves more than impersonal, objective, pure facts. We organize observations based on our experience and interests. We decide what to attend to and what to ignore. This subject-

tive element of scientific exploration is even larger in the human sciences, such as sociology, anthropology, and parts of psychology, than in the physical sciences, such as physics and chemistry. Thus psychologists' worldviews, which include their personal values, penetrate their work in several subtle and not-so-subtle ways.

Worldviews influence which people are attracted to psychology. Surveys of American psychologists have revealed them to be among the most irreligious academics. One-third denied the existence of God (nearly ten times the proportion of other Americans), and only one-third described themselves as even moderately religious. We wonder: Do psychologists, like so many laypeople, tend to see the psychological account of human nature as competing with and elbowing out the religious account?

Worldviews also influence psychologists' choice of research topics and their ethical standards in conducting research. Our interest in topics such as aggression, gender, and smoking prevention are motivated by our personal concerns.

Worldviews also have more subtle effects. There is a growing awareness among both scientists and philosophers that science is not so purely objective as often presumed. Scientists do not merely read what is out there in the book of nature. Rather, they decide what methods to explore it with, what to observe, and how to interpret their findings. As we will demonstrate in chapter 11, our preconceptions act as a flashlight, riveting our attention on selected aspects of nature.

Worldviews further influence our conceptions of mental and sexual health, of self-actualization and fulfillment. Is it better to express and act on one's feelings, or to exhibit self-control? To seek joy in the here and now, or to endure stress now for the sake of future achievement? Little wonder that in one survey, 425 mental-health professionals were almost equally divided on whether it was desirable for people to "become self-sacrificing and unselfish."

What do you think: Should children be trained from birth "in regularity of feeding, sleeping, elimination," so that they might learn that they are "part of the world bigger than their own desires," as the 1938 U.S. Government pamphlet *Infant Care* advised? Or, when fussy, should they (as the 1942 edition of the same pamphlet advised) immediately be

offered "the milk, but also the warmth, the sense of being held firmly" to help them become trusting of the world rather than withdrawn and fearful? The answer depends partly on what we understand to be the effects of parenting style; but it also depends on whether one places a higher value on self-control and respect for authority, as did the 1938 authors, or on security and independence, as did the 1942 authors.

Worldviews even influence our psychological terminology: whether we label those who say only nice things about themselves on personality inventories as having "high self-esteem" or as "defensive"; whether we describe those who favor their own racial and national groups as "ethnocentric" or as exhibiting strong "group pride"; whether we view a persuasive message as "propaganda" or "education."

Our worldviews similarly seep into our everyday language. Whether we label a guerrilla warrior a "terrorist" or a "freedom fighter" reflects our evaluation of the cause. What gets disparaged as "welfare" by a conservative may be celebrated as "aid to the disadvantaged" by a liberal. Post-9/11 Americans who wear flags are "patriots"; flag-wavers elsewhere may be "nationalists." One person's "adultery" is another's "open marriage."

Psychologists also are subtly affected by their philosophical and cultural assumptions. Consider, for example, Lawrence Kohlberg's influential theory of moral development, a theory that underlies some modern curricula for moral and values education in public schools. Kohlberg contended that children develop morally as their *thinking* proceeds through a sequence of stages, from a "preconventional" morality of pure self-interest, to a "conventional" morality concerned with gaining others' approval or doing one's duty, to (in some "mature" people) a "postconventional" morality of self-chosen principles. Critics question Kohlberg's assumption that morality is more a matter of thinking than acting, and they even more strongly question the humanistic individualism of his assumption that the "highest" or most mature moral stage is exhibited by those who make moral judgments in accord with their self-chosen convictions. The critic Richard Shweder contended that Kohlberg's moral ideal was the view "of an articulate liberal secular humanist" masquerading as psychological truth. The critic Carol Gilligan argued that Kohlberg's ideas were those of the typical Western male; for women, she believes, moral maturity is not so much a matter

of abstract ethical principles as of responsible, committed relationships.

So worldviews including hidden values and assumptions do penetrate psychology. They influence psychologists to construct, confirm, and label concepts that support their presuppositions.

Responses to Psychology's Hidden Worldviews

Psychology's critics have sensitized psychologists to the subtle influences of assumed preferences and beliefs. Marxist critics have sensitized us to capitalist assumptions in psychology. Feminist critics have sensitized us to implicit masculine values. Christian critics have sensitized us to secular presuppositions. Should we therefore, as some have argued, replace science that aims to be value-free with a science that expresses one's values and assumptions? (Some have called for the establishment of a Marxist psychology, others for a feminist psychology, others for a Christian psychology.)

Some Christian psychologists answer no. These psychologists tend to be Christians who participate in mainstream psychological science; often they do so with a sense of Christian vocation, recognizing both their own limits and the limits of their discipline. One such person, the British neuropsychologist Donald MacKay, worried about those who are eager to inject an ideology, even a Christian one, into psychology. He argued that the Christian psychologist's obligation

is to "tell it like it is," knowing that the Author is at our elbow, a silent judge of the accuracy with which we claim to describe the world He has created. In this sense our goal is objective, value-free knowledge. If our limitations, both intellectual and moral, predictably limit our achievement of this ideal, this is something not to be gloried in but to be acknowledged in a spirit of repentance. Any idea that it could justify a dismissal of the ideal of value free knowledge as a "myth" would be as irrational—and as irreligious—as to dismiss the idea of *righteousness* as a "myth" on the grounds that we can never perfectly attain that.

For MacKay, ourselves, and others, a Christian psychology is one that is faithful to reality. If God has written the book of nature, it becomes

our calling to read it as clearly as we can, remembering that we are humble stewards of the creation, answerable to the giver of all data for the accuracy of our observations. Indeed, it is precisely because all our ideas are vulnerable to error and bias—including our biblical and theological interpretations as well as our scientific concepts—that we must be wary of absolutizing any of our theological or scientific ideas. As the Reformation motto Ever Reforming suggests, our religious and scientific ideas are mere approximations of truth that always are subject to test, challenge, and revision. Believing that both the natural and biblical data reveal God's truth, we can allow scientific and theological perspectives to challenge and inform each other. But we do so remembering that science and theology operate at different levels of explanation and mindful of the tentative nature of any scientific or theological theory.

There is an additional reason why the Bible does not give us a completed psychology and why we therefore need psychological science. The Scriptures must embody truth not just for us in our twenty-first-century age but for all people past, present, and future. For the very same reason, noted C. S. Lewis:

Christianity has not, and does not profess to have, a detailed political programme for applying "Do as you would be done by" to a particular society at a particular moment. It could not have. It is meant for all men at all times and the particular programme which suited one place or time would not suit another. And, anyhow, that is not how Christianity works. When it tells you to feed the hungry it does not give you lessons in cookery. When it tells you to read the Scriptures it does not give you lessons in Hebrew and Greek, or even in English grammar. It was never intended to replace or supersede the ordinary human arts and sciences: it is rather a director which will set them all to the right jobs, and a source of energy which will give them all new life, if only they will put themselves at its disposal.

There are others whose main concern is with the perceived threat to science and to the profession of psychology posed by any failure to blow the whistle on smuggling values into psychology. For example, Robin Dawes, a professor at Carnegie-Mellon University, reminds us of the need to be alert to the importation of hidden values and assumptions in

some areas of psychology—a view shared by Christians and others concerned about the status of psychology as a science and as a profession. He wrote:

The less we know, the more scrupulous and careful we should be in applying and monitoring what we think we do know. . . . Having lost sight of scientific skepticism and the need for careful research, the "professionals" view has become highly compatible with the New Age view . . . without adherence to the scientific standard of "show me," professional psychology and psychotherapy become a matter of "views" and "schools," with the result that they are highly influenced by cultural beliefs and fads: currently the obsession is with "me."

In chapter 28 we give a detailed example of the influence of cultural beliefs on psychology.

To repeat, we agree that our values and assumptions cloud the spectacles through which we view reality, but also that our calling is to clean the spectacles through careful scientific and biblical scholarship. Other Christian psychologists, those whom the philosopher C. Stephan Evans has called the Christianizers of psychology, remind us that psychologists never approach their subject completely free of prior beliefs and prejudices. Thus if Christian psychologists are to be fully serious both as scholars and as Christians, they must not wall-off their scientific and religious levels of understanding from each other. Instead, they should allow the content of their faith to inform their psychology (and vice versa), much as they also allow their faith to inform their social awareness, politics, and personal relationships. For example, rather than uncritically accepting Kohlberg's theory of moral development, Christian developmental psychologists might instead want to construct a theory that is rooted in an explicitly Christian understanding of morality. If this new theory makes testable predictions, it can then be subject to testing along with competing theories.

We generally favor the first of these two Christian responses to psychology, the view that psychological science offers a limited but useful perspective on human nature that complements the perspective of faith. Some chapters that follow therefore describe striking parallels between what researchers are concluding and what Christians believe.

In other chapters the results of psychological research prompt us to reexamine some widely held beliefs, the nature of the soul being one such example. Yet other chapters note how psychological findings can be applied to the concerns of the church—to preaching, prayer, and the quest for faith and happiness. But as this chapter has emphasized, we agree with the Christianizers of psychology that it can matter enormously whether one views human nature through the eyes of faith. Thus still other chapters will look at psychology critically, by calling attention to hidden values and assumptions in psychologists' writings on giftedness, sexuality, and therapy. Through this mixture of Christian criticism, Christian application, and Christian parallels to psychology, we will sample the various ways in which Christians are integrating psychology and faith.

The issue for the Christian, then, is not some doctrinaire desire to defend the status of psychology as a science but rather to adhere to the commitment to report the way the world is, not the way we would like it to be. As Paul Gross and Normal Levitt elegantly expressed it, echoing Donald MacKay's views quoted earlier,

Science is, above all else, a reality-driven enterprise. Every active investigator is inescapably aware of this. It creates the pain as well as much of the delight of research. Reality is the overseer at one's shoulder, ready to rap one's knuckles or to spring the trap into which one had been led by overconfidence, or by too-complacent reliance on mere surmise. Science succeeds precisely because it has accepted a bargain in which even the boldest imagination stands hostage to reality. Reality is the unrelenting angel with whom scientists have agreed to wrestle.

This image should be familiar to those who recall Jacob's encounter with the living God.

PART 2 / Biological Bases of Behavior

Chapter 4

THE BRAIN-MIND CONNECTION

The distinction between diseases of "brain" and "mind," between "neurological" problems and "psychological" or "psychiatric" ones, is an unfortunate cultural inheritance that permeates society and medicine. It reflects a basic ignorance of the relation between brain and mind.

ANTONIO DAMASIO, DESCARTES' ERROR:
EMOTION, REASON, AND THE HUMAN BRAIN, 1994

On June 17, 1783, the famous English author Dr. Samuel Johnson awoke around 3 A.M. and to his surprise and horror found he could not speak. To test his mind, he attempted to compose a prayer in Latin verse and succeeded. Thus reassured, he next tried to loosen his powers of speech by drinking wine, but this only put him back to sleep. When he awoke the next morning he found that he still could not speak, yet he could write and could understand what others said.

What sort of disorder would disrupt speech yet allow one to think, read, write, and listen? Johnson summoned his physicians, who diagnosed a disturbance of the vocal apparatus and prescribed a treatment of blisters on each side of the throat. Sure enough, within a few days his speech began to return, leaving only a slight impediment at the time of his death late the following year.

The ignorance of Johnson's doctors regarding the localization of different aspects of language in the brain was mild compared with that of their predecessors. Down the centuries philosophers and physicians have talked about the mind, the soul, and the heart and how they are related, and have produced a vast literature from which can be distilled several different pictures. For many centuries people debated whether the mind was located in the heart, as Aristotle argued in the fourth century B.C., or in the brain, as Hippocrates had guessed. The