VOCATIO

Essays on Work and Calling

Excerpted from Veritas Press's Omnibus texts

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TABLE OF CONTENTS

F O R E W O R D

The English word *vocation* comes from the Latin *vocatio.* It simply means "calling."

The Reformation's beginning is credited to Martin Luther when he posted the 95 Theses on the door of the Wittenberg Castle church in 1517. The Five Solas, while not systematized as such until later, contain much of the essence of the Reformation. Yet Luther was concerned about more than these very important concerns. One was the idea of vocation. Dr. Gene Edward Veith, an editor of the Veritas Press textbooks Omnibus IV, V, and VI, has written, "'Justification by faith alone' is surely the most important contribution of the Reformation. The second most important, arguably, is the 'doctrine of vocation.'"* In the same article Dr. Veith quotes 1 Corinthians 7:17:

> Only let each person lead the life that the Lord has assigned him, and to which God has called him.

The 18 essays collected here on various vocations were first published in the last three Omnibus texts mentioned above. We thought putting them together, all in one place, would be of great benefit to many.

Callings are significant concerns for the Christian, particularly the young one still finding his way in life. The essays within this book are not a comprehensive list of career possibilities. For example, we haven't included homemaking, though this also is a high calling and surely worthy of esteem. They are a good representative list that we hope will inspire readers to think deeply—about the gifts God has given them, about the opportunities God has opened up to them.

Today, young people have as much freedom to pursue anything they wish as ever before—maybe more. We hope this book will serve to help them clarify their thinking about their pursuits or know a bit more about them. Our ultimate goal is to see godly men and women in all walks of life leading by example, by their words, and by their commitment to their *vocatio.*

—*Marlin Detweiler*
VERITAS PRESS | PRESIDENT

*Veith, Gene Edward. "Our Calling and God's Glory."
Modern Reformation. Nov.-Dec. 2007: 22-28.

A ESTHETICS

Postmodernists believe "there are no absolutes." Christians, on the other hand, do believe in absolutes. They sometimes, however, do not raise the obvious question: What are absolutes? Classical thinkers, both ancient and Christian, spoke of three kinds of absolutes: the true, the good, and the beautiful. Most Christians have no problem believing that truth and goodness are absolute—that they are objective, transcendent reality grounded ultimately in God. And yet, when it comes to beauty, Christians are often as subjective and relativistic as postmodernists.

What is Aesthetics?

Aesthetics, put simply, is the study of beauty in its different varieties and in its different manifestations in nature and in the arts. Aesthetics is indeed about pleasure, which often makes people assume that it is merely about subjective feelings. But, properly understood, aesthetic pleasure is a perception of objective quality that also points, ultimately, to God.

Say you are walking outside on a fall day and across the road you see a gigantic maple tree, its leaves turned a bright red and its branches trembling in the breeze. It takes your breath away. Why?

Or say you are watching *American Idol,* the popular television talent show. One singer croaks and yells and has an attitude. Another sings in such a way that you are utterly captivated. What is the difference? What makes one singer bad and the other one good?

Plato would say that aesthetic experience is a glimpse of perfection. That tree across the road gave us a momentary manifestation of the ideal tree that exists in the mind of God. The skilled singer is approaching perfection of sound and expression.

An Aristotelian approach to aesthetics would look at the tree and the *American Idol* performance in terms of their purpose and how the parts—the leaves and branches, the words and the music—cohere into a whole.

Other aesthetic analysis might attend to matters of form. How the color of the leaves harmonize against the blue sky; how the branches trace intricate patterns; how

A detail from Vermeer's work *The Art of Painting* (also known as *The Allegory of Painting* or *Painter in his Studio*). In this piece, the woman crowned with a laurel wreath and carrying a book by Herodotus or Thucydides represents Clio, the Muse of History.

the singer's techniques of phrasing, breathing, and improvisation contribute to an excellent, effective performance.

Christian thinkers, ranging from the medieval scholastic Thomas Aquinas to the American Puritan Jonathan Edwards, said that the feeling we get when we experience beauty is a kind of love. You love that maple tree. You love that song and feel a love-like connection to the artist who sings it. For Aquinas and Edwards, something is beautiful when it provokes love. They went on to connect beauty to Christian ethics and to the love of God, whose own love for His creation is expressed in the beauty that He lavishes everywhere.

For Edwards the beauty of the natural world is a testimony to the God who created it. Christian artists such as Thomas Cole, founder of America's first distinct artistic

movement, the Hudson River School, saw nature as God's art. Like an artist creating a painting, a song, or a novel—only much, much more so—God created the entire universe in all of its variety, intricacy, and detail. And He made it beautiful. Human artists, in turn, who are themselves God's self-expression as having been created in His image, can imitate, however faintly, God's creativity by creating works of beauty and meaning themselves.

The British critic John Ruskin said that God alone is the source of our highest pleasures. Therefore, he reasoned, the standards of aesthetic excellence please us because they reflect the attributes of God.

For example, one aesthetic criterion is the principle of unity and complexity. Some works of art, such as the black canvas in a modernist art gallery, have unity. Others,

Thomas Moran (1837–1926), a painter from the Hudson River School, evokes a sense of infinity through this detail from *Grand Canyon of the Colorado River*.

such as Jackson Pollack's random paint drippings, have complexity. But the best works—a Rembrandt portrait, a Thomas Cole landscape—have both unity and complexity at the same time. The paintings have a plethora of intricate details, but somehow they all harmonize together into a whole. In a Bach concerto every instrument may be doing something completely different from all of the others; and yet all of the sounds harmonize to form a wondrous whole. In a Shakespeare play each character has his own story, plots and subplots interweave with each other, and multiple themes emerge in the complex, multi-leveled language. And yet, everything in the play comes together into a unity.

Why do we respond so positively to the synthesis of both unity and complexity? Ruskin says it's because the Triune God is both unified and complex—a perfect unity of Father, Son, and Holy Spirit. Ruskin tells us that even unbelievers cannot help responding in love at the faintest glimpse of God's attributes.

Ruskin explains other aesthetic criteria along the same lines. Anything that evokes a sense of infinity, he says, gives us aesthetic pleasure—the can't-take-it-all-in vastness of the Grand Canyon; the Crab Nebula; the mind-boggling sublimities of Milton's *Paradise Lost;* a Hudson River School landscape of waterfalls and mountain ranges. Intimations of infinity give us pleasure because God is infinite.

According to Ruskin's aesthetic theory, symmetry, the way parts are in balance, is a sign of God's justice. Light is a sign of God's energy. Moderation is a sign of

God's law, which is fulfilled in "self-restrained liberty." Craftsmanship, technical skill, and attention to detail call to mind the artistry of God.

Another dimension to the field of aesthetics concerns the different kinds of aesthetic experience. Both Longinus, a Greek in the Roman empire, and Edmund Burke, the eighteenth-century father of conservatism, explored the category of the "sublime," that is, creations in nature and in the arts that create a sense of awe. Again, think of the Grand Canyon. If beauty evokes a feeling of love, said Burke, sublimity evokes a feeling of fear. And yet that fear, that sense of being overwhelmed, is a positive and particularly powerful aesthetic experience. Other categories include the "picturesque"—the quaint and unusual—and the "homey," creating feelings of comfort and the warmth of ordinary life, as in the Hobbiton scenes in *The Lord of the Rings.*

Notice that beauty in its various guises is not the same as "pretty." The horror of tragedy can create in us a feeling of compassion, which is a kind of love and thus a perception of beauty. A portrait by Rembrandt, arguably the greatest Protestant painter, shows ordinary human beings through whom traces of God's image shine. The lined faces of his old women stirs more love than a stereotyped, made-up, shallow expression of a fashion model, and thus shows a greater beauty.

Aesthetics is not an exact science. Different styles and different movements have their own aesthetic quirks.

The Garden of Eden, painted in 1828, was Thomas Cole's first painting to explore spiritual themes. "A number of critics have seen the Hudson River School landscapes evocations of the American Eden, an unspoiled paradise to be inhabited by the new American Adam. Certainly, Bible-saturated Protestants of the time could hardly view an example of natural beauty without thinking of the biblical paradise, but it should be noted that such associations would have been understood to be only analogies, not literal identifications." —*Painters of Faith: The Spiritual Landscape in Nineteenth-Century America*

The Past and *The Present* by Thomas Cole

Just how much aesthetic judgments can be rationalized is a matter of debate. But people debate about truth and goodness also. Controversy and elusiveness do not keep beauty from being an absolute.

Aesthetics as a subject in itself is a branch of philosophy. Just as epistemology is the philosophy of how we know, and metaphysics is the philosophy of the nature of existence, aesthetics is the philosophy of beauty. The field of aesthetics explores questions such as: What is art? How does art work? How can we say that one piece of art is better than another?

All branches of philosophy have their controversies and contending schools of thought, and aesthetics is no exception. Is a work of art something that has no purpose other than itself? Or does art always have to communicate something? Is the meaning of a work of art determined by the artist's intention? Or is the meaning determined by its audience? Or is the meaning independent of both the artist and the audience? Is art self-expression or a representation of objective truth? Does art appeal to emotion or to the mind? Is the beauty of a work of art simply a matter of form? Or intensity? Or technique and craftsmanship?

Such questions are not easily answered. Like other philosophical issues, they resist resolution, cropping up in different guises throughout the history of philosophy.

But aesthetics is not simply an academic philosophical exercise. Like ethics, another branch of philosophy, it manifests itself more clearly where it is applied.

Thus, aesthetics is an intrinsic part of many other fields. Whether you pursue singing or photography or writing or filmmaking or industrial design, you must operate in the realm of aesthetics.

Keep in mind that "art" refers not only to painting and sculpture, but also to music, literature, drama, movies, and similar human creations. Even "practical" creations—such as architecture, clothing, and manufactured products—have their "design" and thus have aesthetic qualities.

Aesthetics is for both artists and critics, the ones who make the work and the ones who receive it. The latter include professional scholars who try to understand and to help other people understand significant works of art.

At college you can learn to be a critic. Art criticism, literary criticism, music criticism are all valuable enterprises. This does not mean "criticizing" or "being critical" in the sense of always being negative and tearing down other people's creations. (That *can,* of course, be part of a critic's calling when dealing with bad work that deserves that kind of treatment.)

A critic is someone who analyzes and evaluates a work of art. To do so requires knowledge of the art form—its genre, techniques, and history—as well as the cultural knowledge to put it into context. To explicate a painting or a novel or a movie, a critic needs, among other things, to be a historian, a philosopher, and (ideally) a theologian. That is, a critic needs a strong classical liberal arts education.

If you study the arts in college—whether the visual arts, music, literature, or film—you can learn how to *do* the art. You draw, perform music, write poetry, make movies. You can also learn how to *understand* the art. You can analyze paintings, appreciate music, interpret poetry, and evaluate movies.

These two dimensions are related. Performance classes involve the professor and your peers critiquing your presentations. And if you are going to become good at your art, you also need to learn how to critique yourself.

But it is also possible to specialize on the critical side. Most English majors focus on literary criticism. In fact, critical theory is currently dominating the field, to the point of sometimes overshadowing the great authors. A promising subfield for would-be critics is the history of the art form. You will learn much about aesthetics from courses in literary history, music history, and art history.

You do not, however, have to be a professional artist or a professional scholar or journalistic review-writer to be involved with aesthetics.

Cooking a good meal, painting and decorating the house, making yourself presentable when you get dressed are all manifestations of artistry in everyday life. These ordinary activities call for the exercise of aesthetic taste.

Going to a movie, listening to your iTunes, reading for pleasure, watching TV are all examples of receiving works of art. You can consume artistic dreck that contaminates your intellect and your morals. Or you can take in art that enriches your life.

In our entertainment-saturated culture, understanding aesthetics and cultivating high aesthetic standards have become survival skills.

Critical Issues

I have sometimes overheard some of my students talking about what they did last weekend, and one of them will make an innocent remark, "That was a really good movie."

Whereupon I jump into the conversation. "What was good about it?"

"Uh, I don't know."

"Was the movie good because it conveyed a profound insight into moral behavior?" I will say, as the student looks around for an escape.

"Not really."

"Was the movie good because of the excellent construction of its plot?"

"No. It really didn't have much of a plot."

"Was the movie good because it had good acting? Good camera work? Was it well edited?"

"I really didn't notice."

"So what was so good about the movie?"

"Well, I really liked when they had the big car chase, and they had some really cool explosions, and at the end when the bad guy was killed his guts all came out. It was an awesome movie!"

At that point, saving for another day a discussion about the sublime, I say, "Oh, I get it. You liked the movie. You didn't mean that the movie was good. You just meant that you liked it."

I then go on to help the fledgling critic see the difference between saying something is "good" and saying, "I like it." The former tells us something about the work. The latter tells me something about him.

We can "like" things that are not "good." In fact, such is our fallen nature that we have a proclivity for liking things that are bad.

To take an innocent example, we take pleasure in food that is, as we say, "bad for us." We gorge ourselves with sugar and fat in all its various guises, even though a steady diet of such fare makes us fat, decays our teeth, and destroys our health. Still, we "like it." For some people, that is all that matters. Or, to take a guilty example, we take pleasure in sin, in activities that are morally "bad."

This is what many movies and other popular entertainment forms exploit. It is possible to make a movie that is aesthetically good—one that is technically excellent, that conveys a valuable meaning, a work of art whose form effectively conveys its theme, a movie with actors and directors and cinematographers and writers who display a high level of skill and craft. But a movie like that is hard to make.

It is far easier to get people to "like" a movie by bringing in a beautiful actress and having her take off her clothes, or by appealing to viewers' latent sadism with a ramped up torture scene. Viewers also "like" the feeling of rebellion that can come from admiring an immoral hero or from mocking good institutions, such as the family or the church.

Aesthetics does have to do with taking pleasure in something. It does have a subjective element, the enjoyment of a work of art or a natural phenomenon. But aesthetics also has an objective element, having to do with the perception of qualities in a work of art, as well as the ability to make evaluative judgments based on objective standards.

I am not saying that aesthetic criteria are the only pleasure we can take from a work of art. Some pleasures are innocent. There is nothing wrong with eating junk food occasionally, as long as it doesn't dominate our diet. There is nothing wrong with enjoying a movie for its car chases, even though the rest of it is incredibly stupid and ineptly put together. We can even enjoy movies that are so bad they are unintentionally hilarious, as in *Plan 9 from Outer Space.*

Some people, though, eat so much junk food that they "like" nothing else, destroying their taste for good, healthful, wholesome food. And some people "like" nothing but entertainment that gives them cheap thrills and so cut themselves off from works of beauty and meaning.

This is the condition of many people today. They are culturally obese, out-of-shape, and malnourished. They require constant stimulation; otherwise, they succumb to that chronic spiritual ailment of our times: boredom.

According to the classical Christian writers, chronic boredom can be part of the sin of sloth, a spiritual laziness that can grow into a paralyzing apathy. Those who are chronically bored often treat their condition by pursuing ever greater sensations, including the overtly sinful kinds.

In contrast, the Bible teaches us to cultivate high standards: "Finally, brothers, whatever is true, whatever is honorable, whatever is just, whatever is pure, whatever is lovely, whatever is commendable, if there is any excellence, if there is anything worthy of praise, think about these things" (Phil. 4:8).

Often called the "worst movie ever made," the 1959 sci-fi film *Plan 9 from Outer Space* is about aliens who, in hopes of stopping mankind from developing a doomsday weapon, create zombies to get the planet's attention.

There is a "whatever" of contemporary boredom. Here, though, we have "whatevers" that open us up to the best of what life has to offer. This is a list of what is good, including not only the moral ("whatever is honorable . . . just . . . pure") and the intellectual ("whatever is true") but also the aesthetic ("whatever is lovely . . . commendable . . . any excellence . . . anything worthy of praise").

A Christian Response

Learning to "like" (subjectively) what is "good" (objectively) is what we mean by developing good taste.

Christians should develop good taste. Not because there is any spiritual or even moral merit in good taste, in itself. But beauty is better than ugliness; and good art is something of an antidote to bad art. Christians should equip themselves to tell the difference and to prefer the good to the bad.

In our current pop culture we are immersed in entertainment that is decadent, immoral, and mind-dissolving. It generally conveys a worldview that is utterly hostile to that of the Bible. Since God is the source of true beauty, art that is truly beautiful will tend to conform to His will.

Usually what is beautiful accords with what is true and what is good. The moral flaws in a work often turn out to be aesthetic flaws also, such as when a complex and involving plot is interrupted for a sex scene, causing the audience to respond with a different kind of pleasure and thus breaking the aesthetic spell.

This is not always the case, however. Some well-written literature advances a false worldview. Sometimes the form of a work is beautiful or sublime, while the content it communicates is false. Awareness of aesthetics, though, enables you to make that kind of distinction. This frees you to appreciate the form while refusing to let it manipulate you into accepting the content.

Conversely, sometimes the content is true and good—indeed, Christian—though the form is aesthetically bad. Thus the plethora of embarrassing Christian music, romance novels, movies, and knickknacks that fill up the shelves of so many Christian bookstores. Now a Christian might agree with the message of a Christian romance novel and might even "like it." But a poorly-written novel, whatever its message, will generally have little lasting impact—on Christians, much less non-Christians—and it will have zero influence on the culture as a whole.

As I hope you are noticing in the *Omnibus* series, Christians have an aesthetic legacy that is unparalleled by any other worldview. The heirs of Rembrandt and Bach, T.S. Eliot and Tolkien, Hopkins, Donne, Herbert, Milton, Shakespeare . . . and the list could be extended indefinitely, should aspire to create and to enjoy work that is simultaneously true and good and beautiful, thereby glorifying God and edifying man.

But the Christian appreciation for aesthetics must go beyond the important but separate question of whether or not the artist was a Christian. Christians are empowered to appreciate beauty wherever they find it and to turn it into an occasion for glorifying God.

Ruskin observed that when we experience beauty, we are also filled with a sensation of thanksgiving and praise. We are grateful for what we see or hear, and we praise whoever made it possible. When we see a beautiful tree, we are thankful for that tree, and we praise the One who made it. When we hear a beautiful song, we are thankful and full of praise—to whom?

Some people see no further than the artist who created the art, with their thanksgiving and praise going entirely to him, turning themselves into often-pathetic, star-worshipping fans. Christians can appreciate the artist, but they can also see through him to Someone looming behind the artist's talents. God Himself is the source of every good and perfect gift (James 1:17). Christians, in faith, can recognize the greater Artist behind the artist, the One who bestowed the artist's gifts and who creates beauty through the artist's vocation. When Christians perceive the beauty, whether of nature or of art, it becomes an occasion to glorify God.

So how can Christians learn to notice the aesthetic dimension and grow in their tastes? That is, how can we learn to take pleasure in what is good?

Let me recreate another conversation that I have had with students. A group of them will be talking about music. Someone will say something like this: "Hymns are boring! Contemporary Christian music is a lot better!"

"*Better?*" say I. "In what way?"

"Well, the old hymns have a lot of words I don't know. And, the old hymns are like, old. But the praise songs are more modern, and I can relate to them better."

"OK," I say, with considerable self-restraint. "You don't understand the hymns. Does that make them bad?"

"No, not really."

"Which has more to say, a six-stanza hymn, or a praise stanza that you sing over and over? Which has more words? Which has more notes?"

"Well, I guess the hymn."

"Which tells us more about Christ, the Bible, the will of God, and the Christian life?"

"OK. The hymn."

"Which has not only one melodic line but different voices all coming together into a harmony?"

"The hymn."

"So how can you say that a contemporary praise song is better than a hymn?"

"I don't know!" my interlocutor concludes, "I just like it better!"

"Ah!," I say. "You don't mean to say that the praise song is objectively good. You just mean that *you like it better.*" Whereupon I move to the other discussion described in the previous section.

I have come to the point where I can prove to the satisfaction even of the person I am debating that, for example, the music of Mozart is objectively better than the music of the pop star currently at the top of the charts.

I hesitate to name the pop star, since by the time this essay gets into print, that singer, defended then with such ardour, will have fallen far out of fashion. That is one measure of the difference between great art and commercially-churned-out popular art. The latter wears out its welcome; people get tired of it, even sick of it. It has to give way to the next fashion. Whereas the best art never ages. I have read Shakespeare's *Hamlet* probably hundreds of times, and I still see new facets of the play every time I read it. Whereas I can hardly sit through reruns even of TV shows that I originally enjoyed. I never tire of listening to Bach's *Brandenburg Concertos.* The first time I heard "Don't Worry, Be Happy," I found it catchy. But it wasn't long before whenever it came on, I wanted to shoot my radio.

Nevertheless, my students who preferred contemporary Christian music and pop songs do illustrate some important principles of aesthetics. The best art demands understanding. Poorer art is simple and accessible.

It makes few demands. It's easy. Great art, though, is demanding. It demands attention. It demands knowledge.

Consider sports. Actually, many aesthetic theorists consider sports to be equivalent to art. An athlete, like an artist, performs his exploits for their own sake, seeking to attain standards of excellence.

To enjoy a game of football, you need to understand the game. And the more you understand it—if you pick up on the different plays, the blocking patterns, and techniques of the various position players—the more you will enjoy the game.

To enjoy the best music, you need to know about music. The more you know about literature, painting, architecture, movies—or baseball, woodworking, or cars—the more you will enjoy them. And also, the more you will be able to make judgments about them.

My daughter, currently an *Omnibus* teacher, was in the Milwaukee youth orchestra when she was a kid. Playing the violin in a youth orchestra is a competitive sport, with everyone trying to beat out their friends and rise through the ranks from the easy ensembles all the way up to the higher-ranked orchestras. The program also offered a music theory course, teaching the concepts behind the music.

That was the time when heavy-metal, head-banging music was all the vogue. Many Christian parents we knew had all kinds of conflicts with their teenagers over the salacious content and purposefully rebellious attitude cultivated in this music. But we never had any problems like that. Our daughter dismissed her friends' music not because of its immorality

but because she knew about music. "That stuff just has three chords!" she told me. There just wasn't enough to that kind of music to interest her. Another time, when their conductor made them play some atonal modernist abstract music, she and her friends whined and complained until they could play music they could really enjoy— specifically, Mozart.

You need to understand the art form before you can enjoy it at its highest level. This is why you take music lessons, go out for sports, and study *Omnibus.*

I really couldn't expect those students I was tormenting to know any better, though as their professor I was trying to teach them to open their sensibilities to higher things. It also wasn't completely fair to compare rock groups to Mozart.

Different genres of art have their own standards. Within a genre, it is also possible to perceive different levels of merit. Some pop stars are better singers than others, which makes *American Idol* possible. Some rock musicians thrash their guitars to make noise. Then there is Eric Clapton, a guitar virtuoso.

In the genre of country music, Hank Williams, Patsy Cline, and Merle Haggard are objectively *better* than the latest hot act on country radio. By the standards of creativity, musicianship, and originality, these artists are far better than those of lesser talent who simply follow conventions and trade on their good looks.

We can apply aesthetic standards on nearly every level. The principle of complexity and unity? That describes an Eric Clapton guitar solo, a riff by Aretha Franklin, and a Johnny Cash ballad.

Some genres have such complexity and unity built in. We have discussed how in a Bach concerto all of the instruments are playing different music, which nevertheless coheres into a whole. That is also a good description of jazz.

Whereas classical music has been composed so that the musicians are following a score, jazz depends on improvisation. Each musician makes it up as the music goes along, though the whole ensemble is following a strict chord progression and must listen carefully to every other member in the group so that they play off of each other so as to avoid cacophony. Jazz, arguably, grows out of a different worldview—one that values individualism and existential self-invention—as opposed to Bach's objective, God-centered ordering. But jazz requires the very highest musicianship.

Bluegrass is similar to jazz. It too demands musicians that are creative enough to improvise. Taking traditional tunes as a jumping off point, bluegrass musicians trade off solos at blinding speeds.

One might say that the highest form of American popular music is jazz, and that the highest form of American country music is bluegrass. There is just more going on in jazz and bluegrass than in a three-chord rock song or honky-tonk ballad. A still higher form of music is classical orchestral music, which is capable of even more musical complexity.

This is not to say that songs in the simpler genres cannot be complex and unified in their own terms. We should look for quality and appreciate excellence of every kind. You should develop aesthetic taste. But don't become an aesthetic snob.

Another concept that will help you cultivate your taste is the distinction between the levels of culture. As the Christian culture critic Kenneth Myers explains in his book *All God's Children and Blue Suede Shoes,* works of art exist in the folk culture, the high culture, and the pop culture.

Folk culture is the product of a historical community. It is traditional, conservative, and communal. When it comes to works of art, no one person wrote the fairy tale *Cinderella,* or composed the ballad "Barbara Allen," or patented the recipe for barbecued ribs. All of these were passed down from generation to generation, with different families creating their own variations. We have regional folk cultures—that of the deep South, New England, the wild West, the different neighborhoods of Chicago—and we have ethnic cultures with roots in Africa, Italy, Scotland, and wherever.

High culture is the product of talented individuals who create contributions that everyone else can then draw on. High culture grows out of education and genius. Great statesmen such as George Washington and Thomas Jefferson, inventors like Thomas Edison and Bill Gates have contributed immeasurably to our American culture. The great poets, painters, and thinkers that you read and learn about in *Omnibus* have given us our high culture.

Pop culture, according to Myers, has to do with the commercial realm. It is entertaining, technologically-driven, and instantaneously gratifying. Pop culture goes in and out of fashion. Pop culture turns art into a commodity to buy and sell. Achieving popularity and thus making money is its only purpose.

What determines whether or not a television show stays on the air is not its valuable moral lessons (the concern of folk culture) or its aesthetics merits (the concern of high culture), but its ratings. Networks will put on anything that will draw an audience. Music executives give out recording contracts not so much to the most talented musician but to performers whose music, for one reason or another, will sell. The entertainment industry does depend on the talent of the

high culture—musicians, actors, photographers, technicians—but the artists often end up frustrated by the commercial demands of the marketplace, which sometimes distorts or degrades the artistic impulse.

Food in the folk culture is your grandmother's home cooking; food in the high culture is a gourmet meal created by a chef in a fine restaurant; food in the pop culture is a hamburger wrapped in paper shoved at you from a drive-through window. There is nothing wrong with eat-

your only artistic diet is pop culture, you will be aesthetically malnourished and you will miss out on some of the deepest and most edifying pleasures.

Pop culture traffics in what we "like," rather than what is "good." Though it sometimes attracts us with cheap tricks such as sex and sadistic violence, pop culture can be innocent. The problem with pop culture is that it drives out the other kinds of culture. As Neil Postman has shown in his book *Amusing Ourselves to Death,* the

In *Angle of a Dream* painter Joel Sheesley uses reflective surfaces to pose an interesting riddle for one of the 20th century's major concerns about painting: its persistent valorization of "flatness." Two dimensional reflective surfaces simultaneously embody three dimensional space. Sheesley is interested in the dynamic tension between abstraction and representation; between the virtues of analytic reduction and metaphorical expansion.

ing a fast-food hamburger. But if that is all you eat, you will not only develop malnutrition, you will miss out on the love and good company of a family meal and the heights of deliciousness of a fine meal.

Similarly, I am not against all pop culture. Again, even within pop culture, there are gradations of excellence, and it is possible to develop a taste for the best TV shows, the best rock music, and the best fast food. But if

entertainment mentality is now taking over every other cultural realm, from education (where high culture is supposed to be cultivated) to the church (whose hymns and customs reach deep into the folk culture and whose theology and scholarship exemplifies the high culture).

The antidote to the pop culture diet is to make a point of enjoying also the folk culture and the high culture. I myself love the blues, an art form that emerged from

the folk culture of poverty-stricken black Southerners. I also love traditional country music, an art form that emerged from the folk culture of poverty-stricken white Southerners. Later, these strains would be fused together by artists such as Elvis Presley, and rock 'n' roll was invented. Even after this new art form was co-opted by the pop culture, in its best examples you can still pick out the blues stylings in a particularly fine guitar solo and the country heritage in a particularly plaintive lyric.

So grow your musical sensibility by listening to the music of the folk culture: to blues and bluegrass; Irish dirges and Appalachian folk songs. Also listen to music of the high culture: to Bach and Mozart; jazz artists like Duke Ellington and Charlie Parker; great singers like Luciano Pavarati, Mahalia Jackson, and (I would say) Patsy Cline. Similarly, don't just watch TV for your entertaining stories. Delve into the fairy tales, myths, and legends of the world's folk cultures. Read Shakespeare, Milton, Dickens, Tolkien, and other masters of the high culture. All of this will give you a richer aesthetic experience. You will learn to take pleasure in what is good. You will develop good taste.

There is one other thing you need to realize as a Christian going deeply into aesthetics. When you go into the upper reaches of the art world or of the academic establishment, you will find that you, as a Christian, have a profound advantage.

Just as postmodernists reject the true and the good, they also reject the beautiful. In their relativistic minds, standards of beauty—like intellectual truth and moral principles—are nothing more than oppressive constructions by those in power. Since Beauty expresses ideals and perfections, it needs to be subverted. Thus, many contemporary artists create work that is, as they say, "subversive" and "transgressive." They make art that is purposefully ugly. Instead of trying to make their art give aesthetic pleasure to their audience, they try to outrage and shock their audience (thus the art made of excrement and bodily fluids, the blasphemies and desecrations, the pornographic images and gross-out carnage). Ironically, the biggest enemies of art today happen to be artists.

This should not surprise us. Those who have no basis for truth and goodness have no basis for beauty. Christians, though, do have a basis for them all.

As the secularists create a world that is uglier and uglier, increasingly void of order and meaning, and as they become capable of no pleasures other than sensuality and vulgar entertainment, Christians can resist by recovering beauty. The aesthetic treasure that the unbelievers have thrown away Christians can take up for themselves. And when Christians go back to creating compelling works of art like they used to, they will once again shape Western civilization.

—*Gene Edward Veith*

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ARCHITECTURE

Cambridge historian Nicholas Pevsner defined a bicycle shed as a *building*, as opposed to a cathedral, which is *architecture.* Even though architecture exists everywhere, we *use* buildings for functional rather than aesthetic purposes to conduct our lives. Buildings provide protection from the elements, places for everyday tasks, sites to give or receive services of all kinds, or stages for formalized rituals and events. Civilizations display their progress by sponsoring monumental architectural complexes composed of both grand and humble buildings, and ornamental as well as useful structures. Highway systems, bridges, city blocks, monuments, signage, landscaping, parks, cemeteries, fair grounds, ancient ruins, and mere remnants buried in the ground fold into the study of our built environment. Architectural history also surveys how to preserve such constructions, from the Native American mounds of Cahokia to hot dog stands. Millions of small decisions over the centuries contribute to the heritage that influences the construction of all spaces today.

Think of architecture as a historical, physical record of lived experience, revealing human culture through the lenses of social, political, economic, artistic, religious, and technological movements. Just like a person, buildings have a life span and house a narrative of events.

Scripture most often refers to architecture in metaphorical terms, linking structural integrity with moral integrity. The fragility of the house built on sand rather than solid rock underscores the need for a solid doctrinal foundation, but also makes good common sense. The Tower of Babel symbolized misplaced human pride.

which God eventually "confounded" by scattering the self-aggrandizing people who built it. "Unless the Lord builds the house," the Psalmist warns (127:1), the builders labor in vain. What matters primarily to God about architecture is how one uses it: protecting cities with watchtowers is acceptable, but conducting pagan rituals on high is clearly offensive.
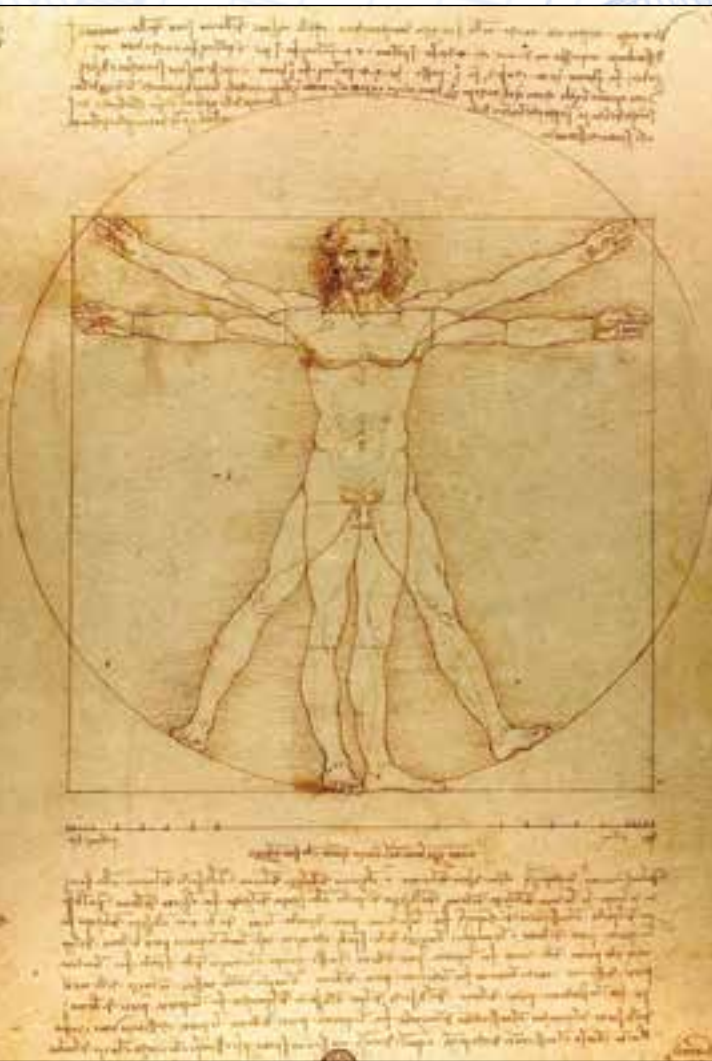
What is Architecture?

The term *architecture* comes from the Greek and Latin roots for "chief" (*arkhi* or *archon*) and "builder or carpenter" (*tekton*), although no one was called an "architect" until the sixteenth century. We rarely discover the identities of the master masons who constructed lofty cathedrals in what historians later called the Early

Christian, Carolingian or Ottonian (after various rulers), Romanesque, or Gothic styles. Yet anonymous medieval builders erected high stone vaults and piercing spires with the simplest tools, and their buildings have remained upright for centuries. Part of the rebirth that Renaissance theorists supported involved the refinement of architectural vocabulary, through formal guidelines based on ancient Roman ruins. Palladio (1508–1580), in particular, revived the writings of the first century B.C. Roman, Vitruvius. Two centuries later, Thomas Jefferson imported Palladian classicism to the new American republic with his plans for Washington, D.C. (1791), the Virginia capital (1796), and the University of Virginia Lawn (1817–1826).

Vitruvius defined the primary qualities of architecture with the Latin terms *venustas*, *firmitas*, and *utilitas*—beauty, strength or structural integrity, and usefulness or functionality. Over the centuries, many individuals contributed to the forms we call the classical orders, beginning with the Doric, Ionic, and Corinthian systems, which include columns, pediments, and sculptural ornament, and later expanded by the simple Tuscan and combined Composite orders. Within each order, strict proportions operate: for example, a column's width dictated its height; spaces between classical columns corresponded to their height. Such formulas established a formal classical canon or set of rules for proper proportion, balance, and symmetry (equal-sidedness).

Even though we don't experience or perceive ideal proportions when we walk through a space, designing by rules and geometric formulas made classical Renaissance architecture an intellectual challenge that even artists like Michelangelo could not resist. Many treatises attempted to demonstrate how facial or bodily proportions corresponded to pleasing architectural measurements. Leonardo da Vinci's iconic *Vitruvian Man* placed the ideal body in a circle and a square, with perimeters that marked the reach of ideal arms and legs. (Don't try this at home, though! Our actual measurements are rarely ideal!) The circle and its volumetric sphere, which appear in rotundas, domes, or halved in apses and lunettes, represents an endless space that has no obvious beginning or end, and therefore symbolizes a perfected whole or eternity. The square and its volumetric cube project perfection through tidy mathematical formulas based on equal sides. Squares and circles appear regularly in planning formulas for Renaissance buildings, which are not discernible to the eye, but easily visible in the decorative patterns on floors and walls (see San Lorenzo, including Michelangelo's New Sacristy).

Leonardo da Vinci's *Vitruvian Man*

"Reading" Architecture

We can learn about architecture by "reading" certain types of diagrams. The site plan shows what "footprint" the building makes on its property. A flattened floor plan displays a building's layout on the ground, revealing walls, doorways, openings for windows, and features like columns on each level, as if the roof had been lifted off. In vertical terms, illustrations of the elevation or façade of a building show how its exterior walls look. Cutaways or cross-sections "slice" through the building width- or length-wise and give some sense of the proportion or spatial design of the interior. Perspective views give a three-dimensional rendering of the building's space, more as it might be experienced in life, and can be tilted at various angles for differing views. Occasionally, you may see exploded or expanded views, which visually explain how the components of a building fit together. These are helpful for understanding the hidden systems that keep the building running. Consider sketching your own home in these ways, and you are bound to see it differently.

Architectural history even investigates the familiar house or apartment where you grew up, which not only reveals the context of a neighborhood at a certain time in history, but also figures into regional, national, and even global movements. Perhaps you have visited the homes of friends who are more or less privileged than your family, and you've noticed differences in the quality of materials, the traffic pattern, or the way rooms are set up. You can bet that the areas in a house used most regularly reveal its inhabitants' lifestyle preferences. Contemporary houses often feature grand entries (even though the occupants prefer the garage entrance), huge entertainment centers (which replaced "family dens"), and enlarged eat-in kitchens designed for "grazing" rather than formal dining—all concessions to contemporary life. In fact, housing trends tell us a great deal about the state of society. For example, severe housing shortages in America after World War II contributed to the innovation of cheap, cookie cutter housing developments, such as Levittown. Levitt and Sons, among others, contributed to the founding of modern suburbia by constructing efficiently planned neighborhoods (at the rate of 30 homes per day) in New York, Pennsylvania, New Jersey, and Puerto Rico, giving middle-class patrons the opportunity to pursue the American Dream by owning their own house. Since the 1950s, though, the size of American homes has expanded by five times, on average, despite the fact that average family size has decreased. Multiple garages, larger room sizes, and more storage spaces for extra "stuff" suggest a period of relative material success.

The Cycle of Style

Architectural style "speaks" to us about the building's nature, function, status, or place in history, and every style that dominates culture for a time tends to be overthrown by a subsequent generation. Imitating or reinterpreting a historical style, which is called historicizing, is a design approach that reorganizes widely familiar architectural elements. Architects who oppose historicism try to invent a new style that reflects their own time period. Classicism, as the oldest "academic" style, has remained a constant target: Baroque and Rococo designers had to tart it up, dressing it up and making it fancy, stretching its rectangles or circles into oblongs and ovals; Victorians tired of its predictable repetition; modernists simply hated revisiting older styles, wanting an architecture that suited modern times; postmodernists injected a sense of irony by lampooning, in some ways, the classic features of classicism—summed up by Michael Graves' Team Disney Building in California (1991), which features the Seven Dwarves holding up a pediment.

Classicists felt that orderly architecture promoted orderly society. This idea of architecture as an abstract or ideal, rather than a purely physical construction, has roots in the writings of Plato and finds expression in the development of the classical temple structure in Greece (e.g., the Parthenon, fifth century B.C.). Ever wonder why so many buildings in Washington, D.C. feature triangular pediments, fluted columns of white marble, and classical statues? Thank Pericles, the great statesman of ancient Athens, who attempted to project a sense of political permanence and power through an ensemble of incredible buildings on the Acropolis. Unfortunately, Athens fell to the Spartans two decades after the Parthenon was completed, proving that a grand architectural statement, in effect, was powerless to prevent military defeat. And yet, classical Greek or Roman features still symbolize the strength and endurance of democracy, particularly in Washington.

Throughout the eighteenth and nineteenth centuries, the main academies in France, Britain, and America accepted nothing less than Greco-Roman classicism as the basis for an enduring, universal expression of Western civilization. However, during the Victorian period (based on the reign of England's Queen Victoria from 1837 to 1901), architects firmly rejected the regimentation of classical white marble pediments and columns. Victorian designers preferred to mix and match exotic, foreign, and eccentric elements for a picturesque, visually stimulating effect, studding their architecture with color, shapes, textures, and depth. Some Victorian approaches, such as the

Arts and Crafts movement started by England's William Morris, began as critiques against the impersonality of the Industrial Revolution, advocating a return to handcrafted yet affordable art, and medieval guild systems. Arts and Crafts designers around the world coordinated ensembles of matching architecture, furniture, wallpapers, textiles, stained glass, original art and landscape treatments.

Other Victorian architects felt convicted that "modernization" meant combining industrial solutions with aesthetic design and began adapting the huge metal trusses that supported major train stations, colossal market buildings, factories, and glass-walled garden conservatories to non-industrial projects. Mid-nineteenth-century masterworks that exhibit both technical daring and artistic beauty include Henri Labrouste's Ste. Genevieve Library in Paris, Joseph Paxton's temporary glass and cast iron Crystal Palace, and Deane and Woodward's Oxford Museum of Natural History (influenced by John Ruskin). While Ruskin accepted the use of glass supported by cast iron columns, his editorials always urged a return to Gothic motifs and forms, which were called "Christian pointed architecture" at the time. Ruskin and A.W.N. Pugin, in particular, advocated medieval styles as more "authentic" to Britain and more "moral" than pagan neoclassical architecture.

As Victorian taste began fading in popularity, a committee of America's most prominent architects presented a gleaming array of neoclassical buildings ringing an artificial lagoon at the 1893 World's Columbian Exposition in Chicago. These temporary straw-and plaster-constructions, known collectively as "The White City," inspired the redesign of Washington, D.C. in 1901 according to the original 1791 plans overseen by Jefferson and L'Enfant and prompted an urban redesign trend using classicism called the "City Beautiful" movement.

Modernists in the early twentieth century objected to both Victorian ornament and the repetitious rules of classicism, insisting on a "modern" approach to design that reflected progressive if not futuristic technologies and materials. German Walter Gropius (1883–1969), who taught at the Bauhaus and Harvard, argued for architecture as the unifier of all other art. An emphasis on function led to a practical overview of architecture as a machine with working parts, prompting Le Corbusier's statement that "a house is a machine for living in."

Modernists played with open rather than fixed floor

The Farnsworth House
by Ludwig Mies van der Rohe

plans, flat roofs, pre-fabricated parts, non-symmetrical placements of windows or doors, and moveable walls that presented a planar effect, paralleling art movements like Cubism and Russian Constructivism. Eventually, a strict set of rules defined High Modernism, also known as the International Style after an influential 1932 exhibit because it could be universally applied to any setting or climate.

As modernists anticipated population explosion in cities, many embraced the ancient idea that orderly architecture could order society, or the way people behaved, but chose a stripped-down style that has not always stood the test of time. They founded many international consortiums, like CIAM, to head off the urgent challenges of creating architecture for a rapidly expanding world in dire need of affordable mass transportation and healthier living conditions. As Peter Hall's *Cities of Tomorrow* explains, solutions for better suburban and urban life existed for centuries but matured during the Industrial Revolution, when humane village and town plans for the working class began receiving more notice. In the 1920s, Swiss-born Le Corbusier (1887–1965) designed the first of several model cities for millions of people, housed in huge towers surrounded by parks and hidden highways and train systems. Germans Mies van der Rohe and Ludwig Hilberseimer, teaching in Chicago after World War II, rationalized a scheme of "superblock" apartments on a grid, hovering above extremely sterile mass transit avenues. Such monumental urban schemes were rarely realized, except in smaller segments, such as Brasilia, in Brazil, and Corbusier's Chandighar in India. Humans, in the end, are sloppy by nature, creating garbage, pollution, noise, and visual chaos that no architectural design could possibly control. (No one trained you how to mess up your room, right? But how often have you been hounded to pick it up?)

Because postmodern architecture refers not to a specific style or philosophy, but merely the time period following modernism, many scholars consider it a flawed term. Postmodernists in the 1970s debated vigorously about the direction architecture ought to take, leading to a standoff characterized by a plurality of individual styles.

Some fought against the former dominance of spare Modernist design by rejecting functionality and embracing ornament and symbolism, as if the past offered an encyclopedia of recovered meaning. A 1980 exhibit at the prestigious Venice Biennale, titled "Presence of the Past," demonstrated that everything—even new forms of classicism—had been allowed back into architectural practice. One group, dubbed "The Whites," reinterpreted Le Corbusier's white boxes, hoping to transcend history as the Modernists had with a "high" form of architecture (see Meier, Gwathmey, Hejduk, Eisenman). "The Grays" argued for a "low" form of design, gleefully muddied by individualistic design approaches, that appealed more to the public by narrating a storyline from history and culture (see Venturi, Scully, Moore). Meanwhile, other architects promoted "deconstruction" by dismantling our expectations of architecture along with its very structure, paralleling Derrida and Foucault's interrogation of meaning in language. After their initial introduction to the wider public at an exhibit in 1988, many deconstructivists altered their radical, theoretical approaches for practical reasons during the following decade and finally located the technology to actually build such chaotic forms (see Libeskind, Gehry, Eisenman).

The realization that most humans generally prefer variety and surprise in their daily environments led postmodernists to design more humane urban complexes. One excellent example of this New Urbanism appears in *The Truman Show* movie, set in a digitally modified version of an actual town in Seaside, Florida. Here, a combination of carefully proportioned house designs contributes to a tidy yet diverse looking neighborhood which rings the town's service core. Everything optimizes the beautiful ocean sunsets. Some individuals protest New Urbanism precisely because a plan that presumes to anticipate everyone's needs and habits reduces actual life into a caricature of aesthetic perfection. Another stream of architecture, defined by some as Critical Regionalism, embraced the natural building practices and materials of non-Western cultures, intentionally modeling architecture on the simpler but efficient inventions of folk life (see India-born, MIT-trained Charles Correa). Late twentieth-century scholars began seeing the value in vernacular buildings for everyday use (such as barns and gas stations) or noticing trends in simple housing forms (such as the bungalow)—structures that regularly serve the majority of the population. Recent scholarship emphasizes the fact that distinctive regional forms of architecture project the same validity and vitality as universal, monumental, or classical forms, and deserve to be investigated with the same rigor.

Fallingwater, or Kaufmann Residence, is a house designed by American architect Frank Lloyd Wright in 1935 in rural southwestern Pennsylvania. The home was built partly over a waterfall on Bear Run. Given the humid environment from the running water, mold has proven a problem. The elder Kaufmann called Fallingwater a "seven bucket building" for its leaks and nicknamed it "Rising Mildew." Condensation under roofing membranes was also an issue due to the lack of a thermal break.

Critical Issues

Unlike twentieth-century artists who intentionally subverted meaning, structure, and discipline to test the relevance of art, architects have always had to produce edifices that function and remain standing. Through time, architects tested the ideals and rules of a "pure" or predominating style, such as classicism, against forms extrapolated from observed nature or inspired by personal imagination. Ayn Rand's novel *The Fountainhead* (1943) highlights the intense struggle between classicists and modernists. Commentators writing on one of the most prominent American architects, Frank Lloyd Wright (1867–1959), described his early Prairie-style homes as "organic" because Wright's designs allowed the best views of nature, brought the most pleasing natural effects into the house, and seamlessly meshed built forms with the surrounding environment. Postmodernist Frank Gehry (b. 1929), who innovated the "Bilbao Effect" with his famous titanium-sheathed Guggenheim Museum in Spain, epitomizes design processed by the imagination, with self-derived forms, rather than by rules or nature. Gehry sketches freehand forms, and then contracts computer programmers to figure out how to construct his ideas. This approach results in freeform architecture that encases interior spaces, like art galleries, in billowing, metallic folds that ambiguously suggest sails, boats, fish scales, or the shape of wind blowing. Charles Jencks, one of the first scholars to argue that postmodern architecture sought to reclaim language and symbolism after the failure of Modernism, calls Gehry's buildings "iconic architecture," because they become "icons" in their own right, without referring to anything but themselves.

Of course, the greatest dilemma facing contemporary architects involves the combined impacts of population growth and environmental issues aggravated by our abuse of natural resources and pollution. Given the Genesis mandate to care for the environment, one would expect Christians to maintain a higher profile in this discussion. In general, developers heartlessly scrape all the trees off their plots, for efficiency, and plunk houses down without considering the direction of sunlight, wind patterns, or natural features of the property, because it costs them less. Conscientious architects are trained to make environmentally responsible choices and to position the building in a way that preserves as much of the landscape's natural features as possible.

While we can point out "Christian buildings," we rarely, if ever, hear someone described as a "Christian architect." Church building commissions don't generally

inspect the character, morality, or religious convictions of the firms they hire. They simply want a good, affordable, and serviceable building. In the larger cultural sphere of architectural endeavor, however, a definitive Christian response is lacking in the important fields of urban design, green technologies, and aesthetic integrity. Clearly, there is a natural tension between the call to focus on the spiritual future of redemption and eternal life, and the need to build our environment responsibly. Academically, the historical period called "Christian Art and Architecture" corresponds specifically to the growth of the early Christian church, from the fourth to eighth centuries, when Rome, Ravenna, and Byzantium became established as centers of a powerful ecclesiastic system sponsored by emperors and kings, starting with Constantine's Edict of Milan in 312. After this point, church officials wanted to project power, so they adopted basilica or rotunda formats from Roman imperial architecture for their early churches, starting in the fourth century. The reasons for this are, of course, complicated. Some church leaders, no doubt, wanted to project their own personal power and authority. Some chose this form to highlight Christ's authority and kingship. Many adopted it because it was the popular style of architecture for meaningful public buildings in the Roman Empire.

Basilica, which translates from Latin as "hall of kings," provided an efficient rectangular format with side aisles that facilitated royal and liturgical processions. Early Christian builders translated the apse end of Roman basilicas, which contained a monumental statue of the reigning emperor, into a half-circle shape on the eastern end of the building (where the sun rises, and the focal point of the altar is located). Using the body metaphor, the apse represents the "head" of the body, and Jesus Christ is the head of the church.

Interestingly enough, architectural history textbooks never question the validity of church architecture from the fourth to sixteenth centuries, but the category gradually evaporates from the narrative and disappears altogether by the late modern era. Beyond Le Corbusier's 1955 *Notre Dame du Haut* in Ronchamp, which eminent Berkeley historian Spiro Kostof called a twentieth-century masterpiece, one hardly sees any discussion about contemporary ecclesiastic design in academic journals. This legacy of the Modernist discussion arose from an assumption that faith in the West was on its way out, resulting in the marginalization of modern church architecture. Publications like *Faith and Form* entertain the topic in a non-critical, non-theoretical and mostly descriptive way. Many useful books go into depth on the

The adobe- and pueblo-inspired Cathedral of Our Lady of Angels in Los Angeles
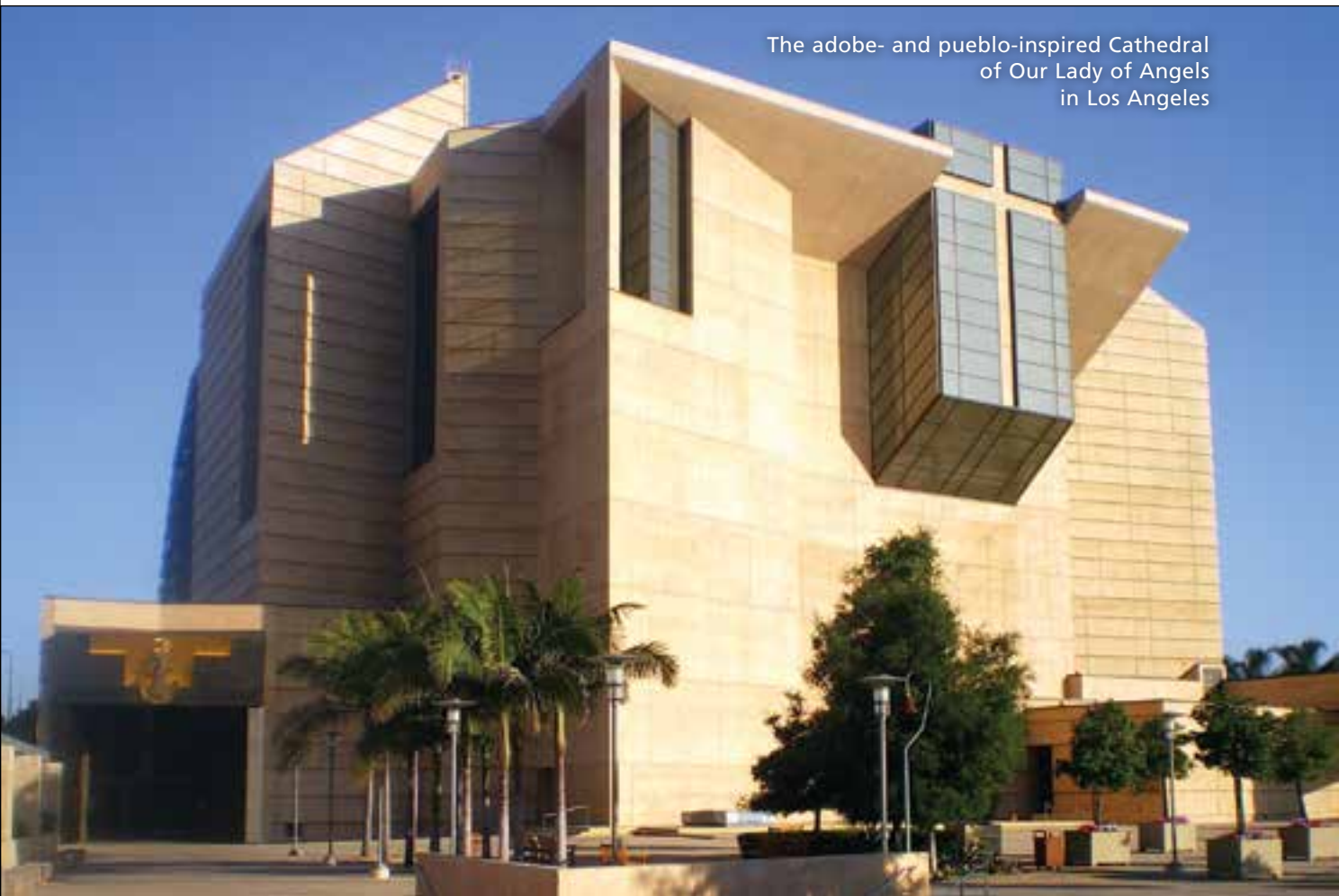
entire historical narrative of ecclesiastic architecture (see Richard Kieckhefer, Judith Dupree, Thomas Barrie, or Mark Torgerson), but few address the reasons for the gap between the critical literature about traditional church architecture versus its contemporary expressions.

That this gap exists at all is all quite interesting in light of the fact that *every* major twentieth- and twenty-first-century architect, regardless of personal faith, has competed for major commissions to design sacred spaces. Resolving the design for a space with such lengthy historical roots in the record of human history tantalizes architects, who must use physical materials to construct a place for sublime, spiritual experience. Mario Botta's striped cylindrical churches, Richard Meier's bisected spheres for the Jubilee Church in Rome, or Raphael Moneo's adobe- and pueblo-inspired Our Lady of

The Crystal Cathedral

Angels Cathedral over the Los Angeles freeway represent a few contemporary responses. "Seeker sensitive" and megachurch movements have required huge building programs but rarely sponsor a "signature" style. One exception might be Reverend Robert Schuller's church campus, which moved far beyond its origins at a drive-in theater by commissioning the glassy, $72-million Crystal Cathedral in Orange Grove, California, designed by leading American architect Philip Johnson (1906–2005).

Regardless of the "high" *architecture* discussion about churches, our landscapes are punctuated by church *buildings* of every kind, in numbers that defy calculation. Many of us have even worshipped on fields, in temporary structures, under tents, in high school auditoriums, or in boring cube-like gymnasium spaces and still experienced spiritual connection just as surely as we might have in a medieval Romanesque or Gothic cathedral. We can actually pray to God or worship *anywhere*. Typically, however, we do not worship just *anywhere*, but construct worship halls that specifically provide a place for our spiritual interactions with God and that intentionally incarnate our deepest theological convictions. More seminaries and divinity schools ought to prepare their students in ministry for building campaigns. Rather than sponsoring merely adequate vessels for Christian endeavors, why shouldn't the buildings associated with our faith exhibit blazing creativity? Most new churches fall back on classicism as a default style, without thinking through the symbolic implications. They can buy the elements more cheaply than ever, produced in hollow vinyl or aluminum for Lowes or Home Depot, but what does this artificial classicism actually "say" about the endurance of our faith?

If we consider architecture as a language, there are many different dialects, or choices, that can convey reflections of God's identity, knowledge and precepts in architectural form—although individuals may argue long and loud about their bias towards classical, Byzantine, or various traditional formats. Why not sponsor buildings that converse with the God-given delights of nature? Show originality? Turn on a concept that the congregation holds dear, such as reconciliation, community, or love? Model the store of infinite creativity that we are connected to, as beings made in the image of an infinite Creator? Contemporary church buildings need not offer some of the worst clichés in architecture. Not surprisingly, one of the largest congregations on earth, Joel Osteen's Lakewood Church, meets in a bland former football superdome, plus stage lighting. When the Anaheim Vineyard outgrew its supermarket warehouse, what did it build for millions of dollars? A bland supermarket warehouse-like building! Have we such limited abilities to innovate?

Where are the Christians in urban design? Augustine, in particular, brought attention to the metaphorical parallels and contrasts between the City of God and the City of Man, but overall we would have to conclude that most city housing projects around the world have failed their occupants. Those that work tend to relate to the depth of community commitments. Not only do we lack individuals willing to identify themselves as believers who have made significant impact on urban improvement, but we also lack specifically architectural analyses of note on the topic by Christians. Who will bring redemption to this field? Who will fight the good fights for those who cannot afford decent housing?

Christians in general seem somewhat resistant to the green conversation, even though our calling to be good stewards of the created world relates so directly to the Genesis mandate about our dominion over the earth. Increasingly, architects building new churches are attempting to persuade church congregations to pay for green roof systems, rainfall recycling, reused and reusable building materials, and passive heating or cooling technologies that do not require oil, coal, or gas in the long run. Responsible stewardship of our financial resources, as well as the natural resources granted to us, allows future generations to thrive. While green technologies may cost more initially, the end result can provide substantial savings in energy costs and can certainly benefit the environment. Christians should not be "green" because it is currently trendy, although it is, and they should not be compromised by any pantheistic theologies concerning the environment or political coercions in the name of saving the planet. But with that said, there is nothing wrong with good old-fashioned stewardship. In matters of stewardship and creation, Christians of all people, should take the lead.

All these questions require Christian responses and hard work. Christian reactions are a different matter as far as architecture goes. So many church campaigns amount to building a big box on a prominent site, as if bigger is better. If we don't buy evolutionary theory wholesale in our science classes, why should we always support the concept that bigness and grandness shows success to the unsaved? Why not advocate quality or innovation as well as quantity? Does the world really need another 50- or 150-foot high cross? How about an arresting, artistic design instead? What if our seminaries, divinity schools, and Christian colleges taught future ministers something that actually prepared them for building campaigns, which some of them will inevitably face, as well as the history of building?

Your charge as Christians regarding architectural matters can be summed up quite efficiently. No arena of activity in this world has too many Christians involved in it. When you can improve on a building, do so, because people inherently respond to *good* (not just adequate or efficient) architecture. When you can make a choice that demonstrates good stewardship of the environment, do so, because God cares for creation, which currently groans. And finally, if you have the chance to choose quality over efficiency, think hard about it. Additionally, if you have the kinds of gifts that architectural training or construction management might require, go for it! Your example can bring standards of excellence and integrity into an area where unscrupulous builders, commercialism, developers' greed, and scant attention to nature in the landscape have influenced too much building.

A Christian Response

How interesting that the only artist described in detail in the entire Bible turns out to be invested in the design and decoration of the Tabernacle. Exodus 35 and 36 describe an individual with technical proficiency as well as the right heart and a willing spirit. God, through Moses, specifically called Bezalel, we are told, and granted him "skill, intelligence, and knowledge in every kind of craft, to devise artistic designs, to work in gold, silver, and bronze, and in cutting stones for setting, and in carving wood." Moreover, Bezalel was an inspired teacher, willing and able to pass his skills and example on to future generations. Teaching: *always* important. Moreover, Bezalel is willing to collaborate and share this calling with Oholiab as well as teams of others skilled in various crafts. Collaboration, while hard: always a good teacher. The filling of Bezalel by the Spirit of God and his willingness to "do the work" suggest an attunement to the goals of the ultimate Maker, rather than his own agenda or need for self-realization. Sacrifice for God is ultimately enriching. Exodus also explains that Moses has to restrain the people from donating too many "freewill" offerings to the building campaign—a condition that rarely, if ever, happens in our own church projects.

Of course, the Tabernacle differs greatly from its more permanent expression in the Temple of Jerusalem, visualized by Ezekiel, realized by Solomon, and renovated by Nehemiah and others. Roman soldiers pillaged Herod's reconstructed Temple in A.D. 70, leaving only one foundation wall in place—the Wailing Wall, where Jews have left paper petitions in the mortar cracks for centuries. By the seventh century, Muslims supplanted both Jews and Christians on the Temple Mount, crowning it with an Islamic shrine called the Dome of the Rock to honor Abraham, Sarah, and the prophet Muhammed. A complicated history underscores the loss of this major Jewish monument, yet begs the question: did God really want a

house, or did the people want a house? Didn't God really want the obedience of the people? Some actively wait for the third Temple to be reconstructed, but the New Testament proffers only an unusual substitute.

In 1 Peter 2 we learn that the people of God have become *living stones of the new temple.* God's answer to the lack of a building, or a prime location like the Temple Mount, is community—an unassailable replacement. As Paul emphasizes in Ephesians 2, "you are no longer foreigners and aliens, but fellow citizens … built on the foundation of the apostles and prophets, with Christ Jesus himself as the cornerstone." This Cornerstone, prefigured in Isaiah 43, is prominent enough to be a "stumbling stone" to the unsaved, the stiff-necked, the stubborn goats, the shallowly planted, and the whitewashed sepulchers who seem perfect on the exterior, but are filled with death inside. "Jews demand signs and Greeks desire wisdom," Paul argues in 1 Corinthians 1, "but *we* proclaim Christ crucified, a stumbling block to Jews and foolishness to Gentiles, but to those who are the called, both Jews and Greeks … the power of God and the wisdom of God." The Cornerstone, intentionally laid in Zion to trip nonbelievers, will not similarly shame those who repent of their unbelief.

Consequently, every living stone that rests on the Cornerstone contributes to the building's soundness, wholeness, and beauty. You may be a beautifully carved bracket, or a sturdy slab of stone supporting a wall, hidden amidst the other stones. You may serve as a gutter spout or a lowly doorjamb, but you are equal to the window that allows the glorious light of day to pierce the interior ambience, and the finial that decoratively tops the roofline and leads the eye heavenwards. Each living stone contributes to the total effect, steadfastly supported by the cornerstone. This portable iteration of community stands firm in the wake of all catastrophes and crises. For wherever we are, as Ephesians 2 concludes, Christ joins the whole building together, "to become a holy temple … built together to become a dwelling in which God lives by his Spirit."

The architecture of community makes for a mighty good building.

—*Karen Mulder*

For Further Reading

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The people of God have become living stones of the new Temple: "You also, as living stones, are being built up a spiritual house, a holy priesthood, to offer up spiritual sacrifices acceptable to God through Jesus Christ" (1 Peter 2:5). Depicted is a model of the Temple complex.
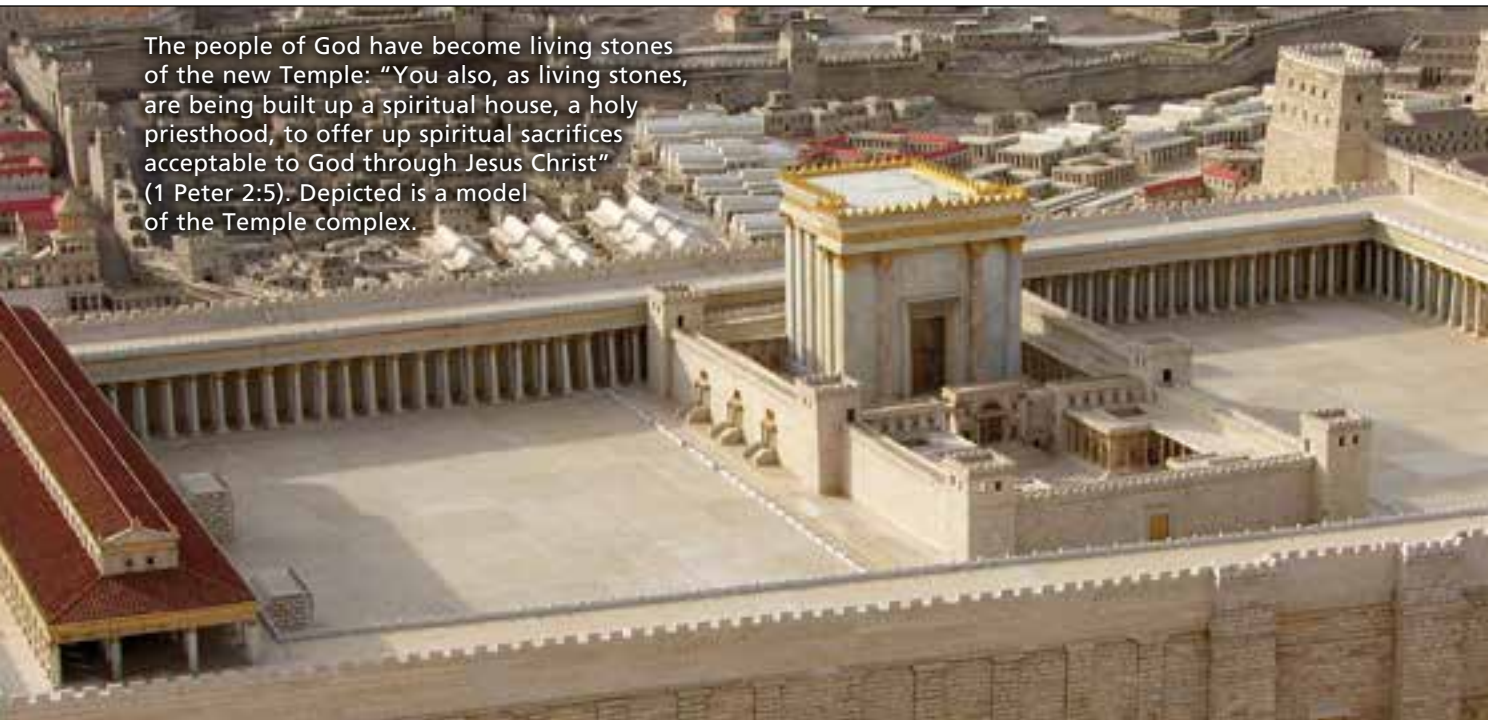
B U S I N E S S

When he was in high school, my third son, Travis, played the lead character, Tevye, in the perennial Broadway hit, *Fiddler on the Roof.* I will never forget Travis's laugh-out-loud funny rendition of the song "If I Were a Rich Man" as he broke into a shimmy, enjoying the role more than anyone should be allowed.

The song idolizes the idea of being rich by saying, "All day long I'd biddy biddy bum, if I were a wealthy man. I wouldn't have to work hard." Who doesn't want to make money? Who doesn't want to be wealthy?[1] In business the bottom line is to make money and, at least theoretically, the more the better. In fact, the term *bottom line* is a colloquialism that is borrowed from business that literally means the last line on an income statement, which is a tool that you will learn later is very valuable in business to keep a record of how a business is doing.

The popularity of lotteries and gambling establishments such as casinos—both found increasingly throughout the United States—is testimony to the fact that nearly everyone is interested in having more money. It is also testimony to the fact that they want it quick and easy—no effort, no work, no sweat—just like Tevye envisions his life would be if he only had money. Fortunately (or unfortunately, depending on your view), that is not how God made the world to work best.

R.C. Sproul has often joked, "I can understand why 'a fool and his money are soon parted.' What I can't understand is how they ever got together in the first place." Seeking wealth in a "something for nothing, get-rich-quick" way is not what God intends for us, and we should not expect it or even want it. Scripture teaches that hard work is the means by which we secure the resources to live. Proverbs is full of on-point wisdom. In Proverbs 6:6–11 we read,

Go to the ant, you sluggard!
Consider her ways and be wise.
Which, having no captain,
Overseer or ruler,
Provides her supplies in the summer,
And gathers her food in the harvest.
How long will you slumber, O sluggard?
When will you rise up from your sleep?

The oldest operating McDonald's restaurant is located at Lakewood Blvd. and Florence Ave. in Downey, California. The first McDonald's opened in 1940 in nearby San Bernardino.

© Bryan Hong

A little sleep, a little slumber,
A little folding of the hands to sleep—
So shall your poverty come on you like a prowler,
And your need like an armed man.

Business, maybe more specifically, work, is the means by which we make money. Businesses pay wages to employees. Businesses sometimes provide additional benefits to employees such as health insurance, funds for retirement plans, memberships in clubs and organizations, or profit sharing. A business also provides the opportunity for its owners to make a profit. And, of course, a business provides goods or services to meet the needs of customers. Businesses are generally started and sometimes run by people called entrepreneurs.

Entrepreneurship

An entrepreneur is a person who organizes and manages any enterprise, especially a business, usually with considerable initiative and risk. Entrepreneurs start businesses because they have an idea to provide products or services for which they believe there is a need or demand—a market. Sometimes they buy existing businesses because they believe they can make them bigger, better, and more profitable.

To be an entrepreneur you will need some capital (money to start or buy a business), an idea to develop, and a considerable amount of courage. If you are prone to worry or lose sleep at times when you have considerable responsibilities, you may not be cut out to be an entrepreneur. But, if you find yourself frequently thinking about new ways to do something, are comfortable in leadership roles and creative, cutting-edge thinking, and you don't mind taking risks, then you might have what it takes to be one.

It is not necessary to be an entrepreneur to be a successful businessman, but if you intend to *own* a business or be its top leader and grow it to any significant size, the gifts common among entrepreneurs are essential.

Ray Kroc, the founder of McDonald's, has a story worth telling of successful entrepreneurship. An early job of Ray's had him selling milkshake makers. One of his customers was a business in San Bernardino, California, owned by the McDonald brothers. They were building more stores and were interested in his product for their new locations. Ray agreed to work with them, but became frustrated with their unwillingness to grow as quickly as he thought they could, so he bought the business from them. The idea that impressed him enough to buy their stores was that they had an assembly line approach called the "Speedee Service System," which allowed the restaurant to prepare the customer's order fast and inexpensively. He also believed it was important to give the customer a consistent experience and have the food taste the same whether it was served in New York or Dallas. Of course, there were many other great ideas that Ray and his talented employees instituted. No one needs to tell you that his formula has worked rather well—billions and billions of times.

Yet, as good an entrepreneur as Ray was, there always

seem to be ways to make things better. Dave Thomas, founder of Wendy's, no doubt was a keen observer of the McDonald's success. He just believed that he could do some things better. One idea important to his success was the drive-thru window. Before the early 1970s, neither the burgeoning McDonald's restaurant business nor the more recent Burger King organization had used such a feature to help customers order and get on their way so quickly. How long do you think it took for McDonald's and Burger King to copy Wendy's and incorporate the idea?

Now if you are a budding entrepreneur, you're dying to know the answer to a question: What was the idea that made Burger King, the third restaurant of the big three fast food restaurants, succeed? There are two innovations that stand out. The Insta-broiler, which was required in all franchises from early on and gives their burgers that "flame-broiled" flavor, and the "have it your way" mentality were two key ingredients to Burger King's success. Cooking over an open fire gave Burger King a taste that many thought better than the grill-top-prepared McDonald's' burgers. And Burger King knew early on that giving a customer their burger exactly the way they wanted it—"Hold the pickle, hold the lettuce, special orders don't upset us …"—would be a valuable service for customers.

This kind of innovation and building on the success of others has been and will remain key to the success of future businesses and the entrepreneurs that build them. There always seems to be room for new businesses with the idea of taking what someone else has done and making it better. And, of course, there will always be room for new inventions and innovations, too. But we are getting ahead of ourselves a bit. Before we ask dad for a million to fund our great idea, we have some basic details to cover.

What is Business?

Business may be defined as "a company or other organization that buys and sells goods, makes products, or provides services."[2] Providing goods or services for a fee is generally what a business does. Goods and products are anything that is physical, such as tiny precision-milled screws used in watches, a laptop computer, ships that carry cars across the Atlantic from Germany to a U.S. port for distribution to car dealerships. Have you ever wondered where you would go to buy such a ship? Or how much it would cost?[3] Services include activities like real estate sales, legal services, and architectural drawing by which we might build a house.

Just like a doctor has tools to judge the health of a patient, the businessman has tools to judge the health of his business. Like a thermometer, a stethoscope, or a blood pressure gauge, these tools tell the businessman if his business is well—or if it is ill.

Financial statements are the tools that show how a business is doing at any given point in time. Business owners, vendors, investors, and bankers who may be asked to loan money to a business use these financial statements to evaluate the company's performance, and these tools allow them to see aspects like whether the business is growing or changing in any way. There are two basic financial statements: the first is called a balance sheet, and

This balance "sheet," in the form of a clay tablet, dates back to approximately 2040 B.C. during the Third Dynasty of Ur in Mesopotamia, around the time of Abraham. The document gives an accounting of the raw materials used in a basketry workshop as well as days worked by the artisans.

An enduring image on the American landscape is that of young entrepreneurs operating roadside lemonade stands. This youngster is selling squash and cucumbers as well as lemonade. Such scenes are especially common in rural areas dominated by agriculture. The child-operated roadside stand was famously parodied by Charles Schulz in his *Peanuts* comic strip, where Lucy was sometimes shown peddling psychiatric help for "five cents, please."

the second is called an income statement, which is also sometimes called a profit and loss statement.

A balance sheet contains three basic categories; assets, liabilities, and capital. The math on a balance sheet is only correct if assets = liabilities + capital. Assets might include the money the business has in the bank, money owed to you as the business owner by customers who bought something but have not yet paid for it (Accounts Receivable), the things the business makes to sell, like the laptop computers mentioned above, and the real estate the business owns. Assets are generally things with value that can be sold.

Liabilities include the money you owe for things you bought but have not yet paid (Accounts Payable), any amount borrowed from a bank or individual that has

not been repaid, unpaid taxes such as sales tax you have collected but not yet sent to the government who is owed them.

Capital is a little trickier. Most businesses need money to start, whether it is five dollars to buy the lemons, sugar, cups, and ice for a lemonade stand or hundreds of millions of dollars, maybe even billions, to open a shipyard to build freighter ships that can carry cars from Germany to America. There is an adage in business that says, "It takes money to make money." This money that goes into a business at the beginning is called capital. Investors who put up this money are generally the owners of the business, and they hope their investment will produce a profit, or a "return on their investment."

The second basic financial statement, the income

statement, contains two major categories: income and expenses. Income is the value a business receives from the sale of goods or services. Expenses are costs incurred to operate the business. The cost of paying an employee is an expense; so is paying rent for an office or store. As mentioned earlier, businesses generally sell goods or services, and sometimes both. The income statement for a business that sells goods generally has two major types of expenses: *general and administrative* expenses and *cost of goods sold* (COGS). General and administrative expenses include salaries, rent, computers, and pencils. COGS relate directly to the product being sold. If you buy tea from China or coffee from Juan Valdez in large bags at the cost of $1.00/lb and repackage it into individual one-pound bags to sell for $10.00/lb, your COGS would be the $1.00 per pound. Of course, you would have other COGS to include, like the bag in which your customer took home his pound of coffee or tea.

The difference between income and COGS is called *gross profit*. Businesses won't survive if their COGS exceeds their income.

The *net profit* is the bottom line mentioned above. It is also the number that connects the income statement to the balance sheet. Remember the capital section of the balance sheet? The net profit is a number that is copied to the balance sheet in the capital section under the line called *retained earnings*. This connection between the two reports is how we know that we have some chance of having accurate reports on the business.

Here is a typical skeleton income statement for a business that sells goods:

Income
- COGS
Gross Profit
- Expenses *(General & Administrative)*
Net Profit *(also called Net Income)*

Now all this may seem rather dry and boring. Be assured, to a business owner it is not—nor to an investor or potential investor. In fact, there are very wealthy investors who have become so good at reading financial statements—both what is recorded in them and what cannot be recorded in them because of the general rules used to keep them—that they have made hundreds of millions of dollars primarily by honing their skills at reading these statements of businesses in which they then have invested.

The "score-keeping" described above is only one area of business—albeit a very important one—and it is generally called *bookkeeping*. Imagine playing a sporting event without knowing the score. You might

be one point behind in a basketball game and choose to hold the ball with 10 seconds left rather than drive for a layup because you assume you are ahead and have no information to tell you for sure. Good bookkeeping (and producing good financial reports) is key to running a business well, but it's not the only area.

Other major areas of business include sales and marketing, legal and accounting, operations, human resources, information technology, and sometimes, research and development.

It is often said that nothing happens until someone sells something. A broad statement like this has some truth in its shock value. Yet sales and marketing are extremely important in most businesses. The concept of sales is fairly easily understood. Marketing is what is done to make sales happen, the means to develop a business and advertising (like television commercials or radio ads). If you start a business in your garage to sell putters to golfers, you had better have a plan for making people aware that your putters exist and that they are better than other putters, or maybe as good but at a lower price.

Karsten Solheim, the engineer who invented Ping golf clubs, actually did start his business in his garage. And he did have a better idea for putters. In the 1960s most putters were fairly simple and simple looking. However, as an engineer and avid golfer, he knew that one reason for missed putts was not striking the ball in the center of the putter, the "sweet spot." He realized that if he moved
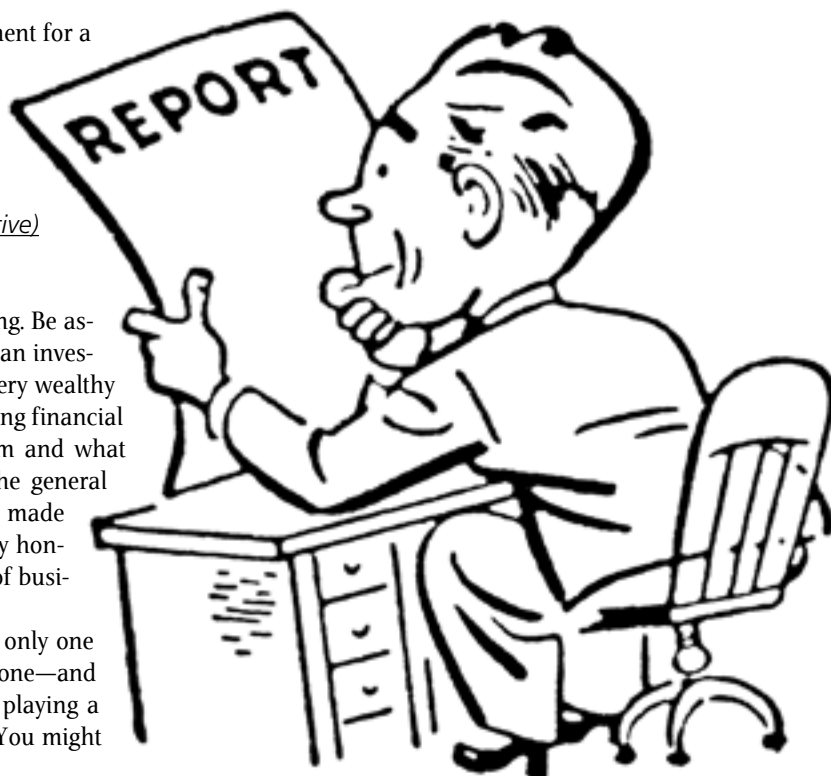
much of the weight of the putter to each end of it that a putt struck slightly off center was less adversely affected and was more likely to find the hole because the spreading of the weight of the putter like this effectively enlarged the sweet spot. It was genius, but to succeed in business takes more than a good idea. How were golfers going to hear about this ingenious putter and be willing to try it themselves? Fortunately, Solheim was able to convince some professional golfers to give it a try. When Babe Hiskey won a professional tournament using his putter, the business had good exposure and publicity that even all the money in adverting cannot buy. Nothing sells like success.

Today's world requires businesses to pay close attention to numerous areas that add very little to productivity and would be a waste of time and other resources if there was an alternative. Two of these areas are legal and accounting. Laws provide operating rules for societies. Murder is illegal; so is stealing. These, of course are good laws. But what if you wanted to name your new beverage business Coca-Cola? Do you think you could? Probably for about as long as it would take some powerful Atlanta lawyer to dial your phone number. While it seems a good thing to avoid confusion in the marketplace by protecting the name of a business or product with trademarks or copyrights, doing so adds nothing to productivity. However, legal protection is very important if you are trying to guard your invention or copyright from a competitor who is trying to steal your idea or brand name. Herein lies an interesting dilemma for the business owner because he is routinely faced with more issues than just making a great product or providing a wonderful service.

If your business can bang out umpteen thousand cans of soda per hour but someone else is allowed to steal the formula and duplicate what you make without the same costs, you quickly realize that these protective efforts are important, too.

Even more of a drain on productivity is keeping record of taxes, paying taxes, and tax planning. In the United States our national, state, and local tax laws are so complex that an enormous amount of time, money, and effort for any business must be dedicated toward this issue and away from the purpose of the business. Today, for some good reasons and some not-so-good, environmental concerns and laws have added a huge layer of administrative bureaucracy to operating certain businesses.

Accounting, which includes bookkeeping, requires dedicating enormous resources to produce required reports for tax purposes—another drain on the productivity of most businesses. On the positive side, accounting in general provides

One of the most successful brands ever conceived is Coca-Cola. First sold in 1886 at a drugstore in Atlanta, Georgia, Coca-Cola was a non-alcoholic version of a beverage originally blending wine and cocaine.

a standardized set of guidelines called *Generally Accepted Accounting Principles* (GAAP). GAAP does have the effect of standardizing the marketplace in the way business results are reported. You can probably see how this would be very helpful to an investor considering the merits of investing in one business against another.

Legal and accounting issues are presently so important that they are routinely a key to success in any business. Consequently, it is highly recommend to any college student pursuing a degree in any business field to take numerous courses in accounting and business law. They will likely prove quite valuable for the indefinite future.

The area generally called operations includes the routine functions of the business. Let's say your business still makes beverages even though it goes by a lessknown name than you originally planned. Operations would include keeping the building and equipment you use in good working order, making sure you have the materials needed to make the drinks that have been ordered so you can get them to your customers promptly, and a whole host of other activities that are done in the ordinary course of, well, operating.

Human resources is the relatively recent, politically correct term that was once called personnel. Tax considerations and other laws have made this area of business a major complexity—especially for very large businesses. A human resources department carries much responsibility for hiring, firing, and administering the various benefits available to employees of a business.

Research and development (R&D) departments do just what you would expect. Doing research and developing new products is their exact mission. Businesses such as real estate offices, law offices, and the like have no need for R&D. A business like Coca-Cola will have some need for R&D due to discoveries of new materials or processes and changing tastes. The big R&D departments are found at businesses that have a constant need to change or improve their product or even come up with new products to keep their business profitable. Apple and Microsoft are two examples that make enormous continual investment in R&D. It is their lifeblood.

The History of Business

Every business enterprise is founded on a basic ingredient—want. Today, we take money for granted as the way we buy something. But before money existed, if you wanted something, you needed to be able to give the person who had what you wanted something that they wanted in return. This system is called the *barter system*. As you can imagine, it is not very efficient. Imagine your difficulty in getting beef for dinner from the local rancher if you made shoes and all you had to offer him was shoes in exchange for a cow, and he had no present need of shoes.

The Canaanites (a.k.a. Phoenicians) are commonly credited with inventing metal money. The earliest form of money, around 1500 B.C., could be mistaken for a bracelet, as i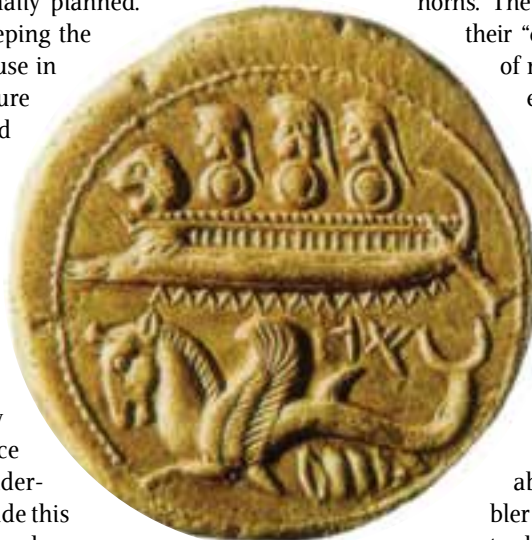t was made of two iron half-rings like a pair of bull's horns. The Phoenicians soon realized that their "customers" preferred other types of metal. Silver, copper, and gold, for example, were more desirable. The round disk—the shape of a coin—was an easy shape on which to put the image of the Phoenician leader, and our modern coin was born.

However, it was a long time before business substantially eliminated the barter system. Maybe you've been to visit Colonial Williamsburg in Virginia and learned a bit about their economy. The cobbler made shoes that he might have traded with a farmer for a cow or with the silversmith for knives, forks, and spoons. The blacksmith might have made a hammer or horseshoes that he might trade with the cabinet maker for a table and some chairs. Money, commonly in the form of coins, certainly existed in early America, and even long before that, yet the barter system remained quite alive and well in the businesses of early America.

This Phoenician coin is an example of one of the first "modern" coins.

Another important development in the history of business was the birth of the corporation as a vehicle to own and operate a business. The earliest form was likely during the sixteenth century. Definitions and descriptions of what is meant by "corporation" have changed over the last several hundred years, but their existence is a benchmark in the history of business. Prior to the corporation, businesses operated in what was essentially a *debt economy*[4] (when it came to merchant work). A debt

economy means that the business owner was entirely and always responsible to pay the debts resulting from business activity, even if payment required him to use resources that were not related to the business activity. With the advent of the corporation, business operated more as a state-sponsored enterprise. Operating as a corporation allowed businesses to take risks and expand in ways they had been unable to do before, because it provided a shell of protection for the owners. In other words, owners of the corporation could take risks while enjoying limited liability—they were protected and not responsible to pay the debts of the corporation if the corporation could not afford to pay.

Today there are several popular forms of business ownership. The sole proprietor is the most basic form of business and was likely the most common prior to the invention of the corporation. It is simply one person providing goods or services for compensation on his own (not as an employee of another business). The advantages of sole-proprietorships are that they require no legal work to exist or operate unless the activity requires it. A sole proprietor can own the business for as long as he wishes and may sell it at any time. The company pays no specific business taxes. Instead, the owner adds any income from the business to his personal income tax. Unfortunately, the owner has no protection from and remains personally responsible for all debts and liabilities incurred by the business.

The partnership is like the sole proprietor except that it involves more than one owner and tends to share responsibilities and benefits according to a contract called a partnership agreement.

The corporation is the most common form of business ownership today among companies that are of any size. The term comes from the Latin *corpus*, which means "body" (but you already knew that). It is considered to be a person completely separate from its owners. That may seem a bit disconcerting, but no one has tried to argue yet that it has a soul. Virtually every large business is a corporation, and many small businesses are corporations. The advantages of this form include limited liability which, again, means that the owners are not responsible to pay the debts of the corporation if the corporation cannot. The owners can lose no more than what they have paid for their ownership. The corporation is also a permanent person. When owners die, the shares can be sold or passed on to family members. Selling an ownership portion tends to be easier, whether it be to pass on to a family member or to sell to someone else.
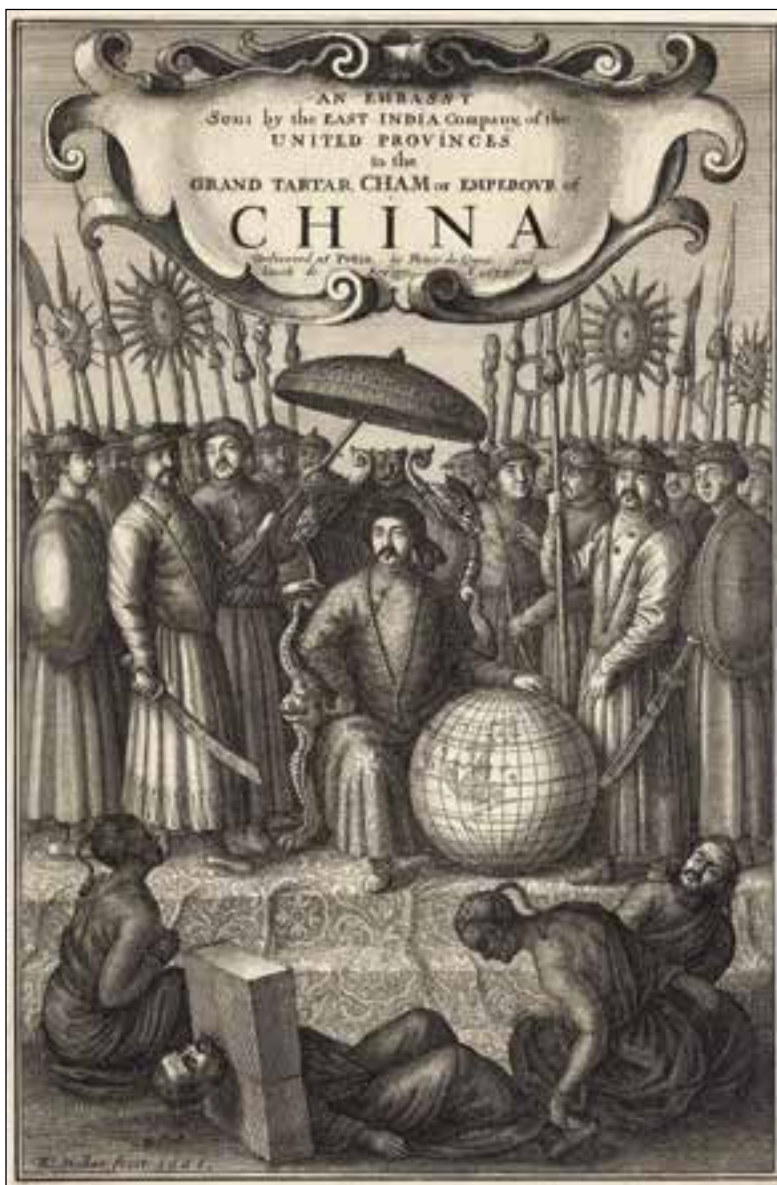
This rendering of Johan Nieuhoff (kneeling) depicts the seventeenth-century Dutch adventurer in his role as a representative of the Dutch East India Company to the Emperor of China. Nieuhoff was considered an early Western expert on Chinese culture.

The New York Stock Exchange is a place where millions of ownership interests in corporations are sold every day. One major disadvantage of some types of corporations is that taxes are paid twice—the corporation pays once on its net income and then a stockholder or owner has to pay tax on money he receives as a result of his ownership. The good news is that there are at least two types of corporations that don't get taxed twice; unfortunately, they are generally ones that don't have too many owners.

The East India Company[5] is commonly identified as the first multinational company. It was established by a Royal Charter from Queen Elizabeth in 1600, and for over 200 years this business dominated trade in many parts of the world—most notably India. It was well-established throughout Asia and quite active in Colonial America. Ever heard of the Boston Tea Party? It was the tea on the ships of the East India Company that was thrown overboard. The East India Company finally came to an end in 1874, but not without becoming a model example for many corporations that would follow.

The Industrial Revolution during the eighteenth and nineteenth centuries accelerated change in culture and lifestyle at a pace that was never before possible. Knowledge and technological advances in many fields drastically enhanced growth in textiles, mining, metallurgy, chemicals, transport, medicine, and agriculture, to name a few. Remember the Cotton Gin? Or the Transcontinental Railroad? How about the invention of flight? All of these resulted in and caused further advancements, providing fertile ground in which to grow the world of business.

Many of the wealthiest people to ever live in America made their fortunes through business endeavors that would have had no value or weren't even possible prior to the Industrial Revolution. What value would John D. Rockefeller's oil have been without Henry Ford's automobiles? Or Andrew Carnegie's steel without John Jacob Astor's high rise real estate, Cornelius Vanderbilt's ships and railroads, and, again, Henry Ford's automobiles?

In the twentieth century, a century filled with big inventions—cars, airplanes, computers, flashy takeover battles, and fortunes made and lost—arguably the most important event was the building of America's interstate road system. The ability to travel easily and to move products quickly from their place of manufacture to your home, regardless of where you live, was an extremely significant development.

Today, business is packed with so many tools, ideas, practices, and concepts that it is hard to imagine how our distant ancestors could have ever operated a business without them. We can't imagine being without the internet or smart phones, let alone money itself.

THE TOP 20 OF THE 20TH

From the beginning of the Industrial Revolution to today, there are so many developments in business that this essay cannot possibly develop them. Several years ago the business web site, *The Street,* developed a top 20 list of the most important business events of the twentieth century.[6]

20. President Johnson signs Medicare into law: 1965
19. The Depression-era securities laws: 1932–34
18. Netscape goes public: 1995
17. Bakelite is introduced: 1909
16. Hewlett and Packard put Silicon in the Valley: 1939
15. Kroc buys McDonald's: 1961
14. The United Auto Workers stage their first sit-down strikes: 1936–37
13. Kennan's 'X' letter gives birth to the peacetime military-industrial complex: 1947
12. Keynes publishes *The General Theory of Employment, Interest and Money:* 1936
11. Reagan is elected: 1980
10. Carrier Engineering is founded, beginning the commercialization of air conditioning: 1915
9. The current bull market begins: 1982
8. The first Wal-Mart opens: 1962
7. Kaiser's World War II shipyards surpass all expectations of production: 1942
6. Ford introduces the assembly line: 1913
5. Equal pay for equal work: 1963
4. The Great Crash of 1929
3. The Federal Reserve is formed: 1913
2. Intel invents the single-chip microprocessor: 1971
1. Eisenhower creates the interstates: June 29, 1956

Critical Issues

There are many issues for Christians to consider as they contemplate being part of the business world. Several are found below under a sometimes humorous, sometimes thought-provoking quote.

"Are we there yet?"

—*Any four-year-old on a long car trip*

It's been said that when John D. Rockefeller, possibly the wealthiest American ever, was asked, "How much money is enough?" that he answered, "Just a little bit more." First Timothy 6:10 says, "For the love of money is the root of all evil" (KJV). Can you see a problem? With such great wealth even Rockefeller was not satisfied. Isn't being satisfied with what we have a biblical mandate? If you have some doubt, be encouraged to consider, "He who loves silver will not be satisfied with silver; Nor he who loves abundance, with increase. This also is vanity" (Eccles. 5:10). Also, Ecclesiastes 6:7 states, "All the labor of man is for his mouth, and yet the soul is not satisfied." Many successful businessmen learn far too late in life, if ever, that even if they get everything they strive for through their efforts and investments, the resulting accumulation of wealth still leaves them empty.

"First thing we do, let's kill all the lawyers."

—*Henry VI* (*Shakespeare*)

We live in a litigious society. The courts are full of lawsuits, many of which are ridiculous. And if that isn't bad enough, the decisions rendered in courts will sometimes fail to resemble anything near a just solution. Today, a business can go bankrupt and be put out of business for some of the most ridiculous reasons. This is not intended to be an indictment of lawyers. Rather, there are some very great problems in the world of business that derive from problems with liability issues and legal matters that can be devastating even though the business owner did nothing truly wrong.

There's another issue here. What about the Christian businessman who finds himself in a conflict with another Christian? How is he to resolve the conflict? Is taking his brother to court the answer? First Corinthians 6 is quite clear that this is not a biblically acceptable solution. Yet, the practicality of solving the matter through other means can be riddled with problems.

"When there's a single thief, it's robbery. When there are a thousand thieves, it's taxation."

—*Vanya Cohen*

Today, maybe more than ever before, the burden of both taxes and government-imposed regulations have added to the difficulty of operating a business, let alone succeeding. There is little a single business owner can do. There is much a classically educated group of citizens can, though.

"Better to do a little well, than a great deal badly."

—*Socrates*

To borrow a famous quote from G.K. Chesterton and apply it to the implementation of classical Christian education (which this author strongly endorses), "Anything worth doing is worth doing badly." And such a statement

is quite defensible. However, in business the axiom, "Stick to your knitting" carries considerable importance. Many businesses have failed for spreading themselves too thin or not realizing what business they are in. For example, it seems the railroads of today, which are generally a struggling sector, failed to realize in the early twentieth century that they were not primarily in the *railroad* business but in the *transportation* business. With a bit more cleverness, they could have easily added to their success by introducing the services offered by UPS and FedEX and even more so, by having become the major airlines of today.

"Whatever is worth doing at all, is worth doing well."

—Lord Chesterfield

If it's worth doing badly, it is even better if it can be done well. Excellence is an overused term—partly because it's important. There are far more people in business (and life in general) that purpose to do things excellently than actually do. Yet defining what an excellent customer experience is and causing it to happen can be a very significant cause of success—all other things being equal.

"No man's credit is as good as his money."

—E.W. Howe, Sinner Sermons

"I will gladly pay you on Tuesday for a Hamburger today." (Wimpy from the Popeye cartoon)

Extending credit for the sake of selling more product, that is, allowing someone to buy now and pay later, can be the undoing of a business. It is common for businesses to offer their customers 30 days or more to pay for what they have

Much of the time, business is not spreadsheets and forecasts. It's just plain old hard work, like that pictured here in John Neagle's (1796–1865) *Pat Lyon at the Forge.*

purchased and received. This is a good thing, but if not watched carefully, it can cause a business failure. When a customer seeks a credit arrangement, it is common for them to prove they are worthy of it by providing financial statements and credit references; but it is actually quite rare for companies that extend such credit to have their customers provide updated information periodically after the initial application. And it is not rare for those same customers to have dramatic changes in their ability to pay.

"Failures don't plan to fail; they fail to plan."

—Harvey Mackay

Does anyone really need to be told that operating with a plan and frequently updating that plan is an important part of succeeding at business? The problem isn't *knowing* it, the problem is *doing* it. When a business gets "blowing and going," it is easy to get caught up in the frenzy and forget about budgeting, long-term planning, and a constant evaluation of where the market for the business is headed. How would you like to own $25,000,000 worth of printing presses that can only print books right now? Electronic media is dramatically changing the industry. Can I offer you a good deal on equipment that makes slide rules?[7]

"A man travels the world over in search of what he needs, and returns home to find it."

—George Moore

What does one do "at the end of the day"? This idiom is used to mean many things; when we die, when we are finished with something, and the goal we have in mind, to name a few. Taken quite literally, at the end of the day a business man typically goes home. And it is for what he finds at home that he works so hard and runs his business. Unfortunately, far too often business becomes so consuming that this plain fact is lost, and the primary reason the businessman works at building his business—to provide for his family—ends up being the thing that destroys his family.

"Each day of our lives we make deposits in the memory banks of our children."

—Charles R. Swindoll

Not long ago I attended a funeral of the father of two acquaintances with whom I went to high school. The lyrics to Harry Chapin's song, *Cat's in The Cradle* were read in tribute to their father:

> My child arrived just the other day,
> He came to the world in the usual way.
> But there were planes to catch, and bills to pay.
> He learned to walk while I was away.
> And he was talking 'fore I knew it, and as he grew,
> He'd say, "I'm gonna be like you, dad.

What will it look like to do business in the future? The savy businessman (or woman) is always looking ahead, and imagining a brave new world.

You know I'm gonna be like you."

Chorus:
And the cat's in the cradle and the silver spoon,
Little boy blue and the man in the moon.
"When you coming home, dad?" "I don't know when,
But we'll get together then.
You know we'll have a good time then."

My son turned ten just the other day.
He said, "Thanks for the ball, dad, come on let's play.
Can you teach me to throw?" I said, "Not today,
I got a lot to do." He said, "That's ok."
And he walked away, but his smile, lemme tell you,

Said, "I'm gonna be like him, yeah.
You know I'm gonna be like him."
Chorus

Well, he came from college just the other day,
So much like a man I just had to say,
"Son, I'm proud of you. Can you sit for a while?"
He shook his head, and he said with a smile,
"What I'd really like, dad, is to borrow the car keys.
See you later. Can I have them please?"
Chorus

I've long since retired and my son's moved away.
I called him up just the other day.

I said, "I'd like to see you if you don't mind."
He said, "I'd love to, dad, if I could find the time.
You see, my new job's a hassle, and the kid's got the flu,
But it's sure nice talking to you, dad.
It's been sure nice talking to you."
And as I hung up the phone, it occurred to me,
He'd grown up just like me.
My boy was just like me.
Chorus

And the cat's in the cradle and the silver spoon,
Little boy blue and the man in the moon.
"When you coming home, dad?" "I don't know when,
But we'll get together then.
You know we'll have a good time then."[8]

Can you imagine a worse tribute? (In fairness to the children, I don't think they understood the clear intention of the song. They really were seeking to honor him. He was a man I knew to actually be a good dad.)

Far too many Christian parents fail to realize that the impressionable children they love and raise may not be learning only what they hope they are. Parents may be teaching them things they don't intend, and much of it might be because they are too willing to sacrifice too much for too long in their business endeavors and career development.

A Christian Response

It could be argued that today's Business Degree, or Management Degree as it is now frequently called, attracts students for the same reason that some in the past sought a Liberal Arts degree. That's not to say that it should be. It is simply recognizing the fact that many college students pursue a degree in business because they believe such a degree will allow them diverse options—much like a well-executed Liberal Arts degree should. However, in the pursuit of such a degree and the subsequent pursuit of a business career, there are many issues that Christians need to wrestle with, some of which are mentioned and briefly described in the prior section. Issues like priorities, integrity, and excellence must be carefully studied and understood in their application. So, "How should we then work?"[9]

First and foremost, Christians should run their businesses like, well, Christians. They should be honest. They should seek to provide a good product or service for a fair price. They should handle their customers, employees, and vendors according to the Golden Rule. They should be charitable to the poor with their profits. They should keep their promises regarding commitments and deadlines[10]—their word should be good. Unfortunately, the clear statements in this paragraph lose their simplicity routinely and quickly in the complex world of business. When business is going well, you'll feel like Uncle Remus singing "zippity do dah" in *Song of the South*.[11] But when it's going "south," it's a very different, difficult time. In either case, operating biblically requires wisdom, and it sometimes will be at no small cost.

Honesty. No Christian needs to be told that honesty is important in business or otherwise. But does that mean that in order to use a software program you must actually read the entire licensing agreement before checking the box that says you have? This may strike you as odd, but if you do that every time you are asked, you will lose considerable productivity and probably be reading things that you hardly understand. This type of honesty is a legalism that goes beyond even what the lawyer that drafted

the document really expects. Honesty with software use is generally not making copies for others to use without having paid, not putting the program on more computers than what the seller intended, and not using it as a network version if it was a single-user purchase. Typically, there is not much more to it. So what is the real problem with honesty that should concern us?

Honesty means that we will not try to deceive our customers. If we say that our burgers are 100% beef, they should be. If we say it's a diamond, it had better not be cubic zirconium. Our word should be reliable. Yet there are times when complete and full disclosure is not entirely practical. A car salesman does not lack integrity when he fails to disclose that a Corvette gets poor gas mileage. The biblical principle is this, "Treat others as you would like to be treated."

Fair pricing. The marketplace has a way of dealing with folks who try to charge too much. Capitalism and the free market have a way of keeping us honest about our pricing in the *long term.* But what about the short term? Christians should consider fair pricing carefully. They should also realize that it is not all that simple to do sometimes. What is a fair profit for ice cream, a computer, or a house? A principle exists that describes a fair price as the price at which a willing buyer and willing seller will come together when neither is motivated by extreme circumstances. This principle works in many instances.

Employer-Employee Relationships. The employer-employee relationship resembles the master-slave relationship discussed in Scripture (Ephesians 6:5–9). Like a slave, employees should do what their master tells them to do. They should do it cheerfully and with their best efforts, as if they were doing it for God Himself. Like a godly master, an employer should treat his employees with love, respect, and honor—not asking them to do anything that he wouldn't expect to do if the roles were reversed.

Balanced Life. Finally, it seems we can never hear too much about the dangers of letting something consume us, even becoming an idol. Maintaining our priorities is a constant challenge that will always require wisdom. There will be times in a businessman's career when he must dedicate long hours at the sacrifice of personal matters. Starting a business and meeting deadlines are two of many instances that can create demands that adversely affect other priorities, such as family and friends. Yet if this becomes our pattern of operation for years and years, we will one day look back on our lives with broken hearts even though our wallets may be full.

It has been argued that, after "justification by faith alone," the next most important contribution of the Reformation was the doctrine of vocation. Today, vocation generally is synonymous with "profession" or "occupation." It is what a person does for a living. But the Latin root *voco* means "I call." So a vocation is a calling. Martin Luther was quite concerned to teach that becoming a priest (or pastor) was no more important than being a farmer or a blacksmith (or an engineer, fireman, plumber, or—may it never be—businessman). It was a matter of following the path that was consistent with how God had gifted you. Christians differ on how specific God will lead us to a specific vocation. Some believe there is a particular career that He has for each of us. Others believe there is less specificity, believing more the idea that God has created each person with gifts and talents oriented toward specific purposes and a way of life.

The one thing we need to be quite careful to avoid is thinking that "full-time Christian work" is somehow superior to other forms of work. No doubt Luther would be quite disappointed to learn that his Protestant posterity had failed to learn what he deemed so important.

In summary, to succeed in business might require a great idea or an improvement on another idea to start, but to continue to succeed can be boiled down to a few basics:

1. Treat others the way you would like to be treated.
2. Know your product; know your customer.
3. Stay abreast of changing conditions in the marketplace.

Business is a worthy pursuit for the Christian. It is also great fun when it works. And a great deal of applied biblical wisdom will go a long way in making one successful in business and in life.

—Marlin Detweiler

For Further Reading

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Gladwell, Malcolm. *The Tipping Point: How Little Things Can Make a Big Difference.* Boston: Back Bay Books, 2002.

Collins, Jim. *Good to Great: Why Some Companies Make the Leap . . . and Others Don't.* New York: HarperBusiness, 2001.

Collins, James C. and Porras, Jerry I. *Built to Last: Successful Habits of Visionary Companies.* New York: Collins Business, 2002.

ENDNOTES

1. Thank God there are actually exceptions—those who have made choices to earn less in order to follow God's call on their lives, such as teachers, pastors, missionaries, etc. The point here is that, given the choice, one normally prefers to "have" rather than "not have."
2. Bing Dictionary, "business." Accessed Nov. 4, 2011, http://www.bing.com/Dictionary/search?q=define+business&qpvt=define+business&FORM=DTPDIA.
3. A search of the internet will quickly reveal that eBay doesn't generally handle them.
4. The term *debt economy* is being used here to describe an entire world or country where everyone operates like a sole proprietor with no separate being, a corporation, to be a shield for the individual from debts and other liabilities.
5. During its history it was referred to by several names, including the English East India Company, British East India Company, and Honourable East India Company.
6. Click Link 1 for this chapter at www.VeritasPress.com/OmniLinks for more details on each of these.
7. It's possible you don't even know what a slide rule is. Click Link 2 for this chapter at www.VeritasPress.com/OmniLinks to learn more about this obsolete tool.
8. Lyrics used by permission of Alfred Music Publishing Co., Inc.
9. A thinly veiled takeoff of Francis Schaeffer's book title, *How Should We Then Live?*
10. The publisher (me) and editors of the Omnibus series did not do a very good job at meeting the publishing deadlines for this series. To compensate, we made sure to provide the early files from each book at the deadline point to all who had the book on order, even though they had not yet paid for it.
11. Go ahead and search for it on YouTube. You know you want to.

Cultural Anthropology

What is Cultural Anthropology?

Unfortunately, it is not possible to discuss an academic discipline of this nature without using some of its jargon. Please bear with me. There is also a brief glossary at the end of this essay in case you need to refresh your understanding of a particular term or field.

Cultural anthropology is part of the "anthropology" family of academic disciplines. *Anthropos* (Greek) refers to "human beings" and *logy* (also rooted in Greek) is commonly used to designate something as a "science, theory, or doctrine" (as in physiology, theology, or biology). Thus, anthropology can be concisely defined as the "scientific study of mankind" (or in the current politically correct style, "humankind").

The term *cultural anthropology* can refer broadly to all those subfields of anthropology that are not specifically part of *physical anthropology,* the latter having to do with "the study of human biological characteristics and variation across time, place and condition." In this more general designation, cultural anthropology includes archaeology (the study of the material remains of past human populations in order to describe and understand their cultures), linguistics (the systematic study of language), and ethnology (which involves analyzing and explaining different cultures, generally in comparison to one another, or to themselves over time). The "ethnography," a detailed and comprehensive written description of a culture resting mostly on sustained, direct

Beautifully displaying her culture by what she wears, this girl from Longsheng, China, wears a traditional costume of the Dong minority group.

interaction with it ("participant observation" or "fieldwork"), is the most important source of information for doing ethnology.[1]

More narrowly, the term *cultural anthropology* is often used to refer to the field that includes ethnology as well as ethnographic study of individual cultures. Scholars who do this tend to treat archaeology and linguistics as separate anthropological subfields, despite the fact that both certainly involve analyzing cultures or cultural phenomena. Regardless, it is generally recognized by cultural anthropologists that their work often requires incorporating material from, and being conversant in, all anthropological subfields to at least some extent. The current essay treats cultural anthropology in this more restrictive sense.

Cultural anthropology as a discipline or field of study did not formally emerge until the mid- to latter part of the nineteenth century. Certainly, before this time there had been people interested in studying cultures other than their own, both deep description of particular groups and some types of comparative studies.

What student of classical education is not aware of the ancient Greek historian Herodotus (484–425 B.C.), who in his time traveled throughout, and wrote extensively about, the known world around the Mediterranean and places as far-flung as India? There was Julius Caesar, who wrote of the customs of the Gallic and Germanic peoples in his *Commentaries*, even describing things like marital rules and dowry in detail. In *Germania,* the Roman historian and senator Tacitus (A.D. 56–117) essentially provided a study of the German ethnic groups, and he tackled other tribes in some sections of his *Agricola.*

Actually, the detailed study and description of other cultures and their habits (essentially early "ethnography") held an honored position among the ancient Greeks and Romans. There are the writings of later traders and explorers, such as the famous thirteenth-century work, *The Travels of Marco Polo.* And a more immediate precursor to cultural anthropology, French aristocrat and Enlightenment thinker Baron Montesquieu (1689–1755), did what amounted to early ethnology in his *Spirit of the Laws,* searching for general laws behind social variation and development across different cultures through systematic comparison. In fact, his "general spirit" (roughly, the ways of thinking, feeling and seeing common to a people) anticipated later notions about "worldview" and "culture." He also explored the effect that different physical ecologies may have upon the content of cultures, a major concern for many cultural anthropologists today.

However, these early analyses and descriptions of various people groups differed from what was to become cultural anthropology in some pretty important ways. Two appear to be especially important.

First, cultural anthropologists consciously sought to be more "scientific" in studying cultures, utilizing practices such as direct observation, cross-checking, verification, and standardizing methods. Later on, some quantification was even introduced. They tried to get away from "armchair anthropology"—that is, just reading about the experiences of others such as missionaries, traders, explorers, soldiers, and colonial government workers.[2]

Second, in something that especially reached fruition in the twentieth century, cultural anthropologists worked hard to be more objective in looking at other cultures, trying to understand them on their own terms, and not assuming the superiority of their own civilization's way of life. They were also more likely to use ethnographic work to question their own cultural practices, values, and beliefs.

Edward Burnett Tylor

Two of the earliest major thinkers in what was to become cultural anthropology were Edward Burnett (E.B.) Tylor (1832–1917) and Lewis Henry Morgan (1818–1881). The latter's work *Iroquois* (1851) is a real ethnography based on extensive firsthand interaction with the group. In Tylor's *Primitive Culture* (1871) and Morgan's *Ancient Society* (1877) both men advanced the idea of "unilineal evolution." That is, despite differences in their theories with regards to the exact nature of the stages and processes involved, they both believed that all cultures progress over time, from lower to higher, through the same stages in the same order. This idea is now widely discredited.

In a more important and lasting contribution, in the former book E.B. Tylor sought to define the very idea of "culture" as something possessed by all people groups. Formerly, normal usage was that "culture" was

something only possessed by certain folk, particularly elites or more advanced peoples, or at least some people had more culture (or "civilization") than others. Culture, Tylor said, was a "complex whole" that included any habits or capacities that were acquired by people through their involvement in societies.

The idea of culture has developed in the field a great deal since then, but owes a lot to Tylor's pioneering efforts. Certain features are pretty consistently held to across the (probably) hundreds of definitions of "culture" advanced by cultural anthropologists over the years.

Cultures are learned through social interaction and not inborn, therefore they are transmitted from one generation to another; they are generally held in common by members of the society that generated them; they tend to be integrated (that is, they are internally coherent, with different elements of cultures supporting rather than undermining other elements of the same cultures); and they include things like knowledge, beliefs, behavior, values, norms, and even emotions.

Most of all, cultures are, at the core, symbolic. That is, they involve representations—visible things that stand for ideas and thus convey meanings that must be interpreted in culturally appropriate ways. The most obvious example of the symbolic nature of culture is language in all its elements, but things such as rituals, ceremonies, art, literature and stories, traditions, images, and even repetitive practices of everyday life also convey and sustain meaning symbolically.

The real foundation of American cultural anthropology was laid by Franz Boas (1858–1942), a German Jew who emigrated to the United States in 1887, eventually becoming a professor at Columbia University in New York City. He taught and shaped the approach of many who went on to become influential cultural anthropologists, including Alfred Kroeber (1876–1960), Robert Lowie (1883–1957), Edward Sapir (1884–1939), Ruth Benedict (1887–1948), and his most famous disciple, Margaret Mead (1901–1978).

Boas was a talented ethnographer, known especially for his work among the Inuit of the Baffin Islands, and the Kwakiutl of a coastal region in British Columbia. He decisively rejected the theory of unilineal evolution and sought to make anthropology even more empirical and rigorous methodologically by basing it even more on observation rather than conjecture, promoting fieldwork done by scholars who master the native language of their subjects, living with them over a fairly lengthy period of time. Although Boas did not use the term, he advanced the idea of "cultural relativism." Embracing this became a virtual requirement for doing cultural anthropology. He also promoted the doctrine of "cultural determinism."

His program was substantially laid out in his *The Mind of Primitive Man* (1911), and each of the latter three elements, especially the first two, became central features of American anthropology.

Cultural relativism basically states that the beliefs and actions of people can only be evaluated within the context of their own cultures. This means that a culture's morals, too, can only be understood in light of the values of that culture. The doctrine also clearly asserts that no culture is inherently superior or inferior to any other culture.

Understanding other cultures in light of any supposed universal truths or absolutes, or from the standpoint of one's own culture, is not only flawed epistemologically, Boas believed, but undermines good methodology; objectivity in studying other cultures requires that one embrace cultural relativism. Ethnocentrism, the belief in the superiority of the ways of one's own culture and evaluation of others by its standards, is also seen as bad for humans generally. Cultural anthropologists believe that one of the most valuable consequences of their work is to combat excessive ethnocentrism in their own cultures, and to help people become more critical of their own cultures and their basic assumptions. A quote from Ruth Benedict's *Patterns of Culture* (1934) illustrates this doctrine: ". . . taboos on killing oneself and others relate to no absolute standards."

The doctrine of cultural determinism states that people, and variation among individuals and cultures, are not shaped by biology much, if at all. Humans are quite "plastic," easily able to adapt to the vastly different cultures in which they might be raised. An almost infinite variety of cultural practices will "work" for people, so long as they are enculturated (raised within and taught the culture) to it. As Benedict said in the above, "Man is not committed in detail by his biological constitution to any particular form of behavior." Every culture is a kind of "personality," which imprints itself on its members (an idea that became especially associated with Benedict and Mead). At the cultural level, cultures are ultimately responsible for their own nature and content; culture begets culture. They are influenced, may be limited, but are not determined, by various forces both cultural and non-cultural.

This idea is somewhat associated with those eventually leading to the approach of Boas and his disciples being labeled "historical particularism." That approach emphasized the uniqueness of each culture and the forces that shape it, such that even cultures that arise at the same point (say, embracing monotheism) often do so by very different means and for disparate reasons. Boas' view makes universal theories about culture difficult if

not impossible. Put another way, he resisted ethnology while emphasizing ethnography.

At the same time, in Britain and elsewhere in Europe a different approach to cultural anthropology was being developed, known as "functionalism." This approach stressed the functional nature of cultures; that is, as wholes and in their particulars they are ultimately designed to promote the survival and wellbeing of the societies that generate them. Cultural practices that are not functional are either abandoned, or they harm and perhaps even destroy their society.

The version of functionalism advanced by the Polish-born Bronislaw Malinowski (1884–1942), working mostly at the London School of Economics, focused on the ways that cultures are designed to directly and indirectly meet the individual biological, psychological, and social needs of their members. In the process they necessarily develop means for emotionally attaching people to their societies. These ideas were set forth especially in two posthumous volumes, *The Scientific Theory of Culture* (1944), and *The Dynamics of Cultural Change* (1945). Malinowski was also known for his ethnographic work among the Trobriand Islanders (just northeast of Papua New Guinea), published in the classic *Argonauts of the South Pacific* (1922).

Alfred Reginald (A.R.) Radcliffe–Brown (1881–1955) developed an approach known as "structural functionalism." This considered more the functions that cultural beliefs and practices had for the society as a whole. The key thing he sought to explain was social stability, or order. The culture provides means for maintaining or restoring equilibrium, or balance, to cope with inevitable disruptions and strains that arise within society. People within a culture are united by common interests and views.

Radcliffe–Brown also promoted an "organismic" view of culture and society. That is, these are like living organisms, in that the various parts are mutually dependent upon and affect one another. Changes in one area of culture (say, birth preferences) lead to changes elsewhere (for example, the military, business markets, or education), often in ways that are hard to predict or trace. For the whole to be healthy, each part must function properly. Much of his theoretical system is laid out in *Structure and Function in Primitive Society* (1952). He was also active in doing field research, especially in the Andaman Islands (in the Bay of Bengal southeast of India) and in Australia.

A slightly later development is the school of thought known as neo-evolutionism, which, like the nineteenth-century work of Tylor and Morgan, sought to explain cultural evolution over time. This approach stresses the extent to which cultures are shaped by, and thus deeply reflect, the ways that people have adapted to, and survived within, given physical ecologies. It rose to a great extent in opposition to Boas' approach, stressing things like cultural progress, the development of general theories about culture rather than just deep

description of particulars, and the clear notions that cultures were strongly determined by external factors.

One major proponent of this was Leslie White (1900–1975). He argued that technology is key to human survival, enabling people to get energy from their natural environment (as in getting energy from food) and turn it to human use. Advances in technology that enable people to do this better propel their cultures forward (as in the shift from hunting and gathering to agriculture, or oil to nuclear energy).

Note that for White, unlike among the followers of Boas, some cultures were more advanced. Such technological shifts lead to changes in every other area of cultures such as the economic, marital, military, religious, and political. Thus, his position is sometimes called "technological determinism." His most important theoretical works were *The Science of Culture* (1949) and *The Evolution of Culture* (1959).

Another key thinker in this school was Julian Steward (1902–1972). He stressed the idea that how people acquire what they need within specific ecologies shapes every other aspect of their cultures. Thus, for example, we would expect the cultures of people living in Arctic tundra to be different from those of folk in the Sahara Desert. His position, set out in books such as *Theory of Cultural Change* (1955), gave rise to the study of "cultural ecology," namely, the relationship of cultures to their immediate physical environments.

Later still is an approach called "cultural materialism," championed especially by the provocative Marvin Harris (1927–2001). A kind of "cultural ecology on steroids," Harris argues that cultural contents are completely determined (not just influenced) by the interaction between people and their immediate physical ecology, with all its assets as well as limitations. Change is often forced by the inevitable pressures of population growth upon societies' ability to survive within particular environments. Unlike Steward and White, he also emphasized the fact that cultures can and do also shape their physical environments. The basic elements of his theory are captured in *The Rise of Anthropological Theory* (1968).

Today, cultural anthropology can be said to be divided between followers of the more "natural science"-modeled tradition and a more "humanistic" approach. The former, characterized by Steward, White, and Harris, seeks as much as possible to use the techniques and approaches of the "hard sciences" in the study of culture, and to develop theoretical generalizations about it. The latter, rooted in the work of Boas and his followers, sees the field as more historical and descriptive, argues for the uniqueness of each culture, and is more interested in describing and understanding individual cultures than in explaining them.

The modern humanistic approach, which could be described as "Boas on steroids," includes "interpretative anthropology," which treats cultures almost as if they were texts to be interpreted (and thus with a heavy emphasis upon the symbolic dimensions of culture), and seeks to acquire and convey an "insider's view" of that culture. The leader in developing this approach was Clifford Geertz (1926–2006), with his key work in this regard being *The Interpretation of Cultures* (1973). He did extensive field research in Southeast Asia and North Africa.

"Postmodernism" is even sharper in its critique of the scientific approach. To postmodernists, science is inescapably bound to its own culture, and thus "scientific" statements about other cultures reflect more the anthropologist's own culture than the one he is analyzing. Cultural materialists reflect their own materialist cultures, technological determinists are shaped by the technological obsession in their own societies, and so forth. And to postmodernists, beliefs of those in positions of power are designed to perpetuate the same. Thus, "scientific" cultural anthropology, like all science, becomes a kind of tool of domination.

Critical Issues

There are many problem areas for thoughtful, serious Christians in cultural anthropology, not only within particular schools of thought but across the field as a whole. For one thing, practitioners overwhelmingly accept Darwinian evolution at least as an explanation for the emergence of man and other species.

With some exceptions, cultural anthropologists tend to be very hostile to endeavors such as Christian missions, or indeed even to many attempts at cultural reform based on broadly Western values and knowledge. In fact, the typical cultural anthropologist wants to see indigenous cultures preserved, not changed. This is true even for cultures that accept high levels of violence and crimes such as rape; hold views of health and disease that increase sickness and death; embrace destructive, magical ideas about the spiritual world; ritually use powerful hallucinogenic drugs; practice extensive body mutilation; and so forth.

Where both anthropologists and missionaries are at work in the field, they are often "at war" as a result of this animosity of the former to the basic work of the latter. Organizations such as Wycliffe Bible Translators must often devote significant time and resources to dealing with such conflicts.

Cultural anthropologists are usually left-wing

personally and politically. Despite the "toleration" they extend to the cultures they study, they are not usually accepting of biblically orthodox Christians, or indeed any conservatives who value and embrace the Western tradition. This is not only irritating, but is also a fundamental contradiction of their stated values, such as being non-judgmental and culturally relative.

Those who are cultural determinists are not only guilty of circular reasoning ("culture causes culture;" "they are different because they are different"), but rule out by fiat a host of relevant external factors that influence cultural variation. On the other hand, those who posit some kind of material factors to explain cultural beliefs and practices tend to view those as deterministic, as if the people had no choice but to adopt them and are thus (where relevant) absolved of any moral blame.

But the most important and systematic challenge facing any Christian working or taking courses in cultural anthropology is its widespread acceptance of the doctrine of cultural relativism. Therefore, that will be the focus of this section, beginning with an extended examination of cultural relativism's central claim that all human standards are relative to the cultures in which they are found and cannot be judged by any external moral norms.

By necessarily rejecting the idea of absolutes, or at least that any can be known with certainty, this position is in direct opposition to what is revealed to us propositionally in Scripture, not only in the areas of morals but also in the claims God makes about Himself, His world, mankind, and any other areas the Bible addresses. The fact is that the Bible is also full of records of God "judging" entire cultures in terms of His absolutes, regardless of what (indeed, typically *because* of) the "cultural values, beliefs, and practices" they embrace. Consider the litany of judgments against entire civilizations in places like Isaiah chapters 14–23.

And lest we think this is just an Old Testament reality, consider the negative judgment of the Cretans in Titus 1:12, or the first two chapters of Romans, in which Paul points out with regards to a litany of practices that are accepted in various cultures that "those who practice such things are deserving of death" (1:32).

The fact is that God is sovereign over every nation; He sets them up and He tears them down (see for example Daniel 2:21; 5:34, 35). His truth proclamations are not subject to or bound by any human culture. So while it is certainly true that our own cultures are imperfect, and affect and often even distort how we understand and apply Scripture, by grace we know that absolutes are in the Bible and that many are at least made clear *enough* to us. For example, things like murder, adultery, theft,

pride, oppression, false religion, envy, homosexuality and fornication are wrong everywhere and for all people. Christians must insist upon people repenting of such things, and turning to the one and only true God, in all cultures.

Besides, the positive statement "there are no absolutes" is in itself an absolute, and so is logically self-refuting. If true, it is not true. Cultural relativists will sometimes dodge this by claiming that there *may* be absolutes, but either (a) no one knows for sure what they are, as there is widespread disagreement about them among cultures, or (b) scholars have to generate or discover absolutes. The latter can only be done after much careful, ethnographic study of the world and seeing what "universals" there are. For example, all human cultures have moral norms, and a statement like "all cultures need moral rules" is an absolute.

Besides rejecting God's propositional revelation in the Bible, view (a) above understates the degree of similarity that exists among cultures. For example, in terms of moral systems, in *The Abolition of Man* (1943) C.S. Lewis's excellent discussion of "the Tao" underscores the extent to which various moral ideas, such as "the Golden Rule," are embraced across a wide range of civilizations and religions.

Moreover, disagreement doesn't prove that no one is right or another wrong about what is or is not an absolute. View (b) at best confuses "something universally done among cultures" with "absolutes." If something is the former, it is certainly an absolute of some kind. But to be an absolute, something certainly need not be accepted in all cultures. Peter's bold statement, "Nor is there salvation in any other, for there is no other name under heaven given among men by which we must be saved," (Acts 4:12) is not commonly accepted in all cultures (sadly, including the modern West), but it is absolutely and everywhere true.

It is also not an illegitimate "slippery slope" argument to point out that cultural relativism leads logically to epistemological (that is, relativism about what we can know) and moral relativism, both of which have destructive impact. If all truth claims are culturally contingent, at some levels both forms of relativism are the logical consequence. Certainly, many cultural anthropologists, especially older ones, have resisted this slide, especially in the moral area, but have simply lacked theological and philosophical means to do so once they embraced cultural relativism.

For example, some anthropologists have pointed out that just because something is morally acceptable in one culture does not make it so in another. For a Tibetan woman to be married to several brothers (fraternal

polyandry) at the same time does not give a New Yorker a "free pass" to do the same, as the conditions that justified this in Tibet do not apply in New York. But what if the relevant conditions in New York become similar to those in Tibet? Or what if a polyandrous Tibetan family moves to New York?

Christians throughout history have championed various social and cultural reforms, and this is an important part of the cultural mandate. Cultural relativism logically undermines the fundamental rationale for such efforts, namely, that some existing cultural practices are objectively wrong and need to be changed.

Cultural anthropologists often deny the latter charge. One way they do this is by distinguishing between their duties as scholars, and those they have as private citizens who can and should make value judgments. But this is a bit like believing in Jesus on Sunday and in Buddha the rest of the week. If cultural relativism is true, it is as true for the private citizen considering outlawing widow burning in India or female circumcision in the Sudan as it is for the anthropologist studying the same things.

Another way around this for some cultural anthropologists is to claim they will use values within a culture to challenge obnoxious practices within those same cultures. But what if these other necessary values are not present? And by what standards do we identify which objectionable practices to assault in the first place, if that culture has accepted them? Nothing is more contorting and mind-twisting than to study the debates among cultural anthropologists whenever they try to figure out if they should oppose some practice of any non-Western culture.

Second, briefly consider the idea that no culture, as a whole, is superior to any other. This kind of claim, with its surface humility, appeals to many Christians, but we must reject it. Christianity is true, and it is transformative. We ought to expect that cultures in which the gospel is being embraced by increasing numbers of people, in thought and deed, will experience real advancement of civilization. We cannot throw that away. This is not an occasion for pride in such cultures, but thankfulness, as it is all about grace from beginning to end.

It is certainly true that in all cultures, including Christianized ones, many problems will remain, and there will be many steps backward along the path of cultural progression. Further, every culture that is permeated by the gospel won't end up the same, but there will continue to be some uniqueness among cultures, as when we see "nation*s*" in the plural in the New Jerusalem (Rev. 21:24–26). But the gospel does bring cultural advances, and if it does so in ours, we should not be ashamed to export these blessings to others.

It must also be remembered that one of the most fundamental facts is that the natural state of all men, at all levels, but for the intervention of God, is rebellion against Him. All non-Christian cultures or cultural elements involve the rejection of God and indeed the attempt to hide from, suppress, and replace Him (Rom. 1:18–23).

So what of the claim that objective study of other cultures is not possible unless one embraces cultural relativism? There are Christian alternatives to this. Overall, simply being dedicated to understanding and relaying truth, as much as possible, in the study of other cultures will go a long way toward overcoming the real dangers of illegitimate types of ethnocentrism.

First, Christians can certainly, through careful study, learn about the substance of different cultural beliefs and practices, even those they know to be wrong, including the culture's rationales for them, and the forces and conditions that promote them. They should also be able to convey these findings in truthful, non-judgmental (in the best sense of the term) ways. For example, we can explain that Aztec cannibalism was partly a result of a large population trying to meet its needs for animal protein without claiming that it was acceptable for them to do this under the conditions, as if Aztecs had no alternative means of meeting these physical needs.

Second, believers should look at the flaws in their

own cultures as they look at others, to help clarify their thinking and to be able to relate to members of these cultures in winsome ways. In considering Muslim polygyny, remember the high rates of divorce and sex outside marriage in the West. In examining cultures that practice human sacrifice, consider the United States, which has enough abortions to depopulate an entire large city, or even one or two states, every year. In a twist on a familiar parable, we end up realizing that we must remove the speck from our eye before we try to take the plank out of theirs (Matt. 7:3).

Third, believers should be self-critically aware of the degree to which we *do* possess "cultural blinders." We tend to take many things from our cultures for granted, and judge other cultures based on them, that are not in Scripture or that go beyond it. For example, do we have to treat all arranged marriage practices as wrong? Provided it is done in a good spirit, should we condemn wives eating separately from and after their husbands? There may be answers to these types of questions, but they won't be arrived at easily, and addressing them properly

Paul Gauguin painted *Nafea Faa ipoipo? (When will you marry?)* in 1892. Gauguin had abandoned his wife and children about a decade earlier to devote himself to his painting. In 1891 he sailed to the South Seas to escape European civilization (that is, he was in serious debt). An aesthetic cultural anthropologist of sorts, Gauguin's depictions of Polynesian culture led the way for Primitivism, an art movement characterized by exaggerated body proportions, colorful contrasts, and geometric designs.

means distinguishing our cultural assumptions and training from what Scripture teaches.

A Christian Response

Is cultural anthropology a legitimate field for a Christian to enter? Well, certainly there is nothing inherently sinful about wanting to study other cultures in a systematic, even scientific way (with all the qualifications we need in applying that latter term to studying humans). There are many valuable insights and facts about the human race throughout anthropological literature, much of which is inherently fascinating. Any endeavor that requires cross-cultural, international work can benefit from being familiar with the relevant ethnographies or doing anthropological studies of one's own. This includes much work in business, politics, the military, and of course, missions. Consider the global missions and Bible translation work of an organization such as Wycliffe Bible Translators, which keeps an extensive collection of ethnographic materials and works with cultural anthropologists quite a bit.

Moreover, throughout the Scriptures, acquiring wisdom includes the careful observation of human beings and their ways. The wisdom book of Proverbs contains scores of insights about human beings, given by God, of course, but obviously acquired through careful observation.

Our understanding of the Bible has been enhanced greatly by the insights of students of the ancient world back to at least Ur at the time of Abraham. This has included archaeology used to reconstruct, among other things, the cultural ways of people involved in the biblical records.

Moreover, much of what is in the Bible is much more understandable if one has a better grasp of cultural anthropological terms, concepts and facts. In the Bible we find

GLOSSARY

Anthropology: the scientific study of mankind.

Archaeology: the study of the material remains of cultures.

Cultural anthropology: in its broadest use, those parts of anthropology that involve the study of human cultures, including archaeology and linguistics, as well as ethnology and ethnography (see below for definitions of these last three terms). Sometimes, the term is used more narrowly, applying only to ethnology and ethnography, which is how it is generally used in this essay.

Cultural determinism: at the level of individuals, the idea that people are easily shaped by their cultures, which are far more important than biology in affecting their personalities, and that many types of practices will work so long as people are taught by their cultures to do and accept them. At the level of cultures, the idea that cultures are ultimately responsible for shaping themselves ("culture begets culture").

Cultural ecology: the study of the relationship of cultures to their immediate ecological (material) environments, with the belief that the latter strongly shape every aspect of the former.

Cultural materialism: cultural ecology (see definition above) "on steroids"; the idea that material, ecological constraints, typically aggravated by various population pressures, determine every aspect of any culture.

Cultural relativism: the idea that beliefs (including morals) and actions of people can only be evaluated within the context of their own cultural context and not in light of any absolutes, and that no culture is inherently superior or inferior to any other culture.

Culture: something that is produced by societies, learned through social interaction, transmitted from one generation to another; generally held in common by members of the society that generated it, which tend to be integrated (that is, internally coherent with different elements of cultures supporting rather than undermining each other), and which include things like knowledge, beliefs, behavior, values, norms, and even emotions. Any culture is essentially symbolic (see definition below).

Enculturation: the process of being raised within, taught, and personally absorbing a culture.

Ethnography: a detailed and comprehensive written description of a culture.

Ethnology: analysis, explanation and comparison of cultures.

Fieldwork: the study of a culture through sustained, direct observation of, and participation within it. (See also "Participant observation" below.)

Functionalism: the idea that different aspects of cultures exist because they support the survival of individuals and whole cultures.

Historical particularism: an approach within cultural anthropology that emphasizes the uniqueness of each culture, and denigrates the idea of general theories about culture.

Linguistics: the systematic study of language.

Neo-evolutionism: a modernization of some of the major ideas of unilineal evolution (see below) that emphasize the progress of societies, and the importance of advancing general theories to explain cultural development.

Participant observation: the study of people by observing and interacting with them while being directly involved in their life and activities. (See also "Fieldwork" above.)

Postmodernism: in cultural anthropology, a viewpoint that sharply rejects the very idea of a science of culture. Postmodernists see science as a Western tool of domination and oppression that is bound to Western culture and believe that scientific claims by anthropologists tell us more about the anthropologists' own biases and cultural blinders than about any of the cultural realities they claim to be analyzing.

Symbolic: involving representations; that is, visible things that stand for ideas and thus convey meaning.

Unilineal evolution: the idea that over time all cultures develop, from lower to higher, through the same stages, in the same order.

polygyny and concubinage and its consequences; beliefs in oracles and other magic; men like Jacob having to perform bride service before they could marry other men's daughters; patrilineal systems (tracing ancestry through the male line) carefully maintained; the levirate, kinship-based property systems; tribal governments; incest and menstrual taboos; and much else that is the basic stuff of ethnographies. A book like Victor Matthew's *Manners and Customs in the Bible* (2006) is just one of many valuable resources that use such information to shed light on Scripture.

For example, learning about how men with multiple wives in contention with each other handle the problems that arise in polygamous cultures around the world, illuminates much of what we read in Genesis concerning Jacob, his two wives, and his two concubines. The beautiful story of Ruth can only be understood in terms of the levirate (where a man is encouraged to marry the wife of his dead brother, a responsibility that then can fall on other male relatives by some rule should this not be possible or desirable). Boaz was Ruth's "kinsman-redeemer," and Jesus Christ is ours. Or consider the refusal of Naboth to sell his vineyard to Ahab in 1 Kings 21, saying, "The Lord forbid that I should give the inheritance of my fathers to you" (v. 3). This is understandable to anyone in a patrilineal system in which land belongs to the larger kinship group and not to individuals in the strict sense of the word, as was true in ancient Israel.

However, the obstacles that one is likely to encounter in cultural anthropology, especially in terms of the prejudice and discrimination from professors and fellow students, are considerable for the serious Christian. Doing cultural anthropology really means getting a master's and probably a doctoral degree in the field. In today's politically correct academy, it would be very tough for the orthodox, believing Christian to get through this process intact, without being either rejected or co-opted. To get something like an academic post, and then tenure afterward, would be challenging as well, except perhaps in a Christian college. However, the latter don't typically hire many cultural anthropologists, and those within these settings have often ended up pretty compromised themselves. All this would require a great deal of discretion, including a lot of very careful picking of battles.

Attending a Christian college could help, if one can find one with a sound program in cultural anthropology. This means carefully talking to the college's professors in the major field about many of the problematic ideas described in this essay and finding out where they stand on them. The history of compromised "evangelical" colleges and professors is pretty dismal, and any social science especially (of which cultural anthropology is one)

Brahma bulls are considered holy to Hindus and are seen freely walking the streets of India. This one was photographed sitting leisurely outside a typical street vendor's market in Chennai.

must be approached with caution. Some Roman Catholic colleges may also be very good choices if they are still seriously Catholic and offer a cultural anthropology major, since they may enforce respect for basic, orthodox Christian beliefs. Another option is to study a different but supportive field (such as history or sociology) and then tackle cultural anthropology at the graduate level. Getting into a good cultural anthropology program does not require an undergraduate degree in the field.

But whatever precedes it, if he is to move on in the field, the Christian student will almost certainly find that he needs to do graduate work in a secular setting, unless (once again) he chooses a strongly Roman Catholic university. Given the close relationships between professors and students that are normal in good graduate programs, the differences in values and beliefs that the Christian student will encounter, and the prejudice of these academicians towards biblical Christianity, are likely to lead to real problems. But recalling that fine Christians regularly successfully navigate programs where most practitioners hold key beliefs that are hostile to scriptural approaches—such as sociology, biology, psychology—it is certainly possible to do so.

One good piece of advice at the graduate level is to look for programs that are more rooted in the "objective science" side of the field, and to at least avoid like the plague those that are heavily "postmodern." The former will generally respect good logic and hard evidence, and will tend to subscribe to academic norms that judge students on the quality of their work more than on their private religious beliefs, even when the professors are personally liberal in outlook. It is also possible to find conservative cultural anthropologists. Normally, on the objective science side of anthropology, they will usually treat Christian students with respect.

A good organization for any academician to join, especially one in a heavily politically correct field like cultural anthropology, is the National Association of Scholars. The NAS is committed to resisting political correctness, defending the study of Western civilization, and promoting sound, objective scholarship. It includes academicians of many religions and political stripes, and sections organized around academic disciplines. The encouragement and networking at NAS meetings both local and national can be invaluable, particularly for the student looking for good graduate programs and professors to work with.

However, nothing can replace the quality of the personal preparation and wise Christian walk of the student himself. Someone contemplating, or engaged in, the study of cultural anthropology should be thoroughly familiar with the Scriptures, with a particular focus on what the Scriptures teach us about human beings. The Bible has a wonderful, rich anthropology that, unlike the secular variety, is completely true. This should

be the starting point, and the check and balance, on all of our inquiries into the field. But understanding the Scriptures, including so many of the difficult passages and problems that arise when studying humans in the Bible, means also learning to read good books, including commentaries on the Bible.

For example, consider the Onan incident in Genesis 38, where the latter is killed by God after refusing to complete the sex act with his dead brother's wife (a levirate incident). How can we understand this? What place did the levirate have in God's economy here, and is the violation of the levirate the source of God's anger with Onan? Does this record suggest that birth control is obnoxious to God? Would God demand something that, in many practical instances, required that men engage in polygyny? These are tough but important issues, and a good student will want to know what scholars like John Calvin, Martin Luther, Matthew Henry, and many others had to say about this difficult passage.

Students in this field should also devour scholarly works that critique cultural anthropology, or social science generally, from a Christian viewpoint. For example, C.S. Lewis's *The Abolition of Man*, mentioned earlier, is among other things a cogent commentary on the error and consequences of relativism, including the cultural variety. His fine "Space Trilogy" (*Out of the Silent Planet, Perelandra,* and *That Hideous Strength,* 1945) also has embedded, in literary form, some excellent critique of the social sciences, as well as some fine Christian anthropology. Another excellent choice is Leslie Stevenson and David Haberman's *Ten Theories of Human Nature* (2008).

Some books that set forth a Christian vision for the social sciences (at least partly) are Abraham Kuyper's *Lectures on Calvinism* (1898) and Herman Dooyeweerd's *A New Critique of Theoretical Thought* (four volumes, 1953–58). Although too long out of print, Alan Storkey's *A Christian Social Perspective* (1979) is also a fine book, inspired by Dooyeweerd. Herbert Schlossberg's *Idols of Destruction* (1983) is a masterpiece. David Hegeman's *Plowing in Hope* (1999) has some excellent insights on establishing a truly biblical theology of culture.

With this, Christian students in all fields should be familiar with the best work on integrating biblical faith with scholarship. Some suggestions in this vein are: *A Francis Schaeffer Trilogy* (1990), which comprises Schaeffer's three most essential books (*The God Who is There, Escape from Reason,* and *He Is There and He Is Not Silent*); George Marsden's *The Outrageous Idea of Christian Scholarship* (1998); Mark Noll's *The Scandal of the Evangelical Mind* (1994); Gary North's (Ed.) *Foundations of Christian Scholarship* (selected essays, 1976); and the demanding but essential *The Defense of the Faith* (1967) by Cornelius Van Til.

Finally, while this has certainly been mentioned elsewhere in this volume, meaningful, sustained involvement with and commitment to fellow Christians, especially in a local church, is vital. This needs to include interaction with wise believers able to understand and respond intelligently to problems and issues encountered in the study of cultural anthropology. They need not be anthropologists of course, but can easily include those schooled in disciplines such as theology, philosophy, sociology, communication, psychology, and history, all of which regularly tackle challenges similar to those confronted in cultural anthropology.

—David Ayers

For Further Reading

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ENDNOTES

1   Although the author is drawing on a number of sources and general knowledge for these definitions, he is especially grateful to Jean-Luc Chodkiewicz ("What is Anthropology All About?," pages 1–5, in Chodkiewicz (Ed.), Peoples of the Past and Present. Toronto: Harcourt Brace. 1995) for his concise definitions of these subfield terms.

2   Though certainly figures such as Herodotus, Caesar, and Marco Polo were not stuck in their armchairs!

DRAMATIC ARTS

What are the Dramatic Arts?

To learn about the dramatic arts is to learn about the incarnation of words. An historical survey of theater provides the student with a narrative of its cultural use and impact that mirrors the very nature of drama itself. The word *drama* has its origin as a Greek word that means "action." The dramatic arts then involve the performance or acting out of literature (prose or verse) by actors for an audience.

Ancient Religious Ritual

Theatrical professor Paul Kuritz has written, "The history of the dramatic theater tells nothing less than the tale of people's changing conceptions of themselves and of the universe." Theater incarnates worldview, and the performing arts have had a central role in human culture, reflected even in the earliest known written languages.

Long before our secularized age, religion was the controlling paradigm of interpreting reality. As such, the temple was the center point of societies, and the worship of deity or deities procured atonement for sins, agricultural bounty, and military victory over enemies. The ancient religious rituals were dramatic, allowing worshippers to participate in the supernatural by re-enacting the actions and primeval stories of the deity. The liturgical cult required ritual performance of music, dance, and drama.

Classical Theater

The Western tradition of theater as we know it begins with the ancient city-state of Athens around the fifth century B.C. The word we use for actor, *thespian*, is derived from the name Thespis, the reputed creator of Athenian drama. The essence of theater is captured in the term, *mimesis*, the imitation or representation of nature or self. Each spring at the Dionysian festival, a competition of plays and their performances dedicated to the god Dionysus took place in a newly developed theatrical stage structure that is now common to our experience: a stage area with scenic backdrops surrounded by a semi-circle of audience seating ascending a hill. Actors would wear masks to display their characters and engage in exaggerated bodily gestures to communicate emotion to the thousands of audience members. The plays continued to draw on the myths and legends of the Greek religion, though soon the human part of the story took center stage.

The most celebrated playwrights of the Greek era were Aeschylus, Sophocles, Euripides, and Aristophanes, but the most-remembered writing about theater is the academic analysis of drama from Aristotle's *Poetics*. Aristotle defined tragedy as the highest poetic form, involving an imitation of reality through an inevitable sequence of events (containing a beginning, middle, and

end) with the intent of arousing "pity and fear" in the audience, resulting in *catharsis*, relief through the purging of emotions.

The thousand years of Roman civilization (509 B.C.–A.D. 476) continued the culture of Greek theater, with the subjects becoming more secular and the favored genre shifting to comedy. But by the third century, drama was overshadowed in popularity by a different form of public performance and entertainment: Circus. Athletic games, chariot races, and gladiatorial contests were held in massive arenas. Like the action movies and sports events of today, spectacle reigned. Gladiator events, though engaging in real murder of its participants, were often staged theatrically as famous historic land and sea battles. By A.D. 568 these spectacles ended, following the rise of Christianity that would soon replace the mythology and theater of the classical Roman Empire with a new paradigm rooted in a "Holy Roman Empire."

Medieval Theater

The Medieval age of Western Civilization, spanning the next thousand years from A.D 476 to 1517 was dominated by the institution of the Roman Catholic Church. Christian festivals replaced pagan ones. Theater was turned into a teaching tool of the Church. By 1264 this liturgical church drama developed into three kinds of plays performed by the laity during the many holy day feasts throughout the year: Mystery, miracle, and morality plays. Mystery plays would depict all of history from creation, through the Exodus, the miracles of Christ, His Passion and Resurrection, and on to the Final Judgment. They would be massive productions and involve hundreds of community participants for days on end, bringing God and sacred history into the common experience of the

Mystery plays depicted all of history, from Creation to the Last Judgment, and were typically performed on wagons that were then rolled to various stations around the village. Some towns, like Chester, England, have in modern times revived the practice, and the re-enactments are large and popular community events.

populace. Despite the introduction of the printing press in 1454, most peasants were illiterate, and the use of these dramas substituted for their lack of access to the written texts of the Bible. Miracle plays dramatized the lives of the saints. Morality plays were allegories, using symbolism to explore the Christian life. Plays like "Mankind" and "Everyman" taught the audience moral lessons, disciplining their tastes and training their judgments.[1] In these plays, the Devil was not only the tempter of mankind, but he often supplied the comic element of the play as his plans unraveled.

Renaissance Theater

With the rise of humanism in the sixteenth and seventeenth centuries, came a revival of classical Greco-Roman civilization in the arts of the Renaissance. Though God was not absent in Renaissance cosmology, man was nevertheless the measure of all things, with science and reason being his foundation for beauty and truth. This led to Renaissance artists approaching drama as ordered, calm, rational, and enforcing social stability through a more realistic imitation of nature.

A great divide increased between the uneducated masses and the educated aristocracy in Western art and theater. Art would divide into the popular and crude "low arts" of the masses and the refined "high arts" of the courts and wealthy patrons. Educated circles preferred imitations of Greek and Roman drama, with its unities of time (the story could depict no more than one day), place (the story could have only one location), and action (the story could have only one plot) and its strict rules of decorum (no violence could be depicted onstage). Popular drama, in contrast, drew on the artistic freedoms of the medieval drama. The biblical plays depicted the whole history of

the universe, from creation to the last judgment, in one afternoon; they took place in many locations; they had many plots; and in depicting incidents in the Bible such as the crucifixion, they showed violence.

In this milieu William Shakespeare (1564–1616) wrote his comedies, tragedies, and histories, including critique of both culture and king, with the dramatic liberty inspired by the biblical plays. His work evidences an implicit Christian worldview at times united with humanist undertones, within a dramatic context of royal turmoil (*Macbeth*, *King Lear*), corruption and decadence (*Hamlet*), and the comic irony of social mores (*Taming of the Shrew*). English Renaissance theater (1558–1642) became the television or cinema of the day, with regularly scheduled new episodes and multiple reruns for the public, mixing sensational entertainment with moral teaching for the amusement of the masses at public playhouses.

Social Theater

The Age of Enlightenment (eighteenth century) marked a new period in history championed by science and reason and culminating in the decline of monarchies and the rise of the middle class and democratic government. It was an age of revolutions resulting from the logical extension of a belief in natural religion, natural humanity, and natural rights. The problems with the world were seen in the social order not in the individual.

And yet the style of drama in the Enlightenment was not something new and experimental. Reacting against the apparent messiness of drama in the biblical, medieval tradition, the playwrights of the eighteenth century went back to the rational rules and conventions of the Greeks and Romans as the neo-classical style came into vogue.

Courtly drama died in the eighteenth century and was overrun by the middle class—the "everyman"—interested in addressing social injustice, of which, not surprisingly the ruling aristocracy and clergy were the predominant offenders. French playwright Denis Diderot (1713–1784) embodied this "turn of the ages" with emotion's ultimate triumph over academic rationality. He advanced rationalism with his editing of the first encyclopedia, yet eventually came to value imagination and passion as more important in his art. He sought to "inspire men with love of virtue and horror of vice" through his middle class subjects exploring domestic problems in everyday life.

Romantic Theater

The rise of the Industrial Revolution (nineteenth century) was the technological extension of Enlightenment science. The Romantics of this era felt that humanity was dehumanized through industrialism and mass production and that nature was being raped by technology. In response, they exalted individual emotion, subjectivity and passionate expression, and a return to the "wild" of nature. This also brought a fascination with Oriental philosophy and religion and the dark side of existence, as embodied in the chaos of nature against the social order and taboos. The rise of the artist as individual genius and hero "ahead of his time," coupled with the elevation of art as a transcendent experience of reality, created for the Romantics a form of art as religion and artist as high priest.

Opera emerged as a dominant form of romanticism, and German composer Richard Wagner's (1813–1883)
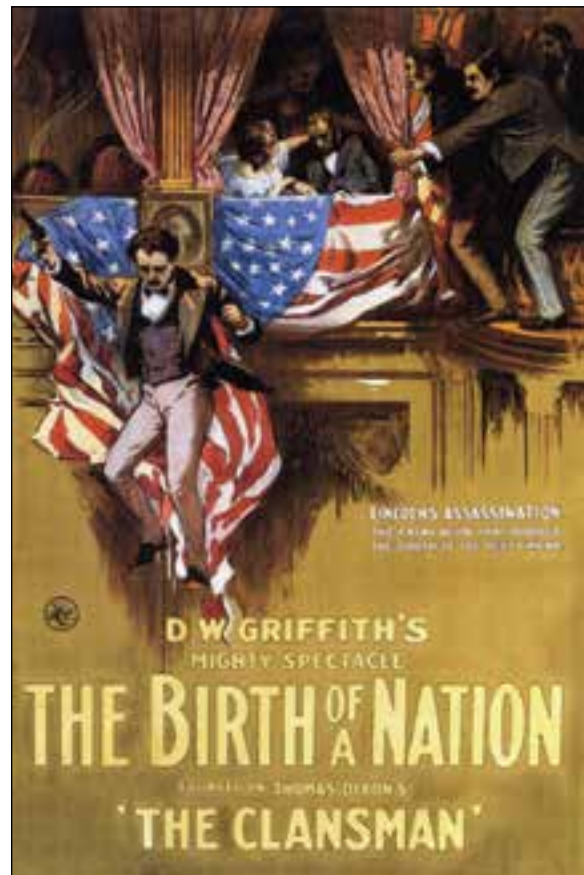
Even though the Civil War epic *The Birth of a Nation* was still in the days of silent film, it successfully integrated full-length feature storytelling with new techniques of the camera to create an intimacy of viewing experience that transported the audience into the world of the story in a way that the stage could never achieve.

operas of mythical tragedy and spectacle (*The Ring of the Nibelung*) became a quasi-religious embodiment of the romantic spirit in theater. The most famous French poet, Victor Hugo (1802–1885), brought a deeply lived passion to the stage with his play *Hernani*, critical of the monarchy and provoking enthusiastic audience reaction, a blockbuster of its day.

Realist Theater

The late nineteenth and early twentieth centuries developed through a paradigm of Newtonian scientific method, Darwinian evolutionary theory, and Einstein's newly constructed Relativity. This "positivist" elevation of empirical observation as the only form of true knowledge resulted in a scientific approach to society as well. Romanticism died hard under the microscope of detailed observation. Theatrical realists developed an approach that focused on the present rather than a romantic past, dispassionate accuracy in acting rather than emotional excess, an attack on traditional Christian morality as harmful to social evolution, and the rising middle class as "bourgeois." Thus, "social injustice" decried in the theater was often rooted in an ideological resentment of religion, power, and wealth. Realistic drama would be epitomized by such playwrights as Henrik Ibsen (1828–1906) in Scandinavia, Anton Chekov (1860–1904) in Russia, George Bernard Shaw (1856–1950) in England, and Tennessee Williams (1911–1983) in America.

Silent Cinema

One technological invention would further the illusion of reality in the performance arts and ultimately transform theater: the photograph. In 1839, Louis Jacques Mandé Daguerre invented photography, which was supposedly the ultimate in scientific empirical reproduction of reality. Photography not only captured all observable details, but it allegedly diminished the elements of poetry, symbolism, and imagination. By 1895 the Lumiére brothers had created the first motion picture camera, but it did not become popular until 1903, when *The Great Train Robbery* added storytelling to the new technology and movies took off. While dramatic theater as we have been discussing certainly continued on into the present with a rich history of style and influence, we will now shift over to the cinema, because cinematic theater would ultimately eclipse staged theater as the dominant medium of dramatic storytelling for the mainstream masses of the twentieth century. The stage would ultimately be transformed into the screen.

From its origins and until 1920, the cinema was silent, sometimes being accompanied in theaters by a live orchestra. D.W. Griffith's Civil War epic, *The Birth of a Nation* (1915), successfully integrated full-length feature storytelling with new techniques of the camera to create an intimacy of viewing experience that would transport the audience into

Lillian Gish was a star of stage and screen, beginning her film career in silent cinema, including a role in Griffith's *The Birth of a Nation*. She successfully made the transition to talkies and even to television when that new medium began to become popular in the late 1940s and 50s.

the world of the story in a way that the stage could never achieve. Acting gestures that once had to be expressive enough for audiences to see at a distance (*pantomime*), would now become increasingly more subtle and realistic with the close-up. The camera's ability to move within the environment of the scene produced a more experiential observation that theater could only imagine.

The Battleship Potemkin (1925) by Sergei Eisenstein was also influential with its use of montage editing to portray Russian history in favor of Communist propaganda. The montage theory, which would affect the power of cinema to this very day, argued that the camera does not merely capture objective reality; it defines reality by directing the audience to see what it wants them to see. For example, three images: A man cringing, another man pointing a gun, and a man standing firm, would create the *image* of courage. But the exact same images in reverse order would create the *image* of cowardice. Thus, by aligning certain images in a certain order and from a certain viewpoint, the storyteller directs the thoughts of the viewer in a deliberate direction. All cinema becomes the subjective perception of the filmmaker directing the audience to see the story (i.e., reality) through his worldview lens.

Sound Cinema

In 1927 *The Jazz Singer* was released, starring famous singer Al Jolson in 'black face" as a stereotyped "negro" lead character. It featured a prerecorded soundtrack and a few "talkie" sequences—and it changed movies forever.

The 1930s saw the rise of major movie studios, MGM, Twentieth Century Fox, RKO, Warner Brothers, and others. Movie moguls (heads of studios) controlled the product, hiring actors, directors, and producers like factory workers to churn out hundreds of films a year. The early sound era was surprisingly filled with movies containing excessive sex and violence, which provoked the indignation of the public. In order to preempt government censorship, the studios developed their own production code in 1934 that restricted how sex, violence, and profanity could be addressed in movies.

Citizen Kane (1941), Orson Welles' first feature film is considered by many critics to be the best film of all time. It chronicles the life of fictional character Charles Foster Kane from obscurity to riches and reveals the loss of innocence and love in his quest for power. Welles' unique style of montage editing, dramatic lighting, deep focus cinematography, tragic realism, and complex characterizations combined to create a movie that would influence the future of all filmmaking to come.

Of all the gin joints in all the towns in all the world, she walks into mine.

Casablanca starred Humphrey Bogart and Ingrid Bergman.

Noir Cinema

America entered into the War in 1941, and most of Hollywood followed the country's pro-war sentiments, producing films like *Casablanca* (1942), starring Humphrey Bogart. But after the war, the long tradition of anti-war movies returned with *The Best Years of Our Lives* (1946) an Oscar winning film arguing the negative effects on returning soldiers.

The late 1940s and early 1950s also replaced the previous optimism in the cinema, and the now-growing empire of television, with a new pessimistic genre called "film noir" (literally, *dark cinema*). These movies, possibly fueled by an enigmatic Cold War danger and the newly threatening atomic age of mass destruction, were detective stories that took place in mostly gritty urban environments. They questioned authority by portraying police and soldiers as corrupt, were cynical about love, by depicting women as seducers motivated by greed rather than love ("femme fatale"), and often dealt with deeply psychologically disturbed heroes.

The most well-known director of noir thrillers, Alfred Hitchcock, "the Master of Suspense," hit his stride in the mid-1950s with such thrillers as *Rear Window* (1954), *Psycho* (1960), and *Vertigo* (1958). By the 1950s color became a creative choice exercised by producers and directors in a growing number of films.

Widescreen Cinema & Television

In the 1950s black and white television was an increasingly popular medium with the public, who could now enjoy the entertainment of Hollywood in the comfort of their own homes. So the movies had to compete. In this period, movies began experimenting with more color,

Frank Capra's 1946 drama *It's a Wonderful Life* continues to delight audiences today as it is aired on television every Christmas season. James Stewart played the role of George Bailey, a suicidal business-man visited by an angel who helps him to see what life would have been like had he never been born.

stereophonic sound, big budget spectacles, 3-D, and widescreen cinema. The biblical epic *The Robe* was released in 1953 with widescreen Cinemascope. Widescreen created a "wider vision" of life, with its ability to capture panoramas of both rural and urban environments, its deeper focus, and visual space to work with character relationships. Some classical films that used the widescreen to great benefit were films like David Lean's World War I epic *Lawrence of Arabia* (1962) and Robert Wise's Swiss musical *The Sound of Music* (1965).

Rebel Cinema

Nineteen sixty-seven is the year attributed to the start of what some call the New Golden Age of Hollywood—and what critics would call a more permissive age. By 1968 the Motion Picture Association of America (MPAA) had replaced the Hollywood production code with what we now know as the MPAA rating system. This system created rating categories labeled for adults which would allow filmmakers to portray many forms of previously banned sex and violence, and along with them, more criminals and misfits as anti-heroes. Arthur Penn's *Bonnie and Clyde* (1967) is generally considered the inaugural film of this new era. It transformed the gangster picture into a political satire of outlaw lovers Bonnie Parker and Clyde Barrow, heartland heroes awash in sexual perversion who die in an ironic bloodbath the likes of which had never been filmed before. *Bonnie and Clyde* set the pace for the next decade of rebel filmmakers rejecting social norms of propriety, sexuality, and authority.

This era also saw the coming of age of "auteur"

filmmaking, that a film is the product of one genius, the director, who is responsible for all the elements of a movie. Though directors in earlier years such as Howard Hawks and Frank Capra could fit this definition with their classic westerns and positive American values, it was this new generation that exploited the auteur concept into a household term—with a darker side. Among these new maverick "auteurs" and their creations were Mike Nichols' socially defiant *The Graduate* (1967), Dennis Hopper's hippie drug celebration *Easy Rider* (1969), John Schlesinger's X-rated Oscar winner, *Midnight Cowboy* (1969), and Robert Altman's anti-war satire, *M*A*S*H* (1970). Francis Ford Coppola's *The Godfather* (1972) is perhaps the quintessential movie of this "rebel directors" period. In it, Coppola depicts the Italian immigrant world of the Mafia, with its devotion to family and equal devotion to the "business" of crime, as a metaphor critiquing the American social and economic experience as corrupt and built on violence.

Blockbuster Cinema

Though Hollywood studios had always made what we now call blockbusters, expensive spectacle films with wide commercial appeal, the 1970s opened the door to what would become a growing emphasis on this cinematic form by studio productions into the twenty-first century. A brief consideration of the top 25 grossing movies of all time explains why: Almost every one of them is a blockbuster movie. And many of these moneymaking hits are the franchise sequels with which we are so familiar today: *Star Wars, Raiders of the Lost Ark, Harry Potter, The Lord of the Rings, Batman,* and *Pirates of the Caribbean*.

It all started with Steven Spielberg's *Jaws* (1975) and George Lucas's *Star Wars* (1977). *Jaws* would make more money in its opening few weeks than all the movies made by Universal that year. The temptation toward making more blockbusters is obvious. This "genre" of filmmaking would focus on more frivolous mass entertainment over "serious" filmmaking, younger viewers over older, wide releases, and immediate and repeat viewing. Critics would complain that their obsession with special effects and unrelenting action sequences of violence depreciate the most important values of storytelling: plot, character depth, and insight into the human condition. But to this day, these are the films that make American movies the dominating influence in global cinema.

Independent Cinema

The growth of franchise films and big budget studio movies inspired a backlash of independent filmmaking in the 1970s and 80s. "Indies" would make their movies

outside the mainstream on low budgets in order to maintain artistic integrity. Often these movies would become surprise hits anyway and launch studio careers for some of the filmmakers. Examples of early independent filmmakers and their films are John Cassavetes' *A Woman Under the Influence* (1974), Spike Lee's racially volatile *Do the Right Thing* (1989), and John Sayles' socialist union propaganda *Matewan* (1989).

But perhaps the most influential independence came from those filmmakers who would be able to work within the studio system to create big budget mainstream as well as low budget movies and maintain their control over the content and signature of their pictures. These directors often have "final cut," authority over the editing of the film, which is a rare privilege. Martin Scorsese and Clint Eastwood are two directors who typify American cinema and maintain an independent control of their movies that others only dream of.

Twenty-first Century Cinema

With the advent of digital filmmaking and new media, the future of cinema is uncertain: now low budget films shot on digital cameras can look as good as those made with expensive film cameras; young people are turning more and more to the Internet with shorter attention spans; movies can be seen exclusively on cable, or in large-screen home theaters, or downloaded on the Internet. Will the movie theaters survive? No one knows for sure. But if the genre evolves, as did live performance theater into cinema and television, one thing remains for sure: storytelling and dramatic performance will certainly maintain its grip on the human soul and society, because since the creation of man, dramatic story and theatrical performance has been one of the most powerful means of understanding the human condition.

Critical Issues

The critical issues surrounding dramatic theater have followed its history: its effect on society; its internal moral culture; and its comparison with rational, philosophical discourse. The Christian church has had a tumultuous relationship with theater and movies, but it was a pagan who set the stage for the dominant criticisms that would be repeated throughout history. At the very origins of classical theater in Athens (360 B.C.), Plato complained about the power of storytelling and theater to subvert society through the emotions. His prejudicial favor of rational philosophy as the superior means of social control led him to propose the banishment of poets and storytellers in *The Republic*. He believed that the very act of imitation (*mimesis*) that artists engaged in was inherently lying because of its artifice and fiction. Plato concluded that the dramatic performance or literary representation of the base nature of man would stimulate the imitation of such sins in society and personal life. The masses, as opposed to the elite rulers, are those most susceptible to manipulation and rhetoric.

These arguments would continue to be repeated throughout the history of theater. One of the early Christian fathers, Tertullian, wrote "The Shows" (*De Spectaculis*) in the second century A.D., wherein he condemned the theater and public games not only for the immorality of gladiatorial combat, but also for their origins in and dedications to pagan idols. He complained of immodest costume, foul language, the excitement of illicit emotions and intoxication in the audience, as well as the falsity of fiction, and forbade all Christian attendance at the theater and games. The fact that Christians were mocked in the theater, and eventually murdered in the games, did not help redeem the reputation theater had with Christians for centuries.

Theater has never been without its Christian defenders, but they usually pale in comparison to the influence that key leaders of the faith had against it. Saint Augustine of Hippo (354–430), one of those towering antagonistic influences, was himself deeply influenced by Plato. His duality of God and Satan, body and spirit, reason and emotion built a foundation of prejudice against theater for not

only the medieval period but for the Puritans as well. He considered the incarnational aspect of drama to be fleshly and emotional as opposed to the superiority of the life of the mind and calm reason. Acting was "imaginary" and therefore not true, but illusion and manipulation through lies. The portrayal of sins on the stage was inseparable from the real thing, and therefore immoral, and the entertainment nature of it was a frivolous waste of time.
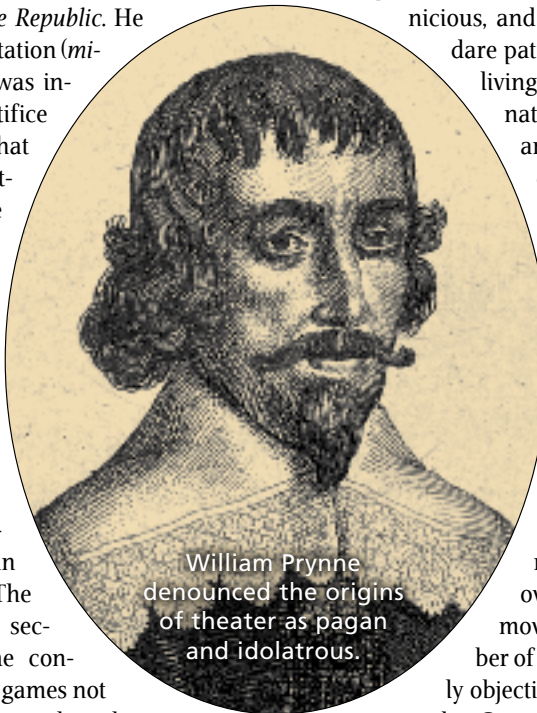
In the era of Shakespeare's England of the early 1600s, the Puritans took up the fight against theater with a vengeance. The Puritan polemicist William Prynne wrote the longest, most ferocious attack of antitheatricalism, *Histriomastix*. He condemned the origins of theater as pagan and idolatrous, "odious, unseemly, pernicious, and unlawful" which no Christian dare patronize; he accused the actors of living lives of debauchery as effeminate long-haired cross-dressers and "notorious whores;" he condemned the actions on stage as morally repellent and inducing imitative behavior in the audience, such as "amorous, mixed, effeminate, lascivious, lust-exciting dancing." Ironically, Prynne's vociferous attacks were not founded on having actually seen any plays.

William Prynne denounced the origins of theater as pagan and idolatrous.

Today's era of Christian media watchdogs have carried on the tradition of concern over dramatic theater with online movie reviews that count the number of obscenities and detail all morally objectionable behavior depicted in the media. Gossip magazines and TV shows use paparazzi to exploit every shocking moment of celebrity actors' debauched lives, simultaneously worshipping them and holding them up for contempt. Psychological studies are made, linking onscreen dissolute behaviors and the disintegration of social norms. Things have not changed much over three thousand years.

While all these issues over theater continue to the present day with modern cinema and television, one of them is particularly significant: the influence of dramatic narrative on the masses. The power of rational argument and empirical observation, once deified in the Enlightenment, has been uncovered as culturally imperialistic and inadequate in understanding the human condition. We live in a postmodern culture that is saturated in narrative. With the advent of the Internet and

television, believer and unbeliever alike are ingesting continuous amounts of story through the dramatic performance of long running TV shows and sitcoms, music videos, viral videos, movies, videogames, and webisodes.

Through all of history, the tendency of the mainstream masses leans toward a "lowest common denominator," in both intelligence and morality. French intellect Alexis de Tocqueville, in his observations of American life in 1835, concluded: "It has always been the theater that the learned and the educated have had the greatest difficulty in making their tastes prevail over that of the people and preventing themselves from being carried away by them. The pit [where the plebian sits in the playhouse] often lays down the law for the boxes [the seating of the aristocracy]." Or as Andrew Fletcher wrote, "If a man were permitted to make all the ballads he need not care who should make the laws of a nation." The stories told in the dramatic arts of mass media have surely become the defining national ballads that Fletcher spoke of.

But appeal to the artistic elite in Off-Broadway, independent TV, films, and Internet sites can just as easily result in pushing the bounds of moral decency and social indoctrination. Witness the power of conspiracy theories in our post-modern culture, where as many as thirty percent of Americans believe that the Bush administration knew of the 9/11 attacks in advance and may have even orchestrated them—and this theorizing spearheaded by academic professors. Or consider the influence of fictional narratives based on pseudo-scholarly research like *The Da Vinci Code,* a case where millions place their faith in spurious esoteric fables that incite anti-Christian prejudice rather than accepting sound historical research. And how can this happen? Because the power of mass culture lies in the power of a story well told or well performed—a believable narrative. The power of narrative can be used to deceive or to tell the truth. So, the question remains: What is the proper relationship of the Christian to dramatic narrative and performance?

THE DA VINCI CODE

In Dan Brown's *The Da Vinci Code* it is asserted that to the left of Jesus (from a viewer's point-of-view) is Mary Magdalene, not, as most art historians identify that person, John the Apostle, and that the body angles between Jesus and John form the letter M— a reference to the Magdalene.

Christian artist Makoto Fujimura writes about this artwork: *Yes, there is an "M" imbedded in the painting, but Dan Brown does not go far enough in tracing its mystery.*

The real "M" or a series of "M"s, starting from Philip's stretched out hand, do not end with John, but with Judas. More specifically, the shock wave ends in Judas's right hand, which holds the money-bag, symbolically depicting the very coins that Judas would receive to betray Jesus.

Is the figure of John effeminate? Yes. But every male figure that Leonardo painted bordered on androgyny. Leonardo's depiction of the sexual genre has never been a secret, and even a critique of such in open forums would not have surprised Leonardo. What would be shocking to Leonardo would be if the viewer did not somehow recognize the greatest message imbedded in the painting—that Judas, the seed of betrayal, is in all of us.

A Christian Response

The antitheatrical prejudice that has typified Christian history contains both helpful and unhelpful elements. The mixing of pagan idolatry and immoral excess that followed non-Christian cultural dominance in theater and media is certainly worthy of condemnation. But too often the Church and her shepherds have tended to react with their own excess in denouncing dramatic performance as *inherently* sinful or worldly. Examples of corruption can always be found, but that is not really the point. A brief examination of the dramatic arts in the Bible clarifies for the believer the high value that God places on theater and drama.

It should be no surprise to Christians that the religious cult, or system of practices and rituals, of Old Testament Israel included elements of sacred performance in its Ancient Near Eastern religious context. Though the Jewish religion was antithetical to its pagan neighbors in its demystification of nature and rejection of magic, it still retained aspects of its common cultural environment. The rich imagery of things in heaven and earth that filled Moses' Tabernacle (Ex. 25–28) and Solomon's Temple (1 Kings 6; 2 Chron. 3–4) did not violate the second commandment, but rather operated as a symbolic stage upon which God directed his Levitical priesthood to enact the atoning drama "on earth as it is in heaven." The various ritual sacrifices served as scripted performance *and* participation in the holy. The Jewish feasts and festivals included symbolic dramatic reenactment of sacred history, giving them present reality: the Passover commemorating the Egyptian Exodus and the Feast of Tabernacles memorializing the Tabernacle in the wilderness. The Psalms were used for praise and worship unto Yahweh in the courts of His Temple. Singers and musicians were an explicit part of the Levitical priesthood given exclusively to temple service (1 Chron. 9:33) whose performance was crucial to God's glory (2 Chron. 5:11–14). Dancing was an established means of worshiping God (Ps. 150:4) as well as celebration (Ex. 15:20).

God often used explicit dramatic performance rather than mere verbal sermons to communicate his will. Ezekiel could be considered a thespian prophet. God told him to perform a play of war as a prophecy, acted out with a miniature city besieged by battering rams (Ezek. 4:1–3). Then God had Ezekiel engage in a "performance art" prophecy by lying on his sides for 430 days, tied up in ropes, eating food cooked over burning excrement, with an emblem of the sins of Israel on top of him (4:4–8). Finally, he concluded this performance by cutting his hair and beard and dispersing it in various ways to dramatically depict God's concluding judgment (5:1–4). God then told Ezekiel to perform a theatrical prophecy of exile by covering his face, dragging his baggage around day and night, and digging a hole in a wall to store it, while repeating the scripted words, "I am a sign to you" (12:1–11). Ezekiel then had to tremble and shudder in fear while eating his meals as another dramatic sign of the anxiety that Israel would feel in their exile (12:17–20). And later, God had him perform a sign of two sticks, symbolizing Judah and Israel, becoming one, not unlike a magician before his audience (37:15–23). Ezekiel was quite the performance artist.

Jeremiah is called "the weeping prophet." But he should have been called "the acting prophet," because so many of his prophecies were theatrical performances. God had Jeremiah act out His "Word" symbolically by hiding his girdle by the Euphrates (Jer. 13:1–11), breaking a potter's bottle in the valley of Hinnom (19:1), walking through all the gates of Jerusalem (17:19–27), wearing a yoke on his neck (27:1–14), purchasing the deed to a field (32:6–15), burying stones in some pavement (43:8–13), and casting a scroll into the Euphrates (51:59–64). Isaiah was commanded by God to engage in shocking performance art as well. He was to walk around naked as a visual "sign and token" of the shame Israel was about to experience at the hands of Egypt (Isa. 20:2–4). Another prophet plays out a prophecy by physically wounding himself to embody God's word to Ahab (1 Kings 20:35–43). God values dramatic performance as a significant means of communicating his Word to man.

In the New Testament, God uses the special visual effects of a picnic blanket filled with unclean animals to persuade Peter of the New Covenant inclusion of Gentiles (Acts 10). Agabus binds his hands as a prophetic enactment of Paul's future in Rome (Acts 21:11). The sacraments of baptism and Lord's Supper dramatically act out spiritual cleansing and communion with God, and Gospel writers use the theatrical spectacle of an emperor's triumphal entry as an ironic drama of Jesus' humble performance having epic spiritual significance (Matt. 21:1–10; Col 2:14–15). Jesus Christ's revelation to St. John clocks in as the most extensive theatrical exhibition ever recorded by prophet or pious poet, surpassing the big budget blockbuster visions of Ezekiel's resurrection valley of dry bones (Ezek. 37), and Daniel's equally spectacular sci-fi pageant of hybrid creature features (Daniel 7)—and stage-directed as it were, by the ultimate playwright, God.

Several books of the Bible itself are deliberately structured according to theatrical conventions. The books of Job and Jonah are depicted in dialogues reminiscent of ancient plays, including prologues, epilogues, and several acts. Job's friends function as the chorus of ancient theatrical performances. God's theological discourse with Job is not so much a rational lecture of doctrine as it is a

dramatic spectacle of sarcastic rebuke—a satire—using a big budget tornado as God's Dolby sound system. Some scholars have argued that the book of Mark resembles a Greek tragedy that follows Aristotelian structure, involving a prologue (Mk. 1:1–15), complications (1:16–8:26), a recognition scene (8:27–30), and a reversal of the fortunes of the leading character followed by the denouement (8:31–16:8).

This does *not* lend question to Scripture's divine authorship simply because it follows human literary convention. But it does illustrate that God considers theatrical expression to be an important means of disclosing truth, as well as disclosing Himself. In fact, the use of narrative and drama to communicate God's Word to man is so prevalent in Scripture that some theologians suggest we approach our theology in dramatic terms of God's speech and actions rather than in metaphysical terms of facts, ideas, and propositions. Kevin Vanhoozer suggests we see the Bible not as "a handbook of revealed information, the systematization of which leads to a set of doctrinal truths," but as a dramatic script written by God for the stage of the world, with humans as the actors, God as the author, the Holy Spirit as director, and the Church as playing out the final act. "To become a Christian is to be taken up into the drama of God's plan for creation." Theology is not merely an intellectual exercise of mentally constructing an accurate picture of reality in our ideas; it is a theatrical performance where Christians participate in God's story of redemption in time and space history.

For Christians who hold to the Bible as their ultimate authority, the biblical use of theater, spectacle, fictional parable, and dramatic performance answers the question of whether the use of theater is "false" or untruthful. If God himself uses fictional drama and forms of role-playing so frequently to incarnate truth, then the use of such dramatic artifice is not intrinsically untruthful. The intention to deceive or tell the truth is what determines the morality of the drama, not the medium of performance itself. When an acting troupe puts on a play or a producer releases a movie, they are no more engaging in deception than when Ezekiel performed a prophecy or Jesus told a fictional parable. Nor can the bodily nature of drama be considered inherently fleshly or worldly. Believers are commanded to abstain from engaging in explicit idolatrous ritual and ceremony (Deut. 18:9–13) but have been commanded by God to engage in performances described above that glorify Him or communicate truth. Bodily performance is as integral to communication, sacrament, and worship as mental assent or doctrinal belief.

"All right, Mr. DeMille, I'm ready for my close-up." A detail of Ezekiel from the Sistene Chapel.

Sex, Violence and Profanity

Another important issue that requires attention for a Christian approach to dramatic performance is the depiction of sinful behavior in theater. As Plato, Augustine, and the Puritans were concerned, does the depiction of sex, violence, and profanity in dramatic performance incite imitation in the audience? Here again, the Bible is instructive in its use of sex, violence, and profanity within its narrative. As a record of God bringing blessing and redemption to a sinful world, the literary text contains the worldview narrative of "Creation, Fall, Redemption, Restoration." As such, it does not fail to detail the sinful behavior of mankind within the context of the story of redemption.

A believable and influential portrayal of redemption necessitates a believable portrayal of the sin from which one is to be redeemed. And the Bible contains some fairly explicit portraits of depravity. An exhaustive list would be chapter-length, so a sampling of such immoral behavior will have to suffice: Adultery (Prov. 7), incest (Gen. 19:31–36), masochism and satanic worship (1 Kings 18:25–28), sexual orgies (Ex. 32:3–6), prostitution (Gen. 38:12–26), rape (2 Sam. 13:6–14), cannibalism (2 Kings 6:28), decapitation (1 Sam. 31:9), disemboweling (2 Sam. 20:10), dismemberment (1 Sam. 15:32-33), genocide (Joshua), human sacrifice (2 Kings 3:27), dozens of murders (Genesis to Revelation), suicide (Gen. 16:29–10), blasphemy (Isa. 36:14–20), revenge (Gen. 34:25), theft (Gen. 31:19), voyeurism (2 Sam. 11:2) and vulgar insults (1 Kings 12:10).

While much of the sex, violence, and profanity in the Bible are dealt with discreetly, there are nevertheless many passages that contain some rather explicit descriptions used by scriptural writers to make a holy point. The book of Judges, if it were made into a movie, would be rated NC-17 for its grotesque sex and violence used to make the polemical argument of

social degeneration when "everyone does what is right in his own eyes" (Judg. 17:6). The evil and violence of the *genetically mutated* beasts in Revelation could justifiably categorize that book as a horror genre whose special effects outdoes George Lucas's Industrial Light and Magic and whose gory depictions would put to shame the grand guignol theater of blood. The Song of Solomon has been revealed by the conservative scholars of the *Dictionary of Biblical Imagery* to be far more explicitly erotic in its original Hebrew language than translators have been willing to translate. God seems to use the dramatic imagery of adultery and harlotry as dominant metaphors to depict Israel's spiritual unfaithfulness (Ex. 34:15–16; Lev. 17:7; Deut. 31:16; Isa. 54; Jere. 3:2–8; Hosea). The shocking sexual drama narrated by God in Ezekiel 16 and 23 alone are so graphic as to trouble many Bible readers. The Scriptures also record blasphemies and profanity from the tongues of men and angels as well (Gen. 3:4–6; Isa. 36:14–20; Matt. 26:74). Even the Apostle Paul, intending to indicate the spiritual poverty of man's goodness compared to God's holiness, uses a profane Greek word for excrement (Phil. 3:8).

And the depiction of such evil is not limited to historical recording. The fictional parables of Jesus contain violent images of beatings, murder, arson (Matt. 22:1–13), choking and torture (Matt. 18:23–25), drunken parties and dismemberment (Matt. 24:45–51), Godfather-style drowning (Matt. 18:6), more dismemberment (Matt. 18:7–9), and the destruction of private property (Matt. 7:24–26)—and all these as metaphors to describe the impact of the Kingdom of God.

There are several aspects to these depictions of sex, violence, and profanity in the Bible that make them moral *exhortation* rather than immoral *exploitation.* Christians must take these qualifications into consideration in developing their standards of just what is appropriate in theatrical depiction of evil. First, the *intent* behind biblical spectacle is to expose man's inhumanity to man and rebellion against God, not to imbibe in evil as entertainment. Secondly, the *depiction* of evil is not indulgent. Explicit portrayal is usually rare and surrounded by more implicit allusion. Thirdly, in the Bible, sinful behavior has *consequences.* Whether in this world or the next, evil leads to self-destruction, not unfettered freedom. And lastly, the *context* of evil is always presented as immoral, not as a legitimate "alternative lifestyle." Christians must be cautious in their involvement with or observance of such dramatic performance of evil to determine whether the context of such display is redemptive or gratuitous. And it is important to realize that the effect of a work of art does not always match the intent.

Narrative and Dramatic Performance

As Christians who live in a postmodern world that has produced suspicion toward abstract reason and has embraced the body, narrative, and imagination, we must navigate the treacherous pathway between the extremes of Platonic idealism and Aristotelian empiricism. Platonic idealism exalts the abstract world of rationality as the ultimate truth. It tends to reject theater as a "fleshly" enterprise manipulating emotions, which is inferior to the contemplative life of philosophy and intellectual pursuit that stimulate reason. It is spirit without body. Aristotelian empiricism rejects the "spiritual" and abstract side of reality in favor of the concrete body of "this world" experience. But both views suffer from the same unbiblical dualism of separating spirit and body, emotion and intellect, reason and imagination, and valuing one over the other.

A proper biblical approach to understanding the place of narrative and dramatic performance is incarnational. It places equal ultimacy in both spirit and body as a unified whole, emotion and intellect as equally a part of God's image in man, and reason and imagination as equally necessary to God's revelation. Jesus Christ, as the very *image* of the invisible God (Col. 1:15) is an *incarnation* of God's presence, the manifestation of deity in *bodily form* (Col. 2:9), God's own dramatic performance of His Word and will within time and space. Jesus acts out God's scripted will of a redemptive story in a dramatic theology of the body—Word become flesh (John 1:14). In this way, dramatic performance is incarnational. It embodies a worldview in its theme, brings concrete bodily expression to abstract ideas. It is living doctrine. The power of theater is the power of incarnation through narrative.

The narrative nature of drama is also foundational to a biblical worldview. About thirty percent of the Bible is rational propositional truth and laws—whereas seventy percent of the Bible is story, vision, symbol, and narrative. The Bible is the story of God's redemptive activity in history. The Bible is not a systematic theological textbook. It communicates doctrine and theology mostly through story. Storytelling draws us into truth by incarnating worldview through narrative. Creation, Fall, Redemption, Restoration—the elements of a worldview—is a narrative progression of events that can be seen in dramatic performance.

Stories are means of understanding truth through existential inhabitation of narrative. As we enter into the story and see ourselves in it, we see truth in a way that mere logical or doctrinal discourse cannot achieve. As Abraham Kuyper explained in reference to biblical

literary narrative, "revelation strikes all the chords of the soul, and not just one, e.g., the rational one. This makes it clear that the historical doctrine of revelation is not the barren propositional one it is often charged with being."[2]

Jesus taught about the Kingdom of God mostly through parables. And those parables communicated invisible reality in terms of visible, sensate, dramatic stories. To Him, the Kingdom was far too deep and rich a truth to entrust merely to rational abstract propositions. He chose stories of weddings, investment bankers, unscrupulous slaves, and buried treasure over syllogisms, abstraction, systematics, or dissertations. And His usage of such metaphors and images was not a "primitive" form of discourse, as if ancient Jews were not sophisticated enough to understand abstraction. In fact, at the time of the writing of the New Testament, Israel was immersed in the Hellenistic culture that dominated the Middle East with its heavily abstracted thinking. Jesus deliberately chose story over abstraction.

Kenneth E. Bailey, an expert on Middle Eastern New Testament studies, explains that "a biblical story is not simply a 'delivery system' for an idea. Rather, the story first creates a world and then invites the listener to live in that world, to take it on as part of who he or she is. . . . In reading and studying the Bible, ancient tales are not examined merely in order to extract a theological principle or ethical model." Theologian Kevin Vanhoozer agrees that doctrinal propositions are not "more basic" than the narrative, and in fact, fail to communicate what narrative can. He writes in his book, *The Drama of Doctrine*, "Narratives make story-shaped points that cannot always be paraphrased in propositional statements without losing something in translation." If you try to scientifically dissect the parable you will kill it, and if you discard the carcass once you have your doctrine, you have discarded the heart of God.

In conclusion, our modern western bias toward rational theological propositions can too easily blind us to the biblical emphasis on visually dramatic stories. We downplay dramatic performance as dangerous or irrational, while God embraces such incarnation as a vital means of communicating his message. We elevate rational discourse as superior and theater as inferior in its emotional and entertainment orientation, while God elevates dramatic narrative equally with rational discourse as part of our *imago dei*. We consider stories to be quaint illustrations of abstract doctrinal universal truths, while God uses stories as his dominant means of incarnating truth. While it would be equally dangerous to swing the pendulum to the other extreme of postmodern irrationality in our pursuit of a Christian worldview, we are obligated to consider our own cultural biases and maintain a proper biblical balance of reason and imagination, of orthodoxy (right belief) and orthopraxy (right behavior), of theology and theater.

—*Brian Godawa*

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ENDNOTES

1   More information about morality plays may be found at Links 1 and 2 for this chapter at www.VeritasPress.com/OmniLinks.

2   As quoted in Kevin J. Vanhoozer, "The Semantics of Biblical Literature," in *Hermeneutics, Authority and Canon,* ed. D.A. Carson and John D. Woodbridge (Grand Rapids, Mich.: Zondervan, 1986), p. 78.

Economics

One of the most famous (and notorious) economists of the twentieth century, Sir John Maynard Keynes, said:

> The ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed the world is ruled by little else. Practical men, who believe themselves to be quite exempt from any intellectual influences, are usually the slaves of some defunct economist.

Indeed, the field of economics serves as the playground for some of the most contentious discussion in contemporary thought. Mistaken economic beliefs can wreak havoc on entire societies, while cogent economic thinking can open the door to a level of prosperity previously thought unimaginable. As Lord Keynes points out above, the implications of economic theory are far more practical than many realize (for good and for ill).

Christian social thought has participated in both the good and the bad of economic influence over the centuries. The spectrum of thought covering economic theory is deep and wide, and Christian voices have contributed to the dialogue, at times agreeing with one side of the spectrum, and at times affirming the other. This begs the question as to whether or not there is a distinctively Christian view of economics or whether the Christian worldview allows for simply casting one's vote behind one or the other conflicting schools of thought. In other words, should men and women of faith study the major perspectives that exist on the subject and subsequently "cast a vote," or does Christian social thought have something original and productive to add to contemporary economic conversations?

What Is Economics?

In the most basic sense, economics is nothing more than the study of the production and consumption of goods and services. Put more practically, economics looks at the impact incentives and resources will have on human behavior and allocation of scarce resources. As is the case with any number of disciplines, the size and complexity of the subject have forced an extraordinary expansion in the study of economics. In modern society, economic ideology is unavoidably overlapped with political ideology, though that was not always necessarily so.

The Scottish philosopher, Adam Smith, is widely considered the father of modern economics. While best known for articulating the concept of "the invisible hand," his metaphor for the self-regulating nature of the free marketplace, Smith was a pioneer in the theory that rational self-interest can lead to broad-based economic prosperity. The "invisible hand" describes the inner-workings of the marketplace wherein consumers and producers (often with no relationship to each other) purchase and sell goods and services according to their own wants and needs, with each incidentally helping one another "invisibly" even though the objective was self-interest, not altruism. (In the course of a business transaction, I often use Federal Express to send documents and proposals; my objective is always to get documents to my clients in a more efficient manner, thereby expediting the completion of a transaction that benefits me. However, the money spent on Federal Express delivery also benefits disinterested third parties—namely, the employees of Federal Express, the food establishments from which those Federal Express employees buy their lunch, etc., etc.) For Smith, individuals working to advance their narrow self-interest paradoxically work to advance the good of all society as competitive markets advance broader social interests. A culture of competition is created when a marketplace of producers and consumers sets out to better each individual's own situation. This competition creates lower prices and builds incentive for a variety of goods and services. Smith's magnum opus *The Wealth of Nations* became one of the first modern works to advocate free-market capitalism, the economic school of thought in which the means of production and distribution are privately owned and profits are the explicit incentive of those who own and invest capital. Capitalism is not just the most efficient system for economic management, but the most moral one as well. The controversy behind this viewpoint is as prevalent today as it was three centuries ago, as we shall see.

Other notable names in the field of classical economics include Jean-Baptiste Say, David Ricardo, Thomas Malthus, and John Stuart Mill. Say did monumental work in understanding supply and demand. Ricardo became one of the early intellectual pioneers of the free trade movement, demonstrating its mutual competitive advantages. Malthus did yeoman's work on the economic implications of population growth and how it affected resources. He was one of the first to note the connections between economic realities and their inducement to moral and industrious behavior. Mill accepted Smith's viewpoint that free markets were good at allocating resources but disputed the idea that the market could properly distribute income and profits. Each of these men made his own contribution to the study of economics in the nineteenth century and greatly influenced the various progressions that would follow.

Descending from the classical school of economics, Karl Marx represented a noticeable dissent from the orthodoxy of Smith's era. Marx saw the profit motive of private enterprise and the ownership of private property that it presupposed to be ultimately based on the exploitation of laborers. Contra Smith, the "invisible hand" was not improving society but instead was allowing an elite minority to dominate the working class. The solution to this social injustice, for Marx, was to place the means of production in society into collective ownership. While capitalists affirm the right of the owners of capital to control and direct resources at their disposal, Marx believed that collective ownership of capital was required if we were to remedy the exploitation of the labor class.

While perhaps it is too simple to posit that the ultimate division in the field of economics in the nineteenth century was between followers of Adam Smith and followers of Karl Marx, it serves as a helpful paradigm for understanding the major philosophical conflict entering the twentieth century, and indeed, to this very day. For all of the complex differences among the various schools of thought and key economic thinkers, the essential disagreement dealt with the practical and moral consequences of private property and a profit motive (i.e., the alleged tension between economic profit incentive and some form of collectivist vision for society). This tension was not resolved in the twentieth century, but rather was magnified many times over. The socialist, or collectivist, view of economics took firm hold throughout much of the world, and essentially argued for various degrees of state control of the economy. After the Great Depression in the 1920s and 30s, the new orthodoxy in modern economics became the theories of John Maynard Keynes, who rejected outright collective ownership and control of the means of production in society, but defended the role of a central planner (i.e., the state) in stabilizing the perceived inefficiencies of the business cycle (the business cycle is

the term economists use to describe fluctuations in economic production, generally inclusive of expansion and contraction). Keynes presented an alleged hybrid of the most crude parts of free market capitalism and the most benevolent and efficient parts of collectivism. Keynes believed that aggregate demand for goods would be inadequate during economic downturns, but that the state could compensate for that diminished demand by injecting demand into the economy (through infrastructure development, government spending, etc.). Free market advocates such as Friedrich Hayek and Milton Friedman categorically rejected the tenets of Keynesianism, countering that the tools Keynesianism relied on would inevitably lead to greater government control of the economy, suppressing incentive, distorting prices, and stifling innovation. While Keynesianism argued for the necessity of central planning in a stable economy, Friedman (representing the Chicago school of economics) and Hayek (representing the Austrian school of economics) demonstrated that the opposite was the case: government intervention, rather than stabilizing economic imbalances, served to perpetuate them. Hayek believed that Keynes failed to understand the true nature of the business cycle and that governments could not create real demand; they simply distort the real needs of the marketplace, giving false price signals that ultimately lead to far greater instability. Joseph Schumpeter coined the phrase "creative destruction," arguing that while greater innovations and technologies may render certain segments of an economy obsolete, these innovations and technologies ultimately serve as the engine of macro economic growth that a society needs. Put differently, this "creative destruction" may inflict short-term pain to some people, but ironically creates long-term benefits for all people.

While the failure of full-blown Marxism in the Soviet Union and Communist China did much to destroy whatever credibility existed in the theories of Karl Marx, and the downfall of Eastern Europe largely damaged the reputation of exhaustive socialism wherein all of the means of production are controlled by a centrist state, the twentieth century oddly failed to extinguish the forces of collectivist economics. Cherry-picked from the ashes of full-blown socialism and Marxian economics, Redistributionism, a political philosophy as much as an economic policy, survived as an alleged remedy to many of the "social injustices" Marx addressed, albeit not through a totalitarian command control economy, but rather through a progressive income tax system and welfare-state democracy.

At the heart of the matter today lie the same issues that Smith addressed in the eighteenth century, Marx in the nineteenth century, and Hayek in the twentieth century: the moral propriety of a profit motive (is it proper to try to make money?), the relationship between the state and its people, and the best economic system for cultivating stability and prosperity.
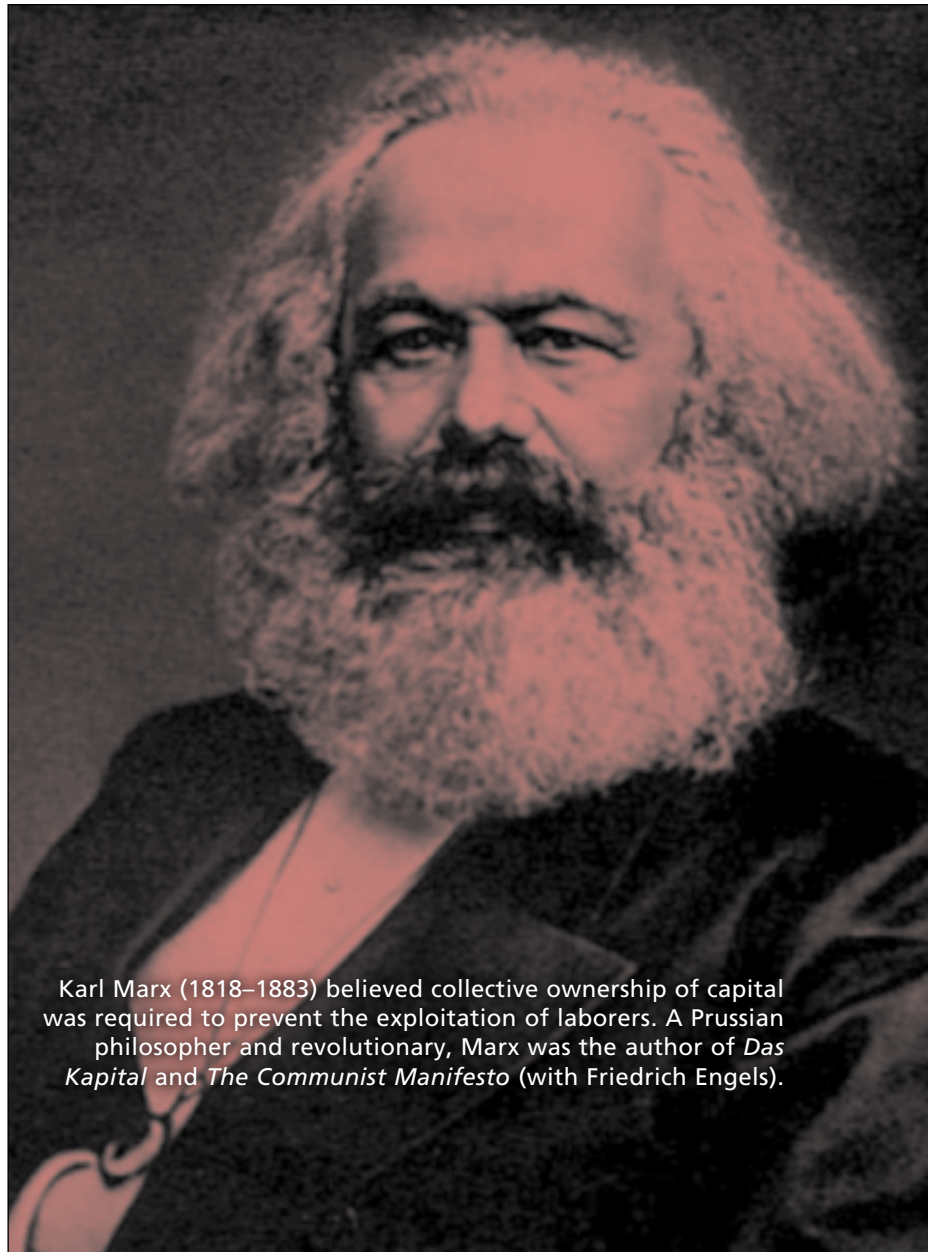
Karl Marx (1818–1883) believed collective ownership of capital was required to prevent the exploitation of laborers. A Prussian philosopher and revolutionary, Marx was the author of *Das Kapital* and *The Communist Manifesto* (with Friedrich Engels).

The Author of the Wealth of Nations

Critical Issues

At stake in the conflict of modern economic debate are issues that have long been wrestled with by the Christian church. Not surprisingly, differing economic perspectives are as prevalent both within and outside the church, and the level of passion and conviction that accompanies these differences is even magnified. I am going to use three primary issues to illustrate the divide that exists in looking at a Christian view of economics. While

countless sub-issues exist, and far more than two major sides could be said to exist on these three issues, I believe these provide the basic paradigms of the present landscape. These issues are:

(1) Differing views of material prosperity

(2) Differing views of social justice (and remedies to social injustice)

(3) Differing views of private property

Differing Views of Material Prosperity

Since economics is often perceived as the study of the forces that create material advancement, a tension has long existed at this juncture for Christians. Does the very study of economics expose one to the idol-worship of money that Jesus warns against? Isn't the obtaining of material possessions to be repudiated? Even if Christians are permitted to study broad principles of economics, should not their material aspirations be limited to that which can be used to assist others in need? Consider these verses, just a small sample of Scripture texts often used to support a theology of material frugality:

Jesus answered, "If you want to be perfect, go, sell your possessions and give to the poor, and you will have treasure in heaven. Then come, follow me." (Matt. 19:21 NIV)

And He instructed His disciples that they should take nothing for their journey, except a mere staff—no bread, no bag, no money in their belt—but to wear sandals; and He added, "Do not put on two tunics." (Mark 6:8–9 NASB)

Jesus said, "No servant can serve two masters; for either he will hate the one, and love the other, or else he will hold to one, and despise the other. You

cannot serve God and riches." Now the Pharisees, who were lovers of money, were listening to all these things, and they were scoffing at Him. And He said to them, "You are those who justify yourselves in the sight of men, but God knows your hearts; for that which is highly esteemed among men is detestable in the sight of God." (Luke 16:13–15)

The dilemma as it pertains to differing views of material prosperity boils down to this: Does the Scripture condemn the pursuit of material wealth, and if so, shouldn't that biblical view be reflected in our own suppositions about economics? If the Scriptures do not condemn obtaining affluence, what economic system best reflects the Scriptural view of markets and morality?

Differing Views of Social Justice

The Christian gospel presents a vision for social justice often portrayed as at odds with the free market capitalism of Adam Smith and Friedrich Hayek. No Christian disagrees with the notion that God is very concerned with matters of social justice.

> Religion that God our Father accepts as pure and faultless is this: to look after orphans and widows in their distress and to keep oneself from being polluted by the world. (James 1:27 NIV)

> If anyone has material possessions and sees his brother in need but has no pity on him, how can the love of God be in him? (1 John 3:17 NIV)

But while the need to care for those in material need is not in question, the proposed solutions are the heart of the dispute. One side sees progressive taxation and income redistribution as the solution to caring for those in need, while the other side sees increased growth and freedom and individual responsibility as the long-term solution. From Adam Smith's perspective, social justice is best addressed through the incidental benevolence of the free market—the "invisible hand" at work. But to Karl Marx, the exploitation of laborers was the necessary effect of capitalism, and therefore free and open markets were not merely tolerating social injustice, but creating it! What economic system best reflects the Scriptural view of addressing social and humanitarian needs?

Differing Views of Private Property

The final integral issue addresses differing doctrines on private property. One can see how the presuppositions one brings to the subject of private property will necessarily affect his entire view of economics. A Christian who believes the Bible establishes the existence and propriety of private property will likely advocate a system that cultivates and defends it, whereas a Christian who disputes the morality of private ownership is far more likely to be attracted to the lure of some form of collectivism. The biblical view of private property, whatever it may be, is necessarily intertwined with any biblical view of economics. Karl Marx saw private property as a dehumanizing force in society that causes humans to sacrifice the good of their species for their own interests. John Locke, on the other hand, saw private property as a natural right, with each man possessing the moral right to claim ownership of the fruits of his property. Does the Christian worldview resemble Marx or Locke in its treatment of private property? Certainly other viewpoints exist, but essentially all other viewpoints are mere variations of these two major perspectives.

A Christian Response

There is no question that Christians who defend a free-market approach to economics, and do so within the context of a biblical worldview, carry a heavy burden. The intuition that the Bible condemns the pursuit of material prosperity is a common one, and a good number of verses lend it *prima facie* support (though, I will argue, they do not provide support beyond that). The Christian response to the critical issues I have outlined needs to be as follows:

(1) The Bible supports the pursuit of material prosperity, and in fact, encourages it. What the Bible condemns, and condemns in the strongest language possible, is any and all forms of idolatry. The Bible condemns ill-gotten gains. The Bible condemns mistreating the poor as a means of obtaining riches. And God, being a jealous God, will not share His glory with anyone. Any person who seeks riches as a substitute for fellowship with God is in grave sin and has missed a crucial point of a biblical view of affluence.

(2) While social justice is of primary importance in the Bible, any economic system that seeks to alleviate poverty through forced economic redistribution of wealth (taking money from those who have it and giving it to the poor by taxation or force) creates just such injustice. The biblical view of charity is that a charitable spirit is found in the heart, not in the coercive powers of the state. Human dignity is most respected when Christians voluntarily seek to

care for those in need. Confiscation of wealth from one party to give to a third party is not charity; it is theft. Ironically, the heavy weight of historical evidence tells us that the greatest alleviation of poverty comes when political and economic freedom is greatest. The free market is not the cause of social injustice; it is the cure!

(3) The entire thesis that a Christian view of economics leans more on the side of Adam Smith than the side of Karl Marx hinges upon our view of private property. The Scripture's uncompromised respect for private property provides the foundation for a private enterprise economy. Just as the prohibition of adultery (Ex. 20:14) presupposes the institution of marriage, so also the prohibition of theft and covetousness presupposes the institution of private property (Ex. 20:15, 17). Out of our private property doctrine will come an incentive system that matches Proverbial wisdom with capitalistic tenets, the framework needed to maximize productivity and faithfulness in a modern economy and a repudiation of collectivism.

The pursuit of material prosperity is a given in most cultures. It is uncategorically natural to the human condition to desire a better life for one's self, greater comfort, greater blessings, greater freedom, and greater abundance. The question a Christian must ask is whether or not this is only natural for humanity to the extent that it reflects the carnal condition, or whether or not it is part of God's design for our lives. God desires for His people to live in delight. Our covenantal journey is one of starting at, and returning to, Edenic conditions. This is an economic journey, just as it is a spiritual and moral one. The story of Adam and Eve in Eden before the Fall is one of abundance and delight. The story of the Exodus recounts God's leading his people out of oppression and poverty and toward His promise of a "land flowing with milk and honey" (Ex. 3:8). The eschatological journey on which we find ourselves now is destined to end in the "celestial city" (Heb. 12:22), a place where the "streets are paved with gold" (Rev. 21:21). The picture of the journey we find ourselves on is frequently one portraying a people seeking improved material conditions—even conditions of prosperity and affluence.

The Bible is replete with a message that wealth is a gift from God, and an incentive for hard work and innovation.

You may say to yourself, "My power and the strength of my hands have produced this wealth for me." But remember the LORD your God, for it is he who gives you the ability to produce wealth, and so confirms his covenant, which he swore to your forefathers, as it is today. If you ever forget the LORD your God and follow other gods and worship and bow down to them, I testify against you today that you will surely be destroyed. (Deut. 8:17–19 NIV)

Readers should note the two-fold message of this passage. While on one hand, the production of wealth is affirmed and encouraged, pride and self-reliance are condemned. The testimony of Scripture is adamant that a dependence on one's wealth will not end well. God is not mocked. He demands that His people live lives of gratitude and humility. Even so, He proposes time and time again that wealth and prosperity are an incentive to creative and industrious labor.

The Bible does not promise that every believer will live in prosperous delight. What it does, though, is affirm that every believer may pursue wealth. However, unlike capitalist systems that glorify hedonism and selfishness (Ayn Rand), the biblical system notes both the *rights* and the *duties* of free people. While our *economic* system of thought may call for a human liberty that is free to succeed and flourish in a market economy, our *theological* system of thought recognizes God as the giver of all good things and seeks to practice the biblical notions of stewardship and gratitude, without which the market system crumbles under the heavy weight of sinful human nature.

A biblical pursuit of material prosperity is careful to praise God for all He has given us (Ps. 107:8). It does not pursue ill-gotten gains (Prov. 10:2). It does not exploit the poor (Amos 5:11). It focuses on wealth as a reward for hard work (Eccles. 5:19). It never loses sight of contentment (1 Tim. 6:6). But most of all, a biblical view of wealth is one that encourages the idea that prosperity is to be an incentive for productivity (Prov. 10:2–5). It also provides the basis for generosity by providing us something to be generous *with* (1 Tim. 6:17–18). We don't want to slide into thinking that the poor will be taken care of by an impersonal "invisible hand." Generous Christians must be involved. And besides, if wealth were a bad thing, why would we want to share it with others?

The challenges embedded in this topic do not end there. The study of economics seeks to understand production and consumption, but it also allows for addressing the major social concerns of the day. The vast majority of confused economic theory juxtaposes social justice and economic freedom in such a way that it delivers

neither social justice nor economic freedom. The view of the state that Marx held, and to a much lesser degree, Keynes as well, calls for some central authority in the administration of social justice. The prevalent economic philosophy of today uses a progressive tax system to first garnish wages from some of the more productive members of society, and then to redistribute a portion of those proceeds to others. Social ills including homelessness, hunger, disease, poverty, and many others are addressed via the bureaucracy of the state, funded via redistributed funds which were collected from revenue-producers in society (i.e., capitalists). The Christian response to disputes over issues of social justice must be to first properly identify the problem and then properly identify solutions to the problem.

Orphans and widows are examples of severe social need. "Income inequality" is not such an example. Today, income inequality is held up by the political Left as one of the great illustrations of the failure of capitalism. However, there is no coherent reason whatsoever for seeing income inequality as a social evil. In fact, the presupposition that income inequality is itself a social ill is deeply rooted in an egregious violation of the Tenth Commandment that "thou shalt not covet" (Ex. 20:17).

The temptation to view the difference between monetary compensation received by one party versus that of another party as a social woe only makes sense if one falls for the "zero-sum game fallacy." This describes a belief that one participant's gain is exactly equal to another participant's loss. In other words, you can only get a bigger piece of pie if someone else gets a smaller one. But this fails to see the reality of "wealth creation," by which the entire pie of wealth grows, as opposed to various slices of the pie simply being re-drawn. In a free market system, matter is converted into resources, and this selling of the goods and services that are made creates economic expansion. It stands to reason, then, that consumers will put a different price tag on different skill sets and goods as market conditions allow (and demand). The idea that different people of different work ethics, working in different industries, and employing different means of competing in their given marketplace would all obtain the same income is intellectually absurd and morally skewed. For a Christian who is faithful to avoid coveting his neighbor's possessions, income inequality is a red herring. As Hayek's work on price signals has taught us, the free and open market will indicate what value is to be placed on certain labor and exchange of goods. Income inequality

The Orphan, an engraving from the original by Scottish painter Thomas Faed (1826–1900). Christians should not be lulled into thinking that the poor will be cared for by an impersonal "invisible hand."

will always exist as long as there is a variance in degrees of responsibility, risk, importance, and complexity in the job market. It is a perversion of the definition of "social injustice" to include the disparity of income levels within that broad category.

But what about real cases of social injustice, such as the aforementioned examples of widows and orphans? Surely there are many examples of human tragedy that do not reflect poor human decisions, and a Christian must incorporate a comprehensive view of social justice into his worldview to address just such issues. However, the idea that a compulsory redistribution of wealth, administered by a state that is dependent upon votes for its power, will be the ideal mechanism for remedying social injustice is patently false and, in fact, counter-productive. The very definition of charity implies a voluntary *and personal* action. Why is it that people who object to the impersonalism of the "invisible hand" don't object to the impersonalism of distant federal bureaucracies? When the societal responsibility of caring for the poor is taken from the individual, family, and local church, and vested in a federal bureaucracy, it should shock no one that people are less motivated to find ways to help the poor, looking instead to the government to care for them.

The doctrine of moral proximity not only teaches that we are most morally culpable for what is most proximate to us (i.e., I am more responsible for the injured man lying in front of me on the road—like the Good Samaritan—than I am an injured party in a far away continent that I could not possibly help if I wanted to), but it also teaches that we will have a far greater likelihood of success in such a scenario as well. When moral human agents engage the societal ills that are most troublesome to them directly, far more attention, passion, conviction, and sensibility are injected into the problem. Bureaucrats lack the ability to be charitable (it is not their money they are distributing), and lack the ability to be efficient (they are not in proximity to the ill they are trying to address). But local churches and organizations, bound by their own moral consciences and operating with a duty to serve their fellow man, are not nearly as subject to the pile of inefficiency that governments leave behind when they attempt to redistribute wealth. Taking money from one person or family and giving to another (or if you want the technical language: confiscatory wealth redistribution) is not only immoral, but it hurts the incentive to work and generate profits, thereby leading to greater unemployment and poverty (the very social ills supposedly being remedied).

Free market advocates cannot take the burden of social justice lightly. It is a serious thing for secular advocates of a free market system, as they do not desire to live in abject chaos (history and human sociology tell us that there is an inverse correlation between social justice and law-breaking). Christian advocates of a free market system who take seriously the biblical mandate to care for the poor must also take social justice issues seriously. Marvin Olasky's landmark work *The Tragedy of American Compassion* provides a plethora of support for the failure of the modern welfare system to effectively engage in social good. What is appalling in the present age is not that profit-driven Christians would continue to seek an increasing level of productivity even as homelessness and poverty exist, but that manipulative believers would continue to invoke the redistributive power of the state in addressing what it has so miserably failed to address. In many cases the cure is worse than the disease.

Finally, the third critical issue requiring our attention is that of private property. Our response to this issue sets the tone for how the Christian will side in the great divide between Adam Smith and Karl Marx. The free market capitalist builds his system of economics on the belief that there is such a thing as valid private property. Private property rights have been defended by such important historical stalwarts as Thomas Hobbes, John Locke, Charles Montesquieu, William Blackstone, and Frederic Bastiat. It is my contention not just that Christians ought to side with private property advocates within capitalist economic circles, but in fact, that secular private property rights advocates owe their views on the subject to Christian teaching. As we shall see, the doctrine of private property is one established by Scripture itself. And yes, private property does provide the needed foundation for the repudiation of collectivism and defense of free enterprise.

A low view of property rights is not only ethically flawed in its overt contradiction of God's ethical maxims, but it is pragmatically disastrous.

"Thou shalt not steal" serves as the great and eighth commandment in the holy Decalogue God gave to Moses to guide the ethical behavior of His chosen people (Ex. 20:15). And out of this great commandment comes one of the most significant economic inferences in the entire Old Testament. Though far from being the last word on the subject, "thou shalt not steal" is certainly the first set of words, and by inference, it captures a powerful mandate for the existence of private property. For indeed, how can one be guilty of stealing if someone else does not possess the right of ownership? The Old Testament ethic went beyond the mere prohibition of theft, but in fact, provided a thorough case law system for punitively addressing it (Ex. 22:1–14; Lev. 6:2–5). Private property is established by Scripture itself, just as the theft of someone else's private property is prohibited by Scripture. The implications of this were recognized early in our nation:

> . . . the exclusive right of possessing, enjoying and disposing of a thing; ownership. In the beginning of the world, the Creator gave to man dominion over the earth, over the fish of the sea and the fowls of the air, and over every living thing. This is the foundation of man's property in the earth and in all its productions. Prior occupancy of land and of wild animals gives to the possessor the property of them. The labor of inventing, making or producing anything constitutes one of the highest and most indefeasible titles to property. —Noah Webster

As John Locke and, centuries later, Murray Rothbard

have persuasively argued, the right to private property includes the right to the fruit of one's labor. Ownership of property is created by the application of labor. Opposing property rights is really not a desire to abolish them, but rather to simply transfer them to a third party—most frequently, the civil government. A low view of property rights is not only ethically flawed in its overt contradiction of God's ethical maxims, but it is pragmatically disastrous. Common ownership of resources provides no strong incentive to preserve the resource. Most individuals will care for their personal property more diligently when they know that their ownership of it is protected by the rule of law. Indeed, the rule of law is an integral part of belief in private property rights. Confidence in the enforcement of property protections is required for the benefits to be fully realized. The management of resources and real property where private ownership exists provides incentive for the types of behaviors that preserve value in society, leading to greater prosperity and improved aesthetics for society at large. Private ownership provides incentives for the maintenance, safety, health, and functionality of our communities.

Ultimately, the legal rights of private property are the underlying requisite for rational economic calculation. Prices of goods and services cannot be determined without enforceable property rights. Without prices for goods and services there cannot be profits, and without profits there cannot be economic growth. The alternative is the cold and de-motivating world of collective ownership, also known as socialism, wherein prices are set by a central planning authority according to the marginal cost, and not by an open and competitive price system. The control of capital, to the capitalist, is not about a right to exploit the worker (as Marx contended), but rather is about the right of the owner of capital to *exchange it as he wishes*. A laborer does not have to enter into the transaction, and neither does the owner of the capital. Both parties, possessing clear control of their own property, are free to choose (in the case of the owner, it is his capital and resources; in the case of his laborer, it is his desired skill set). The major theme of capitalism and private property is, and must always be, personal freedom. The freedoms embedded in the doctrine of private ownership are what make a prosperous society possible.

Conclusion

This is by no means an exhaustive discussion of the historical tensions in economic thought or the Christian's considerations in assessing them. Economics is a complicated social science, made even more complicated by its necessary intertwining with socio-political issues. And while many classical and neo-classical economic thinkers have laid the foundation for a comprehensive understanding of the subject, we can be certain that a great deal of work remains to be done.

Most important for those who believe in developing and applying a biblical world and life view to all aspects of Christian living is the careful synthesis of our theological precepts with the economic truisms of the free market system. But these truisms must not be synthesized on the ground that we like the results they produce but rather because we fundamentally believe in the superiority of the free market system as measured by the standards of Scripture. To the extent that private enterprise economics most respects the dignity of the person, created in the image of God, given a series of rights and duties, we commend private enterprise economics. To the extent that the pursuit of material prosperity allows human beings to flourish, we defend the pursuit of material prosperity. The Acton Institute has articulated this very well in their core principles:

> Liberty flourishes in a society supported by a moral culture that embraces the truth about the transcendent origin and destiny of the human person. This moral culture leads to harmony and to the proper ordering of society. While the various institutions within the political, economic, and other spheres are important, the family is the primary inculcator of the moral culture in a society.[1]

While secular capitalists often draw proper conclusions in matters of economic thought (they understand the relationship of supply to demand; they are skeptical of the ability of the state to objectively control an economy; they understand the necessity of an uninhibited incentive system to maximize productivity, etc.), we must be very careful to identify the places at which our premises differ from theirs. Our belief in the pursuit of material affluence is necessarily subject to covenantal obedience and at all times subordinate to our standing before God as His creation. The free market system, developed over the centuries by economic pioneers such as Smith, Locke, Mill, Hayek, and Friedman, does not provide Christians with a functional framework that can be backed into our religion. Rather, the Scriptures establish the principles and values of a market economy—values that we hold dear. It is the Bible more than any philosopher that dictates the tenets of the free market system we believe in. We must not put the cart before the horse. Secular and faithful capitalists alike ought to resist the malignant intentions of corrupt power. However, we Christians must equally resist the malignant intentions of secular capitalists.

For while both see the merit of the profit motive, only a believer, ingrained in the worldview provided him or her by the Bible, can make heads or tails of what it means in daily economic life. Like the house built on shifting sand, free market principles divorced from Christian ethics will always, always end poorly. But when synthesized with the gospel of Jesus Christ, free enterprise will do more than just transform a society economically; living with faith in the promises of the gospel while practicing free enterprise will provide a coherent and virtuous model of what prosperous living ought to look like. This must be the aim of economics.

—David Bahnsen

For Further Reading

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Endnotes

1   These core principles may be viewed in their entirety by clicking Link 1 for this chapter at www.VeritasPress.com/OmniLinks.

ENGINEERING

Engineers solve problems. Engineers use rigorous methodologies, specific domain knowledge, engineering techniques, math, and science to analyze and design solutions. Engineering requires creativity, sound judgment, perseverance, experience, and risk. Engineering is a profession that requires significant education, typically membership in a professional society, and sometimes government licensing. Engineers work closely with scientists, technicians, businessmen, and customers. Engineers have created or influenced almost every aspect of the world where we live.[1] Theodore von Karman says:

"Scientists discover the world that exists;
engineers create the world that never was".[2]

The National Academy of Engineering defines engineering as:

Engineering has been defined in many ways. It is often referred to as the "application of science" because engineers take abstract ideas and build tangible products from them. Another definition is "design under constraint," because to "engineer" a product means to construct it in such a way that it will do exactly what you want it to, without any unexpected consequences.

Engineers are men and women who create new products. It is estimated that there are over 2 million practicing engineers in the United States. They work in fields such as biomedicine, energy, automotive, aerospace, computers, and many others that require people to create products that didn't exist before.[3]

The Accreditation Board for Engineering and Technology (ABET), the agency that accredits college engineering programs, says that engineering design is:

. . . the process of devising a system, component, or process to meet desired needs. It is a decision-making process (often iterative), in which the basic sciences, mathematics, and the engineering sciences are applied to convert resources optimally to meet these stated needs.[4]

There are many definitions of engineering, but in the end, engineers solve problems.

There are as many examples of engineer-solved problems as there are products we use every day. Engineers created different ways for humans to get places faster, such as cars, trains, and planes. Engineers created different ways for humans to communicate, such as cell phones, television, and the Internet. Engineers created different ways for humans to stay healthier and live longer, such as vaccines, MRI scanners, and robotic-assisted surgery. The examples are endless, but you get the picture.

There are many different kinds of engineering, just as there are problems to solve in many areas of life. Examples of the larger branches of engineering include electrical, mechanical, civil, chemical, computer, biomedical, and aeronautical. There are many very specific types of engineering such as nuclear, petrochemical, materials, mining, etc. New types of engineering are created periodically as science or technological advancement open up new areas with problems to solve. Each type of engineering has specific knowledge, techniques, and tools that differ from other branches of engineering, but all apply a common approach to solving problems. Additionally, many real world problems require knowledge and skills from multiple areas, so engineers frequently work on multi-disciplinary teams.[5]

Within each type of engineering there are many different types of jobs. Some engineers are almost indistinguishable from scientists because they spend most of their times in the lab doing experiments. The difference is that the engineer always tries to use the experimental result to solve some problem. Some engineers spend most of their time in an office working on a computer. They use design programs such as CAD (computer aided design) or run simulations of different types of solutions. They may spend much of their time working alone. Some engineers spend their time outside preparing the site of a new cell tower or crawling beneath the streets to maintain the pipes and wires that keep a city running. Others spend most of their time working with customers and other people to understand their problems or help them install and use new solutions. Finally, some engineers spend their time in management looking at the big picture where solutions fit and then guiding other engineers to fulfill those needs. Engineers often make good senior managers because of their disciplined way of approaching problems.

Engineering is a respected and well-paid career field. The demand for engineers is high and growing. Even though some technical jobs are flowing overseas, the demand for engineers in the United States will continue to

grow for the foreseeable future. Additionally, the need for engineers is global, so people who want a chance to travel can easily find such opportunities in engineering. In high school, the best way to prepare for a career in engineering is to focus on advanced math and science courses, as these are the basic tools that engineers use to solve problems.

To the casual observer, it would seem that engineering is ethically neutral. Does God really care which type of concrete to use in a bridge or whether an electronic device runs at 2.5 volts or at 5 volts? It is true that much of the math and science in engineering has minimal moral implications; however, the problems engineers choose to solve and how they go about it has great moral impact. Every engineering professional society has a code of ethics, such as this one for the electrical engineering profession:[6]

> We, the members of the IEEE, in recognition of the importance of our technologies in affecting the quality of life throughout the world, and in accepting a personal obligation to our profession, its members and the communities we serve, do hereby commit ourselves to the highest ethical and professional conduct and agree:
>
> 1. to accept responsibility in making decisions consistent with the safety, health and welfare of the public, and to disclose promptly factors that might endanger the public or the environment;
> 2. to avoid real or perceived conflicts of interest whenever possible, and to disclose them to affected parties when they do exist;
> 3. to be honest and realistic in stating claims or estimates based on available data;
> 4. to reject bribery in all its forms;
> 5. to improve the understanding of technology, its appropriate application, and potential consequences;
> 6. to maintain and improve our technical competence and to undertake

> technological tasks for others only if qualified by training or experience, or after full disclosure of pertinent limitations;
> 7. to seek, accept, and offer honest criticism of technical work, to acknowledge and correct errors, and to credit properly the contributions of others;
> 8. to treat fairly all persons regardless of such factors as race, religion, gender, disability, age, or national origin;
> 9. to avoid injuring others, their property, reputation, or employment by false or malicious action;
> 10. to assist colleagues and co-workers in their professional development and to support them in following this code of ethics.

Although such codes are not explicitly Christian, they certainly reflect natural law and strive to promote the common good (see point 1 above).

Finally, there is a stereotype of engineers as geeky, anti-social loners who care more about technology than people. There are certainly many engineers who fit that description. However, most engineers have to work closely with a variety of people to identify problems, manage projects, and install solutions. They frequently work in teams for long periods of time. Although all engineers require basic technical skills, successful engineers require more. Successful engineers are good communicators both orally and in writing. Successful engineers have a strong work ethic. Successful engineers are able to step back and see the big picture of where their particular solution fits. A 2006 article in the Wall Street Journal reported that about 20% of the CEOs (chief executive officers) of top U.S. companies are engineers.[7] In today's complex world that requires large, integrated solutions, the old stereotype just doesn't fit well.
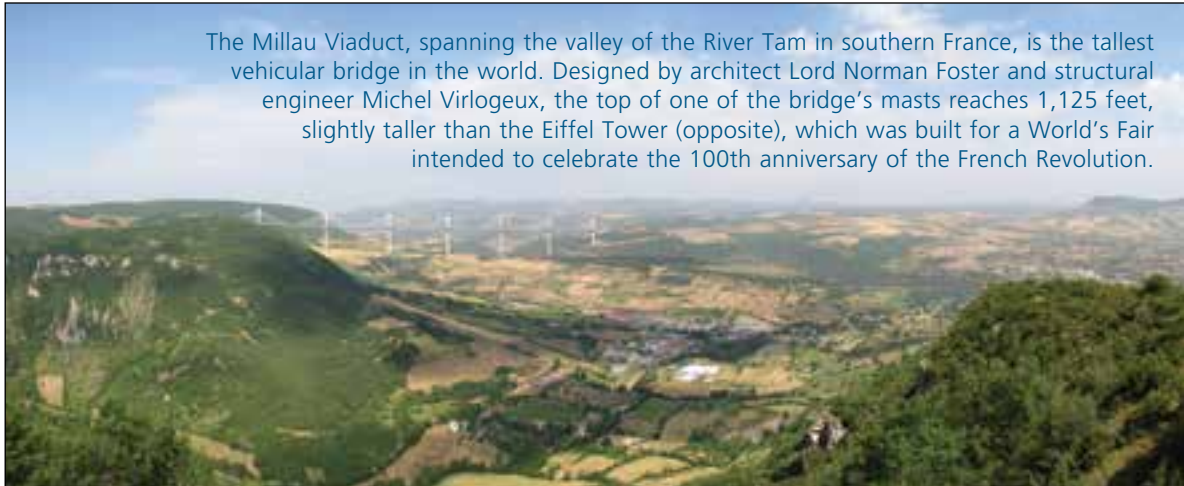
The Millau Viaduct, spanning the valley of the River Tam in southern France, is the tallest vehicular bridge in the world. Designed by architect Lord Norman Foster and structural engineer Michel Virlogeux, the top of one of the bridge's masts reaches 1,125 feet, slightly taller than the Eiffel Tower (opposite), which was built for a World's Fair intended to celebrate the 100th anniversary of the French Revolution.

Engineering Approach

Engineers approach problems in a disciplined way. Although there are many variations on the theme, most engineering design processes include the following steps:

1   Recognize the need for a solution
2   Clearly define the problem
3   Generate alternative approaches and select the best
4   Create a design
5   Implement the design
6   Test the design
7   Deliver/install the solution
8   Support and extend the solution

Along with the steps shown, engineers must plan the project, manage the project and communicate clearly what is happening at each step.

Step 1, recognizing needs, seems simple. However, people tend to focus on symptoms rather than underlying problems. Engineers must work closely with people to help everyone understand the true need. When dealing with disease and water safety issues in tribal areas, engineers must consider whether a treatment plant is necessary or practical or whether the water quality could be increased by simply changing the locations were people bathed, where they dumped waste, and where they drew water from the river. Also, there are many, many needs in the world, and engineers must carefully choose which ones they will address. Engineers often work closely with marketing personnel and with customers at this stage.

Defining the problem, step 2, is primarily the task of translating the customer's sometimes-ambiguous, English-language description of a problem into precise, quantitative, mathematical requirements that will guide the rest of the process. For any given problem, there are many possible solutions. This step also outlines which goals of the solution are most important. Different goals often conflict with each other, such as low-cost and high quality, and engineers must exercise judgment on appropriate compromises. Engineers must communicate clearly with customers at this stage.

Generating alternatives and designing the solution, steps 3 and 4, call for great creativity. Engineering teams work best when they have people with different skills and backgrounds so they can consider a wider variety of possibilities. This stage is often considered the heart of engineering. The design must be strictly guided by the requirements specified in step 2.

Steps 5 and 6, implementing and testing are sometimes considered straightforward tasks. However, there is great room for creativity and the use of advanced tools and techniques in these areas. Testing is particularly important, as that is where the team ensures that the solution matches the problem as defined in step 2.

Delivery and support, steps 7 and 8, require close contact with the customer. New solutions frequently modify the customers' environment significantly, prompting them to want more. Hence there is inevitably a need to extend the solution by adding more function. In today's environmentally conscious world, step 8 also includes the idea of recycling as much of the solution as possible when it is replaced by a new solution.

This basic approach applies to small, one-person projects and large, multi-year projects. Although stated as a linear process, in reality engineers often iterate within and across steps. Many industries and organizations have formally defined design procedures with specific checkpoints and documentation outputs from each stage. Sometimes each stage is performed by a different group. Sometimes a single team completes most or all the stages itself. In the latter case, the team obviously needs a range of talent and skills.

Critical Issues
What have engineers done for us?

People have had problems from the very beginning. Even in the Garden of Eden, Adam and Eve might eventually have wanted to get around faster, build a nice house, or have a reliable light source after dark. Where problems exist, engineering solutions will follow. This is not to imply in the least that engineering can solve the problem of sin or its consequences in the human heart. Engineering solutions belong strictly in the natural realm, and it is important for engineers to know their limitations.

Engineers helped erect all our favorite historical buildings and sights such as the pyramids, Stonehenge, and Notre Dame Cathedral. Budding materials engineers helped move us from the Iron to Bronze ages and beyond, finding new and improved uses for these basic materials. The military has always embraced engineering as a competitive advantage, such as the development of the longbow, catapult, rifle, etc. What would modern life be like without cars, televisions, or computers? Look around you right now. Almost every item you see and the processes to make it were developed by engineers. The National Academy of Engineering compiled a list of the twenty greatest engineering achievements of the twentieth century.[8]

In earlier times, the names we know well were often responsible for both basic scientific discoveries and the engineering applications of those discoveries. A few examples are Archimedes, Leonardo da Vinci, and James Watt. Today, with our knowledge so much greater, scientists and engineers tend to be different people. Unfortunately, after Thomas Edison, many engineers are relatively unknown outside their field. The disciplined approach of engineering is often useful in other fields, so some engineers are well known, but not necessarily as engineers. Examples include U.S. Presidents Herbert Hoover and Jimmy Carter.

What will engineers do tomorrow?

Our world today has many urgent problems. The National Academy of Engineering has defined a series of Grand Challenges that require urgent attention by engineers to maintain and continue the advancement of civilization. Some of these challenges are listed below:

Make solar energy economical
Provide energy from fusion
Manage the nitrogen cycle
Provide access to clean water
Restore and improve urban infrastructure
Advance health informatics
Engineer better medicines
Prevent nuclear terror
Secure cyberspace

As you can see from the list, engineers solve basic problems of life such as water and energy, as well as highly advanced and technical problems such as nuclear fusion and virtual reality. Engineers truly help people.

Everyone knows that the pace of technology change in today's world is fast and accelerating. Technology itself often introduces new problems even while it solves old problems. There is a significant movement within engineering to consider sustainability in all solutions and to predict potential problems each solution may introduce. Even if people are willing to forego particular technologies, few people seriously want to give up all the benefits of our technological age. For

Whereas endurance athletes have gained distinction for swimming across the English Channel (21 miles wide at its narrowest point), rail cars like this one traverse the expanse between England and France underground through the Channel Tunnel. The "Chunnel" opened in 1994 after six years of work and has been declared one of the Seven Wonders of the Modern World by the American Society of Civil Engineers.

example, everyone enjoys advances in biomedical technology that allow us to live longer and healthier lives.

Engineers are particularly aware of the great divide in how different people in the world benefit or not from our current achievements. While most people in the U.S. are surrounded by electronic devices and have instant access to information and services, many people in the world struggle with basic health and security needs. There is a great need for engineers to make basic technology affordable and accessible to everyone. For example, a project at Massachusetts Institute of Technology evolved into the One Laptop Per Child program that strives to make basic computer technology available at a $100 per child price.[9] This will stimulate education and provide access to information and services far beyond the local community. Technology can be a significant multiplier as developing nations try to catch up with the developed world.

When defining requirements for a particular problem and prioritizing characteristics of the solution, cost is inevitably an important component. Engineers must always realize that resources available for a solution have limits. For example, fossil fuels have traditionally provided cheap sources of energy. Yet today we know that those sources have limits and we need to develop cost-effective energy sources that use more abundant resources (like solar or fusion). Low cost is also important in making technology more available to developing countries. Good engineers are frugal.

There is a shortage of qualified engineers in most countries and most industries in the world. As the Grand Challenges point out, there are many major problems left to solve. The future of engineering is exciting and wide open.

A Christian Response
The Ethical Engineer

Although engineers cannot solve the problem of sin or change the human heart, they can make life better or easier in the physical world. As illustrated by their codes of ethics, secular engineering organizations promote basic virtues that any Christian would also support. However, Christian engineers must go beyond these basic virtues. They have a responsibility to use their talents in ways that acknowledge the underlying design of the Creator, the effects of sin on our world, and the need for solutions to protect the oppressed.

There is a pervasive idea that technology itself is morally neutral. People just choose to use a particular technology in good or evil ways. However, most modern philosophers accept the view that a given technological solution has a particular moral bias, either in a positive or negative direction.[10] Engineers choose a problem based on some moral framework. They develop the solution and the specific functions with a particular purpose in mind and try to create a technology that people will use in a particular way. Obviously, users can subvert the intentions of the designer, but the technology itself still has an intended use for good or evil. Hence there is a need for engineers with high ethical standards—a need for Christian engineers.

Military technology is a difficult example in this area. Clearly there is a need for nations to defend themselves, however, just as clearly we do not want people using efficient and effective technology to kill others maliciously. Two of the Grand Challenges, "prevent nuclear terror" and "secure cyberspace," address this issue directly. Engineers must not only produce military technologies that are hard for the bad guys to replicate, but also processes to keep them in the right hands.

Sir Edmund Hillary said that he climbed Mt. Everest "because it was there." Such an approach is unacceptable to today's engineer. There are too many problems and too limited resources to solve everything. This frequently implies making moral choices about which problems to address. During the design process, engineers must also consider ways to make their solution safe for users and easy to use for its intended purpose.

It is true that many engineers work in companies where others choose the problems to solve. However, engineers often work closely with marketing and business people to help choose where to apply company resources. Engineers are frequently called upon to evaluate and make recommendations on which design alternative to develop. Engineers can pursue a career path in management to allow them more say in how the company will operate. In the extreme case, a Christian engineer may choose to leave a company that does not make ethical choices in selecting problems to solve or selecting methods for solving them. Fortunately, most engineering firms do recognize a need for ethical choices compatible with a Christian worldview.

Many engineers work as independent consultants or contractors. In this case, the engineer has great latitude in choosing problems and methods. Also, many engineers work in small companies where they have more influence on company decisions. Finally, entrepreneurs who start new businesses often rely on engineer partners to define the initial technology for the business.

Ethical Engineering Education

College engineering programs always have an explicit course in engineering ethics or include a variety of places where students are confronted with ethical case studies. Texas A&M University has a collection of

ethics case studies, many with commentaries (note the commentaries are not from an explicitly Christian perspective).[11] Engineers frequently face difficult situations where they need guidance on how to make decisions.

Engineers must consider a variety of inputs in making ethical decisions. First, Christians must consider biblical mandates. God is abundantly clear on general principles of right and wrong. However, it takes thoughtful analysis to apply these principles to specific situations. Second, there are often laws and government regulations that apply to how engineers should act and make decisions. Besides the ethical codes published by engineering professional organizations that try to provide guidance in particular areas, many organizations have internal codes that direct their employees.

For example, one unfortunate consequence of the computer revolution is a vast and growing pile of waste electronic devices (e-trash). Engineers have discovered that the materials used to build these products, called semiconductors, work much more effectively when they contain rare earth materials, such as gallium, arsenide, or germanium. Also, a lot of lead is used in the solder used to assemble semiconductor boards. Unfortunately, these materials are often poisonous to the environment. Every electronic device has a relatively small amount of these materials. However, because electronic technology becomes obsolete so quickly, there are huge volumes of discarded products. The cumulative effect represents a serious health risk.

According to U.S. law, mounds of e-trash must go into specially lined landfills. The idea is to contain the toxic materials until natural processes render them harmless after many, many years. However, these landfills are expensive. Many developing countries do not have laws requiring such care in providing safe disposal. Currently, it is legal for the U.S. to export this e-trash to other countries, so many, such as China, accept huge volumes of e-trash. For companies, this is a cost effective solution, and consequently, this behavior is legal and acceptable to many companies.

However, residents in the recipient countries often make a living by sorting through the e-trash for re-usable parts or materials. These people are at significant risk of developing cancer and various neurological diseases. They are willing to risk future health problems in order to earn money to stay alive now. Many also say they use the funds to educate their children so their children can experience a better life.

Most engineering codes of ethics stipulate that engineers ought not endanger public health or the lives of individuals. However, one can argue that engineers should allow people to define what they believe is for their best welfare. As Christians, we are mandated to protect those who cannot protect themselves. Clearly a Christian engineering response calls for better ways to deal with e-trash, yet provide opportunities for people to make a decent living without endangering their health. Today, many engineers are in fact working on creative ways to solve these problems.

Other Aspects of Engineering Ethics

Typically, when an engineer detects wrong-doing, the immediate response is to "blow the whistle" on the offending person or organization. However, the mechanics of whistle-blowing are often complex. Who should you tell? How soon should you tell? How much evidence do you need before proceeding? What are your legal obligations to tell or not to tell? What are the consequences if you are wrong? Governments and organizations typically do not provide very complete guidance in these areas. In fact, legal requirements vary significantly from state-to-state. In addition, the personal cost of whistle blowing can be significant.[12] Whistle-blowers often lose their jobs or are punished on the job in subtle ways. Cases of whistle-blowing often end up in court, which can be expensive and stressful. Often, the act of whistle-blowing does not actually resolve the original problem. Christian engineers must count the cost and be ready for significant persecution in some situations.

Engineering is a creative activity, and God is the author of creativity. There is a clear movement in the Bible from the simple idyllic life in the Garden of Eden to the more sophisticated city life in the New Jerusalem of Revelation. Many philosophers equate this general trend with the technological advancements of human civilization—advancements created and sustained (at least partially) by engineers. The Bible constantly commands us to help the underprivileged—the widow and the orphan. Christian engineers are well positioned to solve the problems faced by the underprivileged.

Likewise, the idea that God commanded man to have dominion over the earth fits well with the need for engineering. Having dominion over the earth requires man to solve various problems in the natural world. Being a good steward of the environment means that engineers must take particular care in choosing materials for building products and in finding ways to recycle and reuse those materials. Loving your neighbor as yourself means you will develop technology features that promote useful functions and protect against harmful ones.

In many cases, Christian engineers must choose problems and set requirements when there are multiple conflicting demands that all have some ethical merit. For example, defining what is a fair solution usually depends

on who is giving the definition of *fair.* For example, network neutrality is a current debate for Internet service providers (ISPs). Should an ISP be "fair" in the sense of providing equal access and performance for all web sites? Or is it "fair" for the ISP to make money by providing faster access to some web sites if they are willing to pay a fee? The ISP may use this additional revenue to lower overall costs to their users.

Good engineers seek out training and think through these moral issues ahead of time. They must stay in touch with current theological, philosophical, and social trends. As noted earlier, successful engineers require training beyond their specific discipline. Hence, there is a great need for thoughtful Christian engineers.

Engineers must be constantly vigilant that their skills are used for ethical purposes. They must constantly be alert for moral implications in their choices and actions. Engineers have a great ability to make the world a healthier and safer place.

Opportunities for Christians

Engineers have an important role to play on the mission field. Modern trends in mission work have changed far beyond the white Westerner going to a Third World setting, passing out tracts, building a church, and running that church. Modern trends see First World Christians as partners with Third World Christians, providing only the help and support requested by native churches. Since Third World people have problems and (typically) limited education, there is a great demand for engineering skills on the mission field. Organizations like Engineering Ministries International provide opportunities for practicing engineers and interns to work with other mission agencies and native organizations to provide specific and timely engineering skills to local problems.[13]

Previous Engineering Ministry International projects include doing the surveys, structural analysis, infrastructure design, and blueprints for hospitals, medical clinics, community centers, and refugee housing. They are in the process of creating greenhouse kits for rapid deployment in areas that need to extend their growing season. They have done the analysis and created plans for water systems, sewer systems and hydro-electric power plants. At the time of publication, a sample of their project needs included:

an architect, electrical engineer, and structural engineer for refurbishing a hospital in Niger

an architect, civil engineer, agriculture engineer, electrical engineer, and a graphic designer for a widow's vocational training center in Burundi

a landscape architect, civil engineer, electrical engineer, structural engineer, and a surveyor for a retreat center in the Middle East (*for security reasons specific sites in this area are typically not released*)

Engineers have given us most of the wonders of modern life and the conveniences we use daily. Yet there are many problems left to solve. Doing so will require the rigorous approach to design that engineers can provide.

a full team of all architecture and engineering specialties for a Christian Fellowship Center in India

a full team of all architecture and engineering specialties for an orphanage in Peru.

Another Christian organization that employs many engineers is Heralding Christ Jesus' Blessings.[14] HCJB started with a radio transmitter in Quito, Ecuador, that broadcast Christian programming. They still employ many engineers finding creative ways to place transmitters and use other technologies to spread the gospel via radio programming. Along the way, HCJB developed specialties in power generation via renewable resources. They are also involved with a variety of medical missions. HCJB uses engineers and engineering students in short term mission trips, summer internships, and full-time employment.

I-TEC (Indigenous People's Technology and Education Center) is a particularly creative engineering mission organization.[15] Their focus is on providing technology that allows Third World people to be independent. I-TEC develops technology using local materials and training that is suitable for local people's educational level. Examples include a powered parachute for flying into the jungle and a portable dental system that includes a dental chair. I-TEC specifically serves the Waodani people in Ecuador (see their story in the motion picture *End of the Spear*).

Engineers Without Borders is a secular organization that connects practicing engineers and engineering students with engineering projects in different parts of the world,[16] similar to Engineering Ministries International. Although Engineers Without Borders is a secular organization, its projects and values are compatible with a Christian approach. However, EMI, HCJB, and I-TEC are able to improve people's lives while also addressing their greatest problem—their need for a Savior.

Conclusion

Engineers have given us most of the wonders of modern life and the conveniences we use daily. Yet, there are many problems left to solve. Doing so will require the rigorous approach to design that engineers bring to the table. Engineering is a diverse and exciting career field. It is a field that allows participants to significantly impact the lives around them. It is a field that needs Christian participants. The world has problems; engineers solve problems.

—Mike Bright

For Further Reading

Oliver, Douglas. "Whistle-Blowing Engineer," *Journal of Professional Issues in Engineering Education and Practice,* ASCE, October 2003. 246–256.

VanderLeest, Steven."Bias in Technology: From Creation or Fall?" *Proceedings of the 2004 Christian Engineering Education Conference* (CEEC), 2004. 61.

Endnotes

1   For examples of engineering projects, click Link 1 for this chapter at www.VeritasPress.com/OmniLinks

2   Discover Engineering.org, accessed February 22, 2011, http://www.discoverengineering.org.

3   "General NAE Questions," National Academy of Engineers, accessed February 22, 2011, http://www.nae.edu/About/FAQ/General-FAQs.aspx.

4   "Criteria for Accrediting Engineering Programs," ABET Board of Directors, March 17, 2007, accessed February 22, 2011, http://www.abet.org.

5   eGFI is an online magazine and web site that has current news and information about many different engineering disciplines. Click Link 2 for this chapter at www.VeritasPress.com/OmniLinks to learn more .

6   "IEEE Code of Ethics," accessed February 22, 2011, http://www.ieee.org/about/corporate/governance/p7-8.html.

7   For a list of famous (or not so famous) engineers, click Link 3 for this chapter at www.VeritasPress.com/OmniLinks.

8   To view the NAE's list, click Link 4 for this chapter at www.VeritasPress.com/OmniLinks.

9   See more information about One Laptop per Child at Link 5 for this chapter at www.VeritasPress.com/OmniLinks.

10 Steven VanderLeest,"Bias in Technology: From Creation or Fall?" *Proceedings of the 2004 Christian Engineering Education Conference* (CEEC), 2004. View the proceedings of this conference at Link 6 for this chapter at www.VeritasPress.com/OmniLinks.

11 Texas A&M's case studies may be accessed via Link 7 for this chapter at www.VeritasPress.com/OmniLinks. Additional case studies may be viewed by clicking Link 8.

12 Douglas Oliver, "Whistle-Blowing Engineer," *Journal of Professional Issues in Engineering Education and Practice,* ASCE, October 2003, pp. 246–256.

13 To visit the Engineering Ministries International web site, click Link 9 for this chapter at www.VeritasPress.com/OmniLinks.

14 To visit the HCJB web site, click Link 10 for this chapter at www.VeritasPress.com/OmniLinks.

15 To visit the I-TEC web site, click Link 11 for this chapter at www.VeritasPress.com/OmniLinks.

16 To visit the Engineers Without Borders web site, click Link 12 for this chapter at www.VeritasPress.com/OmniLinks.

L A W

What is "law"?

You have certainly heard of the law of gravity and are acquainted with the law the policeman enforces when he stops the motorist (you?) for speeding. How do these different kinds of law connect with each other? And is there a deeper meaning to the notion of law in general?

All law—whether physical law or societal law—involves two elements: *order* and *compulsion.* We can see this if we consider the major varieties of law: scientific law, custom, moral law, and juridical law.

Scientific law involves finding regularities in nature. We observe the world, see patterns, and then attempt to describe them in general terms. Our first attempts are often called "hypotheses." We then test those hypotheses by examining more and perhaps better data; this results, perhaps, in a rejection of our initial explanation, or, if we are on the right track, in a refining of our hypothesis. Such refinements raise our hypotheses to the level of a "theory." Finally, if our theory holds up under even more and better investigations of the physical world, and there appears to be no evidence contradicting it, we may be able to present the result as a scientific law.

Scientific laws describe regularities in the physical universe. They also—and inevitably—entail *sanctions,* that is to say, negative consequences if we disregard or violate them. The law of gravity, for example, tells us that on this planet all physical objects fall toward the center of the earth and that they do this in

This 300-year-old statue of Lady Justice oversees the "Well of Justice" at Frankfurt's Roemer Square in Germany.

accord with a strict mathematical formula. If you try to defy the law of gravity—by attempting to fly from the roof of your house without benefit of aircraft, for example—the *sanction* is that you will break a leg (if not worse).

Customs are part of every society. They are regular, widely accepted social patterns, and disregarding them can result in ostracism. For example, if you insist on wearing a swimsuit to a wedding, you will not be invited to other weddings—and maybe people will hesitate to invite you out at all!

Moral law is often confused with custom (Latin, *mores*). But moral law cuts much deeper. To treat shabbily a person weaker than oneself or to take advantage of someone who cannot protect himself or herself will be considered far more serious than not wearing the right clothes at a social occasion. The treatment of Jews by the Nazis during the Second World War is regarded almost universally today as heinous—as deserving ethical condemnation and the severest of societal punishments. When immoral acts are committed and someone "gets away with it," people often say, "There ought to be a law!" But often there are no laws to cover such acts, and many immoral actions (such as lying, unkindness, selfish use of family property, hurtful treatment of friends) cannot be effectively treated by the state. One comes to see that moral law has a *transcendent* dimension—that is, it touches matters so fundamental that without a Last Judgment to punish the disregard of it, the universe would be inherently immoral and irrational.

Finally, we come to the law of the land—*juridical law.* This is the law that is enforced not by social ostracism (as is custom) or by moral opprobrium such as being publicly disgraced (as is the moral law), but by state sanctions. Most modern nations have legal systems that distinguish civil law and criminal law. Civil law attaches penalties (generally money payments or injunctions forcing people to do what they should) to acts which cause quantifiable or objectively provable harm to others. Criminal law deals with those far more serious acts which are inherently harmful to the society as a whole (homicide, physical attacks, stealing, corruption, etc.), and attaches much more serious penalties to their commission (incarceration and sometimes even the death penalty).

Juridical law comes about through the passing of general laws and regulations by legislatures, reinforced by the decisions of judges in particular cases. Constitutions set forth fundamental law, thereby restraining legislators from passing laws which would go against the general will of the people.

Like the moral law, juridical law has a *transcendent* dimension. This is reflected in the building of courthouses (often, as in the case of the Royal Courts of Justice in London, England, they are styled like cathedrals), in the robes worn by judges, and in the formal, often majestic style of courtroom proceedings. When the death penalty was still imposed in England, the judge would don a black cap in pronouncing the fateful sentence. Again, one inevitably thinks in terms of Last Judgment. People often say that a murderer who has not been found guilty—who has "gotten off" because of a legal technicality—won't get away with it when he stands before the bar of God's justice on the Last Day.

If we focus our attention on juridical law, what are the major issues we should consider? Three very important problem areas are *the connection between law and morality, legal reasoning, and how law can be justified.*

First, how does morality relate to juridical law? As we have seen, they are certainly not the same thing. There are laws having a very minor moral element—for example, the rule that one must drive on the right-hand side of the road (in the British Isles and former British colonies, one drives on the left-hand side of the road). There are also many immoral acts that cannot effectively be punished by the juridical law—especially subjective immoralities such as envy and covetousness, but also instances where a greater evil would be produced by legal action, such as allowing forced confessions or tainted evidence to be used against the accused.

But clearly law and morality are interrelated. One of the major purposes of the law is to make sure that a decent society is maintained. This immediately raises the issue for the Christian believer of the extent to which Christians should "enforce morality" through legislation. This was the subject of an important controversy in England some years ago—the so-called Hart-Devlin debate. H.L.A. Hart, an eminent philosopher of law at Oxford, argued that one should not attempt to enforce morals, whilst Lord Devlin maintained that doing so is quite legitimate, indeed, inevitable. The concrete issue in that debate was homosexuality—should it be criminalized?

Here is a suggested approach; think about it and come to your own conclusion. The moral laws of the Bible are absolute, since they come from the God of the universe who has created mankind. But we live in a fallen world, where everyone desperately needs to receive the gospel of Jesus Christ for eternal salvation. Therefore, we should do all that we can to promote biblical morality through the law—*as long as* by doing so we don't misrepresent Christ and so alienate the unbeliever that he or she will no longer listen to the gospel. In practice, this will mean that we will not create "Christian coalitions" to force Sunday closing laws on the community where this would drive the non-Christian to the view that we are trying to ram our Christian beliefs down the throats of those who are not themselves believers.

Exceptions to this approach come only at the point of mission critical issues like the right-to-life. We would not want to hold the unborn hostage to the possibility of successfully evangelizing the pro-choicer—any more than during the Third Reich Christians would have been right not to oppose the death camps on the ground that to do so might have been to offend Nazis and reduce the effectiveness of evangelism to them! But short of right-to-life, evangelism should trump efforts at moral improvement. After all, our Lord's "Great Commission" to the church, was "Go and preach the gospel to every creature"—not "Be sure to raise the moral tone of society"!

Second, how do lawyers and judges reason? Answer: just like scientists or historians—or anyone else who uses one's head. That is to say, the lawyer or judge collects facts (the facts bearing on the case and the record of similar and relevant past cases), creates the best theory or argument to account for those facts and their legal implications, and then sets forth a reasoned conclusion. Analytical philosophers Ludwig Wittgenstein and Karl Popper employed a very effective analogy for this process: the shoe and the foot. The "foot" is the factual situation; what we try to do in science, history, law, or ordinary life is to develop an explanation which, like a good shoe, will exactly "fit" that situation. We don't want explanations that so pinch the facts that they distort them; nor do we want explanations so general and vague that they would fit *any* facts.

To be sure, the law has special reasoning techniques appropriate to the nature of legal procedure. Thus, evidence will be excluded if it is so prejudicial that it would inflame the jury and keep them from coming to a balanced, reasonable conclusion. Precise "standards of proof" are set forth—a "preponderance" of evidence (51%) to win in a civil case, but "proof to a moral certainty, beyond reasonable doubt" to convict in a criminal case, where the consequences are so much more severe.

Fascinatingly, these high standards of legal evidence have been employed by legally trained Christian apologists to show the soundness of the case for reliability of the gospel records and the facticity of the resurrection of Jesus Christ; we shall have more to say about this below.

Ludwig Wittgenstein

Finally, how can law—legal rules—be justified? The problem here is that if laws are merely *relative*—like customs—then why should one obey them if one can get away with not doing so? To be effective and enforceable, laws must have an authority beyond the changing mores of society. And where constitutional principles are involved, we must somehow reach the level of what the Declaration of Independence termed *"inalienable rights"*—legal standards so immutable that no one has the right to change them.

Secular philosophers of law have tried very hard to find and justify such standards. Probably the most influential attempts have been the *natural law* and the *neo-Kantian* approaches. Let's look at both of these very briefly.

Natural law thinkers have argued that everyone has built-in moral standards—therefore we naturally *know* what should be legally accepted and what should be rejected. In consequence, we are told that law can appeal to undeniable universal standards.

Modern secular philosophy of law has been deeply influenced by the ethical thought of eighteenth-century rationalist philosopher Immanuel Kant. Kant did not believe that one could prove God's existence, but he did believe an absolute ethical principle could be set forth. He called it the "categorical imperative": so act that your action can become a universal rule. In the twentieth century, a major political philosopher (John Rawls) and a major philosopher of law (Alan Gewirth) have used this Kantian approach to try to justify law.

Rawls suggests that if, hypothetically, people were placed under a "veil of ignorance"—so that they did not know anything about their particular advantages over against other people—they would logically and inevitably arrive at a society built upon two "principles of justice" entailing civil liberties and an economic and social life which would benefit the least advantaged. Gewirth claims that since every human being is a "purposive agent," each of us must make "freedom and well-being" available to others, not just to oneself. We must not base our personal freedom (civil liberties) and well-being (social and economic rights) on any special characteristic

we may possess—our race, our wealth, our social position, our family background—but only on the humanity we share with everyone else, i.e., our common characteristic of being "purposive agents." For Rawls and Gewirth, then, fundamental civil and social rights can be justified on a purely secular, humanistic basis.

Let us analyze these philosophies in our next section.

Critical Issues

What is the problem with secular attempts to provide a basis for law? The fundamental difficulty is illustrated by the two positions we have just been describing.

Secular Natural Law

Natural law thinking may seem like a viewpoint consistent with biblical revelation. After all, does not the Apostle Paul say in Romans 1 that God's law is "written on our hearts"? Yes, he does, but he follows this with the condemnation of the entire human race—Jew and Gentile alike—for having consistently violated that law: "All have sinned and come short of the glory of God" (Romans 3:23).

Immanuel Kant

The problem with secular natural law theory in a fallen world is threefold: (1) It assumes that everyone will agree on moral and legal standards, but, obviously, people don't: there are great differences in moral standards and legal rules across the globe. (2) Even if everyone agreed, that would not necessarily mean that what was agreed upon was right. *Consensus gentium*—the agreement of the peoples—is not a sufficient test of truth (and, indeed constitutes a logical fallacy when so used— "Fifty million Frenchmen can be wrong"). (3) To arrive at any kind of commonality of standards, the natural law rules have to be stated in so general a way that they can mean almost anything and are capable of being applied in almost any direction—including frightening ones. Example: the great principle of classical natural law (in the *Digest* of the sixth-century *Justinian's Code*) that "each person should get what he deserves" was placed in German translation (*Jedem das seine*) by the Nazis on the gate leading into the Buchenwald death camp.

The great Christian legal thinkers, such as Sir William Blackstone, have stressed that a special revelation (Holy Scripture) is absolutely essential to show a sinful and fallen humanity which "writing on the human heart" comes from God and which from self-interest. Jiminy Cricket's philosophy of "let your conscience be your guide" is naïve at best, highly dangerous at worst.

Neo-Kantian Approaches

Kant's categorical imperative sounds a bit like the Golden Rule. But Jesus never used it as a rationalistic principle—as an argument to explain societal action. Rather, Jesus employs the principle of "doing unto others as you would have them do unto you" to show us how far our actions deviate from God's standard as to the way we should be treating others. (Like everything in the Sermon on the Mount—summed up in the command, "Be ye therefore perfect, even as your heavenly Father is perfect"—the object is to show us how desperately we need Jesus' sacrifice on the cross for our sins.)

Rawls and Gewirth hypothesize a situation in which people act rationally without any regard for their own advantages. This, however, is hopelessly unrealistic. In fact, people *always* take into account their own strengths—and the weaknesses of others—in their actions. Rawls and Gewirth, like their mentor Kant, have no serious awareness of *sin*—of the radical self-centeredness of a fallen race.

Suppose we were to try to convince, let us say, Ghengis Khan, to institute a proper legal system—one involving civil liberties and socio-economic equality. We might say to Ghengis: "Ghengis, have you been out raping and pillaging again?" Reply: "Well, yes. Frankly, I enjoy raping and pillaging." "But Ghengis, you should be acting

so that your action could become a universal rule! You should be thinking in terms of just legality—civil and social rights—for everyone, not just your own interests. How would *you* like it if others treated you as you are treating them? You should be thinking in terms of a universal rule of law!" Ghengis: "GRRRHH! Listen up! I happen to be bigger and stronger than they are. There is no chance that *they* could get away with raping or pillaging *me.*"

The point here is that in a fallen world, even if people will admit a rational principle (such as the categorical imperative), this in no way ensures that they will follow it. Fallen creatures are perfectly happy with a rule of law for their *own* protection; but they invariably balk when attempts are made to apply legal standards to their personal *disadvantage.* Think of the popular legal area of human rights: everyone favors them—including the worst dictators—but human rights are invariably interpreted to protect the political interest group or dictator, and disregarded when to do so is to the advantage of that state or individual.

The problem with all secular efforts to justify law is that, arising from human sources—and sinful, self-centered sources at that—they cannot possibly arrive at the absolute ethical principles needed to ground legal systems.

Water doesn't rise above its own level. Remember Archimedes? Said he, "Give me a lever long enough and a fulcrum outside the world, and I shall move it." This is sound physics—and an equally sound ethical and legal principle. The necessary condition for moving the world is that the fulcrum lie outside it; otherwise, one is trying to pull oneself up by one's own bootstraps—and a painful fall is inevitable! To arrive at the needed absolute principles to ground a legal system, one needs a source outside the world—a source uncontaminated by the sinful and finite human condition.

Two thinkers have seen this clearly, though they were not themselves believers. Jean-Jacques Rousseau, in his *Social Contract,* wrote: "It would take gods to make men laws." And Ludwig Wittgenstein asserted: "The sense of the world must lie outside the world. . . . Ethics is transcendental"—explaining this by saying, "I can only describe my feeling by the metaphor, that, if a man could write a book on Ethics which really was a book on Ethics, this book would, with an explosion, destroy all the other books in the world."

That book, of course, is the Holy Scriptures. In the inerrant word of God, one finds the absolute principles capable of providing a sound foundation for human legal systems. These principles are absolute—inalienable—because they have been revealed by a God who is the only source of the absolute and the inalienable. Moreover, the Bible gives a fallen race *not only* the legal principles it so desperately needs as the criterion for identifying the proper content of the law written on the heart, *but also* the solution to fallen mankind's self-centeredness: the cross of Christ as the way of redemption and a new life in which one will indeed "love one's neighbor as oneself" and seek to establish and implement legal systems reflecting God's standards.

Taizu, better known as Genghis Khan. This portrait of paint and ink on silk is a detail from an album now located in the National Palace Museum in Taipei depicting several Yuan emperors.

One might, of course, raise the question as to the effectiveness and the application of such biblical standards in our modern secular, pluralistic world. We have already noted that morality (including biblical standards) must not be forced on a non-Christian society in a way that reduces the effectiveness of evangelism to that society. But in our culture, impregnated as it has been with the western Christian tradition, the unbeliever is "living off the inherited capital" of biblical morality. He or she can then be appealed to on the basis of that morality and legal perspective. "Surely," we can argue, "you want your children not to be impacted by internet porn—or suffer the psychological miseries of abortion—or lose the opportunity for a decent marriage as a result of a redefinition of it to include homosexual unions?" Common ground arguments of this kind can persuade the unbeliever to move in the direction of biblical morality and biblically based legislation without imperiling evangelism.

A Christian Response

How can one personally respond to the issues in this vital area of legal thinking? Let us consider a number of possibilities.

The Biblical Aspect

We have argued that only Holy Scripture can serve as a proper foundation for law, since only the Bible is a transcendent book capable of providing absolute principles—principles uncontaminated by the sinful and limited human perspective.

Fine. But this will hardly work if you yourself do not know the Scriptures. Are you well enough acquainted with the actual content of biblical revelation to know what its fundamental principles *are?* This, of course, is a lifetime task. But why not start now? Plan to read the Bible through, say, every three years. Take good courses on particular books of the Bible. Consider the possibility of going to a Bible school for a year after high school—especially if you are planning to attend a secular university.

And there is the problem of "rightly dividing" the word of God, that is to say, properly interpreting it. In the history of the church, even those who have been convinced of the total truth of the Bible have sometimes interpreted it in a manner that has badly hurt its message and impact.

For example, there is the viewpoint that all proper law is given in Scripture and that we should not be allowed to do anything that is not expressly commanded in the Bible. On this basis, during the Commonwealth period in England (seventeenth century), people were fined for celebrating Christmas—since nowhere in the Bible is it commanded to keep that holiday! To be sure, the proper approach to law is that we are allowed by God to do whatever is *not condemned in Scripture.* The Bible is not an "encyclopedia Britannica," giving specific rules for all particular actions. We are expected to use the heads God has placed on our shoulders to handle particular issues. Just as the Bible does not provide rules for television repair, so it does not set out statutes for promissory notes or traffic safety. We are to employ sanctified common sense, through the guidance of the Holy Spirit, in drafting our laws and choosing our actions in a manner that will maximally glorify the Christ who has died for us.

Moreover, one must face the question of the relationship between the Old Testament and the New. There are Christians who have thought that the entire Old

Only the Holy Scripture can serve as a proper foundation for law, since only the Bible is capable of providing principles uncontaminated by the sinful and limited human perspective.
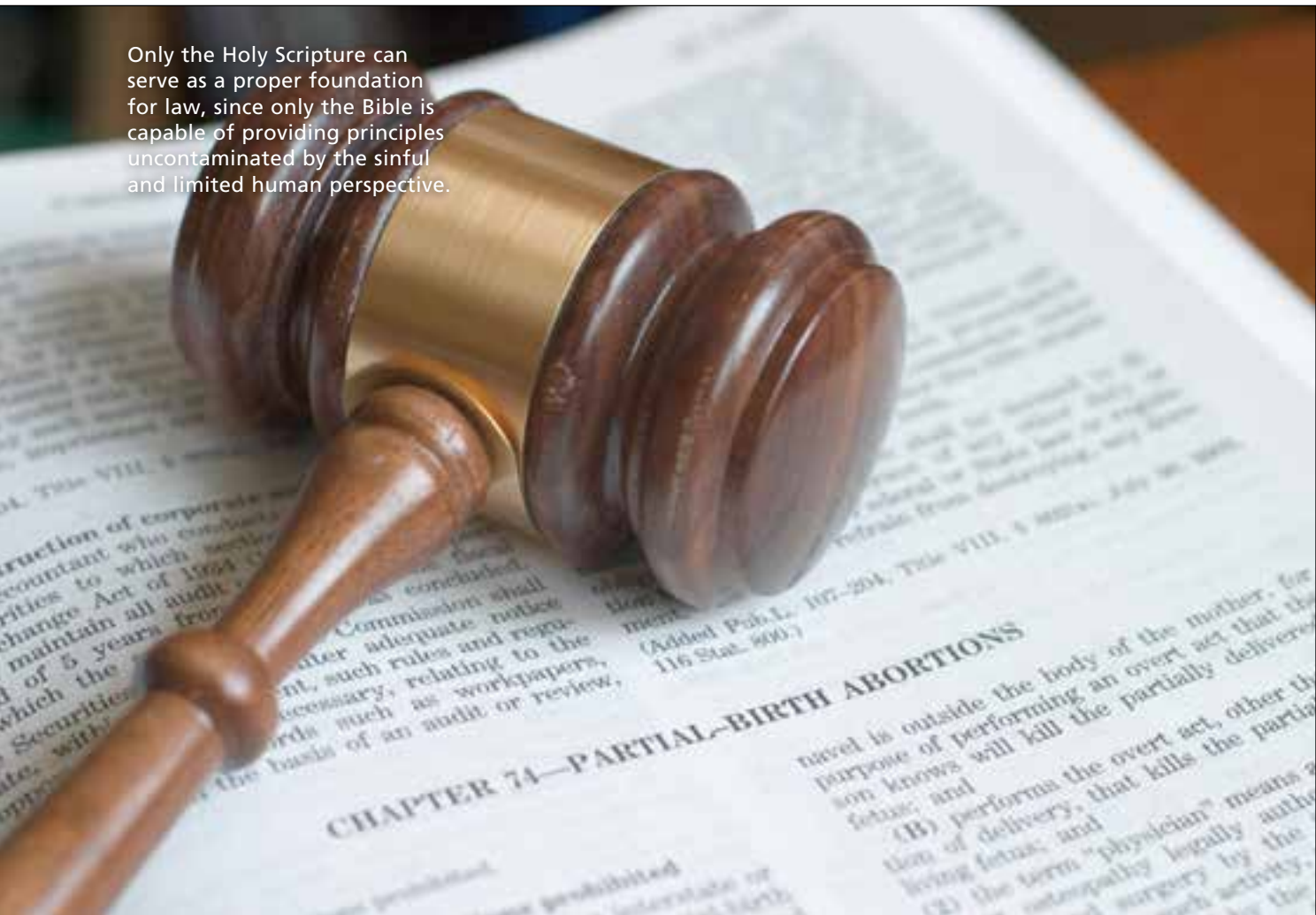
Testament law is (or should be) applied today. These folk have wanted to legislate the levitical law—much as orthodox Jews try to do. One of them has actually said that it would be desirable today to stone prostitutes and kill children who will not obey their parents. You need to understand that whilst the *moral* law of the Old Testament is permanently applicable, the *civil* and *ceremonial* law of ancient Israel definitely is *not.* That law, unique to the preservation of the nation Israel as the cradle for Messiah's coming, was abrogated by its fulfillment in our Lord's advent, as is plain from the apostles' refusal in the New Testament to require circumcision of gentile converts. Occasionally it may be difficult to draw the line between Old Testament moral law on the one hand and the civil and ceremonial law on the other, but the critical importance of the distinction remains nonetheless.

Going further, one needs to understand what Martin Luther termed "the proper distinction between law and gospel." He declared that "the true doctor of theology is the person who can properly distinguish law from gospel." What did he mean? Luther was referring to the two great doctrinal themes that run through the entire Bible. He was not suggesting, as some have thought, that one can divide the Bible into law, equivalent to the Old Testament, and gospel, equivalent to the New Testament! In point of fact, law and gospel are inherent to both Testaments. Law, in the theological sense, refers to *what we do in response to God's commands;* gospel, on the other hand, describes *what God does for us to save us.* Grave problems arise whenever law and gospel are confused. When gospel is turned into law, people try to save themselves by their own moral and law-abiding efforts. (Haven't you heard a non-Christian say, "I don't need salvation—I've led a good moral life—never been in jail"?) When law is turned into gospel, people and societies become unaware of their sin and think that God is a Santa Claus who saves them—maybe everybody—without there being any moral or legal standards at all. Theologian Dietrich Bonhoeffer called this the notion of "cheap grace."

The Reformers distinguished three main "uses" of the law—meaning the functions of the revealed law in the Bible as well as the functions of human legislation. The first use of all law is *political*—the law which structures sinful society and keeps us from eating each other! The second use is the *pedagogical* use—the "law as a schoolmaster [Greek, *paidagogos*] to bring us to Christ" (Galatians 3:24). This is—for Luther—the most important of the three uses, for it points up the fact that *all* law, biblical and juridical, if taken seriously, demonstrates that our fallen race does not conform to God's standards—or even to the human ideals it sets for itself—and therefore needs the salvation provided by Christ alone. (Incidentally, in classical times the *paidagogos* was not the teacher, but the mere slave who brought the child *to* the teacher! This is what the law properly does: it drives us to the cross by showing us how far short we fall from divine standards.) Christ interiorized the Old Testament law, making it even more stringent—leaving no one without excuse: "Has it been said of old time, thou shalt not kill? I say unto you, he who hates his brother has already committed murder in his heart;" etc., etc. The third use of the law—unlike the first two—applies only to believers: it is the *sanctifying* use. Only the believer can come to "love God's law" as the expression of His character and will. The unbeliever will always and ever see God's law as a threat—and rightly so—since, as the Reformers put it, *lex semper accusat* ("the law always accuses"). Only at the cross is the law seen as reflecting God's own loving nature, since He was willing to take the hideous violations of it by a fallen race on Himself, expiating our sin by the blood of His cross.

These kinds of theological and biblical understandings are essential if one wishes to apply law in the fullest sense to one's personal situation and to the society of which one is a part.

The Political Aspect

More than a few evangelical Christians have beliefs which reduce the effectiveness of their witness in the political and legal world of our time. You need to engage in self-examination to make sure that you are not unknowingly hurting the cause in this way.

There are evangelicals who hopelessly confuse biblical religion with conservative politics. They may not believe that no Democrats go to heaven, but they would be surprised if the number was very great! As for socialists, WELL *they* are surely in outer darkness with gnashing of teeth …

Now, I have almost always voted Republican, and I certainly believe that "the best government is the government that governs least" (I'm for less government, rather than more). But this is a far cry from being an anarchist (no government at all) or a libertarian (who may not even want the state to license doctors or lawyers). The facts are that Holy Scripture does not mandate any single form of government and, since original sin is universal, there is no assurance that either Democrats or Republicans will always be right! In some situations, government should stay out of things; in others, government intervention and an increase in legislation can be badly needed. The point is that each policy and each piece of proposed legislation and each legal case needs to be evaluated *as such*—by biblical standards. Sometimes the "conservatives" will be right; sometimes the political "liberals" will be right. We must not become doctrinaire, lock-step

rightists who refuse to "test the spirits" on an issue-by-issue, case-by-case basis.

The same point needs to be made in regard to "Americanism." There are Bible believers among us who give the impression that the American constitutional documents are a kind of infallible extension of Holy Scripture, and that the founding fathers of our country were all saints. Theologically and historically, this is simply not correct. We are blessed with a constitutional and legal system deeply impregnated with biblical ideals, but this is not to say that ours is in fact a Christian nation. *No country is.* The kingdoms of this world will all pass away one day and will be replaced by "the kingdom of our God and of his Christ." Just as in the case of conservative vs. liberal, so in our beliefs concerning our own nation, we need to place everything under the authority of the Holy Scriptures—meaning that we need to judge our country's actions (not just the actions of other nations) by God's eternal standards as set forth in his holy word. Often our nation will show itself a beacon light in a dark world; at other times we may need to speak prophetically to its leaders, its legislators, and its judges.

This brings us to the matter of international law. Some evangelicals seem to think that there is something inherently demonic about things international. Is international law always bad—always worse than our national law? True, there is often less direct accountability to legislatures in the case of international law. But here's a sobering example: The American Convention (= Treaty) on Human Rights, ratified by most of the North and South American countries—but not by the United States—protects the right to life "from the moment of conception." Why has the U.S. Senate not ratified this treaty? Because, were it to do so, the U.S. would immediately be brought before the Inter-American Court of Human Rights for violating the treaty owing to our federal law (*Roe v Wade),* which allows abortion on demand during the first trimester of pregnancy. Here, again, the issue is not whether something is national (supposedly always good) or international (supposedly always bad). National law *as well as* international law needs to be evaluated by biblical criteria, and there is no guarantee that the one will always be right or the other always wrong. Only God's word "lasts forever."

The Professional Aspect

Do you really want to move your country and your world in a more biblical direction? Here are some suggestions.

First, analyze why things are a mess (or, at least, why they aren't better than they are). The reason will *not* be because your favorite candidate didn't get elected or your favorite

law did not get enacted—or because someone on the U.S. Supreme Court didn't get a fatal heart attack.

The fundamental problem will turn out to be much more profound than that, involving such considerations as the perspective of the citizenry (in the 2008 national election, economics was more important—right across the country—than right-to-life). How could such a perspective be changed for the better?

Answer: *by influencing the climate of opinion.* And how is this done? Let's begin by noting how it *won't* be done. It will not be accomplished by the typical evangelical style of separating oneself from the society. We have tended to take the approach, "if we can't beat 'em, we'll separate from 'em." We go to isolated churches; we build our Bible schools and Christian colleges in the middle of nowhere (so that we won't be contaminated by secular society); we avoid the social atmosphere and recreational activities of "the world," etc. Result: though we have the eternal gospel in our hearts (and, hopefully, also in our heads), the non-Christian never hears it—for we are simply not on his or her planet. We need to be like our Lord and like his apostles: "in the world, but not of it."

The apostles, it is seldom noted, focused their evangelism *in the cities*—at the centers of political and cultural influence in their day. They expected, quite rightly, that the gospel would spread from there into the hinterlands. We, however, often do the very opposite: we go out into the bush, as far as possible from the "pagan" centers of our society, and hope that the gospel will somehow trickle to the points of power. Sadly, it seldom works that way. One might think that we are more concerned with our own spiritual health—our personal sanctification—rather than the needs of a dying world.

Practically speaking, why not think of going to a Christian college having the goal of impacting the political and legal climate for Christ? These schools are rarer than the proverbial hen's teeth, but they exist. Or why not go to a fine secular university—one with a strong Christian student work on campus so that you can maintain solid Christian fellowship whilst presenting the eternal gospel of salvation to those who might never hear it otherwise?

Of course, to do the latter, you need to know how to defend the faith—how to present the powerful evidence in its behalf and show the fallacies of the views that contradict it. This means doing what the Apostle Paul clearly did: learning the views of the non-Christian so as to be able to speak intelligently to them. (In Athens, Paul quoted the Stoic poet-philosophers to move the Stoics away from their "unknown god" to Jesus Christ; Paul hadn't studied Stoicism in his rabbinic education—he'd gone to the trouble of learning it because he wanted to reach the Stoics for Christ.) Start,

therefore, studying apologetics now. In a secular society, wherever you go to college, you'll need to follow the Apostle Peter's instruction to "be ready always to give an answer [Greek, *apologia*] for the hope within you."

Fascinatingly, as we alluded to earlier, many great lawyers have examined the case for Christianity using the rigorous standards of legal evidence—and have ended up as Christian believers. Here are but three examples: Theophilus Parsons, nineteenth-century chief justice of the Massachusetts Supreme Court, who declared: "I examined the proofs and weighed the objections to Christianity many years ago, with the accuracy of a lawyer; and the result was so entire a conviction of its truth, that I have only to regret that my belief has not more completely influenced my conduct." Professor Simon Greenleaf of Harvard, the greatest nineteenth-century authority on the law of evidence, and author of *The Testimony of the Evangelists,* who showed that the four Gospels would be accepted in any common law court as solid evidence for the life and divine claims of Jesus Christ. Sir Norman Anderson, late head of the School of Advanced Legal Studies at the University of London, and the greatest non-Muslim specialist of his generation on Muslim law—who wrote several books defending Christian truth, including a treatise entitled, *The Evidence for the Resurrection.*

Here apologetics and law come together—and this is highly significant, since the law deals with the most serious evidential issues in society, those on which life and death depend. The "ancient documents rule" will allow the New Testament books to be admitted into evidence.

Moses carries the Ten Commandments in this stained glass detail from a window at the Scottish Rite Cathedral in Indianapolis, Indiana.

Examining the witnesses to Jesus Christ in those sound historical documents will show them to be reliable. Thus, if one subjects them to "internal" and "external" juridical examination, one can say that the witnesses had no reason to present anything other than the truth about Jesus' life and ministry; and if one looks, again "internally" and "externally," at what they wrote, one finds the four Gospels to present what one would expect of four witnesses to the same event describing it from their own personal angles—in harmony but not collusively; and the archeological confirmations of the New Testament during the last century and a half have supported again and again the veracity of the documentary material. And it is well worth emphasizing that if the disciples had tried to introduce a false or skewed picture of Jesus' ministry, or of the Old Testament prophecies He fulfilled, they could hardly have gotten away with it: the Jewish religious leaders had "the means, the motive, and the opportunity" (as lawyers put it) to refute any such false claims, since the events of Jesus' life took place in full public view. The great New Testament scholar F.F. Bruce has observed that the presence of these hostile witnesses is the functional equivalent of cross-examination in a court of law.

As for the central attestation of the truth of Jesus' claims, his resurrection from the dead, we have the powerful legal argument of Frank Morison in his book, *Who Moved the Stone?,* that if one doesn't accept the miraculous resurrection, one has to explain the missing body— and the Romans and the Jewish religious leaders would hardly have stolen it (it was, to use the technical legal term, "against their interest") and the disciples would certainly not have stolen it and then died for what they knew to be untrue. As the juridical phrase has it, *res ipsa loquitur* ("the thing speaks for itself"). And when unbelievers claim that one can't prove a unique event like the resurrection, we have the devastating rebuttal of Thomas Sherlock, master (chief pastor) of the barristers' Temple Church in London, who noted that a resurrection is simply a person dead at point A and alive again at point B; granted that in our experience, people are alive at point A and dead at point B—but the evidential problem is identical in both instances: we certainly know the difference between a dead man and a live one (eating fish, for example, means the person is alive—as Jesus was when, after Easter morning, He ate fish with His disciples on the road to Emmaus).

So the answer is to learn to present and defend the gospel effectively. This is not just an option; it is a spiritual duty in the secular world in which we live. Legal skills can offer much assistance in this regard. And getting our own legal philosophy straightened out is equally vital. After all, when we witness to unbelievers, we must be able to point them to the proper distinction between law and gospel—which will occur only if we have reached the point of making that vital distinction ourselves!

Luther noted that the way to change society is to "become a little Christ to your neighbor." What we really need is more Christians per cubic inch. Can you imagine the effect of just one more solid Christian believer teaching a critical course at Harvard? Serving in the Senate? Having the role of American ambassador to the United Nations? Sitting as a U.S. Supreme Court justice—or acting in the capacity of judge or lawyer in your community?

Why not aim high? Maybe the way you can impact the law is by making a career of it. Law school isn't easy, but there is no reason why you can't handle it. And if the Lord is leading you in some other direction, aim high there too. Scripture tells us that "He who is within you is more powerful than he who is against you." If you believe that, act on it.

—*John Warwick Montgomery*

For Further Reading

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Mathematics

By the time you graduate from high school, you will have spent a considerable amount of time and energy studying mathematics. But come on, how much mathematics will you actually *use* after you are out of school? Unless you eventually work in a field that extensively uses mathematics—like science, accounting, or engineering—do you really need to know algebra, Cartesian coordinates, or calculus? Wouldn't it be better to stick with arithmetic and a little geometry (enough for the ordinary business of life—cooking, carpentry, and commerce) and move on to other more useful subjects?

The short answer, you probably already knew, is "of course, not." For one thing, even if *doing problems* was all there is to mathematics, there would still be crucial things for you to gain, things that you most likely cannot get without solving lots of more advanced math problems. Becoming adept at doing mathematics trains your mind in ways that other subjects simply can't.

But there is much more to mathematics than merely *doing* it. Without *understanding* mathematics—its history and philosophy—it is impossible to understand the history of Western thought. Western mathematics, science, and philosophy grew up together and have influenced each other since ancient times, shaping our culture. Seeing this, of course, requires that you know how to do mathematics, but you need more: you need to understand the history of mathematics, philosophy, and science. So, what follows is a brief history of mathematics and a discussion of three fundamental issues in mathematics.

As brief as this essay is, it will begin to lay the foundation for a Christian understanding of mathematics.

But despite being brief, this essay covers a lot of material. In order to have a Christian view of mathematics we need to know more *about* mathematics. And although we may know how to *do* mathematics—even advanced mathematics—this in itself hardly counts as knowing *about* mathematics. As long as we merely know how to do mathematics, we remain in the grammar stage. So then, before we talk about a Christian view of something, we need something to have a Christian view of. This, then, is why this essay focuses so much on the history and nature of mathematics.

What is Mathematics?

Now, we should probably begin with the question, What is mathematics? In other words, what exactly is mathematics about? Perhaps the origin of the word *mathematics* will be helpful. *Mathematics* comes from the Greek *mathematike,* which means "that which is to be learned." Although somewhat interesting, it doesn't really tell us what mathematics is *about*. It is fairly clear what other disciplines are about. Scientists, for example, study certain aspects of the *physical world*. Historians study important events that occurred in the past.

But what do mathematicians study? Well, it seems fairly obvious that they study numbers. But this isn't the whole story. The most famous mathematics textbook in history, Euclid's *Elements*, doesn't contain a single number (see Omnibus IV). Rather, the *Elements* is about shapes, avoiding numbers entirely. It talks about points, lines, circles, triangles, and so on.

So mathematics isn't merely about numbers. To boil mathematics down to its simplest subject matter, it is fundamentally concerned with numbers and shapes; that's what it ultimately talks about. (Although as the mathematics becomes more advanced, things get more complicated: mathematicians begin to talk about functions, integrals, derivatives, and so on; but even these are often just different ways of talking about numbers and shapes.) Therefore, one helpful way to tell the story of mathematics is through the story of numbers and shapes.

The History of Mathematics

As far as we can tell, mathematics began with counting. Because of its usefulness, counting must have occurred almost immediately after Adam was created. (Interestingly, counting might not be necessary. Scientists believe that they have discovered at least one culture that never developed number concepts at all.)

But simple counting only goes so far, and mathematics quickly grew. Our first historical evidence of more advanced mathematical practice comes primarily from two important ancient cultures: Egypt and Babylonia. By 3,000 B.C. both cultures had rather advanced numerical systems and were adept at calculating useful things like the area of a field or the volume of a granary or taxes owed on property. They also used mathematics to develop calendars, which were necessary for their religious and agricultural practices. For the most part, the mathematicians were merchants, priests, and government officials.

But the Egyptians and Babylonians were interested in mathematics only to the extent that they could *do something* with it. Numbers and shapes were always associated with real, physical objects. During this time, mathematics was for practical uses rather than theoretical.

But the classical Greeks, beginning around 600 B.C., would change that. (Let us define the classical Greek period as roughly 600 B.C. to around 300 B.C.) In fact, classical Greek mathematicians went to the opposite extreme, avoiding applications altogether. They focused on mathematics for its own sake. Any practical mathematics used in commerce or elsewhere was done by the slave class and not by mathematicians.

This birth of "pure" mathematics—mathematics for its own sake—began with Thales of Miletus, the first Western philosopher, scientist, and mathematician. Thales began to abstract numbers and shapes from physical objects. Rather than talking about two apples, for example, he would focus on the number two itself. Similarly, instead of calculating the area of a circular field, he would investigate the mathematical properties of a circle.

Thales' mathematics was also different from previous mathematics in another way: he *proved* his mathematical results. He did this using deductive logic. The Egyptians and Babylonians, on the other hand, used trial and error to work out mathematical calculations. But Thales wanted certainty for his results: getting a "close" answer wasn't good enough for him.

Thales passed on his mathematical vision to his pupil Pythagoras (of Pythagorean Theorem fame), and it eventually found its way to Plato, the most influential of all Pythagoreans. Mathematics held a special place in
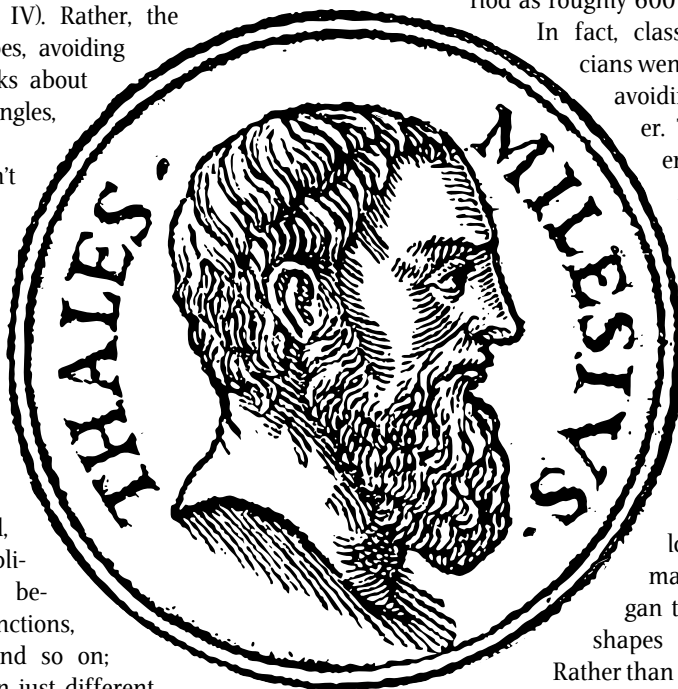
Plato's worldview. Over the entrance of Plato's Academy in Athens was written, "Let no one ignorant of geometry enter here." During the fourth century B.C., the main Greek mathematicians studied at the Academy, continually increasing mathematical knowledge by way of deductive proofs.

By around 300 B.C. classical Greek mathematics had become a massive proof system of mathematical facts. We know this because the Alexandrian mathematician Euclid compiled classical Greek mathematics in his *Elements*. The *Elements*, as we said earlier, consisted entirely of geometry, which had taken over Greek mathematics. Even when Greek mathematicians studied "number theory" it was done geometrically. Numbers will re-enter the story later.

Euclid also made his own contributions to the *Elements*, developing additional proofs and improving others. The mathematical system of the *Elements* is one of the greatest works in Western history. Only the Bible has been more widely translated.

Because of the *Elements'* influence on the West (even outside of mathematics) we should look a bit more closely at it. The *Elements* is a collection of over four hundred statements or propositions about properties of geometrical shapes. Euclid takes us through the *Elements* step by step, logically proving each statement from previous ones. Although he draws the figures with an unmarked straightedge and a compass, these constructions were, theoretically, only to aid in the visualization of the proofs.

In any event, in order for such a deductive system to work, Euclid needed at least some unproven statements—he needed *assumptions*. If Euclid required that all the statements be proven, then the proof process could never begin. So Euclid begins with ten assumptions, statements that are so certain that they need no proof. In mathematics, we call such assumptions *axioms*; the proven statements, on the other hand, are called *theorems*.

Here's the important point. If you begin with absolutely certain axioms and use only valid deductive reasoning from these axioms, then you can be certain of the proven propositions. The entire system—the axioms and the theorems proven from the axioms—is a system of absolute certainty, *mathematical* certainty we would say. Such certainty becomes the Holy Grail for Western intellectuals from here on out.

After the death of Alexander the Great (323 B.C.), the center of Western learning moved from Athens to Alexandria. This period in Greek history (from around 300 B.C. to, say, A.D. 400) is called the Hellenistic or Alexandrian period. Alexandria was a melting pot of cultures where Greek ideas mixed with Egyptian, Babylonian, and Persian notions (and others still). As far as mathematics went, the classical Greek ideal of theoretical proof was mixed with the Egyptian and Babylonian penchant for practical mathematics.

In particular, mathematics became closely linked to astronomy (by way of trigonometry). Because Alexandria was at the crossroads of the ancient societies, navigation was extremely important. The only way to reliably find your place was by following the stars, and so mapping the heavens became a critical task. Ptolemy's famous astronomical work, the *Almagest*, originated during the Alexandrian period, and it set in stone the geocentric view for over a thousand years.

Alexandria's glory simultaneously faded with Rome's, and around the fifth century the center of mathematical learning shifted to India where mathematicians worked on practical calculations with numbers, eventually arriving at the decimal place system and the concept of zero. Indian mathematicians also made their own contributions to algebra and trigonometry.

Around A.D. 800, the Muslim empire was consolidated enough for its leaders to focus on intellectual matters, and they began to collect academic works from all over their vast empire. These works included ancient Greek texts as well as those from India, and, thus, Arab mathematicians inherited much of the Greek and Indian mathematical tradition. This tradition included the Indian decimal system as well as Euclid's *Elements*. Arabic mathematicians added their own work in algebra (in fact, *algebra* is a Latin transliteration of *al-jabr*, a word taken from the title of an Arabic mathematical text).

As Europe came into contact with the Muslim empire during the eleventh and twelfth centuries, Europeans became aware of ancient Greek texts such as Euclid's *Elements*, which were eventually translated from Arabic into Latin. Arab mathematicians also passed along their own mathematical developments as well as those they received from India. The most important of these latter developments were the Hindu-Arabic decimal system of numerals and algebraic methods for finding unknown quantities. For the next few centuries, European mathematicians gathered their mathematical bearings while focusing much of their effort on algebra.

In Europe, during the early 1600s, one of the most important developments in mathematics occurred. Remember that mathematics is fundamentally about two kinds of things: numbers and shapes. Also recall that Euclid's geometry was confined entirely to the realm of shapes. Arithmetic and algebra, on the other hand, had been largely confined to the number realm (algebra might be seen as a kind of generalized arithmetic). The mathematics of these two realms had developed separately for

the most part. But René Descartes, a French philosopher, scientist, and mathematician wedded the two realms in *analytic geometry*. Analytic geometry combines shapes and numbers by fusing geometry with algebra. With his *Cartesian coordinates*, Descartes was able to describe shapes on the coordinate system using algebraic equations. That is, using analytic geometry, *shapes* such as a straight line could be described with *numbers* (remember, for example, that sentences describing a line are in the general form of $y = mx + b$, where y, m, x and b stand for numbers). Mathematicians could then manipulate numerical equations to determine properties of geometrical shapes. Conversely, they could also use shapes to discover properties of numbers and equations.

It would be difficult to overstate how important the invention of analytic geometry was. It made the idea of a *function* much clearer, which, in turn, helped make possible the invention of the *calculus* by Sir Isaac Newton during the 1660s (although the German philosopher and mathematician, Gottfried Leibniz, independently invented the calculus some years after Newton). With calculus, Newton was able to *mathematically* describe physical motion, something that simply could not be done otherwise. This was a critical step in the scientific revolution that had been occurring since the previous century when Copernicus introduced his heliocentric view of the universe. Since physicists and astronomers are typically interested in *moving* objects (e.g., falling bodies, moving planets), most of physics would be impossible without calculus.

During the 150 years following Newton (who died in 1727), mathematicians worked feverishly on calculus, laying the logical foundations of the subject. For, although Newton and other mathematicians knew *that* the calculus worked, they didn't know exactly *how* it worked. In fact, there seemed to be inconsistencies in the very foundation of calculus, and it took a century and a half to put it on a firm logical foundation.

During this time, the amount of mathematical knowledge grew like never before, and in the 1800s a shocking mathematical discovery was made. Mathematicians discovered that there were logically consistent geometries fundamentally different from ordinary Euclidean geometry. These were weird geometries where, for example, straight lines can double back on themselves and the sum of the interior angles of a triangle can be more or less than 180°!

At first, such results seemed as absurd as discovering a square circle. But it was eventually shown that there was no actual contradiction *within* these strange new geometries. They were perfectly self-consistent. They were merely different from our ordinary (Euclidean) conception of geometry. And at the time, these geometries were still seen as purely theoretical. They weren't used to describe the real-life space that we inhabit; that privilege still fell to ordinary Euclidean geometry. The non-Euclidean geometries were merely interesting, theoretical curiosities (but disturbing nonetheless).

But in the early 1900s, Albert Einstein published his general theory of relativity, which described space as *non*-Euclidean! Physical space, said Einstein, isn't always straight or flat. Rather, space can curve, and this curvature is what causes the effects of "gravity." In other words, objects like satellites aren't kept in orbit by a gravitational force. Instead, they remain in orbit because they follow the curved paths of space around the planet. If general relativity is true, then, physical space isn't Euclidean—at least not on large scales like planetary orbits. To put it differently, on these larger scales, Euclidean geometry is not, strictly speaking, true (although it is a good approximation on the small scales we're accustomed to).

But, to put it bluntly, this is simply bizarre. What does it mean for *space* to curve? What is space curving *into*? In other words, what could it possibly mean for physical space to be non-Euclidean? This question disturbed not only mathematicians, but scientists and philosophers as well. And although "curved space" may not be

Sir Isaac Newton

a genuinely contradictory concept, given thousands of years thinking of space as Euclidean (that is, flat), it was difficult for humans to fathom. It still is. Humans cannot fully visualize curved space.

Non-Euclidean geometry wasn't the only disturbing mathematical discovery. Around this same time, a *genuine* contradiction was found in mathematics. Set theory—which studies groups of objects and is the most fundamental of all mathematics—contained an inconsistency at its very heart. It was discovered that the simple notion of a set eventually led to contradictions (these were politely called *paradoxes*)! For example, a set could simultaneously be a member of itself and not a member of itself. How could something as simple as a group of objects (a set) be fundamentally inconsistent?

These two problems—"non-Euclidean" geometries and the paradoxes of set theory—forced mathematicians and philosophers to step back and rethink mathematical methods. Mathematical methods were supposed to be certain, giving us no surprises. To be sure, if we founded mathematics on statements that were true—and then correctly reasoned from *those*—then we would have no problems. The difficulty was finding those correct assumptions. In other words, the difficulty that mathematicians (and philosophers of mathematics) faced was finding the correct foundations of mathematics. In an attempt to find these foundations and to shore up mathematical methods of reasoning, mathematicians and philosophers invented *symbolic logic.* Symbolic logic, it was hoped, would help clarify just what was going on in mathematics and perhaps help avoid developing mathematics with contradictions in it.

But as mathematicians and philosophers (and now logicians) clarified and refined mathematical methods, yet another disquieting discovery was made in the 1930s. An Austrian logician, Kurt Gödel, discovered that the axiomatic method itself has serious limitations. Even if everything goes perfectly in an axiomatic system, there will be mathematical truths that cannot be derived within that system. In other words every axiomatic system will leave out some mathematical truths. Even at their very best, every

axiomatic system is *incomplete.*

Today, mathematicians still cannot agree on the proper foundations of mathematics. There is, so far, no guarantee that more contradictions will not be found. But so far, no more have been discovered. Mathematical research continues apace, and the sub-disciplines within mathematics keep proliferating. Mathematics is now an unbelievably extensive field; it is fascinating in itself and new ways of applying it are constantly being found.

But the very nature of mathematics and its history raises important questions about our understanding of reality. It is no wonder that mathematics, science, and philosophy have grown up together during the course of Western history; the first philosopher was also the first mathematician as well as the first scientist. From Thales to Plato to Descartes to Kant, philosophers have been keenly aware and interested in mathematics.

Let us look at three important issues that mathematics raises for our understanding of the world. The first has to do with the nature of mathematical knowledge. This issue leads to the second: what exactly is mathematical knowledge *about*; what is it knowledge of? And finally—this is the third issue—how is it possible that mathematics helps us to discover things about the physical world? All three issues are interconnected and our stance towards any one of them will affect our stance towards the other two.

Kurt Gödel published his incompleteness theorems in 1931.
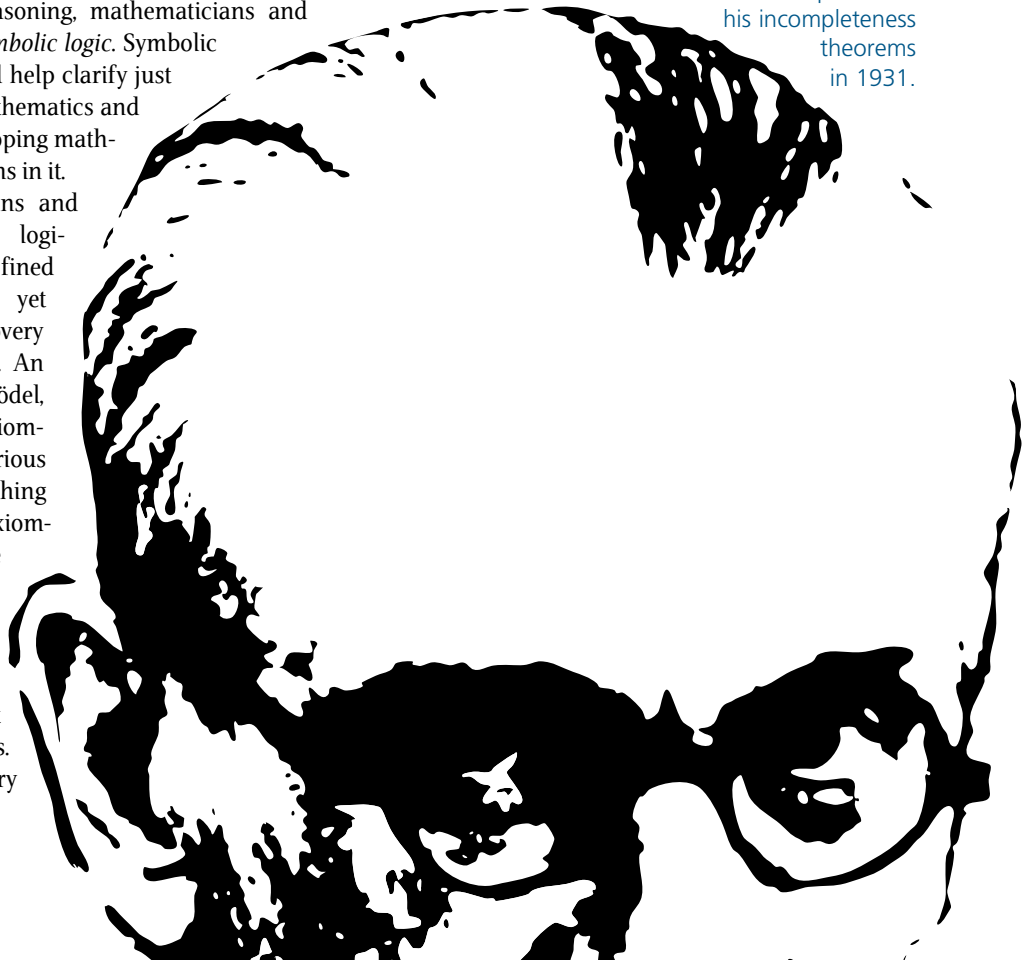
Critical Issues

Mathematical knowledge is special. It seems that mathematics is one of the few disciplines in which we have anything like certainty (paradoxes notwithstanding). We often compare other kinds of certainty against the certainty we have in mathematics. We say things like, "Well, I'm pretty sure, but I'm not *mathematically* certain." By this, we imply that mathematical certainty is the strongest kind of certainty available. After all, could it ever be wrong that 2 + 2 = 4? What's more certain than that?

Mathematical Knowledge and Certainty

Philosophers have always recognized the special place that mathematical knowledge holds. Accordingly, they have taken mathematical knowledge to be the ideal kind of knowledge. The goal for any other area of study has been to approach the level of certainty that mathematics gives us. Other than logic, there isn't much that compares in this way to mathematics (and many mathematicians think that mathematics is just a special case of logic). Take science, for example. We can be sure that an object dropped near the earth's surface will fall toward the center of the earth (go ahead, try it). But it's possible that things could have been different. We can imagine a logically possible science fiction world in which objects are repelled by the earth, away from its center.

But mathematics seems different in this respect. We cannot even imagine a world in which two plus two does *not* equal four. Mathematical statements—most of them anyway—cannot be false. Philosophers say that such statements are *necessarily* true.

Furthermore, how do we come to know such necessary truths? Notice that we need not check the world to know whether 2 + 2 = 4. Nor do we need to do a physical experiment in order to check whether 4,356+809 = 5,155 (it doesn't, and you can check this without actually counting objects). Many philosophers believe—because no experience of ours could ever show that 2 + 2 = 4 is false and that we need no experience to determine mathematical truths—that experience is not fundamentally needed to know such truths. Of course, the way *we* have typically learned math required a teacher, but theoretically we could have come up with the ideas of two, plus, equals, and four simply by thinking about them. Philosophers call these kinds of truths—truths that we can know without looking at the world—*a priori* truths (*a priori* means "prior to experience").

What is Mathematics About, Really?

The nature of mathematical knowledge leads to the next big issue. Maybe the uniqueness of mathematical knowledge is due to mathematics' unique subject matter. Maybe, say some philosophers, mathematical knowledge is special because it is knowledge about special *things*, special kinds of objects. This is the second issue, then: what is mathematics really *about*? We saw that it is at least about numbers and shapes. But what are these, exactly?

Before we try to answer this, we need to understand a very important distinction in mathematics, one that we have already alluded to. To take a simple example of the distinction, consider the following two sentences that use number concepts:

> Two apples added to two apples gives us four apples.

Two plus two is equal to four (i.e., 2 + 2 = 4).

These sentences are obviously very similar; but they are different in an important way. Notice that the first sentence is about apples while the second sentence is about numbers. That is, the nouns of each sentence are different (the number words in the first sentence are adjectives, not nouns). The nouns of each sentence refer to things that could not be more different. In the case of apples, we can see, touch, smell, and taste them. We can't do any of these to numbers (although we can see the *nouns* that refer to numbers, which are in the form of words like *four* or symbols like *4*). Notice also, that apples have a location as well as mass and weight. But numbers, it seems, do not.

So then, in the first sentence, mathematics is about the physical world. The second sentence, however, is about the *mathematical* world and belongs to *pure* mathematics (or theoretical mathematics). The first sentence belongs to *applied* (or practical) mathematics.

Let us look at the pure sentence (*2 + 2 = 4*). Surely this sentence is about *something*; it's not about nothing at

all. Furthermore, the sentence is always true. There was never a time when 2 + 2 = 4 *became* true, nor will there be a time when it stops being true. It would be true even if there were no apples or objects at all. It would be true even if there were no humans to count or to think about the sentence.

So in the previous paragraph we have some facts that need explaining. How can all this—what we've just said about *2 + 2 = 4*—be true? Given all these considerations, most philosophers (and mathematicians) say that this sentence must be about things that have always existed and always will. Such objects also exist independent of human thought and language (therefore, *2 + 2 = 4* isn't merely about ideas or words).

Following Plato, then, most philosophers and mathematicians believe that numbers exist eternally, outside of space and time, like Plato's Forms. Numbers, they say, are unique and mysterious. They aren't physical, and they may not even be *located* anywhere (whatever that means).
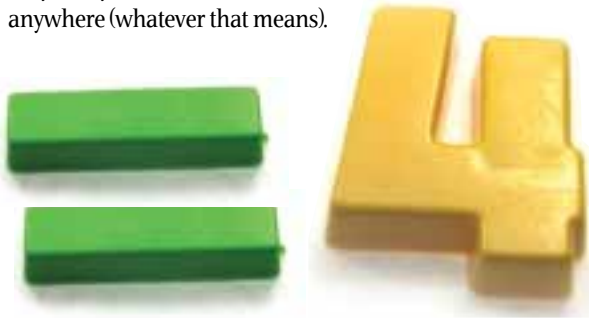
Numbers are spooky. This view that numbers literally exist is often called *mathematical platonism.*

One objection to mathematical platonism is that *2 + 2 = 4* is really shorthand for something like *Every time you add two things to two other things you get a total of four things.* And this objection seems to work for *2 + 2 = 4*, where we can conceive of number words as disguised adjectives. But it doesn't work for sentences like *3 is not a square number.* In this sentence, the noun *3* is not shorthand for an adjective in any clear way, and so mathematical platonism remains plausible. Indeed, platonism is the standard view among mathematicians and philosophers.

The Usefulness of Mathematics

The third problem, perhaps the most intriguing, is just how it is possible for mathematics—a subject that in itself seems to have a *non*physical subject matter—to be so useful for describing and predicting events in the *physical* world. In fact, mathematics isn't merely *important* for describing the physical world; in many cases, we could not say what we want to about nature without mathematics.

In other words, mathematics is *indispensable* for describing much of the universe, especially in the context of contemporary physics. Neither quantum theory nor general relativity can even be stated without mathematics. They are essentially mathematical theories.

How could mathematics be *necessarily* true and yet also describe *contingent* or non-necessary states of affairs in the real world? This is perhaps the most puzzling thing about mathematics for contemporary philosophers and mathematicians. In his famous essay, "The Unreasonable Effectiveness of Mathematics in the Natural Sciences," Nobel Prize-winning physicist Eugene Wigner said, "The miracle of the appropriateness of the language of mathematics for the formulation of the laws of physics is a wonderful gift which we neither understand nor deserve."

There are two things to distinguish here. The first is the mere fact *that* mathematics is useful for science. The second is an *explanation* of the fact: just *why* is it so useful for us? It often seems as if mathematics is simply there waiting for us to use it to describe new and mysterious physical phenomena. There are many cases in the history of science when the mathematics had been developed centuries before it was ever *used.* Scientists have simply picked the mathematics off the shelf and found that it worked. As another Nobel Prize-winning physicist, Steven Weinberg, says, "It is positively spooky how the physicist finds that the mathematician has been there before him or her."

Furthermore, contemporary physicists use mathematics to guide them where observation and experiment are impossible. On the subatomic scale in quantum theory, for example, humans simply cannot make observations. They have to come up with a purely mathematical story of what occurs on a very small scale and then see if the subatomic world's effects on the macro world is what the mathematical story predicts. In such cases, physicists must rely on mathematics to guide them in making predictions of where subatomic events will reveal themselves on an observable scale. The mathematics points to where the observable phenomena are going to show up. Physicists then stand by, waiting to observe the predictions. Strangely enough, this process works!

The universe seems remarkably user-friendly. The question that scientists, mathematicians, and philosophers grapple with is, *Why?*

A Christian Response

How then should Christians view mathematics? Although we can only scratch the surface, a good place to begin is to look at how humans come up with mathematical systems. This can then give us clues about the nature of mathematics. What follows is simplistic, but it captures

the general process of mathematical development.

Remember that we initially arrive at number concepts by looking at the world. We look at concrete examples of, say, two trees, two dogs, two stars, and eventually abstract from these cases the concept *two*. Similarly for many other numbers (and shapes as well). Once we arrive at these abstract mathematical concepts, we then begin to focus on the concepts themselves, ignoring the trees, the dogs, and the stars.

By studying these concepts more closely, we begin to see what different numbers have in common (as well as the properties that makes each one unique). We determine, for example, that two comes after the number one and before the number three. From here, we eventually progress to more sophisticated facts about two: two is the first even number, it's the only even prime number, if we add it to five we get seven, and so on. We continue to do this, developing elaborate mathematical systems or stories. Our systems become larger and branch out: we develop arithmetic, geometry, algebra, analytic geometry, calculus, differential geometry, and so on. Of course, by *we* I mean the collective human race. The actual process took millennia and the contribution of many different cultures.

Something amazing also happens along the way: we often discover that the mathematical systems we arrived at by looking only at the *mathematical* objects can be applied *back* to the *physical* world, to real-life objects. This happens even though we often weren't trying to develop mathematics for these particular purposes (although there are times when we were). So, in general, our mathematics begins with the world, then becomes separate from it, and then often reconnects to the world, usually through science.

This can be misleading, however. Even though the fundamental concepts like whole numbers and simple shapes "came from" our observation of the physical world, *most* mathematical concepts don't. We don't, for example, *see* functions, integrals, and derivatives in the world. Such concepts seem very far from our initial observations of the world. This is why it's so surprising that these concepts actually work when applied back to the physical world. As yet another Nobel Prize recipient, Richard Feynman, says, "I find it quite amazing that it is possible to predict what will happen by mathematics, which is simply following rules which really have nothing to do with the original thing."

And so we're right back at the issue of mathematics' applicability. How do we account for this happy connection between mathematical concepts (that we seem to simply make up) and the actual operation of the universe?

For the secularist, this is an inexplicable mystery (recall Wigner's statement above). And it is no good for

evolutionists to say that the explanation for applicability is that we needed concepts like the integral and derivative for survival. Even if some mathematical concepts like numbers and shapes helped us to survive, most mathematical concepts have nothing whatsoever to do with the survival of our species. This is plain especially when we see that the mathematics of quantum theory, for example, is vastly different in character from the mathematics needed for objects we can directly observe. Such mathematics did not in any way contribute to our species' survival.

But the Christian explanation for the world's apparent user-friendliness is perfectly straightforward. God created the world *and* us and graciously made both in a way that allowed us to arrive at reliable mathematical descriptions of physical events and objects. This situation is one of the ways God allows us to fulfill the "cultural mandate" of Genesis. The universe's user-friendliness is a gift, pure grace. The only proper response is awe and gratitude.

In one form or another, a type of divine explanation has actually been with us since the beginning of Western history, even in pagan cultures. According to the late Morris Kline, there are three basic Pythagorean-Platonic beliefs that have driven science and mathematics throughout Western history.

1. The universe is ordered by perfect mathematical laws.
2. Divine reason is the organizer of nature.
3. Human reason can discern the divine pattern.

Today, contemporary physics has by and large jettisoned the "divine" aspect, but physicists still function as if the universe was *designed* and designed *for us*. They *expect* the mathematics to help us.

But why did God design the universe *mathematically*? Why didn't He design it differently? One of the few things we can say with confidence about this is that *He wanted to*. We can also say that just as a work of art or craftsmanship tells us something about the human(s) who made it, so too, the mathematical nature of God's universe reveals things about Him. Just what, specifically, is not clear, but we know that mathematics is somehow an important aspect of who He is. God is not merely orderly, but orderly in specific ways, one of those ways being mathematical.

And because God is the way He is *necessarily*, mathematics is in some sense necessary. This explains why 2 + 2 = 4 in any world God would have made. This in turn explains how we can know the solution to mathematical problems without checking the world we live in. We can know the answer to 4,356 + 809 without having to construct a group of 4,356 objects and another group of 809

objects and then counting them all together. The answer will be the same no matter what the actual world is like, which is to say that the answer doesn't depend on the world. We only need to "think" the answer (our minds may need help with pen and paper, but that's just a human limitation).

Let us turn to the issue of mathematics' subject matter, focusing again on numbers. Remember that we distinguished two kinds of mathematics, pure and applied. Pure mathematics is about mathematical objects; applied mathematics is (typically) about non-mathematical objects, often physical objects. In applied mathematics number concepts are usually adjectives, as in the case of *two apples added to two apples gives us four apples*. But in pure mathematics, we saw that number concepts often show up in sentences as nouns. *The square root of two is irrational* is about a number, namely the square root of two. And because of the apparent eternal nature of this truth, as we saw, most mathematicians and philosophers believe that numbers are eternal objects, existing outside the realm of space and time.

Such *platonism,* however, can be a problem for Christians. According to platonism, numbers (and the realm in which they exist) are eternal and unchangeable. In other words, they begin to take on the qualities that we usually reserve for God. A way around this problem is to view numbers as dependent upon God. One way to do this is to conceive of them as separate from God but somehow eternally "flowing out of" Him. That is, He eternally creates or "begets" numbers. This notion, however, should at least give us pause—numbers sound as if they are dependent upon God in a way similar to Jesus' dependence on God the Father. This doesn't make the view false, but it should cause us to be wary of it.

A second way for Christians to remain platonists—to still believe in the genuine existence of numbers as objects—is to place numbers in the "mind of God." This is a type of Augustinian platonism. St. Augustine was a platonist before he became a Christian and was so impressed with platonism that he tried to make his newfound Christianity fit with his Greek platonism. He had

Baptism of Saint Augustine by Saint Ambrose of Milan, painted by Benozzo Gozzoli (c. 1420–1497). Augustine tried to reconcile Platonism with Christianity.

to do *something* with Plato's Forms, so he placed them in God's mind. Again, this doesn't necessarily make Augustinian platonism wrong, but, again, it should give us pause. A lot of damage has been done by intermingling Christianity with pagan philosophy, so we need to be very careful when adopting views that mix the two.

Is there an alternative to platonism for the Christian? There is. A good one. This alternative view takes into account God's apparent fondness for stories. As you know, the Bible is much more of a storybook than a textbook. The story of redemptive history is gripping, with its battles between two armies, the victory of the good army thanks to a conquering King, and even a wedding at the very end. Furthermore, humans—young and old—find stories irresistible. In fact, we are natural story makers, just as our Father is.

With this in mind, remember that in developing mathematics, humans abstracted the concept two (for example) from the many cases of two objects. We then naturally began to focus on the number two itself, determining its various properties and how it behaves when it interacts with other numbers (who in turn have different personalities). Once we did this, the number two became a sort of character in a story. Mathematicians then developed the story further, adding concepts that were consistent with the initial story line, the story line that was originally inspired by the physical world. These new concepts often behaved as if they were new characters in the story, with different qualities and personalities, adding layers to the mathematical "story." This view of mathematics is called "fictionalism."

Christian fictionalists say that because God made us natural storytellers, we constructed mathematics as a story almost automatically, without consciously thinking, "Here we are, making a story with numbers as characters." In fact, just as small children sometimes have difficulty separating fiction from reality, platonists have mistakenly believed that numbers are *real.*

If we think of numbers as characters in a kind of story, then we can account for the truth of mathematics without having to countenance numbers as actually

existing objects. Just as it is true that Oliver Twist lived in London, it is also true that the square root of two is irrational. But on the fictionalist view, neither Oliver Twist nor the square root of two need exist for the respective statements to be true. They are, so to speak, *true in the story*. The first story is *Oliver Twist*; the second story is our standard mathematics.

But notice that a fictionalist view of mathematics doesn't make mathematics *arbitrary*. It's not as if we can make up any old mathematics, the way we can make up any old story. Mathematics is different from "regular" stories in that the mathematical characters are heavily constrained by the mathematical nature of reality (which is ultimately constrained by God's mathematical nature). The mathematical story, therefore, can help us predict many things about the real world because it began with the real world and its development is constrained by very strict mathematical methods. Ordinary stories have much more leeway.

Notice what this implies. The story of mathematics is, in some sense, already there in the world, made by God, and we're essentially discovering this story. It's already written.

So we need to be careful with the term *fictionalism*. Again, by *fictional,* we as confessing Christians do not mean that this story is arbitrary, or that God could have made a universe in which $2 + 2 = 17$. Fictionalism is only an option for Christians if it is understood as a narrative grounded in the nature and character of the narrator.

But our mathematical methods aren't infallible. And even if they were, we're not. Furthermore, we have limitations, even when we don't make mistakes. This is one of the reasons *our* mathematics can lead us astray, as in the paradoxes of set theory. In such cases, we're not getting the story right—either because we've made a mistake or because of our limitations (or both).

We shouldn't, therefore, put all our confidence in mathematics—or anything that depends upon it (like science). If something other than God becomes our ultimate epistemic authority (or ultimate authority on how we can know things), we're bound to be let down or misled.

So then, mathematics is a gift, but one that we shouldn't mistake for the giver. Mathematics is a powerful tool for taking dominion over the earth, one that we simply cannot account for without a supernatural connection between man and the world. God designed it this way. The next time you're doing a math problem, remember that a lot of weird stuff is going on behind the seemingly mundane and tedious calculations. In a sense, you are thinking God's thoughts after Him. Even if numbers aren't objects in the mind of God, they are still characters in His grand story.

—*Mitch Stokes*

For Further Reading

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MEDIA

The word *media* (-a: Latin, 2nd declension, neuter, plural) has two common, related meanings. The first refers to the basic technologies people use to communicate, such as the printing press, telephone, radio, television, and computer. The second emphasizes the businesses or industries that disseminate information and entertainment through those technologies. "The media" or "the mass media" typically refer to the commercial communication industries and their workers (news reporters, columnists, talk-show hosts, actors, comedians, advertisers, film makers, etc.) who produce the majority of the media content for public audiences. The mass media can reach very large ("mass") audiences, but they tend to limit access to contributors and allow only minimal "feedback" from their readers, listeners, and viewers. When people opine about "the media," they are usually concerned about the political, moral, religious, and cultural influences of the dominant mass media businesses more than they are about media technologies per se.

Communication between two (or a few more) individuals through some medium (-um: Latin, 2nd declension, neuter, singular), such as the telephone, letters, or email, which allows them to interact easily and personally, is referred to as "medio-communication." Face-to-face conversations that are not mediated through some technology (other than by words and expressions) are simply considered "interpersonal communication."

Communication creates and maintains the common bonds of families, communities, societies, and cultures through language, symbols, rituals, and images over time. Media often provide the

technology and contexts for that communication to occur. But media innovations have tended historically to disrupt,[1] but not displace, older media and to change the social, political, and cultural conditions in which the innovations appear. The advent of movable type printing in the mid-fifteenth century, for example, fundamentally disrupted the spoken and written communication systems that had served the government, society, and the church since ancient times. As the first mass medium, printing allowed almost any author (not just those approved by the state or church) to reach vast audiences previously unimaginable to earlier orators or authors of hand-reproduced manuscripts. The printing of Martin Luther's Ninety-Five Theses disrupted the Roman Catholic Church's political and theological authority in Europe. In just three years, more copies (300,000+) of Luther's publications were distributed than any other work in history. The printing press made the Reformers' plea for *sola Scriptura* not just a theological idea, but a hard-copy reality by putting the Bible within the reach of almost everyone. The Reformation demonstrated the power of new media to disrupt the status quo of Europe and of Christendom itself.

The press's power to change how individuals, cities, nations, and entire continents thought and acted provoked civil and religious authorities to try to regulate and control the disruptive new communication technology. In Spain, the Inquisition had burned banned books and the government required all printed works to be licensed. The Edict of Worms in 1521 required German printers to submit their works to censorship and to publish only with the permission of the authorities. In sixteenth- and seventeenth-century France, hundreds of authors, printers, and book dealers were jailed for violating printing laws. In 1538 English works and their printers had to be registered and inspected by the notorious Stationer's Company.

An early American newspaper was *The Sun,* published in New York City from 1833 to 1950. Its demise coincided with the early emergence of television as a broadcast medium.

Under Tudor rule, one Englishman was executed for printing an allegorical attack on the queen's religious policies. In 1644 poet John Milton wrote *Areopagitica*, his famous plea for press freedom, after English authorities suppressed his pamphlet on divorce. Distaste for England's restrictive printing regulations in its colonies, including those that led to the immediate suppression of North America's first newspaper, *Publick Occurrences Both Forreign and Domestick* (Boston, September 25, 1690), was one of the key reasons that "freedom of speech and of the press" was later guaranteed in the First Amendment to the United States Constitution.

While some form of systematic news reporting can be traced back to Rome's daily gazette around 40 B.C.[2] and to handwritten newssheets distributed in Venice in the 1500s, books and pamphlets dominated the printing trade until about 1600. The monthly or weekly publication of newspapers began in England about 150 years after the invention of printing. These new "periodicals" became so widespread across Europe by the end of the seventeenth century that the first known study of the newspaper industry was completed in 1690, the same year America's first newspaper was suppressed after one issue. In his University of Leipzig doctoral dissertation, *De relationibus novellis* (On news reporting), scholar Tobias Peucer described an emerging news industry that reported "marvellous and unusual" events, "differences, changes and transfers of government," and "matters ecclesiastical or literary." He also noted that certain types of stories attracted too much attention, such as "ridiculous and foolish" reports about "how many purple and gold garments" princes owned, speculations on things "that belong in private diaries rather than public records," "the affairs of princes, which should not be bandied about," and other "wicked statements" and "things that would fall heavy on pious ears."[3] Criticisms of news reporting similar to those found in Peucer's seventeenth century study are still common in the twenty-first century.

For almost 400 years, the old Gutenberg-style, hand-operated, one-sheet-at-a-time printing press had a maximum production rate of only about 125 copies an hour. In the early 1800s, America's largest circulation daily newspaper had about 4,500 subscribers. Published by political parties or mercantilists, these papers appealed to small partisan audiences and were available by subscription only. At a time when most people earned less than $1 per day, subscription rates of six cents per copy or $8–$10 per year put the newspaper out of the reach of the common family. That all changed, however, in 1833 with the invention of a new disruptive media technology: the high-speed, steam-driven rotary printing press. Rotary presses could print more than 18,000 copies

an hour (a 144-fold increase in the speed of production). Seizing upon this new speed and an idea born in England, printer Benjamin Day started the New York *Sun,* a daily newspaper funded not by subscription but by advertisers and designed for mass distribution. With content created to appeal to every reader, the papers were hawked on street corners by newsboys for a penny. These "Penny Papers" became the model for America's advertising-based, mass marketed commercial media. Within a few years of Day's *Sun,* the Penny Press could be found in America's largest cities, boasting circulations exceeding 15,000 copies daily. The Penny Papers demonstrated how a new technology, the high-speed rotary press, could disrupt the status quo of the communication system and change how people understood news and information.

Penny Papers were widely criticized as scandal sheets, but crass sensationalism really took over the news business in the late nineteenth century with the advent of "Yellow Journalism" (so called because of the color printing of one the earliest newspaper cartoon characters, the Yellow Kid). Publishers William Randolph Hearst of New York and Joseph Pulitzer of St. Louis, whose newspaper "chains" (groups of newspapers in different cities under one corporate owner) were locked in cutthroat competition for ever-larger national circulations. They paid writers (now called reporters or journalists) to scour their cities for interesting news and to write stories that would attract more readers. They sometimes stooped to inventing controversies, faking interviews, staging photos, and fueling scandals. Prior to the start of the Spanish-American War in 1898, Hearst gave his reporters in Cuba this infamous (though possibly and fittingly apocryphal) charge: "You furnish the photos; I'll furnish the war."

Critics of Yellow Journalism called for improved ethical standards among journalists and more accurate and fair news reporting. One response in the early twentieth century was to turn news workers into professionals with their own association, Sigma Delta Chi, the Society of Professional Journalists, and a code of ethics. Some newspaper owners began to require that their reporters be college educated. Pulitzer, hoping to gain credibility for his journalists, offered New York's Columbia University, which was financially strapped at the time, several million dollars to start a journalism school. Columbia accepted his offer. Thus was born the Columbia School of Journalism (1912), home of the Pulitzer Prizes, which remain journalism's most prestigious awards.

Another response to sensationalism in the early twentieth century was the rise of investigative journalism, known as "muckraking," that helped fuel the popularity

Hogan's Alley, shown here, was one of the first comic strips in an American newspaper. Drawn by Richard F. Outcault, the strip was created as political commentary for adults. It featured the character known as the Yellow Kid, who evolved from a character that appeared in Outcault's magazine cartoon panels in 1894 and 1895.
The Yellow Kid became not only a late-twentieth-century cultural icon but also a lasting symbol of media priorities, as to this day "yellow journalism" is synonymous with sensationalism and the valuing of profit over journalistic integrity.

became famous for their carefully researched exposés of government corruption, dangerous industrial practices, and corporate greed. Sinclair's 1906 book, *The Jungle*, which revealed the horrid conditions in America's meat packing plants, is credited with prompting passage of the Pure Food and Drug Act.

The division between the sensationalism of Yellow Journalism and the professionalism of Muckrakers exemplifies what social historian Michael Schudson has described as a long-standing divide between the Story Ideal and the Information Ideal in American journalism. The one treasures the ability of writers to tell a good story and to spin a good yarn in order to sell as many papers as possible. The other values objective, non-partisan, "scientific" reports which trade only in facts and the truth about public affairs in order to better inform citizens and consumers. The tension between the Story Ideal and the Information Ideal is still felt today.

The Electronic Tradition

> "The wireless telegraph is not difficult to understand. The ordinary telegraph is like a very long cat. You pull the tail in New York, and it meows in Los Angeles. The wireless is the same, only without the cat."
> —Albert Einstein

Just when the Penny Papers began transforming the news business, the first disruptive electrical communication technology, the telegraph, appeared and changed both how print media operated and how we understand the nature of communication itself. Invented in 1844, the telegraph's high-speed transmission of information across great distances promised to aid news gathering, but some editors feared the new electrical medium could weaken or displace the newspaper itself. For example, in 1845 the editor of *The Herald,* one of New York's Penny Papers, predicted that the "new mode of circulating intelligence," the telegraph, would "be fatal" for "a vast number" of newspapers.[4]

Those fears proved to be unfounded, of course, but telegraphy did change how stories were gathered and written. Newspapers soon began a system of cooperative sharing of "telegraphic news" between cities. Several New York Penny Papers organized an "Associated Press" news syndicate in 1848 to share the costs of gathering news by telegraph. With the first transatlantic cable in the 1860s, newspapers no longer had to wait days or weeks for ships to arrive with international news. The telegraph shrank time and space for the newspaper business and improved their efficiency and profitability.

Because early electrical and telegraph lines were notoriously unreliable (especially during the Civil War),

Julius Chambers (1850–1920) is considered one of the pioneers in the "muckraking" movement toward investigative journalism (the term "muckraking" in reference to journalism is often attributed to President Theodore Roosevelt in 1906). Chambers made his name as a reporter for the New York Tribune in the 1870s. He had himself committed to the Bloomingdale Asylum for the mentally ill in an effort to expose mistreatment of the inmates there. Chambers' reports for the *Tribune* led to reforms in the care of psychiatric patients. Future "muckrakers" took on such targets as the Standard Oil monopoly, sanitary conditions at meat packing plants, and the abuse of child labor.

of another new medium, the magazine. President Teddy Roosevelt first applied the term "muckraking" to journalism in 1906, referring to the "Man with the Muck-rake" in Bunyan's *Pilgrim's Progress.* Muckraking journalists like Upton Sinclair, Lincoln Steffens, and Ida Tarbell

news stories sent by telegraph had to be written differently. The "inverted pyramid," which became the most common news style, summarized most important information in the first paragraph (the "lead" or "lede") and the less important information or background details were arranged in order of decreasing importance. If a telegraph signal were cut and a message interrupted, the "inverted pyramid" style ensured that the most important news had been delivered in the first few paragraphs.

> **telephone** *n.* An invention of the devil which abrogates some of the advantages of making a disagreeable person keep his distance.
> —Ambrose Bierce, *Devil's Dictionary*

While working on ways to help the hearing impaired in 1876, Alexander Graham Bell redesigned the basic signaling technology of the telegraph to transmit the human voice electrically and thus introduced another disruptive electrical communication technology. Bell and his associates offered to sell his invention to the Western Union Telegraph Co. in 1878, but were turned down. Eventually, the new "telephone" would absorb and displace the telegraph. The Bell system was later renamed the American Telephone and Telegraph Company (AT&T). The phone was first used primarily for emergency purposes (fire, medical, and police communication), but domestic phone use grew after the 1894 expiration of the first Bell patents and the availability of new non-Bell phone hardware. Dozens of new phone hardware manufacturers and thousands of small telephone cooperative systems sprang up across the country after 1894. However, in 1913 AT&T made a deal with the federal government to avoid anti-trust prosecution, called the Kingsbury Commitment, which allowed the company to join independent (non-Bell) systems in creating a national telephone monopoly. AT&T's monopoly status was solidified during World War I and continued until 1984 when the federal government forced the break-up of the national phone system into several "Baby Bell" phone companies. AT&T's monopoly ended about the same time that another new disruptive technology, the "cell" or wireless phone, made old land-line phone systems redundant and less profitable. Unencumbered by its less profitable land-line system, AT&T came to dominate the new and more profitable cell phone service industry.

In the early days of telephony, a wire could carry only one phone message at a time. Cities therefore needed hundreds, even thousands, of unsightly telephone lines which hung over their streets like tangled spider webs. With so many lines running close together, phone technicians discovered a strange electrical phenomenon called "ghost lines." Intersecting electrical fields between

Alexander Graham Bell (1847–1922) redesigned the basic signaling technology of the telegraph to transmit the human voice electrically and thus invented the telephone.

two parallel wires actually created a third "wireless" line in the "ether." Researching this strange "wireless" phenomenon, inventors in Italy, Germany, and the United States made a series of breakthroughs that produced the first "wireless telephony," or the radio. This disruptive electrical communication technology became required on-board ships after the sinking of the Titanic in 1912. The first commercial radio station, KDKA of Pittsburgh, began broadcasting in 1920. By 1922 the nation had more than 500 radio stations serving 100,000 radio sets. By 1925 Americans owned more than 5.5 million radios and the radio boom was on. The dramatic growth of radio broadcasting was due to its popular news, music, and

storytelling programming. Unlike newspapers, the radio industry was, from the start, financed by advertisers eager to reach millions of listening consumers.
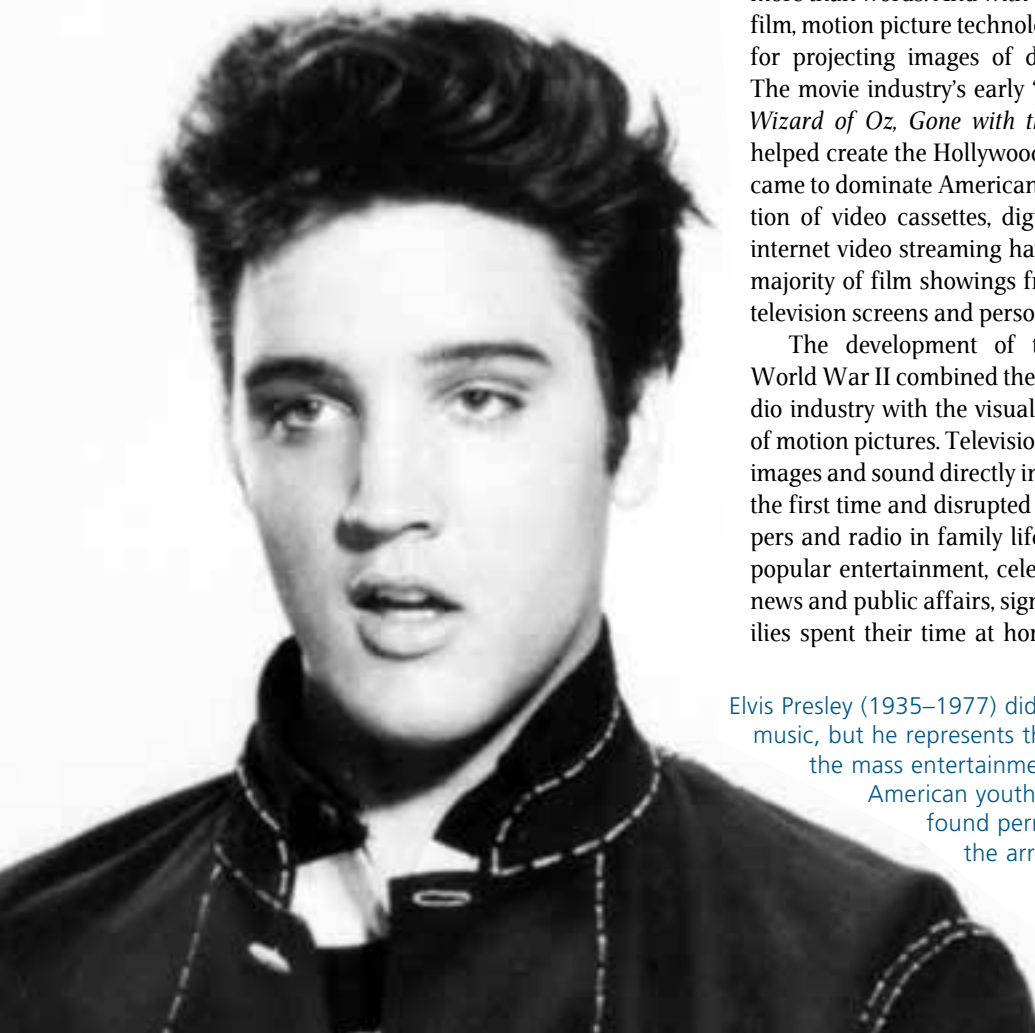
Competition between stations for listeners (and the advertising dollars they represented) led to a kind of "wild, wild West" environment among the early radio broadcasters. Stations would sometimes boost the power of their signals to "walk over" a competing station on the radio "dial." Others would deliberately create interference to block the signals of a competitor's station. Out of this chaos came pleas from both broadcasters and listeners for the government to step in. The U.S. Department of Commerce, under Herbert Hoover, opened investigations that culminated in the Federal Radio Act of 1927. Despite the First Amendment's free press guarantees, the government created the Federal Radio Commission to regulate broadcasting on the premise that the "airwaves belong to the people." The 1927 Radio Act declared that broadcasters had the right to "use, but not own" the airwaves and that government regulators were needed to control broadcasting for the "benefit of the people." That rationale would be used in the Communication Act of 1934 to justify the government's regulation of all future electronic media.

Concerns about radio's potential for social and political disruption and harm grew with the disturbing success of Nazi propaganda in 1930s Germany and the mass hysteria created by Orson Welles' 1938 "War of the Worlds" radio drama, some of whose listeners thought they were witnessing an actual Martian invasion. The rise of "pop music" and "rock-and-roll" (Elvis Presley, the Beatles, etc.), targeting young consumers after World War II, only heightened concerns about media's potential to corrupt the morals of young people, to radicalize students, and to commercialize (and secularize) culture.
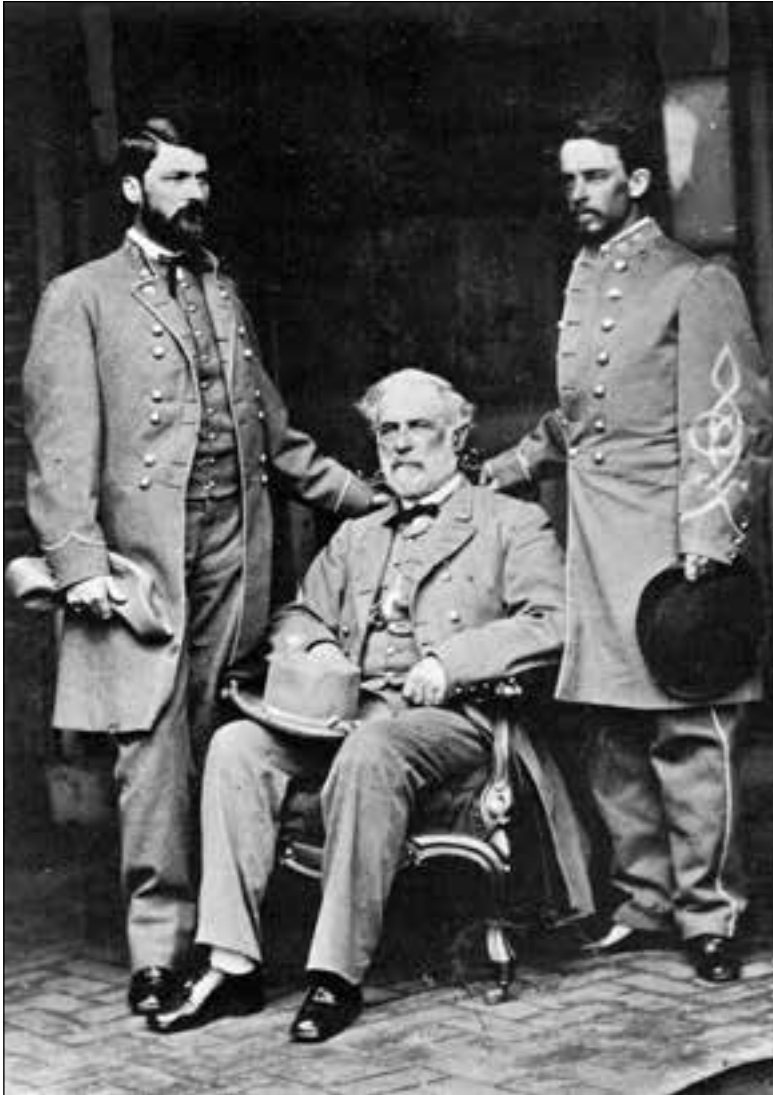
The Visual Tradition

Photography was the first modern disruptive visual medium. Invented in the mid-nineteenth century, photography undermined painting's centuries-long pursuit of realism, and it shook the foundations of art. Artists rapidly abandoned realism and began to explore abstract, non-realistic forms of art. The photograph's unparalleled power to capture realistic images of the world was secured with the Civil War photojournalism and portraiture of Mathew Brady in the 1860s. Photography inspired an entire new line of "illustrated" magazines in the late nineteenth century that emphasized images more than words. And with the development of celluloid film, motion picture technology spawned a new medium for projecting images of dramas and documentaries. The movie industry's early "blockbuster" films, like *The Wizard of Oz, Gone with the Wind,* and *Citizen Kane,* helped create the Hollywood celebrity "star" system that came to dominate American popular culture. The invention of video cassettes, digital video disks (DVD), and internet video streaming have more recently shifted the majority of film showings from movie theaters to home television screens and personal computer terminals.

The development of television technology after World War II combined the corporate backing of the radio industry with the visual and storytelling techniques of motion pictures. Televisions brought live-action visual images and sound directly into the family living room for the first time and disrupted the use and role of newspapers and radio in family life. Television, which stressed popular entertainment, celebrity, and sports more than news and public affairs, significantly changed how families spent their time at home, what they devoted their

Elvis Presley (1935–1977) did not invent rock 'n' roll music, but he represents the 1950s emergence of the mass entertainment media culture aimed at American youth. This media phenomenon found permanent acceptance after the arrival of the Beatles in 1964.

Digital Media Convergence

The computer and new digital technologies have had the most recent disruptive impact on our culture and almost all other media. While the computer stands as a medium in its own right and supplements the work of older media (word processing, publication design, audio recording and editing, video production, etc.), and facilitates new media such as (the internet, blogs, and social networks), its capacity to converge all media onto a single digital platform is what has produced the most dramatic and disruptive changes in media. Initially, the older media simply sought to use the computer to enhance the efficiency of their traditional ways of working. However, the computer and its increasingly small and portable digital devices are making access to all media virtually seamless and independent of the old media's spatial limitations.

time and attention to, and how they interacted with one another. Even in the so-called "Golden Age" of television (the 1950s), the artistic and cultural quality of television programming was widely criticized. Former Federal Communication Commissioner Newt Minow once called television "a vast wasteland." For about 40 years (late 1940s to late 1980s), television dominated the media in terms of audience and revenues, but after the rise of personal computers in the late 1980s, network television viewership began declining. However, Americans are still watching televised "programs" at record numbers, but the content is more specialized (as on YouTube) and more individualized through cable television, cell phones, video-streaming, and satellite TV. This is sometimes described as "narrowcasting" instead of "broadcasting."

Advances in digital imaging in photography and film-making, especially with films like *Star Wars, Toy Story, Titanic,* and *Avatar,* changed the process of *capturing* visual images ("taking pictures") to *generating* images ("designing original images" that may look "life-like" or "realistic" but don't exist outside the medium). Digital media made the difference between an "original" and a "copy" impossible to discern. "Bootlegged" (unauthorized) copies of music and movies have become a multimillion dollar global problem for the major recording studios and film producers.

Today, most newspapers' online editions (and archives) and search engines can find news reports on millions of stories from thousands of papers around the world in seconds. New books, magazines, and journals can be read instantly on Kindle, an electronic reader for

books, etc. The texts of entire libraries (7 million books and counting) are immediately and fully accessible through Google Books. Streaming video (YouTube, Netflix, etc.) provides more on-demand television shows, independently produced video, sports, entertainment, and movies than broadcast and cable television combined. And each year more and more people prefer to shop online for bargains than to waste time looking for specific items that aren't stocked in crowded malls. Computers are not just another medium; they have the capacity to integrate all the older media into a single system of production, delivery, and feedback.

"Old media"—hard-copy newspapers, magazines, and recordings—are struggling today for subscribers and buyers. Traditional television networks are losing viewers (ratings) and advertising revenues. The new digital media have fundamentally disrupted the old media's ways of doing business. The new media have also undermined the mass media's cultural dominance because individuals are restricted to the choices others make for them. The old media's "gate-keepers" once decided what news and entertainment they would give to their audiences. Now "audiences" are empowered to seek out, create or publish whatever interests them personally. The new media have given users far more choices and points of access to news, information, and entertainment unhindered by old media systems and monopolies.

Critical Issues

Christians who wish to think biblically about media or to prepare for vocations in media must first realize how much our perspective on media has been influenced by two competing concepts of communication: a transmission view and a ritual view. According to media scholar James W. Carey, the transmission view grew out of the telegraph's technical genius to split communication from transportation. Before the telegraph, all communication required some kind of personal, physical contact between speakers and listeners, writers, and readers. Postal workers still have to hand-deliver letters. But telegraphy eliminated the personal contact and gave primacy to the transmission of disembodied data. This inspired an electrical model (later referred to as the mathematical theory) of communication that reduced communication to a linear, non-physical transmission of information between a sender and a receiver through some medium.

Television, which stressed popular entertainment, celebrity, and sports more than news and public affairs, significantly changed how families spent their time at home.

By contrast, the ritual view of communication, according to Carey, is "directed not toward the extension of messages in space but toward the maintenance of society in time; not the act of imparting information but the representation of shared beliefs."[5] A ritual view does not exclude the transmission of information, but recognizes communication to be much more than transmission. It recovers the common root and ancient bonds between "communion," "community," and "communication." The sacrament of baptism, for example, doesn't just convey information; it changes a person's identity and bonds them to their new family in Christ. The exchange of wedding vows doesn't just exchange information; it literally transforms the two people who make them from a single man and a single woman into a husband and wife, a new legally constituted family which previously did not exist. Likewise, news reading and film watching and text messaging are less about sending or gaining information than they are rituals or dramatic acts that shape our lives, define our character, form our communities, and express our cultural identities in God's world.

When a transmission view of communication dominates the public imagination, however, as it has over the past century, then questions and concerns about media use, content, and effects are largely technical ones— or technocentric. For example, the Constitution's First Amendment was originally intended to protect freedom of communication

from government encroachment. But the Federal Radio Act of 1927 placed broadcasting directly under government authority, based on a technological argument that the air waves were a limited resource (like the finite number of printing presses?). With so few radio stations able to broadcast at one time, the government assumed power to license and regulate them. When Congress later instituted the Fairness Doctrine, requiring every broadcaster to carry "competing points of view," it was the supposed technical limits of the electronic media that justified making new content demands of stations and restricting their freedom "of speech and of the press."

When communication is understood as a linear, transmission process of sender-message-receiver, then the effects of a message on receivers naturally raise concerns. The transmission view has thus fueled significant public attention and consumed millions of tax dollars on research into supposedly dangerous "media effects." The Payne Fund Studies (1929 to 1932) was the first major research project to examine how movies affected children. Researchers found, not surprisingly, that movies had a negative effect on children's learning, attitudes, emotions, and behavior. This study inspired a long line of research looking for the effects of propaganda, movies, television violence, pornography, and video games. The "discovery" of powerful direct media effects (generating theories with names like the "Magic Bullet Theory" and "Hypodermic Needle Theory") said more about the researcher's assumptions about the power of media and the passivity of media audiences, than it did about how people actually use media. The first major break from the transmission view and supposedly powerful effects of media was Paul Lazarsfeld's 1944 presidential election study. Lazarsfeld discovered that media do influence voters, but their influence is neither direct nor powerful. Rather, a few influential people like parents, pastors, teachers, and community leaders (he called them "opinion leaders") pay very close attention to the media and the news. The vast majority of voters do not. Instead, they depend on the knowledge and judgment of their respected opinion leaders. Thus, any effects the media have are indirect and filtered through opinion leaders and their personal networks of family and friends. In other words, the transmission view proved far too simplistic to explain the complex ways people communicate, learn, judge, and act. The media are far less powerful or important than the earlier research suggested. Communication involves much more than the transmission view would lead one to believe.

Nevertheless, Christians have good reasons to distrust the media. The media's secular bias and anti-Christian disposition are legendary, of course, especially on current hot button issues like homosexuality, abortion, immigration, and terrorism. High profile journalism scandals, such as former CBS News anchor Dan Rather's blatant use of forged documents in a 60 Minutes hit piece against President Bush just before the 2004 national election, have eroded the mainstream media's credibility among Christians. Television has been subject to withering criticism in such books as Neil Postman's *Amusing Ourselves to Death.* But the problem is not the media or television per se, and the solution is not reading more or becoming orators. The problem is that antithesis between belief and unbelief is often misplaced between people and our things. Rather, the antithesis cuts across all of us and our things. Media can be used for both blessing and cursing. Postman rightly criticizes television programming for trivializing culture, but he wrongly downplays how the content of millions of books, newspapers, and magazines over hundreds of years has also corrupted culture and morals. At the same time, media are vital to our Christian callings as church members and citizens. Without the media, we cannot know our neighbors as we should or act responsibly in our communities as we ought. The media are part of the fabric of our communities and the common culture between believers and unbelievers.

A Christian Response[6]

Without a wider ritual view of communication as more than technologies for transmission, we cannot appreciate the infinite depth and breadth of "the Word" described in John 1:1–3:

"In the beginning was the Word, and the Word was with God, and the Word was God. He was in the beginning with God. All things were made through Him, and without Him was not anything made that was made."

The Word is the beginning and foundation of all communication. According to Scripture, words never merely convey ideas through some medium, whether spoken, written, printed, or conveyed electronically. Rather, words provide a deeply communal and personal foundation for our shared social experiences. And they can be divinely personal. In the beginning, God spoke interpersonally within the Triune godhead ("Let Us make …") before He created the universe. He spoke creation into being by His words ("Let there be . . ."). The apostle John describes Jesus as the Word who was in the beginning and was the creative word through whom all things were made. This close connection between the divine Word and the spoken word is further clarified when the apostle Paul explains that all created things, including our words, reflect the divine attributes of the Creator Word (Rom. 1:19–20). How that can be is a great mystery, but from a biblical perspective, words are never just impersonal bearers of meaning or ideas. Communication is never just the transmission of data between senders and receivers. Communication media are never just neutral technologies for sharing information. From the beginning, the Word and His words have told a far greater story about the nature, importance, and media of communication. In the twilight of the mass media (newspapers, radio, television) and the dawn of convergent personal digital media (cell phones, the internet), media have never been more religiously rooted and an inseparable part of our common culture. To correct our vision of the media, we need to recover our biblical categories. Put another way, when we pick up the morning paper, watch the nightly news, or surf the web, we need to understand the media like Trinitarians.

While the death of the daily newspaper may be a premature declaration, the emergence of the World Wide Web and the resulting "new media" has revolutionized the way people receive and process news and information. Newspapers have struggled to adjust to this new journalistic landscape, with many publications either going out of business completely or teetering on the brink of bankruptcy. "Old media" traditional journalists have been forced to adopt "new media" strategies (particularly blogging) in order to survive.

Understanding the Media Like Trinitarians

The Bible is a medium of communication between God and man. It is full of divinely inspired news. The Scriptures contain both the Good News of life in Christ and the breaking news of God's sovereign rule and judgment over everyday life. The range of biblical news stories is impressive: Of creation, fall, and redemption; of life, death, and resurrection; of self-sacrificial love and unspeakable evil; of faithfulness and betrayal; of passionate tenderness and demonic cruelty; of helpless babes and powerful empires; of simple joys and heartbreaking sorrows; of sufferings and everlasting glories.

The triune God, Father, Son, and Holy Spirit, gave us more stories filled with beautiful poetry and song and informative history and news than with systematically crafted doctrinal formularies and creeds. The Word gives us more reports of bloodshed and brutality than with sweet sentimentalism and cute woolly lambs. The triune God of Scripture never shies away from reporting public sins, exposing injustice, or guiding us into all truth in a compelling, captivating way.

If we are to understand our newspapers, televisions, magazines, and the web, then we need to see them through eyes of faith in the triune character of the Living Word.

Media and the Father

Whenever we read a newspaper, listen to the radio, or watch television, we should remember that God the Father, the first person of the Trinity, is sovereign, omniscient, and omnipresent. He rules over all things and has foreordained whatsoever comes to pass (Eph. 1:3–14). As Jesus taught us in His exemplary prayer (Matt. 6:5–15), God, our holy Father, possesses everlasting authority, power, and glory, and rules sovereignly over the earth from His heavenly throne, graciously providing for our daily needs and forgiving our daily sins—if we only ask.

No news story or media event, however shocking or troubling, should ever shake our confidence in our Father's sovereign rule over His creatures and human history. The Father has already written the story of redemption, and He has told us how it ends—with total victory and redemption in Christ—and nothing can change or undo His divine plan. Reading the news as if He doesn't rule is a wavering faith or unbelief. He is sovereign—end of story. Trusting in the Father's sovereign rule over history also means that there really are no "golden ages" that have gone missing between the Garden and the Last Day. That's especially true in media history. Ideologues of the left and right often hearken back to some imaginary period when journalism was supposedly more truthful, more accurate, more ethical, or more credible. But the media couldn't be naively trusted in the seventeenth century any more than they can be trusted in our own. Sin distorts all news and storytelling in a fallen world, and without spiritual discernment and independent confirmation of their truth claims from several trustworthy sources, daily news reports should always be received with a high degree of caution. Internet-based news and information are no more reliable, because the web is so easily manipulated by propagandists, false accusers, and old-fashioned gossips. Few experienced and knowledgeable editors ever screen the reports that find their way onto blogs and internet posts. Trusting in the sovereignty of God the Father also means we should never let the news drive our eschatology. Reading and interpreting the Bible through the lens of the daily news is end times madness and hermeneutical folly.

Media and the Son

God the Son, the second person of the Trinity, is truth incarnate. Modernists claim that truth is discovered through impersonal, objective ("scientific") study and research. Postmodernists, on the other hand, claim that truth is relative, subjective, and person-variable. But Jesus, the incarnate Son of God, said, "I am the way and the truth and the life" (John 14:6). From a biblical perspective, truth is always personal and incarnational. Truth is never just a set of "objective" propositions in the Modernist sense, or a "subjective," socially constructed reality in the Postmodernist sense. "Objective truth" doesn't exist in the Modernist sense because impersonal objectivity is a godless myth. And "subjective truth" ("What's true to me may not be true for you.") in a Postmodernist sense is equally misguided. Truth is personal and embodied in Jesus himself. That is why He, the Truth, is such a stumbling block in today's objective versus subjective media-truth debates.

The media have long struggled with the issue of truth because news reporting, as a formal vocation, emerged largely within the Modernist paradigm that had its beginnings as early as the seventeenth century. The Modernist assumption that guided Milton's view in his *Areopagitica* was that (propositional) truth, whenever confronted by falsehood or distortion, would always rise objectively, independently to the top and expose the fallacies of its rivals. Truth, Milton argued, always wins in a free and open encounter with falsehood. Adam would disagree. But Milton conceived of truth as an impersonal, autonomous force loose in the world. A free press was necessary,

he thought, so citizens could collect truth-fragments, sort them out, and act on them by (autonomous) Reason. The American founding fathers enshrined the free speech and free press of Milton's "marketplace of ideas" in the First Amendment to the U.S. Constitution. The media thus were immediately thrust into being the fourth branch of government (the so-called "Fourth Estate") and the principal purveyors of news and information deemed essential to our democratic system.

The great flaw behind this system, however, was that autonomous facts and unbiased reason don't exist in God's world. In fact, objectivism is a modern Christian heresy. Objectivism claims that brute, uninterpreted facts are discoverable independent of God. But scientists and reporters are not God, nor do they have a "neutral," objective "God's eye" view of creation, despite their claims to the contrary. As Cornelius Van Til has argued, "There are no brute facts." No matter how hard Modernists try, no matter how many third-person truth claims they utter, they contaminate everything they say and write by their experience, their research, their data, and their worldviews. They remain prisoners of their own bodies, brains, upbringing, language, assumptions, values, and sinful nature. To claim a superior, autonomous vantage point from which to declare "objective" judgments about the world around them is sheer hubris. As Jesus taught us, truth is not objective, it is personal. The truth cannot be reduced to mere propositions or scientific pronouncements because the person of Christ, the incarnate Truth, cannot be reduced to that.

The impossibility of objectivity in the media doesn't mean, however, that news and entertainment are therefore reduced to purely subjective experiences, mere personal opinions or taste preferences. Subjectivism, the evil twin of objectivism, is a postmodern heresy. Subjectivity rightly rejects the myth of objectivity, but replaces it with an equally bankrupt relativity. The high priests of multiculturalism cry out for "tolerance" because (they say with a straight face) "what's true for you may not be true for others." While uttered with all the earnestness of an absolutist, such self-contradiction is enough to drive one back to objectivism. But as Christians, it must drive us back to the person of Christ, who is the embodiment of truth. As finite creatures, we can know truth only

The new digital media have fundamentally disrupted the old media's ways of doing business. This device combines three of the old media in one cabinet: television, record player, and radio.

partially, through a dark glass. But we can know truly because we can, by faith and the guidance of the Holy Spirit, know the Truth incarnate.

The implications of this for today's journalism and the media are profound. Because of human sinfulness, even among the most careful and responsible Christian media professionals, the media will always be susceptible to distortion and inaccuracies. Media must be handled with wisdom and a wary eye, knowing the frailty of our frame. But the media can also be viewed with considerable confidence, because truth is knowable and it is not different for every person. By God's grace and our due diligence, we can know things truly and act wisely, if we trust in God the Son, the personal, incarnate Truth—and not in objectivism or subjectivism.

Media and the Spirit

Finally, we have no reason to despair when confronted with the enormous responsibility we have to discern between true and false, credible and untrustworthy news reports or media content that enter our lives daily. Handling that task in our own strength and wisdom is impossible. Which is why, in part, the Holy Spirit was sent at Pentecost. As Jesus promised, "When He, the Spirit of truth, comes, He will guide you into all the truth" (John 16:13). The Spirit does not make us omniscient, but He does guide us toward the truth, leading us toward spiritual discernment in all spheres and encouraging us to trust in Christ alone in every aspect of our daily lives. Jesus explained the role of the Spirit in this process in the Gospel of John:

> "The Helper, the Holy Spirit whom the Father will send in My name, He will teach you all things, and bring to your remembrance all that I said to you. Peace I leave with you; My peace I give to you; not as the world gives, do I give it to you. Let not your heart be troubled, nor let it be fearful."
>
> —John 14:26–27

Can the media deceive or corrupt us? Of course. The Spirit does not guarantee highways without potholes, skin without blemishes, or news without bias. But if we are faithful, then we can rest in peace knowing the Spirit will aid us in sorting out the wheat from the chaff in the media. We won't always get it right, because the sinful world is still a messy place, but the Spirit will ensure that we don't get the big picture wrong at the Last Day. And along the way, God the Spirit will also show us how to humbly discern the spirits and the media of our day.

The Spirit also doesn't guarantee that Christian media workers will always do their work consistently within a biblical framework, or that they'll automatically do a better job than non-Christians. But only Christians can account for the sinful world as it really is, can report true, accurate, fair, and trustworthy stories about our fallen world without skepticism or hypocrisy, and have a reason for doing so consistent with their worldview. Reporters who are not believers can report truth, but they only do this as they borrow from a Christian worldview. And from beginning to end, God the Spirit will be guiding us into all truth. The Holy Spirit guarantees it.

Trinitarian Confidence About the Media

Whenever we read the paper or watch television or surf the Internet—or if we decide to major in communication—we should have this Trinitarian confidence: God the Father is sovereign and holds the nations and all the media in his hand; God the Son is the personal, incarnate Truth and the standard by which all things including the news, information and entertainment are measured; and God the Spirit guides us daily through the bewildering maze of competing truth claims and media lies about the state of affairs in God's world. Our trust is in the triune God, maker and redeemer of heaven and earth. It is not in journalistic objectivity or cultural conservatism or liberal tolerance or amazing new media technologies or anything else under the sun. We should do our homework in discerning the spirits and media of the day. All we know and all that we are is all of grace. And because we know the living Word, the Good News, and our triune God knows the end of the story, we should never fear or be unsettled by the media, no matter how muddled or misleading it may be.

—*Roy Atwood*
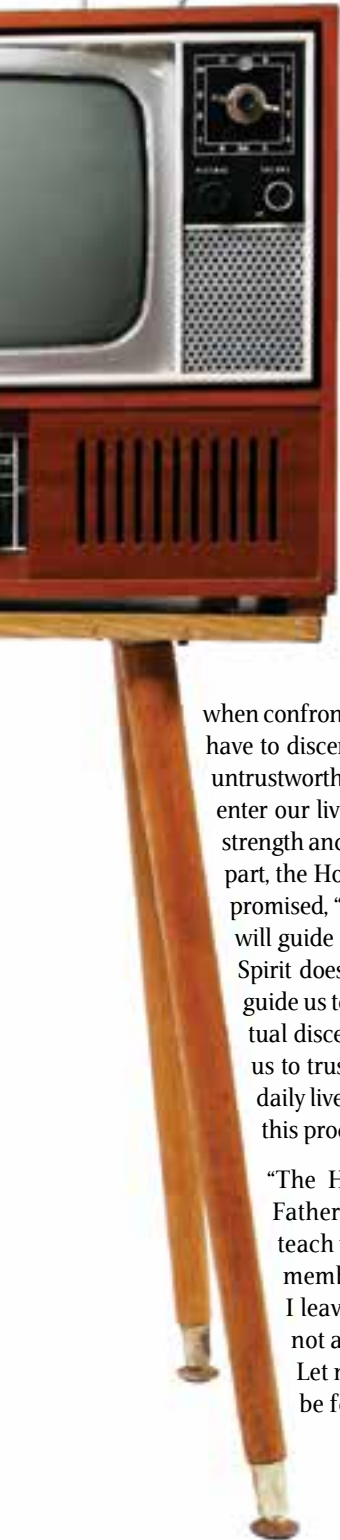
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ENDNOTES

1 Clayton M. Christensen defines "disruptive innovation" as technologies that "enable a larger population of less-skilled, less-wealthy people to do things in a more convenient, lower cost setting, which historically could only be done by specialists in less convenient settings. Disruption has been one of the fundamental causal mechanisms through which our lives have improved." See Christensen, *The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail.* Boston, Mass.: Harvard Business School Press, 1997.

2 C.A. Giffard, "Ancient Rome's daily gazette," Journalism History, (Winter 1975–76), pp. 106–109, 132, and H.L. Van Gessel, "Acta Urbis—Ancient Rome's Local Paper," *International Communication Gazette,* 16:29 (1970), pp. 88–104.

3 Roy A. Atwood and Arnold S. DeBeer, "The Roots of Academic News Research: Tobias Peucer's 'De relationibus novellis' (1690)," *Journalism Studies,* 2:4 (2001), pp. 485–496.

4 "Network Effects: How a new communications technology disrupted America's newspaper industry—in 1845," *The Economist,* 393:8662 (December 19, 2009–January 1, 2010), pp. 142–144.

5 James W. Carey, "A Cultural Approach to Communication," in *Communication as Culture* (Winchester, Mass.: Unwin Hyman, 1989), pp. 13–36.

6 Parts of this final section have been revised from an earlier article: Roy Atwood, "Reading the News like Trinitarians," *Christian Renewal* (May 2006).

M U S I C

Music is such an obvious element of life that we may take its existence for granted. It's not that we don't think about music; perhaps it's that we think about it too much—but in the wrong ways. We treat music as a commodity, a means of fitting in with peers, a vehicle for "worship," cultural enrichment, filler noise in the car, a way to pump up a pep rally or a workout or to set a mood. While all of these examples may have appropriate uses, the fact remains that we seldom think about music as music. Rarely do we consider music as a key that unlocks the mystery and order of the created universe or as a revelation of God's nature and character.

This idea of an interconnected and structured universe finds its root in the creative order of an Almighty God who made the heavens and the earth. For thousands of years, this was the dominant idea and foundation of intellectual and theological thought. Since God created an orderly world, mankind in his work and calling sought to bring order to his sphere of influence. This is the creation mandate of Genesis 1:28 in its fullest—taking dominion over the earth and bringing order. In the arts, that included taking dominion over color, language, movement, and, with regard to music, taking dominion over sound and time.

The Music of the Spheres was an idea

developed by Pythagoras, Plato, Augustine, Boethius, Ptolemy, Copernicus, Kepler and countless other philosophers and theologians. Simply put, the created cosmos sings. As Martin Luther put it, "You will find that from the beginning of the world (music) has been instilled and implanted in all creatures, individually and collectively. For nothing is without sound or harmony . . . music is a gift and largesse of God, not a human gift. Praise through word and music is a sermon in sound."[1]

This same idea is present in the Psalms in such passages as, "The pastures of the wilderness overflow, the hills gird themselves with joy, the meadows clothe themselves with flocks, the valleys deck themselves with grain,

they shout and sing together for joy" (Ps. 65:12–13). In Job 38:7, God speaks to Job and says, where were you "when the morning stars sang together and all the sons of God shouted for joy?" C.S. Lewis picked up on this idea in the scene of creation in *The Magician's Nephew* as Aslan sings the world into being. Likewise, J.R.R. Tolkien introduced this concept in his creation narrative from *The Silmarillion:*

> Then the voices of the Ainur, like unto harps and lutes, and pipes and trumpets, and viols and organs, and like unto countless choirs singing with words, began to fashion the theme of Ilúvatar to a great music; and a sound arose of endless interchanging melodies woven in harmony that passed beyond hearing into the depths and into the heights, and the places of the dwelling of Ilúvatar were filled to overflowing, and the music and the echo of the music went out into the void, and it was not void.

Pythagoras first recognized that the musical sounds that were most beautiful together were represented by the simplest numerical ratios. Mathematically and acoustically speaking, an octave results from a ratio of 2:1, the interval of the fifth from a ratio of 3:2, and the interval of the fourth from a ratio of 4:3. These ratios manifest themselves in the relationship of one note to another, thus establishing the structure and groups of notes (scales) from which to derive melodies and harmony. For example, pluck a violin string and listen to the note. Then press the string down in the exact center and pluck it again. The second note will be exactly an octave higher because the string is half its original length, or rather, in a ratio of 2:1. The relationships of sounds are represented in the different tones (and the ratios they represent) between large and small bells, different size pipes on an organ, the length of tubes on a windchime. In fact, comparing the differing lengths of pipe of a windchime will reveal the pitch relationship between the notes that the chimes produce.

These intervals and relationships of the octave, fifth, and fourth are the foundation and building blocks of all of Western Tonal music; furthermore, these intervals consist of the mathematically significant monad, dyad, triad, and tetrad. These same numbers and ratios

The ancient idea of the Music of the Spheres resurfaced in pop culture in 2008 on the British science fiction television series *Doctor Who* when the main character premiers a symphony, "Ode to the Universe," based on an aural interpretation of gravity in the universe. The spheres can be seen in this representation of Ptolemy's cosmos.

are operative in the form and structure of art and architecture. Concerning this concept, Joseph Ratzinger, now Pope Benedict XVI, wrote, "For the Pythagoreans, this mathematical order of the universe ('cosmos' means 'order'!) was identical with the essence of beauty itself. Beauty comes from meaningful inner order. And for them this beauty was not only optical but also musical. … The beauty of music depends on its conformity to the rhythmic and harmonic laws of the universe. The more that human music adapts itself to the musical laws of the universe, the more beautiful it will be."[2]

Henry Chadwick summarizes Boethius's thoughts on music as part of the Quadrivium in the seven liberal arts by saying:

"Arithmetic directs the mind towards immutable truths unaffected by the contingencies of time and space. But music advances even further towards that 'summit of perfection' for which the *quadrivium* is a prerequisite. The theory of music is a penetration of the very heart of Providence's ordering of things. It is not a matter of cheerful entertainment or superficial consolation for sad moods, but a central clue to the interpretation of the hidden harmony of God and nature in which the only discordant element is evil in the heart of man."[3]

For centuries, the focus of astronomy remained the discovery of these simple ratios in the movement and relationships of the heavenly bodies. And the intent of musicians consisted in writing and playing music in such manner as to unlock and reflect the order of the cosmos.

As the apocryphal, but helpful, Wisdom of Solomon asserts, "Thou hast ordered all things in measure and number and weight." Therefore, the study of harmony sought to comprehend and reveal this created order as a reflection of the Creator. Music was serious business.

Consequently, philosophers such as Plato and Aristotle wrote about the moral component of music and harmony. As a reflection of various aspects of the created order, different types of music were thought to elicit corresponding responses in the listeners. Some music was fit to develop warriors and encourage cultural stability while other types of music caused effeminacy or laziness. While this idea seems to give music too much power and credence, ironically we often use music in just this way—instilling patriotism to the sound of a march, manipulating sports crowds, lulling a baby to sleep, creating an emotional response in worship.

In Scripture, the verb "to sing" occurs almost 350 times. Mere words are not enough when man encounters the goodness and beauty of Almighty God. From the singing on the shore of the Red Sea declaring God's deliverance from the hand of Pharaoh, to the recapitulation of the Song of Moses in Revelation, God's people throughout and beyond time sing, "Great and amazing are your deeds,/ O Lord God the Almighty! / Just and true are your ways, / O King of the nations!" (Rev. 15:3 ESV). The Bible also includes work songs, love songs, songs of mourning and lamentation, songs of praise, music for processions, coronations, and rallying troops—in essence, all of the same types of uses

In his *Institutes of the Christian Religion,* John Calvin shows great respect for Pope Gregory the Great, "whom you may with justice call the last Bishop of Rome" (*Institutes,* IV.17.49).

of music that we employ today.

The singing of Psalms, hymns, and spiritual songs constituted a regular element of the early church. Much of this singing derived from the music practices of the synagogues that was itself derived from the worship of King David and the music of Solomon's Temple. Thus chanting—the singing of prose, as opposed to metrical poetry—was a regular vehicle for music in the life of the church.

Chanting encourages clarity of enunciation, projection of the voice, and emphasis on important texts through varied pitch or extended syllables. Multiple types of chant developed in various regions and ecclesiastical traditions such as Byzantine, Ambrosian, Sarum, Gallican, Celtic, and Visogothic. Ambrose of Milan (c. 340–397) utilized the singing of Psalms and wrote various hymns to teach his congregation theological truths against the heresies of his day. It is this singing that Augustine refers to in his *Confessions* as music that moved his heart and emotions.

Pope Gregory the Great (c. 540–604) is credited with regularizing the various chants in his day, organizing the liturgy of the church, and creating the *Schola Cantorum* to train and equip singers who came to Rome from all over Europe. His work remained normative in the church for the next 1,000 years.

The thousands of chants that are extant have specific liturgical uses—especially within the context of the worship service. The parts of the mass such as the *Kyrie, Gloria, Credo, Sanctus,* and *Agnus Dei* are all texts from Scripture or derived from Scripture. In addition, the other parts of the service which change according to the time of year,

are mostly Psalm settings such as the *Introitus, Gradualis, Tractus,* and *Offertorium.* While seemingly from the distant past, these musical works formed a core of biblical texts sung weekly and even daily. The Benedictine Order sang through the entire Psalter every week. Not just Catholics but also some Protestants—especially Lutherans—would continue to chant the liturgy.

It was not until around the year 1025 that a monk in Arrezo named Guido developed a systematic method of writing the pitches of notes and their relations. This system enabled music to be more easily transmitted and was based on the mnemonic device of the syllables *Ut, Re, Mi, Fa, Sol, La.* Before Guido d'Arrezo's innovation, music was conveyed orally with a system of arrows and devices to remind the singer of the already-learned melody. The ability to write notes and share them across the miles enabled music to spread much more quickly. However, it would take another two hundred years before a system of notating rhythm was developed. Music up to this point was dependent on lyrics to maintain the rhythmic foundation of any vocal or instrumental ensemble.

French composer and church musician, Leonin (c. 1135–1201) and his student Perotin (1180–c.1238) successfully notated the singing of two or more musical lines at the same time, creating the beginnings of written harmony. This was known as the Notre Dame School. This new art of writing for parts quickly led to the *Ars Nova* movement with such composers as Guillaume de Machaut (c. 1300–1377) and Guillaume Dufay (c. 1400–1474) adding increasingly sophisticated musical lines exploring new realms of sonic color. Machaut and Dufay also presented music for church services that were related and unified musically.

The Renaissance in the North encouraged the development of Netherlands composers Johannes Ockeghem (c. 1420–1497), with church music embodying vastness and mystery, and Jacob Obrecht (c. 1452–1505), who explored and created new musical techniques.

Josquin des Prez (c. 1440–1521) is commonly recognized as one of the greatest composers who ever lived. Known as the "Father of Musicians," Josquin was described by Martin Luther as "the master of the notes. They must do as he wills; as for the other composers, they have to do as the notes will." He wrote numerous compositions that were published, and he thus exercised great influence over European music as other composers studied his work. He took great care in writing music that accurately reflected the text of the lyrics.

German Reformation composers included such musicians as Johann Walter (1496–1570), Hans Leo Hassler (1564–1612), Michael Praetorius (c. 1571–1621), and Johann Hermann Schein (1586–1630). Reformation

"Master of the notes." Josquin des Prez was influential among composers and was careful to write music that accurately reflected the lyrics.

composers outside of Germany included Loys Bourgeois (c. 1510–1561), Claude Goudimel (c. 1505–1572), and J.P. Sweelinck (1562–1621). These various composers wrote masses, chorales, Psalm settings, and organ and choir music.

Composers of the Counter Reformation wrote soaring works of complex counterpoint for multiple choirs as well as simple, straightforward music for services. Giovanni Pierluigi da Palestrina (1525/26–1594) and Orlando di Lasso (1532–1594) represent a continental view of music with some of the most glorious polyphonic (multi-voice) music ever written. Thomas Tallis (c. 1505–1585) and his student William Byrd (1543–1623) were English composers of the same period crafting music that is still used and accessible to this day.

One of the most important German composers of the Baroque period was Heinrich Schütz (1585–1672). Schütz successfully transformed the musical and liturgical ideas of Martin Luther into a workable form that then became the basis on which Johann Sebastian Bach later developed his own contributions to the Lutheran liturgy.

The Baroque Period (1600–1750) covers a shift to more instrumental music as well as music that employs rhetorical and dramatic devices. This is the time of the rise of opera, church cantatas, and oratorios—drama set to music with characters singing various roles. Significant composers in this period include Claudio Monteverdi (1567–1643), Dieterich Buxtehude (1637–1707), Archangelo Corelli (1653–1713), Henry Purcell (1659–1695), Antonio Vivaldi (1678–1767), Georg Frideric Handel (1685–1759), and the incomparable J.S. Bach (1685–1750).

The Classical Period (1730–1820) saw greater movement away from the church and thus the incorporating of Enlightenment ideals in music. The development of forms, structures, and simpler harmonic palates are prevalent during this period. Composers include Franz Joseph Haydn (1732–1809), Johannes Chrysostomus Wolfgangus Theophilus Mozart (1756–1791), and Ludwig van Beethoven (1770–1827).

The Romantic Period (1815–1910) stressed individual emotion over form. Thus composers and performers concentrated on personal self-expression that could be indulgent at times and overwrought. These composers include composers such as Beethoven, Franz Schubert (1797–1828), Robert Schumann (1810–1856), and Peter Tchaikovsky (1840–1893). The Romantic period

Contemporary Estonian composer Arvo Pärt once mused about tintinnabulation, the musical style he developed, "The complex and many-faceted only confuses me, and I must search for unity. What is it, this one thing, and how do I find my way to it? Traces of this perfect thing appear in many guises—and everything that is unimportant falls away. Tintinnabulation is like this. . . . The three notes of a triad are like bells. And that is why I call it tintinnabulation."
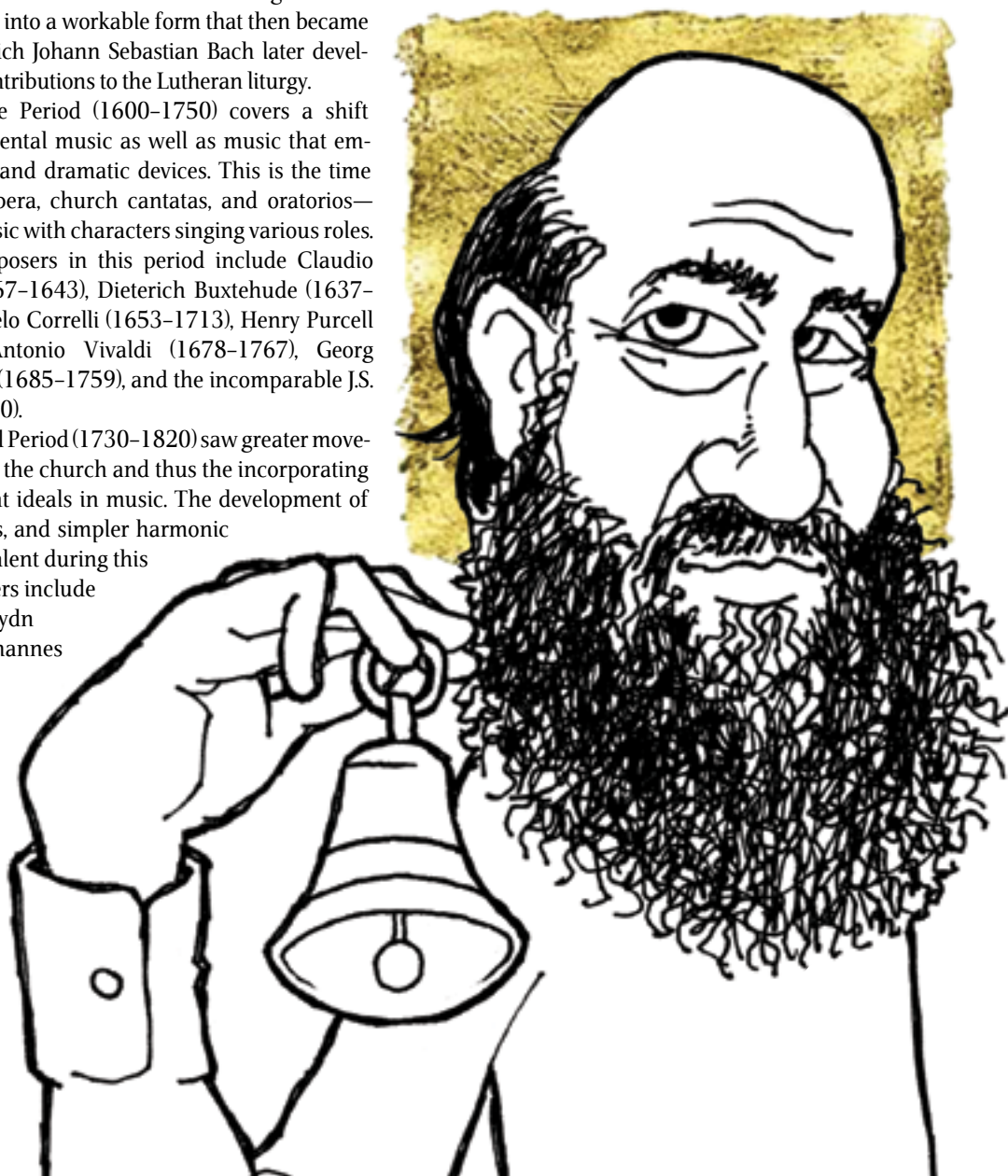
eventually collapsed under the harmonic and performance excesses of Richard Wagner (1813–1883) and Gustav Mahler (1860–1911). Two exceptions in this period include Felix Mendelssohn (1809–1847) and Johannes Brahms (1833–1897), who balanced emotion and intellect in music that relies on form and expression based on the foundation of Bach.

The twentieth century witnessed neo-classical and neo-romantic revivals, nationalist music, as well as the exploration of music that undermines the very fabric of what music actually is. These composers include Igor Stravinsky (1882–1971), Richard Strauss (1864–1949), Ralph Vaughan Williams (1872–1958), Aaron Copland (1900–1990), Arnold Schoenberg (1874–1951), and John Cage (1912–1992).

Recent artists exploring their Christian faith through their compositions include Henryk Gorecki (b. 1933), Arvo Pärt (b. 1935), John Tavener (b. 1944), and James MacMillan (b. 1959).

As with most disciplines, music includes not only history and appreciation as discussed above, but also grammar and theory, and practice. For instance, language arts consist of learning letters and words, reading and grammar, history and literature, and writing and speaking. The musical arts include learning notes and relations, reading and singing/playing, and history and musical literature. In addition, the preceding timeline essentially followed the line of development of art music. Other variations could have included veering off during the Baroque period and charting the parallel creation and advancement of church hymnody and Psalm-singing or the creation of popular music forms starting in the nineteenth century. Some of these ideas will be discussed in subsequent sections.

In order to understand music as a key that unlocks the mystery and order of the created universe and as a revelation of God's nature and character, we must begin to look at music differently. To begin that process, we need to move beyond our own time and cultural prejudices, put music in a larger historic, philosophical, theological, and aesthetic context, and actively participate in music from the inside out. Knowledge must match our emotional engagement. As Stratford Caldecott succinctly summarizes these issues in *Beauty for Truth's Sake*, "In modern times we have neglected the poetic or musical dimension that was presupposed in the Liberal Arts as originally practiced, and infused into the Middle Ages by the Benedictines—the need to educate *the heart and the imagination,* not just to feel but to know."[4]

Critical Issues

We are so often surrounded by music that it becomes very easy to *hear* music without actually *listening.* From the mall to the grocery store, the gas station to the sports arena, at receptions or in our cars, music has become an ubiquitous aural wallpaper. With the advent of the Walkman, now perfected in the iPod and other mp3 players, individuals can take their music with them wherever they go—music of their own choice, music just for them.

This reality is so pervasive that it becomes difficult to envision how it could be any other way. Or even more importantly, *why* it should be any other way. The fact is, our view of music—its purpose and practice—would be unrecognizable to the intent and purpose of music as articulated in the ancient world, early church, and throughout the medieval period until the time of Bach.

Music has become an individual listening choice instead of a communal event. As such, it is far more likely for people to listen to music instead of participating in making music. Sadly, this also happens in some churches where the congregation is *worshiped at* by a group of performers instead of being led in worship together.

Many of these changes took place in the period of history known as the Enlightenment. The mystery of the universe was replaced by an autonomous rationalism that had little place for religion or God's created order. Look at the following quotes as an indication of this shift:

> Music is "a gift of God, to be used only in His honor."
> —*Andreas Werckmeister, German Baroque Organist, 1691*

> "Music is an innocent luxury, unnecessary, indeed, to our existence, but a great improvement and gratification of the sense of hearing."
> —*Charles Burney, Music Historian, 1776*

This contrast is at the heart of the change that the Enlightenment wrought in all of life and evidenced in the area of music. As society sought to throw off authority in favor of the individual, seek after naturalism instead of what was perceived to be formality, and embrace secularism, composers desired to do the same. The result included the untethering of music from the ideal cosmic order and seeking after the "natural" and pleasing sounds that audiences demanded.

Ironically, it is this music born from the Enlightenment that most people today consider to be "classical music," and the works composed during this time are the most frequently played in concerts. Thus, this music is known as the *common practice period* in European art music.

The common practice period of music consists of a

cherry picked list of music from around 1700-1910—a mere 10% of the time period since the birth of Christ. This music has several common attributes or trends: instrumental bias (instead of vocal), secular concert aesthetics (rather than liturgical music), and emphasis on a melody line supported by harmonic accompaniment. These are all developments of the Enlightenment mindset that changed the very basis, purpose, practice, and foundation of art music.

In the earlier centuries, the differences between folk, liturgical, and art music were marginal and had more to do with *intent* and *purpose* rather than *style* or *quality.* This factor also changed during the common practice period in which the various strains of musical development greatly diverged into separate streams. One stream that developed was the area of pop music that did not even exist until the later part of the nineteenth century. It took an emerging mass media and a consumerist mindset to create what was to become pop music.

With the advent of popular music, a new business mentality entered into the realm of music—recording, selling, distributing, marketing, selling print music, downloads, celebrity, trendsetting. In 1957, Richard Hamilton, the English visual pop artist, created a list defining the characteristics of Pop art: "Popular (designed for a mass audience); Transient (short-term solution); Expendable (easily forgotten); Low Cost; Mass Produced; Young (aimed at youth); Witty; Sexy; Gimmicky; Glamorous; Big Business." Think about the songs that appear on the radio, that everyone downloads and is talking about, that win Grammys but then no one remembers in six months.

Music has become ubiquitous, like aural wallpaper. One technology that furthered this trend, patented in 1917 and most widely popular in the 1940s through the 1960s, was the juke box. Today, portable music players like the iPod have tended to make listening to music more individualized but no less pervasive.

The business of music is to create an appetite for what is perpetually new. This is obviously far removed from the intent and purpose of the ancients and medievals with their concern for reflecting the created cosmic order.

This list of pop attributes also raises several interesting questions regarding the suitability of such music for conveying eternal, substantial, and permanent truth by means of a vehicle designed to be transient and expendable. This question is even more salient concerning music for corporate worship.

Part of this difficulty comes in the shift from understanding music as music and the tendency to treat music as just a vehicle for text. Even when Christians seek to evaluate music they more often critique the form and content of the lyrics and not the form and content of the music nor how the lyrics and music fit together. Even the idea that music has content that can be evaluated and judged seems foreign. This lack of clarity leads to music that may be truthful lyrically but that has no sense of beauty, goodness, or truth in its very arrangement of notes. This is one of the tragedies of modern worship music.

Another difficulty that arose in all the spheres of music is the attraction of music that elicits purely emotional responses or primal physicality. This is music in its basest form that provides easy, quick, but cheap satisfaction. There are some genres of pop music whose sole purpose is to feed anger or indulge teenage angst or sentimentality. Submitting oneself to this type of manipulation is not healthy—physically, emotionally, or spiritually.

The best music is that which engages both the intellect and the emotions, but if someone is unable to appreciate or understand the inner workings of music, the emotional response takes over. This error is just as prevalent in thinking that Tchaikovsky was one of the greatest composers as it is in letting the rhythm and melodic hook of a pop song seduce $0.99 out of your pocket. People without a true musical understanding tend to gravitate towards music that affects them only emotionally.

The lack of music education (also a casualty of the Enlightenment) leaves people ill equipped to exercise discernment in the area of music. There are musicians who make their living writing and playing in the music industry who cannot even read music. Because God created us with a natural desire for music, people have an appetite for music, but they so often listen without understanding. Thus, they are drawn towards what they subjectively like. Or in the case of music appreciation, they listen to music that other people say is good—the common practice period. This fulfills the secular humanist agenda of treating music as extracurricular or enrichment.

Seeking self-satisfaction in any area of life is always the basis of heresy. When music listening succumbs to solely satisfying personal desires and that becomes the norm, the quality and selection of music will necessarily be limited, stilted, and slanted. A subjective view of music and its purposes strays ever farther from the created intent, depths, and profundity of this glorious gift from God.

As a shepherd and as king, David redeemed the time he was given, composing a large portion of the Psalms.

Christian Response

Immanuel Kant viewed music as an inferior pastime—an enjoyment rather than an art. Hegel wrote that music has little to do with the intellect, which is why musical talent "declares itself as a rule in very early youth when the head is still empty." How do we restore music to its proper context and approach it from a biblical perspective?

The first step lies in the recovery of music as a representation of God's created order reflected in the cosmos with objective criteria of beauty and with moral ramifications. This restoration of the purpose and aspect of music transcends any discussion of style or genre and begins the process of thinking differently, that

is biblically, about what music is and what it does.

Strictly speaking, music is *sound organized in time*. This definition implies several important distinctions:

- music is an activity of sub-creation that requires intent;

- music is not random or chaotic;

- the organization of music complies with inherent principles of created order;

- music structures time;

- music develops over time with a beginning and an end;

- music moves through time to a place of completion;

- music constantly refers to itself in the past, present, and future

- music, therefore, is a way of *adorning* time.

Exploring, cultivating, and adhering to the principles of created order echoes the beauty and majesty of God's creation. As the crown of creation, we resonate with those things that most clearly reflect God's beauty and order. C.S. Lewis makes use of this concept in one of the final scenes in his space trilogy. In *That Hideous Strength* one of the characters is being inducted to the inner circle of chaos by being subjected to a room in which decorations and structures are not quite right—not square, not symmetrical, not ordered. However, even though he has rejected those things that are beautiful, good, and true, he cannot help himself from trying to organize and apply order to the chaos surrounding him in this room. It is this sense that chaos must submit to order and that order is infinitely preferable which stabilizes his mind and convinces him of gospel truth.

Part of our difficulties as children of the Enlightenment is that we are unable to recognize what constitutes appropriate order in music let alone how that reflects the created cosmos.

One step towards gaining this understanding will be aided by the restoration of music as a co-equal among the other disciplines of education, as it is in the classical liberal arts. The connecting points between music and mathematics, geometry, astronomy, rhetoric, acoustics, engineering, aesthetics, philosophy, theology, liturgics, history, physics, metallurgy, cosmology, symbolism, wood-working, moral philosophy, biblical studies, and others argues easily for a full integration of music in any curriculum. In addition, the application of the quadrivium gives the concept of mandatory study of music and harmonics an impressive pedigree which stretches back thousands of years.

Music Education

The object of music education should be manifold. Much as C.S. Lewis insisted that we should read books from outside of our time period, we too should listen to music outside of our own era. In this case, that injunction applies to both current popular music as well as art music beyond the common practice period. Not only does this notion challenge presuppositions about what music is and its purpose, it also establishes a better understanding of our own place in the history of music. God has worked throughout time; to be ignorant of where ideas, movements, and practices come from and where they are going is to ignore the great cloud of witnesses that He has provided for our edification and sanctification.

Lack of musical history means a lack of a foundation for understanding and judging music and discerning what is truly worthwhile and excellent. Essential in this endeavor is the ability to read music. During the time of the Reformation, the church actively encouraged the people to learn to read in order that they might read the Scriptures for themselves. Likewise, the church also pursued musical literacy so that the people of God would be able to worship and sing with knowledge and skill. Without some sort of practical background in reading music and understanding its most basic elements, truly appreciating music as music will always be a bit of a mystery. This is because what understanding does exist will more likely be due to associations and emotional connections and not due to what is admirable about the music itself.

In addition, part of understanding music is to recognize its purpose and intent. The aesthetic components of music for worship are necessarily different than the aesthetics of music (and performance) for a concert hall, coffee house, arena, or recital. That is to say, the purpose of the music is not the same and that should be reflected not only in the inherent qualities of the music but also in how it is conveyed and presented. How a piano player leads a congregation in corporate worship is unlike how
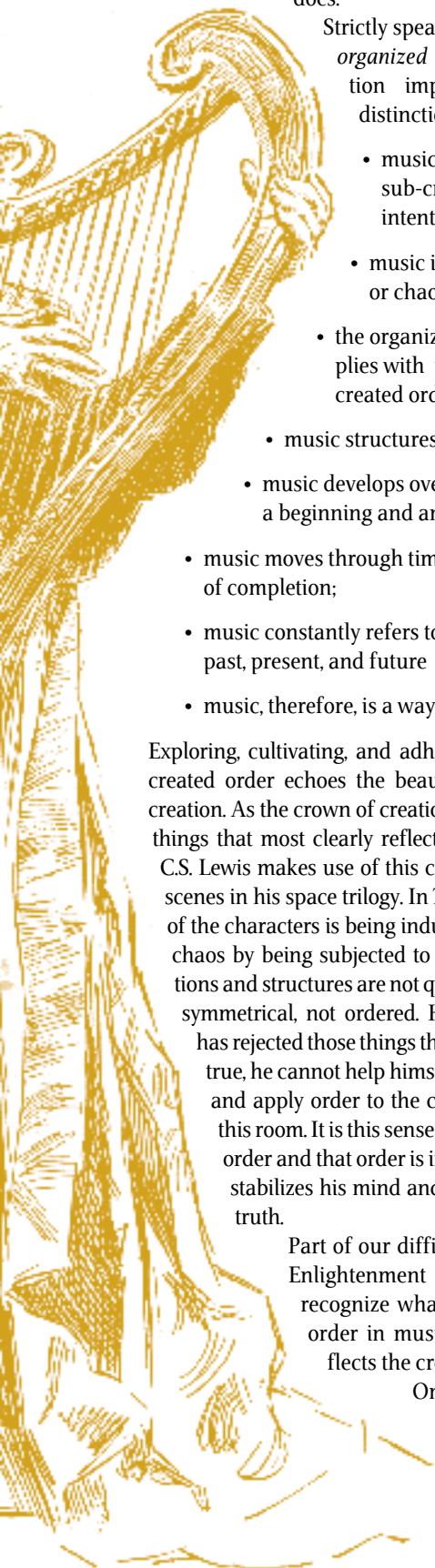
the same player should present a piano recital or accompany a vocalist, or play in a band. This is true of an organist, choir, guitarist, percussionist, trumpeter, etc.

This lack of clarity between different aesthetic purposes causes a great deal of confusion. For example, some people have a problem with drums in worship and others openly accept their use, but both sides generally hold their positions for the wrong reason. The problem that many have with drums in worship should not be the fact of having percussion as a part of worship (see Psalm 150). The problem should be the way in which percussion (or a guitar or piano) is most often played in worship is analogous to modern pop sensibilities instead of the particular needs of corporate worship. The two purposes are diverse, but if we lack the discernment to know the difference, we risk unintended results in the life of the church.

One way that the church has failed to lead in recent centuries is in the area of providing venues and opportunities for a variety of music within the life of the congregation. The church should encourage the development and participation of congregants in various musical endeavors while knowing the proper sphere and place for those concerts, coffee houses, and campfire tunes. Because we lack those kinds of opportunities for shared musical life, churches and congregations are far too accepting of music in corporate worship that violates a worship aesthetic. Because we don't have campfires and coffee houses, we bring campfire and coffee house music into Lord's Day worship. This is true of not only some contemporary music or settings of hymn texts but also some "classical" music that should be left in the concert hall.

Listening to Music

We have established the need to listen to music beyond our own time, but how should listening occur? Listening should be active, intentional, shared, and temperate.

Firstly, music listening should have active elements and not always be a passive activity. Active listening takes concentration and attention, but it is that consideration that opens the intent and significance of a work of music. When possible, look at the printed music as well as listening to it. See what the composer or songwriter has in mind, how they relate musical ideas over time, how melodic elements are developed. There is a place for background listening, but it should be after one has mentally engaged with a work first; otherwise, passive listening to unknown music opens your subconscious and emotions while bypassing your mind.

Secondly, listening should be intentional with regard to what, when, where, how, and why. What music comprises the list for listening, and why is it chosen? What are the physical conditions of where listening occurs? Is it a place where concentration is possible and distractions are kept to a minimum? Can you listen to the entirety of the work uninterrupted? Is there time for preparation and reflection before listening?

Thirdly, while listening can be an individual activity, it is also profitable to share it with others so that you can talk about what you heard. Likewise, different areas of expertise can be shared for the mutual benefit of all.

Fourthly, listening to music should be a temperate activity. In other words, *practice quiet*. In this noise-filled sensory-overload world in which we live, a true cessation of noise is extremely rare. Seek this out. Listening to quiet is just as important to understanding music as listening to notes.

Try fasting from music in your car or when you study. Even though most of the noise is subconsciously heard, the brain still processes what the ears absorb. For instance, one of the best ways to reduce the fatigue associated with airplane travel is to wear noise reduction headphones or earplugs. The actual noise of the jet engines causes mental and physical weariness. The whirr of the refrigerator, computers, fluorescent lights (pitched at B-flat), heat and air, washing machines, dishwashers, clocks and fans provide additional background noise for the radio, TV, and video games and other layered noise.

Constant sound wears us out, but because it is so prevalent, some folks are actually afraid of quiet and seek it as a distraction. They are afraid of their thoughts and dealing with substantive issues, afraid of dealing with sin, fearful of losing the distracting covering of noise. Seek out and find rest and solace in quiet. "But I have calmed and quieted my soul" (Ps. 131:2 ESV).

Participation in Music

Music orders the mind and its thoughts in a unique way, and this is especially true when one is participating in making music—seeing and hearing it from the inside out. There is no substitute for this experience. Music helps participants to grasp spatial relations, to improve reading and cognitive functions including increased vocabulary, to improve skills in math.

And it is fun.

Encourage one another to pursue studying instruments or voice. Organize opportunities to play together just for fun. The benefits of exercise are not dependent upon playing competitively; the benefits of playing music are not dependent on performance.

In addition, learn how to read the language of music. Not only does that serve a practical function in regard to

playing and singing, it also elevates the ability of God's people to sing in corporate worship—to sing and play skillfully (Ps. 33).

Conclusion

Order is inherent in music; by necessity music could not exist without it. Because music works best when it adheres to God's created order of number, ratio, and *harmonia,* the study of music reveals these aspects of creation and charts the path of what constitutes true beauty. In addition, since God's people are called to sing His praises, the study of music enables this praise to be done skillfully and with discernment. The church is in need of musical theologians and theological musicians for the glory and honor of Christ and His Kingdom. Music is a nexus point between mathematics, number, ratios, architecture, cosmology, physics, etc. The same underlying fundamental ideas that make music beautiful also make archways majestic, triangles balanced, and airplanes fly. The continued study of music, whether for professional reasons or personal development, offers a unique incarnational application of a variety of disciplines in a manner that engages the brain like no other. The church desperately needs bright young men and women like you to pour themselves into the study of music both as children and as young adults in college and graduate school. Your efforts and the music that you play or compose could be the catalyst for a needed deepening of the worship of God's people in our day.

Music surrounds us and is an interwoven and necessary part of our lives. And for this reason, we should be consciously aware of it and intentional with regard to how we receive and use it. We ought not to check beauty, truth, and goodness at the door when we flip on an iPod—consciously or unconsciously. Because music is such an effective and powerful tool, Christians need to exercise care and discernment in what, how, and when they listen to music.

However, most Christians are ill equipped to do so because of lack of knowledge and because we allow our subjective natures full reign in our listening choices. Just as we train our hearts in righteousness to understand God's truth, it is equally necessary to train our minds in aesthetic principles and biblical standards. With regard to music that includes knowing the difference between ecclesiastical and concert aesthetics, understanding

*Sing to the Lord with the harp,
With the harp and the sound of a psalm,
With trumpets and the sound of a horn;
Shout joyfully before the Lord, the King. —*
Psalm 98:5, 6

music as music and not just as a vehicle for text, learning to read and participate in music making, and directed active listening of music outside of our time period.

The best music withstands scrutiny and study because successive opportunities to listen to it reveal greater layers and depths of understanding. As American composer Aaron Copland wrote, "Music which always says the same thing to you will necessarily soon become dull music, but music whose meaning is slightly different with each hearing has a greater chance of remaining alive.... And if it is a great work of art, don't expect it to mean exactly the same thing to you each time you return to it."[5]

Music as a reflection of the created cosmos seems like such a foreign and quaint idea. But listen to how Shakespeare explores this idea in *The Merchant of Venice:*

How sweet the moonlight sleeps upon this bank!
Here will we sit, and let the sounds of music
Creep in our ears. Soft stillness and the night
Become the touches of sweet harmony …
Look, how the floor of Heaven
Is thick inlaid with patines of bright gold;
There's not the smallest orb which thou behold'st
But in his motion like an angel sings …
Such harmony is in immortal souls;
But, whilst this muddy vesture of decay
Doth grossly close it in, we cannot hear it.
The man that hath no music in himself,
Nor is not moved with concord of sweet sounds
Is fit for treasons, strategems, and spoils.
The motion of his spirit are dull as night
And his affections dark as Erebus.
Let no such man be trusted. Mark the music.

Jeremy Begbie puts it well when he writes, "For all that we might smile benignly at in the mathematical clumsiness and rhetorical hyperbole of the classical philosopher of music or in the intellectual abstractions and tetchy fussiness of the medieval theorist, is there not something in the notion of being 'cradled' in God's created *harmonia* that is worth recovering?"[6]

The conscious sense of God's created *harmonia* is indeed worth recovering, and to do so requires study, active listening, and submission to music that is *good* for us—not just what we *like*. When we do so, we will discover that amusement will be replaced by beauty, truth, and goodness, and a whole new vista and understanding will open before us to explore the wisdom of God's creation. As James Gaines writes, "A world without a sense of the transcendent and mysterious, a universe ultimately discoverable by reason alone, can only be a barren place; and … the music sounding forth from such a world might be very pretty, but it can never be beautiful."[7]

—*Gregory Wilbur*

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ENDNOTES

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2   Joseph Cardinal Ratzinger, *The Spirit of the Liturgy* (San Francisco: Ignatius Press, 2000), 152–153.
3   Henry Chadwick, *Boethius. The Consolations of Music, Logic, Theology, and Philosophy* (Oxford: Clarendon Press, 1981), 101.
4   Stratford Caldecott, *Beauty for Truth's Sake* (Grand Rapids: Brazos Press, 2009), 43.
5   Aaron Copland, *What to Listen For in Music* (Mentor: New York, 1988), 51.
6   Jeremy S. Begbie, *Resounding Truth: Christian Wisdom in the World of Music* (Grand Rapids: Baker Academic, 2007), 95.
7   Gaines, 12.

Natural Sciences

When laypeople define science they often think of it in ways that are highly distorted, stereotyped, or cloaked in mystery. These impressions of science bear little resemblance to the actual discipline. Hollywood portrayals have sometimes tried to change that image by having cool, sexy, heroic people "doing science" in an action-packed drama where their quick, brilliant, scientific minds and muscular athletic skills save the world (or a large subset of it) from certain doom. It may be good PR, but it doesn't inform the watching public about what science is, any more than Dr. Honeydew did on the Muppet Show. What is science, you ask? It's what scientists do. So what's a scientist?
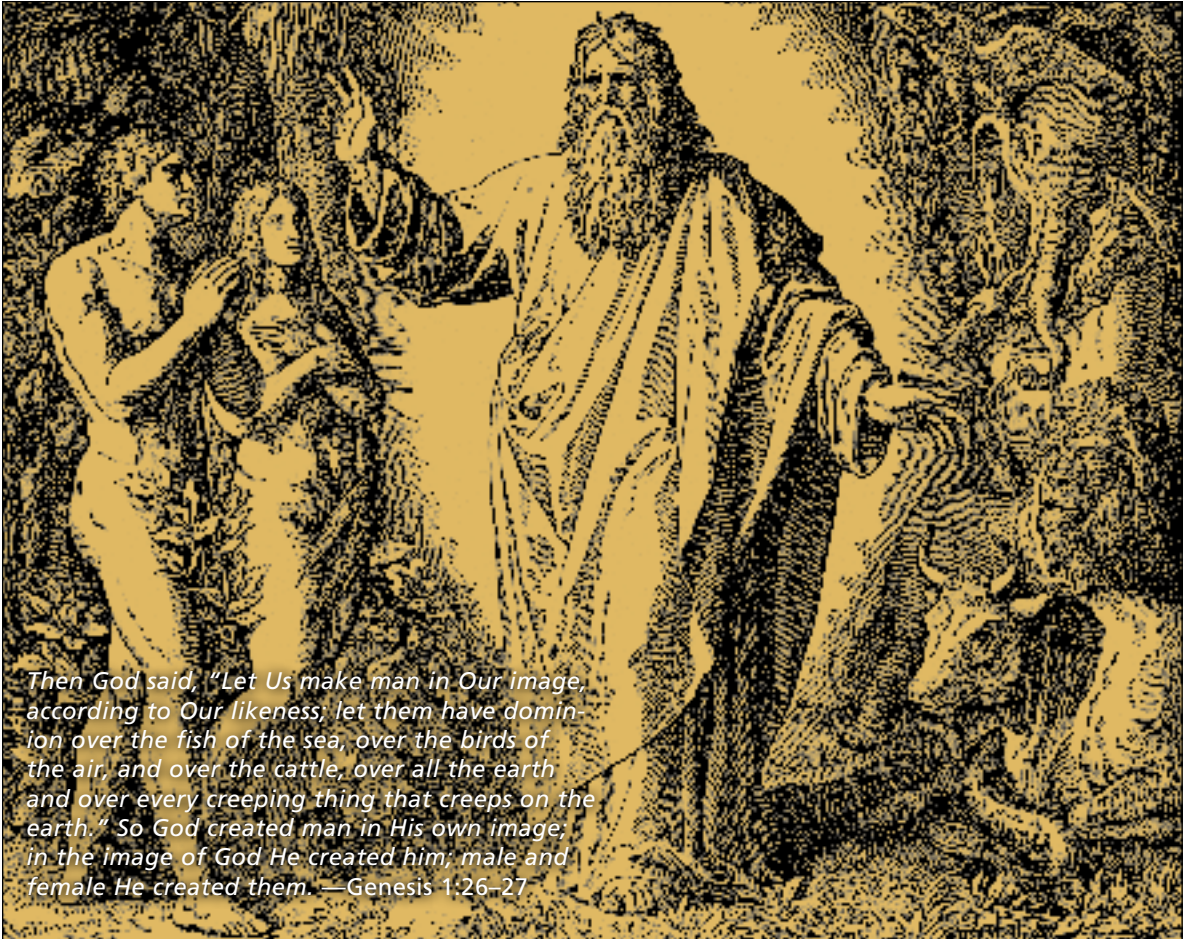
Contrary to Hollywood's portrayal, are they insipid, pale-faced people with nerdy white lab coats? Do their personalities match their appearance? Do they have big, boring, objective minds that can't relate to normal people and know way too much about things of which normal people know nothing? If you answered yes to all the above, we've got work to do.

Then God said, "Let Us make man in Our image, according to Our likeness; let them have dominion over the fish of the sea, over the birds of the air, and over the cattle, over all the earth and over every creeping thing that creeps on the earth." So God created man in His own image; in the image of God He created him; male and female He created them. —Genesis 1:26–27

Seriously, what is science? There are a number of good definitions taken from Merriam-Webster Online:

   1) the state of knowing: knowledge as distinguished from ignorance or misunderstanding.

Using this broad definition, any topic one can know stuff about can be considered a science. Another definition is:

   2) a department of systematized knowledge as an object of study (the *science* of theology); something (as a sport or technique) that may be studied or learned like systematized knowledge.

As in, "Aunt Betty has cross-stitch down to a science. We usually use this definition when talking about someone who could teach a class on it, be it cross-stitch or skateboarding. But when we are talking about science "proper," the following definition captures it:

   3) knowledge or a system of knowledge covering general truths or the operation of general laws especially as *obtained and tested through scientific method* (emphasis mine); such knowledge or

such a system of knowledge concerned with the physical world and its phenomena.

In other words, science is not just what is known about the physical world; it is *a method or a process* by which people discover knowledge of the natural world.

Of course, to get a better understanding of science, one must learn the scientific method. But before I discuss the problems that have arisen between "science" and the Christian faith (and the solutions), I want to give an overview of how science (as we know it) came to be. It is very important to note that *science* didn't come to us modern folk in the form of a textbook dropped from heaven. There was a lot of trial and error. There has been much philosophy and history (good and bad) that has shaped and molded what we call science over the course of several millennia. The great men who forged the scientific method would probably flunk a quiz asking for a list of steps in the *scientific method* such as the one below.

• Ask a question about some phenomenon.
• Gather information based on the question.

- Develop a hypothesis and make predictions based on the hypothesis.
- Test hypothesis (experimentation).
- Repeat tests.
- Tentatively accept or reject hypothesis.
- Report results (publish).

They probably wouldn't have been able to rattle off a tidy definition of *science* either. It wasn't pre-packaged and shrink-wrapped for them. These men were desperately curious about the natural world. They wanted to know what the universe was made of, why it was here, how it came to be, and how it behaved. They also had certain preconceived notions (sometimes wrong; sometimes right) that shaped their knowledge and how they went about getting that knowledge. In other words, their philosophy either helped or hindered their search for truth about the natural world.

Early Birds in the Natural Sciences

The first two of those mentioned below are biblical figures who studied nature, but since we don't know the nature or content of their observations (unfortunately, we have no written record of their biological observations), I will leave it at that.

Adam

The first, of course, is Adam. He was given the command to name all the animals (Gen. 2:19). Since a complete language was granted to Adam, he was able to give the animals meaningful names. Since man naturally systematizes that which he studies and names, it is reasonable to surmise that the names he gave the animals reflected, at some level, a classification of sorts. This is conjecture, but he was extremely intelligent, and I'm assuming that the names he gave reflected the degrees of similarities and differences that he observed.

Solomon

Because the Lord had granted Solomon great wisdom, he was accomplished in many fields. One area that is often overlooked is Natural History. First Kings 4:29–34 describes the scope of his wisdom. Interestingly, his knowledge of plants and animals is considered an integral part of Solomon's wisdom. In the last two verses of this passage it says, "He described plant life, from the cedar of Lebanon to the hyssop that grows out of walls. He also taught about animals and birds, reptiles and fish. Men of all nations came to listen to Solomon's *wisdom*, sent by all the kings of the world, who had heard of his wisdom."
Again, we don't know if there is any written record of Solomon's natural histories. A few creatures are mentioned in the Proverbs, but it is generally in the context of some virtuous behavior that is worth imitating. We would all love to get our hands on them if these writings existed anywhere.

Aristotle

The first philosophers often wrote on a multitude of topics, and for Aristotle, biology was one. His extensive writings on animals were included in Mortimer Adler's *Great Books* Series (named *Biological Treatises*). At the time of Aristotle, the sciences were in their infancy and were strictly observational. Both Plato and Aristotle held that one could ascertain the nature of life through careful observation and intuition of a rational observer. To us, doing experiments to see if what we surmise about nature is actually so, was foreign to the minds of these early philosophers. The idea of actually doing an experiment seemed unnecessary to them, given their philosophy of nature. Nevertheless, Aristotle was an astute observer of the natural world. When a sharp mind and careful observation were enough to ascertain the truth of the matter, Aristotle did quite well. Although he didn't get everything correct, many of his biological observations were dead-on. Unfortunately, many living (physiological) processes (such as the circulation of blood through the heart) cannot be determined through careful observation of dead animals. It wasn't until experiments were conducted on live animals (vivisection) that the truth about certain internal bodily functions was unveiled.

Galen

Aristotle was able to deduce a lot about life, but it wasn't until the advent of experiments that any big strides could be made in biology and medicine. Galen was a Roman physician of Greek heritage who was thoroughly trained in ancient philosophy and medicine. He was an accomplished anatomist and was way ahead of his time. This was because he anchored his claims more on direct and careful observation than theoretical speculations. He was known for his brutal written denunciations of people that held any medical views that were founded on theory rather than confirmed, careful observation. His confrontational manner did not win him many friends among his colleagues, but he was thoroughly trusted by the Roman emperor, Marcus Aurelius, and was royal physician to him and his heir, Commodus. He was aware that medical knowledge would not advance much more apart from experimental work. He performed experiments on live

animals, demonstrating that the brain controls muscular movement through peripheral nerves, and also figured out the basic plumbing of the urinary, reproductive, and digestion systems through careful dissection and simple experiments. He was truly a pioneer in experimental work, which is notable since it was not at all commonplace in his day. Despite his efforts, he never did figure out how blood circulates throughout the body. No one did until almost 1,500 years later. For all his intellect and keen observation, he was still held captive to the doctrine of humors (the belief that health, illness, and even personality were due to a balance or imbalance of four humors found in the body: blood, black bile, yellow bile, and phlegm), which erroneous belief held sway in medical philosophy and practice from Hippocrates (400 B.C.) up through the nineteenth century. Some vestiges of it even slopped over into the twentieth century.

Underlying Philosophies that Shaped Scientific Inquiry

The Judeo–Christian worldview provided the correct soil to cultivate a truly scientific tradition. However, certain Greek philosophical traditions, because of their pre-eminence throughout the known world, trickled in and influenced the way believing scientists viewed nature and affected how their science was done. For centuries, the philosophy of Aristotle shaped the way many believing scientists did science. This philosophy is broadly referred to as Aristotelianism. The general assumption was that matter and living creatures were formed according to a teleological goal or purpose that was organically linked to matter and all living creatures (the Form was in the matter).

Another contemporary competing philosophy was neo-Platonism. This philosophy maintained that metaphysical entities indwelt matter or living creatures. These mystical entities mysteriously guided the behavior of inanimate matter or the development of life which reflected the Heavenly Platonic Form present elsewhere. These two philosophies were often contemporaries and jockeyed for pre-eminence and guided much research through much of scientific history.

However, another competing philosophy arose that sought to explain natural phenomena completely in terms of natural cause and effect. It is called Mechanistic philosophy. It shunned the assumption that metaphysical or spiritual entities or Forms somehow resided in and guided nature. It was skeptical of anything untestable by observation and experimentation. It sought to explain nature strictly through what can be perceived by the senses. The universe was assumed to be a vast complicated machine that was understandable the same way a clock is understandable. If one knows all the parts of a clock, how all its parts are pieced together, and what each part does, one should be able to figure out how the clock works. By the same token, a scientist in the mechanistic tradition assumes that he can figure out how stars or cells work in much the same way, by gaining knowledge of all the constituent parts and how they interact with each other. Keep in mind that it does not necessarily assume an atheistic premise. Many early mechanists (or scientists leaning that way) were devout Christian theists. They felt that since the universe was like a giant watch, it strongly implied a master Watchmaker. In fact, a number of pioneer scientists in this tradition used this very reasoning to argue for the existence of God,
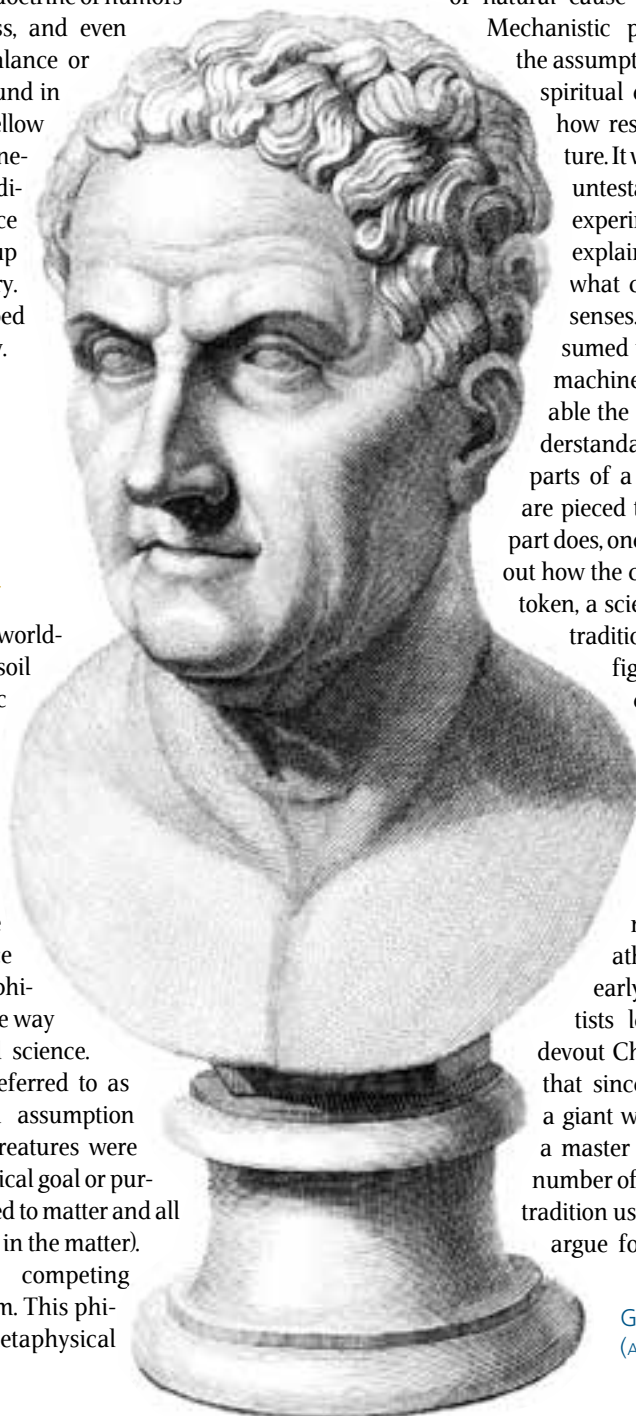
Galen of Pergamum
(A.D. C. 129–217)

the master Watchmaker. Contemporary secular science has sought to rid itself completely of the Watchmaker. This occurred as Mechanistic philosophy was slowly replaced by Naturalism, which attempts to explain all of nature (including first causes) using only natural causes. There are major problems with this thinking, but we will get to that later.

After Galen, medical breakthroughs were virtually nonexistent until an English physician named William Harvey (1578–1657) took it up where Galen left off. Both Galen and Harvey reasoned and worked within an Aristotelian philosophy. This fact is often overlooked. Many historians attempt to portray Harvey as one who was overthrowing Aristotelian philosophy and replacing it with mechanist philosophy. This is not so, if you read what he wrote. He made great advances in medical science because he was immensely curious, not because he became a mechanist. He greatly respected his predecessors like Hippocrates and Galen, but he wasn't satisfied with the current understanding of how the body worked. He wanted to add and expand on their work.

Again, through careful observation and live animal experimentation, Harvey was able to figure out the cyclical nature of the flow of blood through the body. Galen did not believe the flow of blood was cyclical. Rather, he concluded that the liver was the source of venous blood and that the heart was the source of arterial blood. Each performed a separate function and the blood was somehow consumed at their respective destinations by the tissues. The belief that the blood was not cycled through the body didn't make sense to Harvey. Simple calculations determined that the liver would have to make ludicrous amounts (540 pounds every 48 hours) of blood each day which was then consumed by the body. Through careful observations and experiments, Harvey confirmed the pulmonary circuit of blood (heart to lungs and back to the heart) already published by Michael Servetus in 1553, but he was the first to elucidate the systemic circuit (from heart to the body and back to the heart). Even though vivisection of animals answered certain questions about blood flow, Harvey was able to infer from careful dissection, the direction of blood flow by the structure and presence of valves in both the heart and veins. Also, when he forced blood the wrong direction in a protruding vein, the vessel would bulge at each valve, as blood was forced against it. Through this simple experiment he was able to deduce the direction of blood flow.

The Renaissance and Science

We often look back at the science of the Renaissance through modern mechanist glasses. Why? Because secular textbooks, when discussing the great scientific pioneers, have removed any reference to their belief in God. Consequently, it is easy to assume that great scientific pioneers like Copernicus, Galileo, and Kepler were thoroughgoing mechanists. Since mechanistic philosophy is wrongly conflated with naturalism, we then can wrongly assume they didn't believe in God or had no use for Him. This is just flat wrong.

Copernicus

Nicholaus Copernicus (1473–1543) was a brilliant polymath and polyglot (he spoke four languages) with astronomy being more of a hobby than a profession. He was also a self-proclaimed neo-Platonist and is best known for overthrowing the entrenched view of the Ptolemaic system of the earth being the center of the universe (geocentric universe) and replacing it with the view that the sun is the center of the universe (heliocentric universe).

We moderns wrongly assume that his mind was free of the prevailing philosophy and studied the simple astronomical facts with an "objective, unbiased mechanistic mindset." Not so (and by the way, a mechanistic mindset is just as biased as any other mindset). The actual facts that he could compile to overthrow the geocentric understanding of the universe were surprisingly slim. What made him so revolutionary was that he had different starting assumptions. The Aristotelian view of the universe (called the Ptolemaic system) axiomatically assumed that the earth was the fixed center. Being a neo-Platonist, it was much more proper to assume that the sun was the center of the planetary system, not the earth. He did not have a whole mess of new astronomical data to overthrow the established view. The one thing Heliocentrism had over Geocentricism, was that it could be more simply and elegantly described mathematically. Nevertheless, the heliocentric hypothesis was still in its infancy and needed to be tweaked and expanded by his successors.

Kepler

Johannes Kepler (1571–1630) was also a German polymath and astronomer who followed in Copernicus's footsteps. He was also a practicing Lutheran and didn't see his faith interfering with his scientific work. He, too, was a neo-Platonist and was convinced that Copernicus was in the right. But he wasn't going to leave Heliocentrism untested and undeveloped. He wanted to expand and fine-tune the Copernican view. He initially assumed circular orbits, but he was scrupulously exacting and his "circular orbit" assumption wasn't fitting the actual data very well, so he started to assume ovoid orbits. Through much laborious mathematical work using Mars as a case study, he compared its assumed ovoid orbit with actual observational data. Unfortunately, that didn't fit

the data either. Finally, after settling on an elliptical orbit, the data fit nicely. After ending what he called "my war with Mars," he then figured out the orbits of the rest of the planets, which followed the same elliptical pattern, with the sun at the center.

Again we see that great scientists always have starting assumptions (right or wrong). Many of these great scientists were also devout men of faith. A good scientist, even if he starts with an erroneous assumption or premise, does not allow it to blind him from contradictory evidence. Either he modifies his assumptions or discards them if they don't fit the facts. If scientists rule out certain assumptions from the start, particularly correct assumptions, they will find it impossible to arrive at a particular truth. Being able to change faulty assumptions allows scientists to get a new look at the data. In some cases, new assumptions explain the data much better, and problems or incongruities (between the data and the previous assumptions) are completely resolved. For example, when Kepler switched his assumptions from ovoid to elliptical orbits, it resolved all his mathematical discrepancies. If he had stubbornly held to circular or ovoid orbits, he would never have been able to resolve the discrepancies and would never have arrived at the truth.

Galileo

Galileo Galilei (1564–1642) was an Italian astronomer and a contemporary of Kepler. Like so many other scientists back then, he was a polymath and therefore was learned in many fields. He was a philosopher, mathematician, astronomer, and physicist. He is often credited as being a father of modern science, particularly in astronomy and physics. His improvements to the telescope enabled him to make much better observations of the heavenly bodies, which added support to Copernicus's Heliocentrism. Being Italian and believing in Heliocentrism soon got him into hot water with the Roman Church, since the church held a Ptolemaic (geocentric) view of the universe (earth is the center). Heliocentrism was a "hard sell" at that time because of the church's strong literal interpretation and teaching on several passages of Scripture, such as Psalm 93:1b: "Surely the world is established, so that it cannot be moved."

Because of the church's authority to lock you up for thinking and teaching "wrong" doctrines, few

Kepler, as a good scientist, did not allow his assumptions to blind him from contradictory evidence. His willingness to alter his assumptions allowed him to resolve discrepancies and arrive at the truth about planetary orbits.

astronomers publicly accepted the Heliocentric theory. Galileo, however, had some guts and publicly espoused the Heliocentric view in 1610. Due to immediate pressure from the church, he eventually backed down from this view in 1616. Nevertheless, he couldn't keep his views bottled up forever, so he published his views in a work called the *Dialogue Concerning the Two Chief World Systems* (1632). Some of the content greatly offended the pope, so Galileo was brought before the Inquisition and was forced to recant. He was placed under house arrest until his death.

Keep in mind that most if not all of these great architects and pioneers of modern science were God-fearing and Bible-believing Christians of some stripe. Their high view of Scripture posed no problem in interpreting astronomical data in light of scripture. They interpreted scriptures like Psalm 93 figuratively according to its poetic genre; not because it seemed to contradict the data. They

also were influenced by their philosophical baggage that caused them to retain erroneous opinions despite good evidence to the contrary. For example, Galileo rejected the correct elliptical planetary orbits that Kepler demonstrated, simply because his neo-Platonism biased him toward circular orbits. Nevertheless, their overt belief that God was the Creator of the universe did not detract from their ability to do excellent science.

Isaac Newton

Sir Isaac Newton (1642–1727) was yet another English genius who excelled in many scientific and mathematical disciplines. This included physics, mathematics, astronomy, alchemy, and theology. To name his most notable accomplishment, he is credited with writing *Principia,* which is one of the most influential books in the history of science. Included in it are the three Laws of Motion and the Law of Universal Gravitation. Along with Gottfried Leibniz, he developed differential and integral calculus. He also did a lot of work in optics and invented the reflecting telescope. He was one of the most influential men in the history of science. The British Royal Society was recently polled, and it was found that they felt Newton has made a greater impact on both mankind and the history of science than Albert Einstein.

Although his theology of the Trinity would have been considered unorthodox (both then and now), he spent more time studying the Scriptures than he devoted to science. As was true with many other great men in the sciences, Newton's deeply religious beliefs did not quench or hinder him from making great scientific discoveries. Modern secular science curricula give the impression that most scientific discoveries were and are made by rational, educated men who did not allow their religious beliefs to influence their science. It can easily be inferred by those receiving this teaching that religious beliefs arise out of ignorant and superstitious people trying to make sense of the world. Look at what these geniuses did scientifically, and then look at their religious views. You will find that this notion has no validity at all in the history of science.
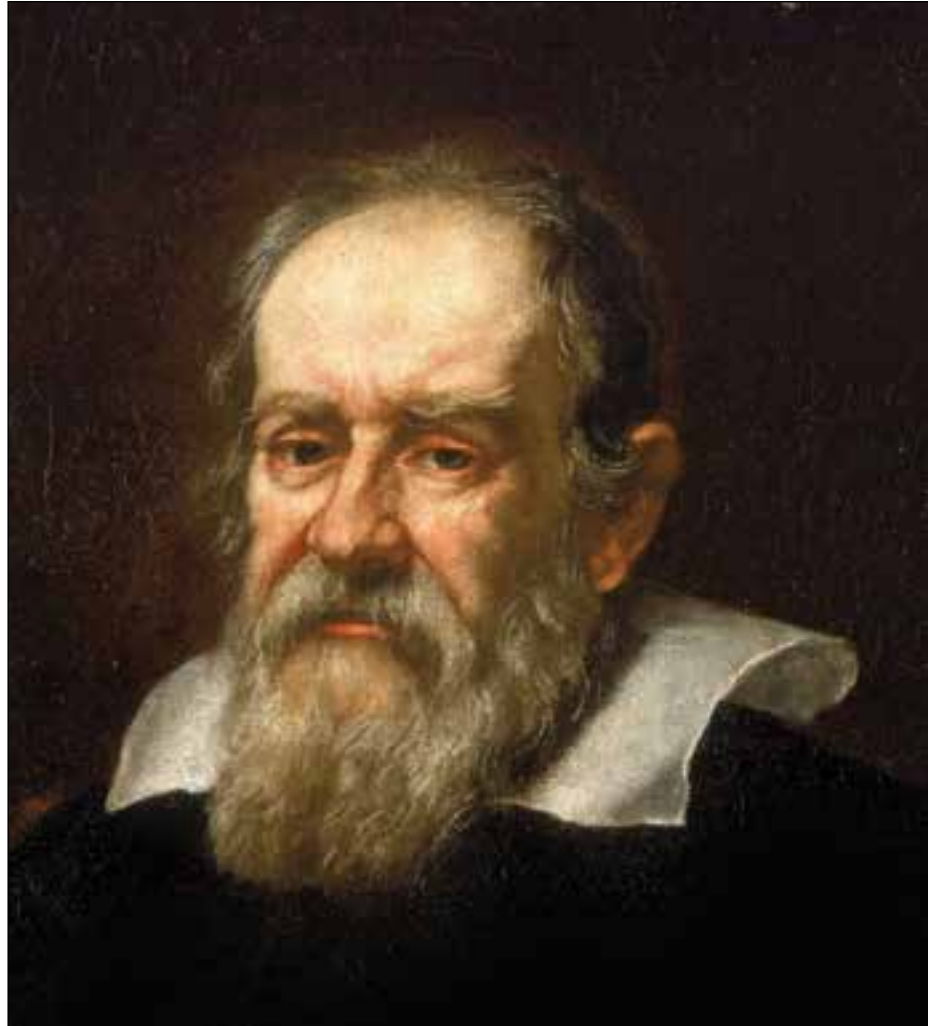
Galileo espoused the Heliocentric view and was famously brought before the Inquisition and placed under house arrest until his death.

Back to Biology
John Ray

John Ray (1627–1705) was a naturalist and acclaimed as the father of English natural history. He published several works on plants, including Historia Plantarum. Ray was more of a botanist, but since he took copious notes on the natural history of many living things, animals appear in other works. He also wrote on natural theology, including *The Wisdom of God Manifested in the Works of the Creation* (1691). Natural Theology was an early form of Christian apologetics that sought to declare the glory of God through the wonders of creation. Previous to his work, creatures were studied more according to rationalism. This philosophy assumed that truth or knowledge

Believing that all the myriad life forms were specially created by God, Carl von Linné is called the father of modern taxonomy.

Carolus Linnaeus (Carl von Linné)

Carl von Linné (1707–1778) was a Swedish professor and naturalist who, through his desire to study creation to the glory of God, started describing and naming both plants and animals that he collected or were sent to him. He expanded on John Ray's work, following him in the same tradition of scientific empiricism (studying and classifying according to the careful examination of each specimen). His greatest work was *Systema Naturae*. The naming system he initially used, called the polynomial (many names), was a Latin phrase attempting to describe the organism's pertinent characteristics as concisely as possible. He even Latinized his own name to Carolus Linnaeus. The polynomial, though descriptive, was long, awkward, and cumbersome. If you wanted to discuss the plant, catnip, it was not very convenient to use the full blown name. For example, "What do you think of this specimen of *Nepeta floribus interrupte spicatus pedunculatis* that I found?" Eventually polynomials were replaced with a manageable shorthand name (the binomial) so communication was much less laborious. Catnip was shortened to *Nepeta cataria*, since *cataria* meant cat-associated. He also devised different levels (taxa) of classification with which many of us are familiar:

> Kingdom
>> ***Phylum***
>>> Class
>>>> Order
>>>>> ***Family***
>>>>>> Genus
>>>>>>> Species

The bold and italicized taxa listed above were added after Linnaeus. His reputation in natural history was stellar, and he soon became internationally famous in intellectual circles. It wasn't long before plant and animal specimens came streaming to him from all over the known world. This kept him exceedingly busy describing and classifying all the stuff sent to him. In fact, he described the eastern box turtle in 1758 (the very creature that I studied for my Ph.D. research). Although he is credited in secular biology textbooks for being the father of modern taxonomy and one of the fathers of modern ecology, it is curious that secular textbooks don't mention that he believed all the myriad life forms were specially created by God. Since he was prior to Darwin, believing such things was almost universal, but it's still a shame to overlook the fact. These textbooks also neglect to mention that he did all his work to the glory of God. Again, we see that this great pioneer in science had prior philosophical and religious commitments that didn't hinder him from making great strides in science.
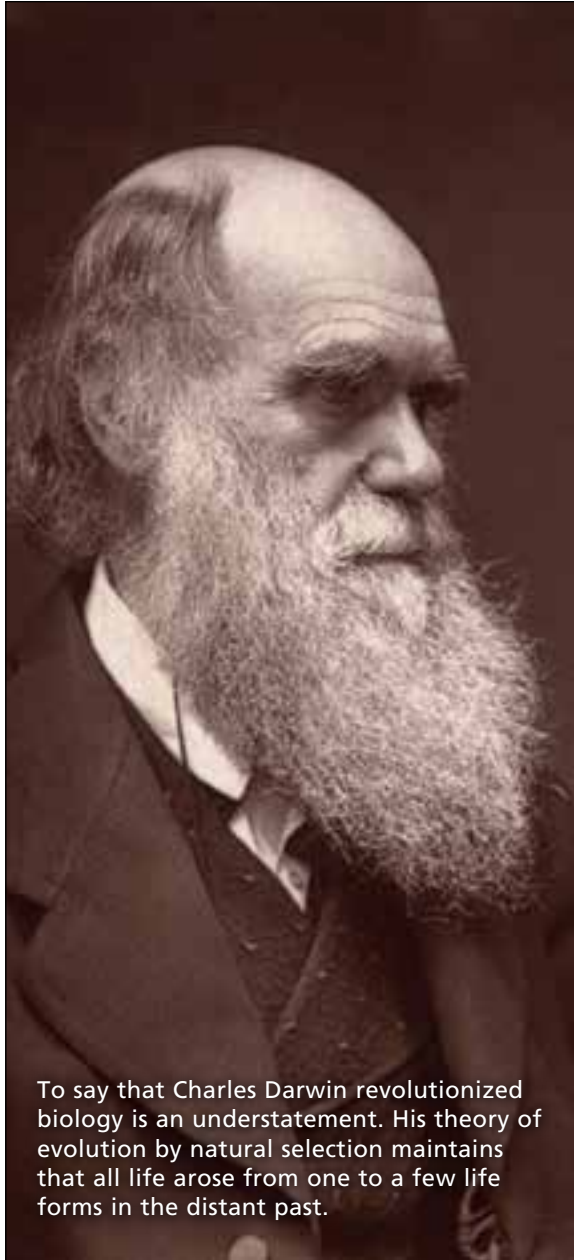
(including biological classification, anatomy, and physiology) could be obtained by reasoning from preconceived notions rather than through detailed observations of the characteristics of a plant or animal using the physical senses (scientific empiricism). Ray took the latter approach because he studied creatures based on careful examination of their physical characteristics (what a novel idea). This move away from the rationalist approach was a very big step toward modern taxonomy. He truly laid the groundwork on which the father of modern taxonomy, Carolus Linnaeus, built,.

To say that Charles Darwin revolutionized biology is an understatement. His theory of evolution by natural selection maintains that all life arose from one to a few life forms in the distant past.

Charles Darwin

About thirty years after Linnaeus died, Charles Darwin was born. To say that Charles Darwin (1809–1882) revolutionized biology is an understatement. He is well known as the man who brought us the theory of evolution by means of natural selection. This theory maintains that all life arose from one to a few life forms in the distant prehistoric past.

Prior to Darwin most scientists believed in the biblical account of creation and the short time scale of earth history. But there was a small minority of intellectuals prior to Darwin who rejected a literal Genesis and began interpreting physical data apart from scriptural authority. This was in large part due to the Enlightenment and its exaltation of human reason over Scripture. James Hutton (1726–1797) began thinking that geological history was spread over deep time (millions of years) and came up with the idea of Uniformitarianism. There will be more on this idea later, but it can be summed up as "the present is the key to the past." In other words, any measurable rate today is assumed to have occurred at the same rate in the unobserved past. Charles Lyell succeeded Hutton and expanded on and popularized Uniformitarianism through the writing of *Principles of Geology.* The success of this book made old-earth geology an increasingly popular alternative to scriptural geology and eventually replaced it.

Principles of Geology was very influential to Darwin. He brought the book along on his famous voyage of the H.M.S *Beagle.* Darwin became a believer in deep time prior to developing the theory of evolution. As he later ruminated over his natural history writings compiled during the five-year voyage as a naturalist on the *Beagle,* he began to formulate and write down his ideas on evolution. *Principles of Geology* gave him the vast amounts of time he needed for evolution to work.

Jean-Baptiste Lamarck, Erasmus Darwin (Charles's own grandfather), and many other men all the way back to the ancient philosophers conceived and pondered evolutionary ideas. What sets Charles Darwin apart was that he presented a purely naturalistic mechanism that he believed could generate complex forms from simpler forms apart from Divine creation or intervention. Prior to Darwin, mechanistic scientists believed that physical phenomena could be explained through careful analysis of natural cause and effect rather than supernatural entities pushing matter around. This thinking didn't preclude the idea that the ultimate cause was truly supernatural. Darwin's theory was an attempt to explain the complexity and diversity of life apart from the direct handiwork of God. At first, he didn't mind the idea of God getting it all started, but the trend in his thinking was to ultimately explain even the formation of the first living cell through natural causes. Although he never embraced atheism, his evolutionary views on how life arose, coupled with the death of his beloved daughter Annie, caused him to doubt the existence of a loving, personal God, and consequently he slowly walked away from the Christian faith. His writings contributed to a philosophical shift in the sciences from Mechanistic Philosophy to Naturalism. Ideas have consequences.

In the nineteenth century Darwin presumably showed how the diversity of life arose from a few simple

forms naturalistically without divine creation, purpose, or guidance. Mechanistic Philosophy was being replaced by Naturalism. Since that time Naturalism (similar to Mechanistic Philosophy except that it excludes the supernatural even regarding first causes of the physical universe) has grown and dominated every realm of science. Today, human reason is universally exalted over the Word of God in the public sphere, and Naturalism, at least in the sciences, is at its zenith.

Albert Einstein

Albert Einstein (1879–1955) is also a household name that has become a label for anyone who appears to be a brilliant, eccentric, science geek. Though he is widely known, few understand his scientific contributions. Suffice it to say, he was a brilliant theoretical physicist and is most known for his general and special theories of relativity. He is also known for his fluctuation dissipation theorem, quantum theory of atomic motion in solids, deflection of light by gravity, and several other theories. He was firmly in the mechanistic tradition but didn't rule out the existence of God. Rather, he believed in a deistic, impersonal god who was revealed simply in the harmony of the physical laws of nature. He did not think this god was concerned with the affairs of men. His theories of relativity maintained that some things that were previously thought to be constant, like time, could be affected by gravity. Through no deliberate fault of Einstein, these relativistic ideas in physics started to trickle into non-physical concepts like morality and ethics. Consequently, his theories of relativity contributed to the rise of moral relativism in the twentieth century.

It is true that the twentieth century showed a clear trend toward Naturalistic scientists making great discoveries. The golden age of great religious scientists seemed to be over. This, I believe, was largely due to the increasing acceptance of Naturalism in the post-Darwin world. More and more scientists began to assume that religion (even if they granted the importance of religion in the minds of the great scientific pioneers) is generally a science-stopper or is, at best, unnecessary baggage that slows down its progress.

James D. Watson and Francis Crick

An unlikely pair of relatively unknown scientists committed to a naturalistic view of the universe made a discovery that revolutionized biology in the mid-twentieth century. James Watson, an American post-doctoral student in his early twenties, came to Cambridge University and met a British graduate student named Francis Crick, who was in his mid-thirties. They both shared a belief that the genetic material was DNA (many still thought that protein was the genetic material). Not doing any experimental work, they were able to decipher the three-dimensional structure of the DNA molecule (the double helix) by gleaning pertinent data from Rosalind Franklin and Maurice Wilkins' research at King's College London. Crick knew a lot about X-ray crystallography, and Watson was bright and determined. Their work mostly consisted in thinking how the chemical components of DNA fit together, followed by trial and error tinkering with molecular models. In 1953 they got it right. They, along with Maurice Wilkins, were awarded the Nobel Prize in Physiology or Medicine in 1962 (Rosalind Franklin died in 1958). Their discovery shed great light on the fundamental basis for heredity. Through many other subsequent discoveries that built on theirs, science has come to understand the details of information storage, expression, and transfer in living cells.

Discovering the material basis for heredity seems like a big triumph for Naturalism in the sciences. However, it has simultaneously exposed a huge problem for Naturalism. Prior to this, most thought that reality consisted of matter and energy. Elucidating the nature of the double helix unveiled a third fundamental entity that secular science is now forced to explain naturalistically. It is called information. The existence of information in life is no easy "pill to swallow" for Naturalism. We will discuss this problem later in the section entitled, "A Simple Cell is an Oxymoron."

Critical Issues

Historians and scientists love to systematize what they study. Taxonomists derive satisfaction from categorizing animals and plants. Historians enjoy pigeonholing people into certain philosophical camps and worldviews. To a certain extent, I have done this in this essay, but keep in mind that many of these scientists defy tidy classification. They don't neatly fall into certain camps. To a greater or lesser extent, many had a mix of worldviews, and even if you could interview them, they would still be difficult to label. Nevertheless, whether a scientist had a blend of ideas or was clearly in one philosophical camp or another, it has always been true that every scientist has preconceived ideas (starting assumptions or presuppositions) that frame how they see the physical world and how they frame questions and testable hypotheses. There has never been an unbiased (lacking a worldview) scientist. Good scientists, however, don't ignore or deny data even if it seems difficult to fit into their worldview. They may need to adjust, modify, or simply discard their worldview or see if the data is able to be interpreted in a different way, but they should never discard the data.

If their worldview is objectively true and the data is true (i.e., it was accurately obtained—no fudging or hallucinating), then there will always be a way that the two will harmonize.

The first major problem that continues to face Christians today is the apparent conflict between "science" and "faith." As we did a flyby survey of some scientists and their philosophies, I hope you saw a clear trend towards a naturalistic worldview.

Today mechanistic philosophy has been replaced by Naturalism, which leaves no room for divine intervention. It doesn't just maintain that the universe is like a complex mechanical watch, which demands a Divine watchmaker (Mechanistic philosophy). Instead, God has been removed completely out of the equation in matters dealing with matter. This didn't happen overnight. Over the centuries, particularly during the Enlightenment, the prevailing philosophy of science progressively became more and more mechanistic and then naturalistic, though much of it was mixed with elements of Aristotelianism and Neo-Platonism. Since Darwin, however, Materialism or Naturalism has prevailed and grown stronger and stronger, at least in the sciences. Inexorably, it gradually began to push out any philosophies that gave any credence to the supernatural.

This has resulted in the redefining of science such that only naturalistic explanations are considered for any phenomena, and it artificially rules out supernatural explanations for all phenomena, including phenomena that seem to require divine explanations or causation. So if one asks questions like, "What is the first cause of life, or the solar system, or the galaxies, or the universe?" scientists trapped by modern naturalistic prejudices can only consider naturalistic explanations. If there is any reference to any intelligent agent
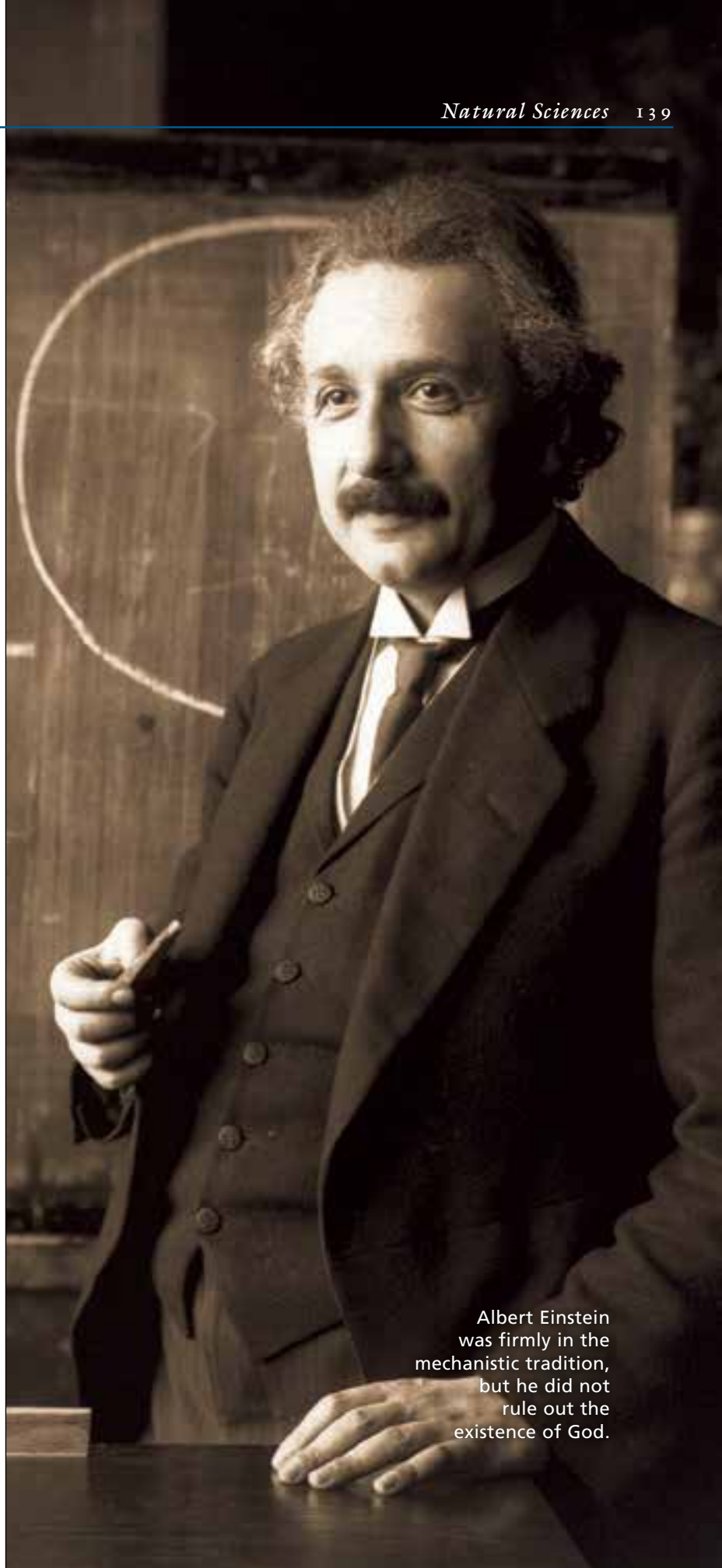
Albert Einstein was firmly in the mechanistic tradition, but he did not rule out the existence of God.

that is beyond the physical realm (i.e., God), it is ruled out with disdain and considered highly unscientific because it has religious implications. Naturalistic scientists think that religion must be quarantined in its own separate realm of values, ethics, and meaning. They may view religion as useful to maintain ethical standards for the "ignorant masses" but a contaminant to science. They see Christianity and other religions as science-stoppers that stifle scientific curiosity and rigor. Many even consider all religion as superstitious nonsense. The current rhetoric is that science cannot allow faith to influence its inquiry. This is laughable when recalling the great pioneers of science we discussed above. The current scientific community has successfully banned Christianity from speaking with authority about how the physical world came to be.

This is a huge problem facing the Christian scientist. Faith (at least the kind that is in conflict with current "science") is a belief in a supernatural being (God) who is the ultimate cause of the universe and life. This definition clearly is at loggerheads with the current definition of science because you can't believe in *only* natural causes *and* also believe in supernatural ones for the same phenomena. One of them has got to be wrong, and therein lies the problem.

The second major conflict between faith and science facing Christians today is Uniformitarianism. Currently, it is strongly linked to Naturalism and deals with measurable processes. It clearly attempts to explain phenomena naturalistically, but it added certain conditions. As you recall, this philosophy was formulated by James Hutton and popularized by Charles Lyell. It was a clear departure from the Scriptures. If certain processes happen slowly today, then we must assume that they have always occurred at that same slow rate. This way of thinking forced one to conclude that huge geologic formations must have been slowly deposited and sculpted over eons of time rather than through processes that could have shaped the earth rapidly during the timeframe laid out in Scripture. Not only did Uniformitarianism open the door for Darwin's theory of evolution, it established a non-biblical and generous timeframe to compose a completely naturalistic story of the earth and life.

During the Enlightenment, the Word of God was gradually marginalized regarding historical matters and was considered authoritative only when addressing spiritual and moral issues (this began to dwindle too). Human reason was increasingly exalted and was effectively cut

Crick once joked, "Christianity may be OK between consenting adults in private but should not be taught to young children."

loose from scriptural truth. This allowed men of science to consider alternatives to biblical earth and life history. These philosophies, Naturalism and Uniformitarianism, both of which are free from scriptural authority, began undermining and eroding the trust people had in the Bible's authority. This erosion occurred at different rates in different countries, but midway through the twentieth century, the scientific and intellectual community worldwide embraced a non-biblical earth history. After that point it was very difficult to go against the prevailing scientific consensus without looking ignorant, backward, naïve, and anti-intellectual.

The third big problem that the Christian faith must sort out is the confusion between historical science and empirical science. Empirical science is dealing with the present. In empirical science, that which is being studied is observable, testable, and repeatable. Conclusions are not as greatly affected by preconceived assumptions. Two scientists with completely different philosophical or religious worldviews can and do often arrive at the same conclusions within empirical science. If both were measuring the acceleration of a ball dropping (and they are using the same instrumentation and system of measurement, say metric) they can arrive at the same answer: 9.8 meters per second per second. Or if they are molecular biologists studying gene regulation in bacteria, both could come to the same conclusion of what proteins are involved to turn its genes off and on.

Historical science, on the other hand, is enormously affected by starting assumptions or presuppositions that can not be proven or tested. They just have to be held axiomatically as a framework to interpret circumstantial evidence. Historical science is an attempt to reconstruct the past by analyzing data in the present. In order to draw the right conclusion about the past, you must have the correct presuppositions. However, if you have the wrong presuppositions, it doesn't matter how carefully and accurately you collect the data; you will draw the wrong conclusions. For instance, say you're a paleontologist who has dug up a small, bipedal dinosaur in a sandstone deposit. If your presuppositions are Uniformitarianism and Darwinism, then you will conclude that the sedimentary rocks on top of that skeleton are either a partial or a complete record of millions of years of sedimentation. A Darwinistic view may cause you to conclude that this form evolved from other creatures lower down in older rocks, and that some of its descendants may be alive today but are not small, bipedal dinosaurs anymore, but rather birds, due to hundreds of millions of years of evolution. If you presuppose the biblical account, that the earth is 6,000 years old, then it will greatly change how you interpret that fossil's place in earth history and your

perspective on how much time is needed to produce large amounts of fossil-bearing sedimentary rocks.

Problem number four. There will always be scientific unbelievers who doubt the Word of God and construct their own (naturalistic) "scientific" story explaining the universe. Unfortunately this is much more common now. Nevertheless, the distressing thing is that Christians begin to believe the secular "scientific" story. Why? The short answer is that they are in awe of the great accomplishments of science. Even though science grew out of a Judeo-Christian worldview, its huge scientific successes resulted in a collective pride and trust in human reason divorced from the Word of God. "Science" began to get too big for its britches. Interpretations of the past (using unbiblical assumptions) led to conclusions that contradicted Scripture. Rather than question the validity of these unbiblical assumptions, the people began to mistrust the Scriptures. Christianity is truly the mother of science. Her child, "Science," grew up and became very successful. She also became proud and cast aside her mother as ignorant and superstitious.

Currently, scientific inquiry interprets data in the light of an entirely different paradigm; one based on Naturalism and Uniformitarianism, with human reason exalted over and severed from Scripture. Scientists no longer have to answer to the Scriptures or to the church. The liberal churches surrendered to secular science quite awhile ago, while the conservative church has lost most of her ethos with the intellectual community and with the public at large. The public has become very enamored with the power of empirical science, and rightly so. Unfortunately, the public often believes that scientific proclamations in the realm of *historical science* are just as authoritative as its conclusions in the realm *empirical science*. Secular science has truly won the high ground. It has become the guardian of knowledge, the high priesthood of truth about the natural world. When one thoroughly embraces Naturalism, it results in the view that science is really the high priesthood of all reality. To win the high ground back, we must make the distinction between historical and empirical science and expose the erroneous philosophies they use when doing historical science.

As the author of Hebrews might put it, "And what more shall I say? For the time would fail me to tell of Francis Bacon, who developed the scientific method; of Antony van Leeuwenhoek, who unveiled a whole new world of microscopic animalcules with a simple microscope, making himself the father of microbiology; of Louis Pasteur, who finally put to rest the idea of spontaneous generation, and who, along with Robert Koch, developed the Germ Theory of Disease; of Gregor Mendel, who discovered the principles of inheritance and became the father of modern genetics; and many, many others." This was a hop, skip, and a jump through an enormous field of study; the history and philosophy of science. I have only scratched the surface of the discoveries and philosophies of a handful of scientists spanning many centuries, but I trust that this brief overview shows a few key pioneers of science and the importance their philosophies played in guiding their thinking and scientific work. Keep in mind, most of these scientists believed in a supreme Being as the ultimate cause of the universe in all of its diversity and complexity.

A Christian Response

Beware lest anyone cheat you through philosophy and empty deceit, according to the tradition of men, according to the basic principles of the world, and not according to Christ (Col. 2:8).

We've looked at some philosophy and history of science as well as some of the clear problems and tensions that have arisen between science and the Christian faith. We have seen that people (as well as brilliant scientists) not only adopt philosophies through which they interpret data, they are also "herd" animals. Most of them find it very difficult to hold views contrary to the mainstream scientific community. But some brave scientists do break away from the mainstream and come up with a new way of looking at the world. Now is the time for Christians to cease their chameleon-like nature in matching our surroundings. The mainstream church since the nineteenth century has caved to the demands of secular science. Although a few brave Christians have taken a critical look at the hollow and deceptive philosophies that shape their scientific conclusions, most do not. Many clergy and theologians are cowed by the dictates of the historical sciences. They no longer strive to see what truths God was actually communicating to us in the Scriptures. Instead they first see what the prevailing views of historical science are and then fall all over themselves to find a hermeneutic that interprets the Bible so that it doesn't disagree with this assumption-laden form of science. This is revoltingly obsequious, bending over backwards to avoid any perceived disagreement with historical science. What this kind of science claims as fact changes every few years and the Scriptures don't. In whom do we trust; the word of man or the Word of God? Christian students need to reject two errors. The first is that of being too easily swayed by secular historical science by not understanding the highly speculative nature of it. The second error is that of becoming reactionary and throwing

out the baby (empirical facts) along with the bathwater (certain secular theories) that these scientists produce. We must be circumspect; innocent as doves and wise as serpents.

Pulling down strongholds

> *"For the weapons of our warfare are not carnal but mighty in God for pulling down strongholds, casting down arguments and every high thing that exalts itself against the knowledge of God, bringing every thought into captivity to the obedience of Christ . . ."* (2 Cor. 10:4–5)

Naturalism is the first stronghold that needs pulling down. This philosophy, over the last couple hundred years, has become very strong indeed. It practitioners (scientists) have exalted it against the knowledge of God in almost every facet of life. Darwinism (which is a naturalistic view of how life arose) is not just ruling the roost in biology; it has infiltrated every "ology" or science dealing with living creatures; psychology, anthropology, sociology, agricultural sciences, and medicine, just to name a few. The list goes on and on. Christians must cease being lapdogs for our materialistic masters.

Naturalism says that God is not necessary to explain the universe. Romans 1:20 says, "For since the creation of the world His *invisible attributes are clearly seen*, being understood by the things that are made, even His eternal power and Godhead, so that they are without excuse . . ." (emphasis mine). From this verse alone we know Naturalism is wrong. If the universe and life can be explained without God, then man has an excuse to reject God. To regain the high ground back, it is essential to not only proclaim the Word of God but also demonstrate through general revelation, that Naturalistic processes are unable to explain the cosmos. Why? This verse also says, "His invisible *attributes* are clearly seen, *being understood by the things that are made . . ."*(emphasis mine). It doesn't say "being understood from the clear reading of Scripture." In other words we can draw the correct conclusion that God made the universe apart from Scripture by examining the things that are made.

Naturalism can't explain first causes

The Law of Cause and Effect essentially maintains that for every effect there must be a sufficient cause. When we examine the vast universe *we must* infer a Creator, because naturalistic causes are properties of the naturalistic universe. How can the universe be produced by natural causes that only can exist within a universe that does not exist yet? In other words, how can nature create itself? Something beyond nature must exist prior

to nature. If the universe is an egg, naturalism says that the egg created itself from processes at work within the egg. Hold on a minute, it is not logical to form an egg from nothing but processes understood within an egg.

Also, the naturalistic formation of the universe cannot be explained in light of the First and Second Law of Thermodynamics. In a nutshell the first law states that matter cannot be created or destroyed. So from where did the Point Singularity that exploded in what is called the Big Bang, come from? Did it come from nothing? If so, that violates the first law which says that matter cannot be created (from nothing). If it was eternal, then you run into problems with the second law of thermodynamics. It maintains that in any ordered system, differences in the temperature, pressure, and chemical potential in matter or energy tend to even out (the measure of this evening-out or disordering is called *entropy*). If the matter in the universe was from eternity in the past, then the universe should have petered out and become completely disordered by now.

A simple cell is an oxymoron

Through the latter half of the twentieth century, our understanding of the inner-workings of the cell has exploded. The basic unit of life can no longer be thought of as a simple blob of protoplasm. Even the simplest cell is far from simple. It is a marvel of complexity that astonishes our most brilliant mechanical and software engineers. The genetic information alone defies naturalistic explanations. Bill Gates, when referring to DNA, the cell's information storage and retrieval system, says, "DNA is like a computer program but far, far more advanced than any software we've ever created." When ever anyone encounters any informational code, whether written language, spoken language, Morse code, binary code, etc., it is assumed that an intelligent agent created the information. All evidence points to the fact that every information-bearing system has been generated from intelligence. But due to the pervasive grip of Naturalism, our brightest biologists must insist that the DNA (or RNA), the code of life, arose naturalistically in or prior to the first cell and evolved into the assembly instructions for hundreds of thousands of different species alive today. Does the evidence point to a naturalistic explanation? Definitely not! However, scientists still must hold that position because the current philosophy demands it. Any professor that is outspoken about the inadequacy of naturalism in the life sciences is very lucky if he retains his employment.

Michael Behe, a biochemistry professor at Lehigh University, was one such dissenter. He wrote a book called *Darwin's Black Box*. The book is one sustained argument of why certain highly complex systems like flagella or

blood clotting mechanisms in living cells could not form naturalistically through Darwinian processes. He coined a phrase called "irreducible complexity." In other words, they are complex, and they can not be reduced or subtracted from and still be operational. They are systems composed of multiple components where each part is required for its proper function. Remove one part (often out of dozens), and the system does not work. Biological cells are loaded with just such systems. Behe proposes in his book that these systems are too integrated and interdependent to have arisen through aimless Darwinian processes. In Darwinism each part is the result of a random mutation. If it is to be preserved by natural selection within an organism, it must grant some advantage to the owner of the mutation. The problem is that many of these irreducibly complex systems have dozens of intermeshing, interdependent parts like a complex factory machine. Having the fully operational machine arise all at once is too miraculous for a naturalistic scientist to swallow. Each part presumably arose independently through random mutation and began to accumulate in the cell. They would then have to be retained in the cell for countless generations until the next part randomly evolved. Once all the parts had all accumulated, they assembled themselves into a complex cellular machine. The problem with this scenario is that each component would not be selected until the machine was fully operational. In real life, useless proteins are not kept around, because they disrupt other cellular processes and are wasteful to the cell's metabolic resources. In the struggle for life, those cells which are more efficient in using energy and raw materials out-compete cells making useless stuff. In the long run, cells making useless stuff (which may eventually become part of a wonderful innovation for the cell) are eliminated long before the wonderful innovation could ever arise. In addition, all these parts require genetic information, and again there is no naturalistic mechanism that generates totally new genetic information from scratch.

Michael Behe's thesis is very powerful because it rigorously shows why complex biological systems cannot arise through random processes. This is also why Origin of Life experiments are so depressing to the naturalist. The simplest cell is loaded with irreducible complexities, and early earth chemical soups experiments get nowhere close to a living cell. Although they have produced a number of biological building blocks, they never assemble into any biological molecules like DNA, protein, phospholipids, or carbohydrates.

This argument can be extended to include why more complex organisms cannot evolve from simpler organisms. When various creatures in an evolutionary tree are examined, the evolutionist points to all the similarities between the presumed ancestor and a more complex descendant. It could be similarities in anatomy or physiology, or it could be similarities at the DNA or protein level. As interesting as these similarities are, they should pose no threat to a Creationist who believes God created the various kinds. Similarity in anatomy, physiology, or gene sequences can easily be explained by common design rather than common ancestry. The devil's in the differences. The evolutionists can point to all the similarities between dinosaurs and birds to provide evidence for common ancestry. The Creationist can acknowledge those same similarities and maintain that they were created according to a similar body plan. But what about the many differences? At some point something had to evolve feathers. An ancestor had to accumulate, through random mutations, the genetic material to code for a bird feather and a bird lung (and much more if it was able to fly). These are not trifling matters. Both the avian lung and feather are highly complex structures, whose development requires additional genetic information and new gene regulatory networks that orchestrate the development of such structures. When evolutionists draw the gradual changes in the overall shape of the body or skeleton of bird evolution, it can seem plausible to the uncritical mind.

However, when we consider all the additions of genetic information needed to account for all these anatomical and physiological changes, it is simply beyond the ability of random mutation. It's like thinking that randomly typing 1's and 0's on pre-Windows software could generate Windows software. It's not going to happen. Intelligent software engineers are required.
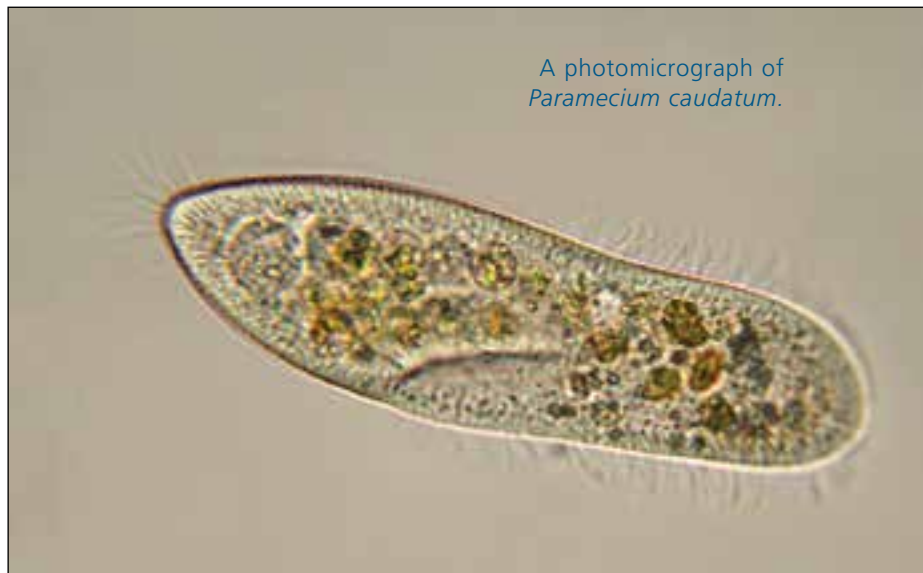
A photomicrograph of *Paramecium caudatum*.

Scripture vs. Uniformitarianism

The vast majority of evangelical Christians have issues with Naturalistic philosophy. At least they should if they believe in miracles. Most Christians (I hope) are firm in their belief that God created the universe from nothing, has intervened supernaturally many times throughout the Bible, and has done so today in answer to prayer. Consequently, most Christians will at least take a stand for supernatural Intelligent Design and won't be too ashamed when strident atheists rally round and point the finger of scorn at believers in the supernatural. Unfortunately, many evangelical Christians are less likely to reject Uniformitarianism and publicly embrace young earth creation. Why? Old earth evolutionism and old earth creationism have one thing in common: the *old earth* part. Old earth (and universe) is so ingrained in our culture's psyche that to express views contrary to it is equivalent to being a self-proclaimed "flat earther" Many Christians don't have the guts to be labeled a Bible-thumping anti-intellectual so they just go with flow; whatever the scientific community says to believe, but then tack on God to the story. These beliefs are found on signs in national parks, plaques in museums, in the scripts of nature documentaries, and in secular textbooks. Many Christians don't have the time or energy to think through their claims critically and actually find out whose being anti-intellectual. Of course this is not true of all Christians who are not young-earthers, but it cannot be denied that this is what young-earth Christians are generally up against. And faithful Christians who want to maintain their old-earth convictions with integrity need to be doubly sure that they are seeking to ground their position on what the Bible plainly teaches and not be in any way beholden to the materialist assumptions that are pervasive in the world of science.

What does the Bible say?

So Christians must first adopt the worldview that interprets the claims of science through the lens of Scripture, not the other way around. We must first find out what the Bible actually teaches and then interpret the physical data within the boundaries of Scripture. Those Christians who say that the Old Testament can accommodate deep time as a valid interpretation should, in my view, seriously reconsider. Rigorous textual analysis of Genesis 1–11 shows that the genre is unequivocally historical. It is not poetry (although it includes some poetry and song). Nor is it apocalyptic literature or a collection of parables. Forcing Genesis into some other genre to accommodate the demands of secular science doesn't do justice to the biblical scholarship.

What does yom mean?

Some say that the Hebrew word *yom* in the Creation week can mean more than a 24-hour period. Yes, it can, but the vast majority of its use throughout the Old Testament is a regular day or a short period of time (at most a generation or so). If the authors of Genesis wanted to convey huge spans of time then *yom* is not the Hebrew word to use. *Yom rab* (a long time) or *Olam* (eternity) would be much more appropriate.

What do the genealogies tell us?

The genealogies given in Genesis 5 and 11 always include the age of each person when he begat so and so. These are the only two times in the Bible where ages are given. This allows us, through simple arithmetic, to add up the ages and calculate the amount of time between Adam and Abraham, which is about 2000 years. Through piecing together other established historical dates, it is possible to give Abraham a pretty firm date of 2,100 years B.C. This adds up to the Creation being a little more than 4,000 B.C. If we cringe with embarrassment at this date, it shows us how thoroughly we are in the grip of secular thinking. Again, the central issue is not the date itself—the central issue is taking God at His Word. If God clearly stated in his Word that the earth was billions of years old and secular science pronounced otherwise, would we be embarrassed affirming an old date?

Assumptions, assumptions

Many have uncritically believed all their dates of millions of years ago because many think these have been scientifically proven. The innumerable dates that they generate are produced using Uniformitarianism. Whether it be rates of radioactive decay, rates of sedimentation, rates of erosion, etc., they are assumed to have always occurred at the same rates as measured today. The stakes are high. If their assumptions are correct, then these deep time dates of millions or billions of years are reasonable. Here is just one example out of many. The problem is no one can prove the validity of assuming constant rates through all earth history. In fact, there have been excellent studies (The RATE project, ICR) showing good evidence that radioactive decay rates of Uranium-238 in certain rocks may have been exceedingly rapid in early earth history. This rapid decay would explain many of the ancient dates we calculate using Uniformitarian assumptions.
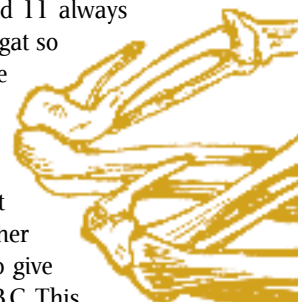
Uniformitarianism is a sword that cuts both ways

If we use Uniformitarianism consistently we would run into many incongruities with the accepted age of the earth. In several examples like continental erosion, ocean sedimentation, Carbon-14 concentrations in certain rocks, atmospheric helium concentration, etc., Uniformitarian rates would actually give dates incompatibly young when compared to the dates demanded by the Geologic Time Scale and Evolution.

This is just a brief summary of the problems that arise when blindly accepting the philosophies and assumptions that secular scientists use in trying to reconstruct the past. If Christians are to regain the high ground, we must not be duped by their pronouncements of "scientific fact" regarding the unobserved past (historical science). Rather, we must "pull down their strongholds and cast down arguments and every high thing that exalts itself against the knowledge of God."

Pulling Down Strongholds

What are these strongholds? Naturalism (including Uniformitarianism and Darwinism) is, in my view, the most formidable stronghold that Christians of all stripes (young and old-earth creationists) must tear down. Naturalism must be exposed for what it is, a philosophy, not the heart and soul of science. Naturalistic theories on the origin of life, namely the genesis of cells with all their information and complexity, are lacking one major thing: evidence. They are completely bereft of naturalistic mechanisms to produce genetic information without intelligent design. Macroevolution faces the same problem. What were the naturalistic mechanisms to produce creatures with novel features when their supposed ancestors neither had those features nor the genetic information to code for them? Is it mutation and natural selection? Show me the evidence. I have yet to see it.

In particular, Darwinism may seem like a formidable fortress but in actuality, it's a house of cards built upon the sand. One only need exercise some critical thinking, question its foundational philosophies (Naturalism and Uniformitarianism), look at the fossil record and the complexity and information content of living cells, and then look at what mutation and natural selection can actually do. Look past the glossy surface, and you will see that it's an impressive façade with nothing behind it. It's a really empty worldview being sold by persuasive, high-paid salesmen.

One might think that in this war of scientific worldviews embracing young earth creation is too rigid; too narrow. Isn't it too hard a pill to swallow for believers who have a wobbly faith and for unbelievers steeped in Darwinism? Won't a staunch young earth view weaken one's credibility and ethos before the secular world? Couldn't one be more influential if one took a more moderate view? Shouldn't we put the best foot forward, so to speak, and argue from only an intelligent design perspective? If these are reasonable questions, why am I a convinced young earth creationist? Before I answer that question, I would like to preface it with the importance of not being a shrill sectarian. We should never break fellowship with sincere believers who hold a different view in the young vs. old earth debate. I have dear Christian brothers who differ with me on this issue, and they will remain so. I also use and endorse materials and books by old earth creationists who are Intelligent Design

advocates. As I said before, it's good for the two camps to be allied for the purpose of destroying Naturalism. However, I strongly believe in young earth creation primarily because the Scriptures unequivocally teach it. Secondly, I have found that if one is not intimidated by being in the minority and is determined to look at the evidence using different presuppositions, the astronomical, biological, geological, and paleontological evidence harmonizes nicely with a young earth model. I have also found that it offers a more comprehensive worldview that answers so many more important theological and scientific questions which are much more satisfying to me than the old earth view. I have heard the best of the old earth perspective and in my view, it compromises Genesis 1–11 far too much and cannot explain the physical evidence as well. This doesn't mean that there aren't any perplexing, unanswered questions for young earth creationists to wrestle with, but in my view, young earth creation is superior both biblically and scientifically.

Recovering the High Ground

Know and trust the Scriptures even if you think there is no current satisfactory creationist explanation.

Don't be ashamed or apologetic of the biblical creation account. It's true history, so show some backbone.

Understand the limitations of science. Know the difference between empirical science and historical science. Remember that the former requires rigorous observation and repetitive experimentation. The latter interprets and explains physical phenomena in the light of a particular worldview.

Scripture tells us that someone who excels in his work will get noticed by those in authority (Prov. 22:29). Conservative Christian students who go into the sciences, and are being trained in the secular academy, should take care to be the best in the class, excelling in their work, establishing a reputation for superb skills—instead of establishing a reputation for mocking evolution or deep time geology while maintaining a C minus average. As Christians, we need backbone and true conviction, which are not the same as bigotry and ignorance.

Be leaven in the loaf (Matt. 13:33). If you have strong scientific inclinations, be excellent in your field of interest. Don't be an obnoxious, contrary pain-in-the-neck to your secular professors. Be reformational in the sciences, not revolutionary. We need to take over the scientific academy by facilitating a grass roots movement of young, biblically grounded scientists. Think towards taking dominion in the sciences. Imagine a scientific community that is completely under the Lordship of Christ and work toward that end. Secular, naturalistic scientists are jealously guarding the gates of the scientific academy and are vehement about excluding any reference to God or any metaphysical intelligence that was causal to the universe and life. We must not take this sitting down. God is to be glorified and praised for his mighty work of creation not just within our church walls. The secularists are fighting "tooth and nail" to keep the high ground because they know how important it is. Do we? Pray that God would soon fill the scientific community with outstanding, God-fearing scientists so that His glory will someday be proclaimed throughout the earth . . . including the halls of science.

—*Gordon Wilson*

For Further Reading

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PHILOSOPHY

Philosophy can be defined simply as the study of the big questions or, looked at from another angle, the *basic* questions. What is the nature of reality? How can we define knowledge? Who or what is man? Why is there something rather than nothing at all? Why is the universe here rather than someplace else?

A Christian student might be initially puzzled by this, wondering what the difference might be between philosophy and theology. The answer is that while philosophy and theology are often covering the same "subject area" ("God," for example), theology is doing so claiming to have answers, at least in principle. Philosophy claims to have the questions, and wants on the basis of man's autonomous reason to refine the questions, and answer them in accordance with the dictates of that reason. But at its best, philosophy *does* train a student to ask and answer questions with care, and this can be training that is of great value to the Christian student.

When the questions are raised and then answered "from outside the authority of autonomous human reason," that's theology. It may be false theology or true, it may be idolatrous or in service to the true God, but at the end of the day, it is some form of theology. When the questions are raised by men, and then pursued "from within," then that is philosophy.

Philosophy as we commonly understand it began among the Greeks. The first great notable philosopher was Socrates (c. 470–399 B.C.). There were philosophers before him, known as the pre-Socratics (obviously), but these men were all eighth-graders on the JV team. Socrates taught Plato, and Plato taught Aristotle, and these three men have dominated philosophical discussion ever since. Alfred North Whitehead once commented that all of western intellectual history consists of footnotes to Plato, which is not too far off.

Now there are two ways to take this—one is to say that his philosophy was so profound that it is not possible to improve upon it, or we could say that the autonomous presuppositions inherent in philosophy mean that we are condemned to spend all our time walking in the same circles, and not very big ones either.

Socrates wrote no books, and his method of pursuing the truth was the dialectical method of asking questions that basically revealed that nobody in Athens knew what they were talking about. This was obviously not conducive to Socrates' general popularity, and he wound up being condemned to die by the city of Athens. Socrates'

enduring *ethos* is not that of a dogmatician, but rather of a questioner, a seeker after light. When the oracle at Delphi proclaimed him the wisest man in Greece, he responded to this by saying that this must be because he knew that he didn't know anything. But this *bon mot* was really part of his "aw, shucks" *persona*—there are many hidden dogmatic assumptions embedded in the questions of Socrates, rock solid assumptions about reason, truth, the nature of reality, and far more. At the same time, he *was* effective with this manner of debate. Socrates was the old timer at the pool hall, chalking his custom-made ivory cue, responding to the naïve question of the new kid in town. "No, I don't really play much … how about you?"

Plato (428/7–348/7 B.C.) was one of his students, and he was present when Socrates (as an old man) was forced to drink the poison hemlock as the method of his execution. We know virtually everything we know about Socrates from the pen of Plato. Plato wrote the dialogues of Socrates, and so it is not quite clear how much of what we are getting is actually from Socrates and how much was contributed by Plato. Plato taught that everything here on earth is a "shadow" of a transcendent reality in the realm of the Forms. The Forms were ethereal, rational, non-material, and perfect. So, for example, all chairs on earth are what they are because they somehow partake of the ultimate Chair. The same goes for tables and beds. All particular things on earth "answer to" some aspect of the ultimate reality. What this system seeks to do is provide some kind of integration point for all things, a way of getting all things to make sense in a unified system.

Aristotle (384 B.C.–322 B.C.) was a student of Plato's and significantly modified his theory of the Forms. For Plato, the Forms were a transcendent reality, but Aristotle brought everything down to locate the Form of each object within that object. Thus each chair had an essence of Chair within it. The *accidents* of a chair included the fact that it was made out of wood, was red, and had a cloth seat cover. All these things were not part of the *essence* of the chair. That essence or Form was within the chair, but it was not like you could actually locate it. The student should not feel bad about this—the Forms are just really weird, and *that's* why you can't find them. In addition to being a pupil of Plato's, Aristotle also became a tutor to Alexander the Great. His work had a great deal of breadth. He not only wrote on philosophical questions, but also on politics, theater, ethics, zoology, and much more.

Plotinus (c. A.D. 205–270) was the leading exponent of a system called Neoplatonism. He was writing in the context of the rising Christian faith, but does not interact with it directly. It is also important to note he was writing at the point where classical pagan philosophy was on the verge of collapse. In common with every form of Platonism, he was suspicious of the material realm, teaching that it was contemptible in comparison with the realm of ultimate reality. He taught that there was an ultimate transcendent *One,* the source of everything else. This One is infinitely simple, which is a fancy way of saying it has no parts. It also has no attributes, including the attribute of being an "existent thing." It is simply the Good, and is not a self-aware Creator God. This world is here because it is the end result of a cascading series of emanations from that One. In short, the One is an impersonal and perfect potentiality which overflows like a cascading fountain, with each level of the overflow being less perfect. The first emanations were pure like mountain streams, but by the time it gets down to us, it is like sludge from a pipe. To change the metaphor, each level is not a digital reproduction. That means each generation that is farther away from the original is increasingly corrupt.

In the history of the West, the ascendancy of the Church meant that philosophy eventually had to take a back seat for a significant period of time. Philosophical tools were certainly used by theologians, to a certain extent, and they were acquainted with the basic philosophical issues. Some, like Boethius, appeared to be doing pure philosophy without reference to Scripture, while many others honed their philosophical gifts within the confines of revealed truth. As a result, there were a number of important philosophical developments in the medieval period—the rise of nominalism in reaction to Platonic realism being one. But the theologians' central passion was theology, and so between Plotinus and Descartes, there was a significant hiatus in philosophy. If we wish to dabble in ironies, there was a thousand years of peace—the millennium spoken of by St. John perhaps?

The gap in philosophical studies that passes over some of the great Christian thinkers is really quite striking, and so the Christian philosophy student should be ready for it. He should perhaps pursue his own reading of

Plotinus was suspicious of the material realm, even though he was writing in the context of the rising Christian faith. His thought influenced the beliefs of major thinkers over centuries. Neoplatonic elements in the writings of Saint Augustine were no doubt acquired from Plotinus's teachings.

great Christian thinkers like Augustine, Thomas Aquinas, William of Ockham, or Duns Scotus. And by all means, if he sees an elective class offered in the thought of any of these gentlemen, he should by all means take it.

René Descartes (1596–1650) should be thought of as the father of philosophy reborn. In his *Discourse on Method,* he was looking for a sure point of traction, a solid footing for human thought that could not be doubted. His starting point was in his formulation of the famous *cogito ergo sum,* "I think, therefore I am." Even in moments of radical doubting, a man cannot consistently doubt that he is in fact doubting, and doubt is a form of thinking, which means that he has to *be* here in order to be thinking. Right? The methodological point to note here is that Descartes began with the solitary thinking individual, and sought to build up the whole system from that indubitable starting point. His starting point was not God. The entire Enlightenment project can really be thought of as an endeavor built up from Descartes, a Cartesian endeavor. Modern philosophy began with the rationalism of Descartes, was carried on in the empiricism of philosophers like John Locke, was driven into a tree by the skeptical doubts of David Hume, and was then supposedly *rescued* by Immanuel Kant.

John Locke (1632–1704) was an empiricist, which means that he believed that man comes to know through his sensory experience of the empirical world. While Descartes was a rationalist and began with reason, the empirical school which came later taught that knowledge was mediated to man through his senses. Locke made important contributions to political theory and social philosophy, but in philosophy proper his main contribution was in the field of epistemology. "How can we know that we actually *know?*" His *Essay Concerning Human Understanding* gave us a new approach to the self. While Descartes held that human reason contained certain innate ideas, Locke held that the mind was a *tabula rasa,* a blank slate, which was then filled by means of experience and reflection.

David Hume (1711–1776) was part of the great Scottish Enlightenment and was an important figure in the history of philosophy. His was the first modern approach to philosophy that was thoroughgoing in its naturalism, believing as Carl Sagan eventually summarized, "The Cosmos is all that is or ever was or ever will be." At the same time, the effect of his careful approach to questions resulted in a *skeptical* naturalism, as opposed to the dogmatic naturalism of later thinkers, after they had been inspired by Darwin. Hume is famous for his argument on the low probability of miracles, as well as his critique of the argument for God's existence from design. He also showed that it is not possible to derive ethical direction from a
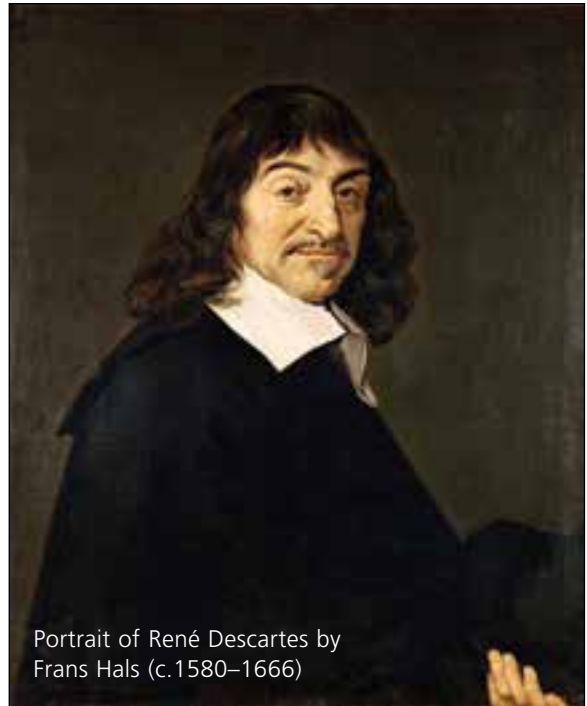
Portrait of René Descartes by Frans Hals (c.1580–1666)

study of the way things are—in short that you cannot derive *ought* from is. The cumulative effect of his philosophy was corrosive to confidence in our ability to acquire knowledge.

Immanuel Kant (1724–1804) credited Hume with waking him from his "dogmatic slumber" and sought to develop a way out of the *cul de sac* that modern philosophy had gotten itself into. The street was a one-way street, so there was no going back. It led into a *cul de sac,* and so there was no going forward. The solution that Kant offered, and which was received with great acclaim, was to float off over the houses. Kant was a crucial figure in the later Enlightenment, and he sought to give an explanation for the motto of Enlightenment—*sapere aude,* or "dare to know." Kant distinguished between the phenomenal world (which we could know after a fashion), and the noumenal realm, which he maintained we cannot know. This meant that, with regard to questions about God and the afterlife, Kant was a principled agnostic. His central contribution to the history of ideas was his transcendental idealism, which means that we have to deal with things as they appear to us, not as they actually are in themselves.

Søren Kierkegaard (1813–1855) was a fascinating Danish philosopher and theologian. In philosophy he wrote in vigorous reaction to the formalism of Hegel, and in religion and theology, he wrote in violent reaction to the dead orthodoxy of the state church of Lutheran Denmark. He is hard to pin down in many ways, but is sometimes

The *Übermensch* is a concept in the philosophy of Friedrich Nietzsche. When it was first translated into English, it became "Superman," an interpretation criticized by some for failing to capture the nuance of the German *über* and for associating it with a comic-book character. Nietzsche introduced the Superman to contrast the other-worldliness of Christianity. He said that God was an invention by which men escaped from this world. Superman is free from these failings, and in the face of nihilism creates new values motivated by a love of this world and of life.

thought of as the father of existentialism—although this is probably too facile. The Christian philosophy student will find a great deal to enjoy in Kierkegaard.

Friedrich Nietzsche (1844–1900) is in many respects the father of existentialism and of postmodernism. He was an exceptionally talented writer, with a taste for memorable aphorisms, sayings and phrases. He rejected the conventional Christianity of his time and was an apologist for a renewed and dynamic paganism. He prophesied the coming of a new Overman or Superman, one who would regard the pathetic moralities of the slave classes with contempt. Nietzsche spoke of the "death of God" in several places, which is one of his more famous phrases, but he was actually speaking of the murder of God. Nietzsche rejected the Christian ideal of charity as nothing more than sublimated resentment over the superiority of others, and urged a master-morality to replace this craven slave-morality. His defenders want to dismiss it as an irrelevant coincidence, but Nietzsche spent the last eleven years of his life completely insane.

Ludwig Wittgenstein (1889–1951) was a philosophical genius and tormented soul. His emphasis on "language games" has contributed to the widespread practice of over-analyzing the language we are using while we are trying to use it. It is kind of like trying to work on the bicycle while you are riding it, or taking out your eyeballs in order to have a look at them. He did a great deal of work in mathematical philosophy, logic, philosophy of mind, and philosophy of language. His first work *Tractatus* was taken as their inspiration by the logical positivists, but Wittgenstein claimed that they really misunderstood him, not that this would be difficult. In many ways, Wittgenstein does for modern philosophy the second time what Hume did the first time, which was to

highlight the internal tensions and contradictions in every form of autonomy—to such an extent that further progress down this road is not really possible.

Critical Issues

The problem for Christians contemplating a course of study in philosophy is that Scripture teaches us that "the fear of the Lord is the beginning of knowledge" (Prov. 1:7). We do not come to a fear of the Lord as a capstone of all our intellectual efforts, a decorative piece to crown all that we have done. Rather, the fear of the Lord is the solid foundation, upon which everything else must be built. That is where we start, not where we end. This means that Christians who are students of philosophy, or even Christians who become philosophers vocationally, cannot ever become full members of the guild. As the philosophers all get out their books, and the Christian does the same, it will soon become evident that the Christian believes he has a book with all the answers in it, which will be quickly identified as "cheating." If the Christian agrees not to use this book, then he has become a methodological philosopher, but at the cost of spiritual compromise. And as long as he uses it, as long as he is a thorough-going Christian, he will not be fully accepted as a "real" philosopher. This state of affairs is not the result of an unfortunate misunderstanding that arose just a few years ago, but rather reveals the state of affairs that has always existed between philosophy and the gospel.

At the same time, despite this tension, many Christians can be found in philosophy departments, and so over time it will be harder and harder for the secular guild to maintain their commitment to philosophical secularism. Contemporary respected philosophers like Alvin Plantinga, who are also clearly believers, have done a great deal to challenge this divide, and Christians who are committed to Christian worldview thinking and "taking every thought captive" ought to be thinking about what philosophy should look like in the future—when philosophy is again done within the context of faith as in the medieval period. There were some things that our medieval fathers did right in this regard, and there were also some blunders that we ought to be careful to avoid the second time around. But all Christian students of philosophy should be thinking in such terms—always rejecting a divided intellectual world. All of it—the whole world—belongs to Christ.

So all Christian students must understand the fundamental antithesis between autonomous philosophy and true wisdom as it is found in Christ. This does not determine whether we may study philosophy, but it absolutely must determine how we seek to do so.

The apostle Paul was acquainted with philosophy, and he took a pretty dim view of it.

> As you therefore have received Christ Jesus the Lord, so walk in Him, rooted and built up in Him and established in the faith, as you have been taught, abounding in it with thanksgiving. Beware lest anyone cheat you through philosophy and empty deceit, according to the tradition of men, according to the basic principles of the world, and not according to Christ (Col. 2:6–8).

Here he contrasts the vandalism and despoliation of philosophy with the edification that is found in Christ. And he is doing this with the "golden age" of philosophy in mind. He is talking about the philosophers who show up in "great books" programs, and he is not talking about the village nihilist. He couples philosophy with vanity and deceit, and links it to the tradition of men, to the world's basic way of thinking about things. The apostle was almost certainly familiar with the content of the "wisdom of the Greeks"—he wasn't just dismissing something he knew nothing about. This meant, at a minimum, that he was warning the Christians at Colossae about the threat posed by Socrates, Plato and Aristotle. In the ancient world, the word philosophy had an understood meaning, just as the words stool, trireme, or emperor did. When he goes after the tradition of men and the rudiments of the world, he is targeting those things which carnal men believe to be virtuous. These warnings are not to be classed in the same category with your mother's warnings about pool halls, taverns, and painted ladies. Everybody knows that painted ladies represent a set of moral temptations. Almost no one knows that respected philosophers are even more dangerous.

This focus becomes even more apparent in the first two chapters of 1 Corinthians, where Paul is probably concentrating on Aristotle. But whether he is doing that or not, his central criticism of the philosophical approach is that "the world by wisdom knew not God." And if you don't come to know God as the result of what you are doing, then what good is it?

> For the message of the cross is foolishness to those who are perishing, but to us who are being saved it is the power of God. For it is written:
>
> > 'I will destroy the wisdom of the wise,
> > And bring to nothing the understanding of the prudent.'
>
> Where is the wise? Where is the scribe? Where is the disputer of this age? Has not God made foolish the wisdom of this world? For since, in the wisdom of God, the world through wisdom did not

know God, it pleased God through the foolishness of the message preached to save those who believe. For Jews request a sign, and Greeks seek after wisdom; but we preach Christ crucified, to the Jews a stumbling block and to the Greeks foolishness, but to those who are called, both Jews and Greeks, Christ the power of God and the wisdom of God. Because the foolishness of God is wiser than men, and the weakness of God is stronger than men. For you see your calling, brethren, that not many wise according to the flesh, not many mighty, not many noble, are called. But God has chosen the foolish things of the world to put to shame the wise, and God has chosen the weak things of the world to put to shame the things which are mighty; and the base things of the world and the things which are despised God has chosen, and the things which are not, to bring to nothing the things that are, that no flesh should glory in His presence (1 Cor. 1:18–29).

Paul is clear that by the "wisdom of the wise" (v. 19), or the "wisdom of this world" (v. 20), he means the wisdom of the Greeks (v. 22). As he exults in the superiority of Christ over all these intellectual systems, he acknowledges that they do have a certain impressiveness to them. He says that God has taken weak things to confound the things which are mighty (v. 27). The scribe, the scholar, the urbane debater—God has made them all foolish. In short, on the subject of intellectual and philosophical respectability, which Paul addresses directly here, he makes it perfectly plain that there is a wisdom of the world which God regards as lunacy, and the worldly wise return the favor by treating all those who begin and end with Christ in exactly the same way—as fools.

None of this means that Christians should embrace sloppy argumentation. We should not start maintaining that wet streets cause rain, or that Christianity is true because it starts with the letter C, unlike Buddhism. As mentioned earlier, Christians can learn to ask and answer questions with care, and they can learn this from their unbelieving philosophy instructor. But Paul's warnings do mean that at the center of the philosophical endeavor there is a seduction which all thoughtful Christians must be on guard against.

I was with you in weakness, in fear, and in much trembling. And my speech and my preaching were not with persuasive words of human wisdom, but in demonstration of the Spirit and of power, that your faith should not be in the wisdom of men but in the power of God. However, we speak wisdom among those who are mature, yet not the wisdom of this age, nor of the rulers of this age, who are coming to nothing. But we speak the wisdom of God in a mystery, the hidden wisdom which God ordained before the ages for our glory, which none of the rulers of this age knew; for had they known, they would not have crucified the Lord of glory. But as it is written:

'Eye has not seen, nor ear heard,
Nor have entered into the heart of man
The things which God has prepared for
those who love Him.'

Gian Lorenzo Bernini's (1598–1680) statue of Saint Paul stands in the entrance of Ponte San Angelo in Rome.

But God has revealed them to us through His Spirit. For the Spirit searches all things, yes, the deep things of God. For what man knows the things of a man except the spirit of the man which is in him? Even so no one knows the things of God except the Spirit of God. Now we have received, not the spirit of the world, but the Spirit who is from God, that we might know the things that have been freely given to us by God. These things we also speak, not in words which man's wisdom teaches but which the Holy Spirit teaches, comparing spiritual things with spiritual. But the natural man does not receive the things of the Spirit of God, for they are foolishness to him; nor can he know them, because they are spiritually discerned (1 Cor. 2:3–14).

This is more of the same. Now in verse 14, what does Paul mean by "the natural man"? An easy assumption for modern Christians to make is that this refers to a frat-boy paganism, someone who is a licentious and lustful drinker of many beers. But natural man here refers to man at his best, not man at his worst. This means that every potential student of philosophy must have his guard up, and must understand where the antithesis really is.

A Christian Response

With all this said, why would any Christian student make the choice of studying philosophy? There are actually many good reasons, but none of the good ones include a desire to "join the club." Assuming the good reasons to be sound, what are some of the basic issues that such a student should consider?

Many of these exhortations apply equally to all Christian college students, going off to study on their own for the first time. But we have to remember that philosophy is probably the only major in college you might consider that the Bible explicitly warns against. This is not the case for mechanical engineering, or forestry, or international relations. When you study philosophy, you really are endangering your soul, and so it is appropriate to take some extra precautions.

First, don't even consider a program unless it is located in a place where you can worship God every Lord's Day in a faithful, biblical church. All faithful discipleship occurs in such community, and so if you are studying secular philosophy in the midst of their community, and you have no Christian fellowship, you will be shaped by that process, however much you might have formed mental resolutions against that kind of compromise. In order to prevent that shaping, it is necessary to maintain your loyalties to God's people in a tangible, on-going way.

The apostle Paul says that we are to prevent the world's attempts to drag us back, the world's attempts to make us conform to its standards, by being transformed into something else.

I beseech you therefore, brethren, by the mercies of God, that you present your bodies a living sacrifice, holy, acceptable to God, which is your reasonable service. And do not be conformed to this world, but be transformed by the renewing of your mind, that you may prove what is that good and acceptable and perfect will of God (Rom. 12:1–2).

But note that Paul says that we are protected in our minds by what we do with our *bodies.* This seems counterintuitive to us, but it is actually testimony to the pervasive nature of certain philosophical doctrines that have gotten into the Church. The disparagement of the body's importance is a legacy of Greek thought or Hellenism, and the Church has had the devil of a time with it over the course of many centuries. The idea that what we *think* is the only "really important thing" is an idea that we have had a really hard time with—it is the philosophical gum on our shoe.

It is therefore more important for you to get your body to church (and of course your soul may go, too), even if the worship service doesn't challenge you, than it is for you to stay in your dorm room, meditating deeply on Christian themes. The reason for this is that God's people are your people, and you need to form an attachment to them as your people. And you cannot form that kind of attachment to people without spending time with them. I could not advise anybody to study philosophy if they were not plugged into a vibrant and robust Christian church.

The second caution is very similar to the first. Personal holiness is crucial, and when there has been sin, confession of that sin is even more crucial (1 John 1:9). I have a friend who, when he was a little boy, was taken down to skid row by his father to see how the bums and addicts were living. The father was not a Christian, but he wanted his son to see the end of the road, to see the final destination of a certain class of choices. I have often thought of that example when considering what the world treats as intellectual sophistication, but which an insightful Christian ought to see as an epistemological skid row full of well-groomed, sophisticated sounding ways of knowing truth that are utterly hopeless dead ends. The universities of the world are filled with intellectual refuse and *detritus.* But this is not caused because people are being stupid. Scripture teaches that folly is a moral issue, not an intellectual one.

The Scriptures teach us that men are given over to intellectual darkness and folly because they refuse

to honor God as God, and refuse to give thanks to Him (Rom. 1:21). In other words, you don't protect your heart (your personal devotion) by means of intellectual exercises. Rather, you protect your ability to think in a straight line by means of personal loyalty to God, His standards, and His people. To be very specific, if an intelligent young man with a Christian upbringing goes off to college to study philosophy, the quickest way for him to start thinking that Heidegger was profound is by watching a lot of pornography or doing other activities that abandon the scriptural values of his family and community and, therefore, make the ridiculous seem profound.

We have a tendency to come up with reasons for staying away from God, and living in unconfessed sin causes such reasons to multiply like the frogs of Egypt. If a student is doing this while simultaneously engaged in a course of study designed for those who want to stay away from God, it is not hard to predict what will happen.

The third warning is this: don't accept a false head/heart distinction, thinking that you are studying difficult philosophical paganism in the course of your studies during the week, and that this requires some light devotional fluff to counterbalance it. We are called, in the greatest commandment, to love the Lord our God with all our minds—all our *brains*—and this means that your thought life is to be disciplined by Christ along with the rest of you. The points made earlier about the importance of being involved in a church and walking with God in your personal life were not meant to say that these activities counterbalance or "make up for" what is happening in your mind. It is *not* the case that the devil gets your brains, and so you have to give God your weekends and sex life in order to compensate. You are studying the way the unbelieving mind works, studying the different routes it may take, not in order to imitate it, but rather to anticipate and answer it. Another way of putting this is that every Christian studying philosophy really needs to be doing so as an intellectual evangelist or apologist.

"The whole problem of knowledge has constantly been that of bringing the one and the many together. When man looks about him and within him, he sees that there is a great variety of facts. The question that comes up at once is whether there is any unity in this variety, whether there is one principle in accordance with which all these many things appear and occur. All non-Christian thought, if it has utilized the idea of a supra-mundane existence at all, has used this supra-mundane existence as furnishing only the unity or the *a priori* aspect of knowledge, while it has maintained that the *a posteriori* aspect of knowledge is something that is furnished by the universe."
— Cornelius Van Til, a Christian philosopher.

In addition, Christians who have studied philosophy do not need to worry that much about what's fashionable among unbelieving philosophers. The Christian world has its own interests that we should be addressing "in house." At a minimum, we should want to have a biblical view of knowledge, freedom, mind, language, mathematics, and so on. The Christian trained in philosophy can certainly help the Church frame her questions about these subjects carefully. This *is* an area where the Christian philosophy student can plunder gold from the Egyptians, and many doctrinal tangles and theological controversies could be sorted out if we learned how to use these philosophical tools with care.

Of course, submitting to the yoke of Christ when it
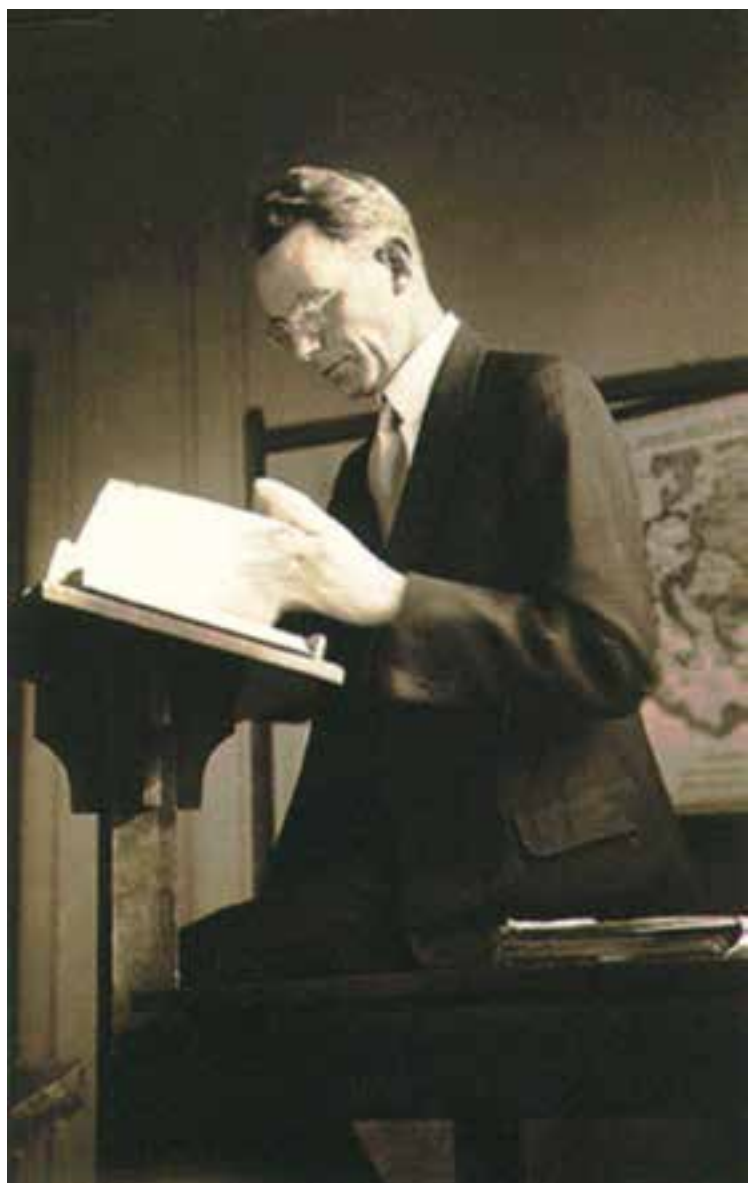
comes to your intellectual life will include reading what many Christian writers have faithfully done to answer the intellectual challenges of unbelief. Such writers should, of course, include Cornelius Van Til, C.S. Lewis, Francis Schaeffer, and G.K. Chesterton. When I was a student of philosophy, I remember that Chesterton was a lifeline of sanity to me, in a field of study where sanity did not seem to matter that much.

But at the same time, it is important to be reading other Christian writers who are in the same league with your secular studies. If all the non-believers you read are heavy-weights, and the believers are all light-weights, or you read them just to "find an answer," you will eventually get to a very bad conclusion. So even if you have a lot to read, make sure to pursue writers who are weighty and substantive, even if they are not writing in a field that addresses any of the particular questions you are working through in philosophy. Read through Calvin's *Institutes,* for example, or Augustine's *City of God.* They may not answer a particular question that came up in one of your classes, but you will be con-tinually reminded that Christians have brains, and moreover that brains can be used in ways that are entirely constructive. As you do this, be careful to resist the temptation of trying to make Christian categories fit into the philosophical ones. It is easy to become impressed with really smart guys in theology and philosophy, and then to try to force them into the same categories, which rarely works out well.

The fourth caution is that before challenging the tenets of unbelief in the classroom—before you set yourself up to be Apologetics Man—you should strive to be the best student your philosophy instructor ever had. You should do your assignments, read everything suggested, turn your papers in on time and in a legible condition, be respectful, and above all, *do not rush to the refutation.* If the second paper you turn in to this in-structor has as its thesis statement that "Kant was an idiot," what you are asking for is for that instructor to never take you seriously. Even if you had a point, which is unlikely, that point might have been made and heard had it been advanced a year or two later.

Your *ethos* as a student needs to be established first. This means that you have to take pains to make sure that you have understood what Kant is actu-ally saying before attempting to explain

to your professor how Kant became so silly. Now some might argue that sophomores have a certain divine right to be sophomoric, but Christian students should still remember that they are nineteen years old, at least for the time that they are.

As just mentioned, this is something to strive for, but sometimes things are not quite so tidy. It would be more to the point to say that Christian students should not take the offense unless they have established their credentials as hard-working, diligent students. In other words, don't carry the flag for the Christian faith, don't go over the top for Jesus, unless you have done all your home-work. But where does the messiness come in? This sce-nario outlined above assumes that your professor is just a regular guy, trying to pay his mortgage, and he does not need an ignorant born-againer dominating all his classroom discussions.

But there are other times when the professor is actively hostile to the Christian faith, and he attacks it every chance he gets. There are times when humble college students, who are not as well prepared as they would like to have been, have to defend the faith. But this is quite different than attacking for the faith. Both are sometimes necessary, but the former can be thrust upon you. The latter ought not to be taken up lightly.

And last, don't become a specialist—resist all temptation to become a philosophy wonk. There are two levels to this. The first is, "don't become a library rat," and the second is, "to the extent you are reading, have only about a third of it be the assigned work. This might seem like a ton of extra work, but it is actually a means of keeping your work proportioned and balanced. This exhortation is simply to make sure you have a life, and that you have one outside the realm of books, and also within the realm of books.

Outside your books, go hiking. Play flag football. Go to the movies. Attend all the church potlucks. When it comes to your reading, reserve about a third of your time to do all your reading assignments. Set aside another third for your Bible reading, and substantive Christian books. For the remainder, make sure you have a steady diet of P.G. Wodehouse, Shakespeare, Billy Collins, John Donne, J.R.R. Tolkien, and Jane Austen. Make sure you stay a reasonable human being.

—*Douglas Wilson*

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POETRY

"If I feel physically as if the top of my head were taken off, I know that is poetry."

—*Emily Dickinson*

"Experience has taught me, when I am shaving of a morning, to keep watch over my thoughts, because if a line of poetry strays into my memory, my skin bristles so that the razor ceases to act."

—*A. E. Housman*

"Poetry is the spontaneous overflow of powerful feelings . . . recollected in tranquility."

—*William Wordsworth*

"The poet is the sayer, the namer."

—*Ralph Waldo Emerson*

"Poets are . . . the unacknowledged legislators of mankind."

—*Percy Bysshe Shelley*

Over the centuries poetry has been described or defined in numerous different ways. One of the simplest and most memorable definitions is that of Samuel Taylor Coleridge, author of *The Rime of the Ancient Mariner*. Coleridge defined it as "the best words in the best order." Simple as it is, his definition points up the truth that, in a broad sense, all artful language is poetry.

However, we ordinarily mean by the word *poetry* language written in lines, or *verse*. The rest is *prose*, writing that runs from margin to margin down the page. Unlike poetry, prose is not broken into lines by the author. The line break is the essential distinction of poetry, since prose may possess almost all the other elements of poetry.

We first encounter poetry as children in the form of nursery rhymes, skipping rhymes, advertising jingles, and in the works of writers like Dr. Seuss. We love their strong rhymes and rhythms, as in "Tom, Tom, the piper's son, / Stole a pig and away he run," though the language may be unremarkable. Here and there a line or more may rise to the level of poetry, in Coleridge's sense of "artful language," as one does in this rhyme:

Tom, Tom, the piper's son,
He learned to play when he was young,
But the only tune that he could play
Was, "Over the Hills and Far Away."

The last line evokes by its meaning, sound, and rhythm a yearning for what is romantic and far off, and the phrase "Over the hills and far away" finds its way into many rhymes and ballads. Similarly, "Ride a Cockhorse to Banbury Cross" ends with the remarkable lines,

> Rings on her fingers and bells on her toes,
> She shall have music wherever she goes.

The lady described in the rhyme is not only impressively decked out, but the last line suggests something about her personality. She appears to be one of those magical people who carry an inner music with them. These rhymes make a strong impression on us when we're young. Recalling nursery rhymes, the Welsh poet Dylan Thomas confessed,

> I wanted to write poetry in the beginning because I had fallen in love with words. The first poems I knew were nursery rhymes, and before I could read them for myself I had come to love just the words of them, the words alone.

Dickinson

As we grow, we find a similar pleasure in comic or nonsense forms such as the limerick and the higgledy piggledy (or double dactyl). Here is a classic limerick:

> There was an old monk in Siberia,
> Whose life grew drearier and drearier.
> He emerged from his cell,
> With a blood-curdling yell,
> And eloped with the Mother Superior.

Similarly, we delight in the pounding rhythms and clever rhymes of a higgledy piggledy, or double dactyl, like the following:

> Higgledy piggledy,
> Ludwig von Beethoven
> Bored by requests
> For a tune they could hum,
> Finally answered with
> Oversimplicity,
> "Here's mein Fifth Symphony—
> Da da da **Dum.**"

As we read and encounter 'serious' poetry in school or elsewhere, we discover that there are many different forms of the art and that few have the rollicking rhythms and clanging rhymes of light, or comic, verse. We also learn that the purpose of poetry is "to delight and instruct," as the Renaissance courtier and poet Sir Philip Sydney wrote. Like all art, poetry must first please us or we're unlikely to stay with it, but what it finally reveals to us is much of the best that has been thought and written by humankind. Sydney says in a memorable phrase, it is like "a medicine of cherries."

As his phrase suggests, poetry appeals to us through the senses—sight, hearing, touch, taste, and smell, as well as the kinesthetic sense (the sense of the body's position or motion—as in dancing). Its musical rhythms and sounds, as well as its imagery and other components, are more concentrated and intense than those of other genres. One can say that a poem is an almost physical embodiment of thought and feeling. Mind, body, and emotions are unified in a good poem. To understand how this is achieved, it is helpful to look at the basic elements of poetry and consider how they work together to make the poem. These elements are *imagery, metaphor, sound, form*, and *content*. Although I can hardly pretend to treat these comprehensively in a short essay, looking into them—particularly from the writer's point of view—can provide a good start to understanding how poetry works.

HOW POETRY WORKS

Imagery

I mentioned above that a poem, both for reader and writer, can be thought of as a physical experience of thought and emotion. It should be, according to the poet Keats, "felt upon the pulses." Like all good writing, poetry is rooted in the concrete, in the experience of the five (or six) senses. Abstract words like *love, grief,* or *joy* must be incarnate in the images that make them real. Archibald MacLeish makes this clear in his poem "Ars Poetica":

> For all the history of grief
> An empty doorway and a maple leaf.

MacLeish is probably thinking here of a poem by Robert Frost. The empty doorway reminds the speaker, returning

home, of the absent loved one; the single maple leaf reminds him of his loneliness and happier times in a fall now past. In the famous balcony scene in *Romeo and Juliet,* Romeo compares Juliet to the sun:

> But soft! what light through yonder
> window breaks?
> It is the east, and Juliet is the sun!

Later Juliet expresses her love for Romeo in a similar cosmic image:

> Take him and cut him out in little stars,
> And he will make the face of
> heaven so fine
> That all the world will be
> in love with night.

These visual images, along with a hundred others supplied by Shakespeare, suggest the remarkable intensity of the love for which the two lovers are famous.

Visual images are the most common in poetry (as indeed they are in life), but note the other senses experienced in one line from Keats's "Ode to a Nightingale." The poet is wandering blindly among blossoming trees on a pitch-dark spring night and notes that he cannot see "what soft incense hangs upon the boughs." The senses of touch, smell, and a kinesthetic feeling of weight are all appealed to in the words *soft, incense,* and *hangs.* The speaker is alive in all his senses and alert as he listens to the nightingale's song. William Carlos Williams in his poetry repeats the dictum "No ideas but in things," and everyone beginning to read or write poetry should keep it in mind. Note the power of the images of the bones and foxes in these lines by Wallace Stevens,

> Children picking up
> our bones
> Will never know
> that these were once
> As quick as foxes on
> the hill,

or the effect of the Chilean poet Neruda in his "Ode to the Tomato" describing a ripe one cut in half as "a fresh, / deep,/ inexhaustible sun."

The popular Japanese form of the haiku works almost exclusively with images, as these two illustrate:

> Melon
> in morning dew,
> mud-fresh.

> Sudden sun upon
> the mountain path,
> plum scent.[1]

Note that these two, like most haiku, consist of two juxtaposed natural images that complement or contrast with one another, often in very subtle ways. The following is a haiku-like poem done by a student—in two lines rather than three (it's a bit of a riddle):

> Who let the roaring yellow tigers
> out of their cage last
> evening?

—Janet Gummeson

It describes a sunset. In Japan crowds of people will participate in haiku-writing contests. I urge you to try one.

Poetry, like all art, is rooted in the concrete, physical world. As Alan Watts observed, "Perhaps we need a poet occasionally to remind us that even the coffee we absent-mindedly sip comes in (as Yeats put it) 'a heavy, spillable cup.'" In my experience, poems begin in the world of the senses and stay rooted there, no matter where they end. What usually moves me to write is a desire to call things up by the power of words. A sensation, impression, or image will step out from its surroundings and demand my total attention: as the image reaches up toward the words, the words become the image, the thing itself. Thing becomes word, and word becomes thing. For one happy moment substance and meaning are fused. The terrible gap between experience and the articulation of experience is closed. The mind is one with what it perceives.

Chaucer

Metaphor

Metaphor, in the broad sense, means figurative language, and is found everywhere in poetry. Narrowly defined, it is a figure of speech in which one concrete image, thought, or feeling is put in place of another to suggest a likeness between them. Robert Frost defined it simply as "saying one thing in terms of another." When Romeo declares "Juliet is the sun," he creates a metaphor. When Juliet imagines Romeo cut "out in little stars" she creates another. If either of them had used the word "like" or "as" he/she would have made a kind of metaphor called a *simile*. Here are two similes:

> I . . . saw the ruddy moon lean over the hedge
> *Like* a red-faced farmer.
> And round about were the wistful stars
> With white faces *like* town children.
>
> —*T.E. Hulme*

Sometimes metaphors are only implied, as in this sonnet by Shakespeare:

> That time of year thou mayst in me behold
> When yellow leaves, or none, or few, do hang
> Upon those boughs which shake against
>   the cold,
> Bare ruined choirs, where late the
>   sweet birds sang.

After comparing his age to autumn, the speaker implies that his thinning hair is like the dwindling leaves of autumn and like branches abandoned by singing birds. The branches shaking against the cold also suggest other ills of advancing age (palsy, sensitivity to cold as opposed to warm-blooded youth). All of this is implicit, not spelled out; part of the pleasure of the poem is discovering it as we read the poem over several times. As in Janet Gummeson's poem, the object of the metaphor (the sunset) is only implied: "Who let the yellow roaring tigers / out of their cage last evening?"

A *symbol* is a special kind of metaphor, which says many things in terms of another. An image that is a symbol can mean many different things—even contradictory—like the ocean in Whitman's "Out of the Cradle Endlessly Rocking" that symbolizes both life and death, time and eternity, and more. Natural objects, forces, or actions often serve as symbols—the sky, mountains, birds, forests, serpents, fire, or geese flying south—but so do man-made things like the Cross, a many-faceted diamond, a sword, a veil, or an electric dynamo. In Keats's "Ode to a Nightingale" the bird becomes a symbol of many things, including immortality, mortality, art, ideal happiness, escape, and spiritual reality. In Keats's equally famous "Ode on a Grecian Urn," the urn suggests, in addition to the above, artistic perfection, human passion, frustration, truth, beauty, to name a few. Keats exclaims, "Thou, silent form, dost tease us out of thought / As doth eternity"—a good description of what a symbol will do.

There are other figures of speech, all of which can be grouped under metaphor. Aristotle, in his *Poetics* gives metaphor, or rather the maker of metaphors, a special place: "It is the one thing that cannot be learned from others; it is also a sign of genius, since a good metaphor implies an intuitive perception of the similarities in dissimilarities." Aristotle's statement might tempt you to try making a metaphor or two. One thing is almost certain, if you like metaphors, you'll love poetry.

Sound

In addition to imagery and metaphor, poetry must have the music of words. One indication of how much a person will like reading or writing poetry is how much he enjoys the sound of words. Auden said that in the case of two youths, one of whom says, "I want to be a poet," and the other, "I like fooling around with words," he would have more hope for the second. I recall as a child going by gas station signs in the car and reading them backwards for the sound. "Gulf Gas" became "Flug Sag"; and the ordinary "Standard Oil" became the mythical monster, "Dradnats Lio." Most children from infancy on play with words and other sounds; unfortunately parents and school sometimes suppress this creative oral play.

Rhyme is only the most obvious musical effect in poetry. The list includes *onomatopoeia, alliteration, assonance, consonance*, and more. Actually the sound of every word in a poem interacts with every other word. Studies show the reader is aware of these—if only subliminally—over the length of four or five lines. Every sound in language sounds either more like, or unlike, every other sound. Take the sound of the words *oil* and *critic*. They are so different one might say they clash, that they are *anti-rhymes*. The following words have much sound in common: *barn, burn, moon, moan*. So do *decrepit, creditor, medical*. Whether words clash or harmonize, the sound of all of them together is part of the music of poetry.

The sound and rhythm of the words should reinforce the poem's emotion and meaning. As Alexander Pope wrote, "The sound must seem an echo to the sense." Read the following passage aloud to hear all sound effects that it describes (*Zephyr* is the south wind, and *numbers* refers to the meter of the piece):

The sound must seem an echo to the sense.
Soft is the strain when Zephyr gently blows,
And the smooth stream in smoother
    numbers flows;
But when loud surges lash the sounding shore,
The hoarse rough verse should like the
    torrent roar.
When Ajax strives some rock's vast weight
    to throw,
The line too labors and the words move slow;
Not so, when swift Camilla scours the plain,
Flies o'er th'unbending corn, and skims
    along the main.

Poetry can sometimes help us "see" things even better than the visual arts. In this painting *The Adoration of the Kings and Christ on the Cross,* attributed to Benedetto Bonfigli (d. 1496), the connection is made between the Nativity and the Crucifixion. But that relationship is made quicker and stronger in a piece by Christian poet Luci Shaw (1940–) called, "Mary's Song." At the end of that poem she writes:

> *. . . nailed to my poor planet, caught*
> *that I might be free, blind in my womb*
> *to know my darkness ended,*
> *brought to this birth for me to be new born,*
> *and for him to see me mended,*
> *I must see him torn.[2]*

Earlier he has described an *Alexandrine* (a long six-foot line, often used to end a stanza or poem) as "a wounded snake," and slows the line to a literal crawl:

> A needless Alexandrine ends the song,
> That like a wounded snake, drags its slow
>   length along.

Briefly, the sound effects of poetry include:

Onomatopoeia: words that sound somewhat like what they denote: *buzz, bang, click, snick, tintinnabulation*, and also, *skinny, slim, slender, spindly, fat, gross, huge, hog, vast.*

Alliteration: The repetition of consonant sounds. Note the m's in these lines by Tennyson as you read them aloud:

> The moan of doves in immemorial elms
> And murmuring of innumerable bees.

Assonance: The repetition and modulation of vowels. These lines by Sylvia Plath have rich vowel sounds and alliterating consonants. Again, read them aloud:

> Haunched like a faun, he hooed
> From grove of moon-glint and fen-frost
> Until all owls in the twigged forest
> Flapped black to look and brood
> On the call this man made.

Rhyme: Unlike a language like Italian, English is poor in rhymes (*true rhymes*, that is, such as *June/moon, weather/feather, bubble/trouble*). For the last century many poets have used *half-rhymes* (also called *off-* or *slant-rhymes*), expanding greatly the opportunities for rhyme. *Frost* and *forest* in the above poem are half-rhymes. Wilfred Owen, a World War I poet, provides further examples in "Arms and the Boy": *blade* and *blood, flash* and *flesh:*

> Let the boy try along this bayonet-blade
> How cold steel is and keen with hunger
>   of blood;
> Blue with all malice, like a madman's flash;
> And thinly drawn with famishing for flesh.

Finally, rhyme occurs not only at the end of lines, but within the lines, and then it is called *internal rhyme*. Here is one from Coleridge's *Rime of the Ancient Mariner*:

> The ship was *cheered*, the harbour *cleared*.
> Merrily did we drop
> Below the kirk....

In the following four lines from Gerard Manley Hopkins' "What I Do Is Me," there are twelve rhymes, eight of them internal, besides an abundance of alliteration and assonance:

> As kingfishers catch fire,
>   dragonflies draw flame;
> As tumbled over rim in roundy wells
> Stones ring; like each tucked string tells,
>   each hung bell's
> Bow swung finds tongue to fling out broad
>   its name.

Rhythm: Rhythm and meter, part of the sound, are discussed in the following section.

Form

As I noted above, the chief formal difference between poetry (or verse) and prose is the line. The line-break creates this fundamental difference between the two; all other differences follow from this one. Historically, lines have had elements added to them, such as rhyme and *meter* (a certain count of syllables or accents per line). But these features only add to, and enrich, the fundamental difference.

All English has *speech rhythms*; that is, when spoken, some syllables are stressed more than others. When one breaks speech into the lines of poetry, the line-breaks create a new, secondary rhythm modifying the primary speech rhythm. One can easily see and hear this effect in William Carlos Williams' lines about a cat:

Poem

As the cat
climbed over
the top of

the jamcloset
first the right
forefoot

carefully
then the hind
stepped down

into the pit of
the empty
flowerpot

In a pine tree,
A few yards away from my window sill,
A brilliant blue jay is springing up and down,
 up and down,
On a branch.

This *syntactical free verse* is the kind the psalmists used:

He maketh me to lie down in green pastures,
He leadeth me beside the still waters,
He restoreth my soul …

For Thou art with me,
Thy rod and thy staff, they comfort me.
Thou preparest a table before me
 in the presence of mine enemy.
Thou anointest my head with oil,
My cup runneth over.

Because of the many line- and stanza-breaks, we hear and see the slow, graceful movement of the cat. Compare these lines to the same words written out as prose:

As the cat climbed over the top of the jamcloset first the right forefoot carefully then the hind stepped down into the pit of the empty flowerpot.

In contrast to the poem, this prose sentence seems undistinguished, and perhaps a little awkward, as we speed through it.

Examining a poem's patterns of sound, rhythm, and appearance on the page reveals its *form*. There are a number of different forms of poetry. The Williams poem about the cat is written in *free verse*, that is, verse free of both rhyme and *meter* (a particular count of accents or syllables per line). In free verse pure and simple each line may be of any length the author chooses. As in the cat poem, this is the only rule. Of course, it doesn't make good free verse any easier to write, for the breaks finally must support the overall effect of the poem.

Sometimes the poet will make each free verse line a unit of *syntax*, such as a phrase, a clause, or a sentence. The end of each line corresponds to a natural pause in speech, as in these lines from "I Try to Waken and Greet the World Once Again" by James Wright:

Each line (or half-line, in the Hebrew) tends to parallel the structure of the other lines and repeat the point in a new way. This kind of free verse, with its parallel construction, was adopted by Whitman and Ginsberg and other poets in modern times to great rhetorical effect:

What place does Faith play in the work of a poet? W.H. Auden turned to Christianity when his own humanistic tradition failed to provide a way of explaining or combating the evil he encountered during the Spanish Civil War and the rise of Nazi Germany. In contrast, Alfred Tennyson (opposite) left the faith in which he was raised and near the end of his life said that his "religious beliefs also defied convention, leaning towards agnosticism and pandeism."
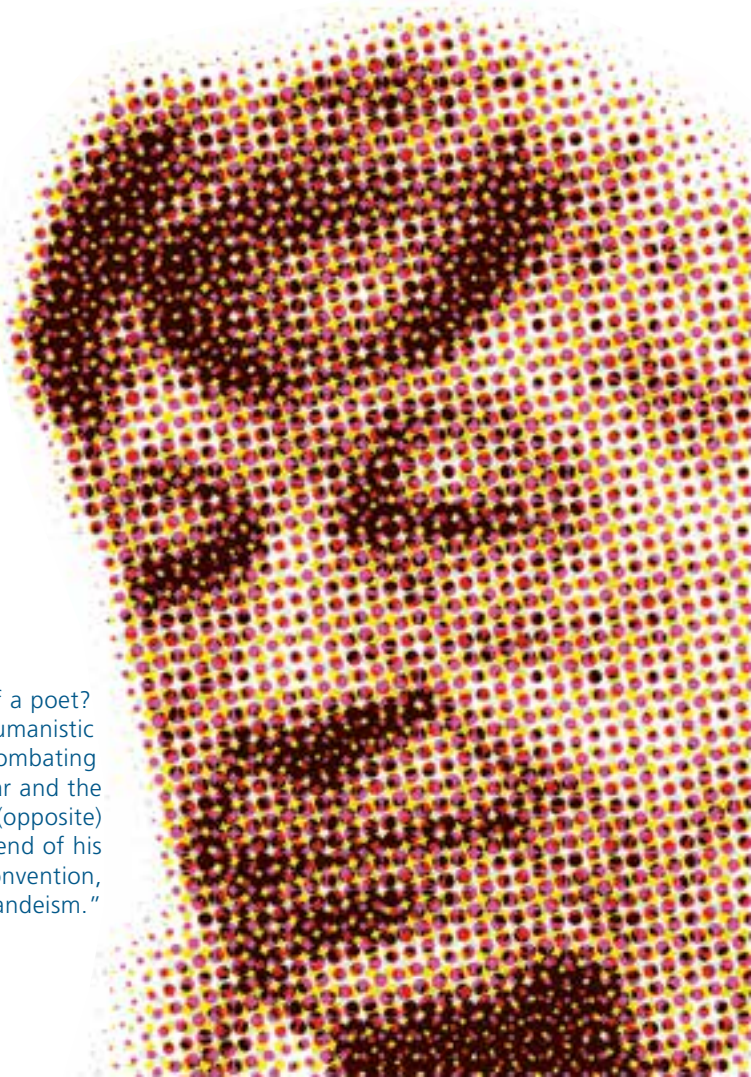
O my chief good,
How shall I measure out thy blood?
How shall I count what thee befell,
And each grief tell?

Shall I thy woes
Number according to thy foes?
Or, since one star show'd thy first breath,
Shall all thy death?

Or shall each leaf,
Which falls in Autumn, score a grief?
Or cannot leaves, but fruit be sign
Of the true vine?

Then let each hour
Of my whole life one grief devour:
That thy distress through all may run,
And be my sun.

Or rather let
My several sins their sorrows get;
That as each beast his cure doth know,
Each sin may so.

Since blood is fittest, Lord to write
Thy sorrows in, and bloody fight;
My heart hath store, write there, where in
One box doth lie both ink and sin:

That when sin spies so many foes,
Thy whips, thy nails, thy wounds, thy woes
All come to lodge there, sin may say,
'No room for me', and fly away.

Sin being gone, oh fill the place,
And keep possession with thy grace;
Lest sin take courage and return,
And all the writings blot or burn.

The poem *Good Friday* is by George Herbert,
the oil painting *The Road to Calvary*
is by Lorenzo Lotto (c.1480–1556).

And I know that the hand of God
    is the promise of my own,
And I know that the spirit of God
    is the brother of my own,
And that all the men ever born are also my
    brothers and the women my sisters and lovers,
And that a kelson of the creation is love.

—*Whitman,* "Song of Myself"

A third kind of free verse, uses the white space on a page to great effect, making an appeal to the eye as well as the ear. It is called *typographical* or *spatial free verse* because it depends on where the type is set on the page in relation to the white space. Here is an example from e.e. cummings' "Chanson Innocente":

in Just-
spring   when the world is mud-
luscious the little
lame balloonman
whistles   far and wee

and eddieadbill come
running…

and from his "Portrait,"

Buffalo Bill's
defunct
       who used to
       ride a watersmooth-silver
               stallion
and break onetwothreefourfive pigeonsjust
             likethat.…

Notice how running the words together in both these examples speeds up the way you read the words, while separating them with white space slows you down or causes you to put more emphasis on a word like *stallion.*

Typographical verse also includes *shaped verse*, where the words on the page may resemble everything from an apple to a coke bottle. I hope you'll try writing a shaped poem. (Here's a demonstration called "Urn"):

<div align="center">

I
a m
w r i -
t i n g t h i s
v e r s e t o l o o k
l i k e a l i t-
t l e C h i-
n e s e
c e r a m i c

</div>

A popular form today, it was used by George Herbert centuries ago for his poem "Easter Wings":

<div align="center">

Lord, who createdst man in wealth and store,
Though foolishly he lost the same.
Decaying more and more,
Till he became
Most poore:
With thee
O let me rise
As larks, harmoniously,
And sing this day thy victories;
Then shall the fall further the flight in me.

</div>

Each stanza (there are two in the poem) resembles an angel's wings when you turn the page on its side. (His example is not free verse, however, since he uses, in addition to shape, both rhyme and meter.)

Most poetry over the years has been written in *meter*, a word related to "measure." In most metrical poetry every line has the same number of *accents* (*stresses, beats),* or *syllables*, or both. One of the simpler metrical forms is *syllabics.* In syllabic verse one counts only the number of syllables in each line. The haiku is a familiar example, often written with a syllable count of 5, 7, 5 in its three lines:

The crow twitches its   5
feathers. A few snowflakes drift   7
in the damp spring air.   5

<div align="right">

—Trevor LeGeis

</div>

These lines from Sylvia Plath's "Dark Wood, Dark Water" each have five syllables:

This wood burns a dark
Incense. Pale moss drips
In elbow-scarves, beards
From the archaic
Bones of the great trees.
Blue mists move over
A lake thick with fish.…

In contrast to syllabics is *accentual verse*, in which we count only the accents per line and ignore the number of syllables, of which there can be any number. In the opening lines to Coleridge's *Christabel* the number of stresses is four, while the number of syllables varies from four to eleven:

'Tis the middle of night by the castle clock,
And the owls have awakened the
    crowing cock;
Tu–whit!—Tu–whoo!
And hark, again! the crowing cock
How drowsily it crew.

In *scanning* the verse, that is, counting the number of stresses or feet per line, we usually mark the stressed syllables with an *ictus* (ˊ) and the unstressed syllables with a *breve* (˘). One looks like a little carrot and the other like a little hammock, as in the above verse.

The most common verse form in English is *accentual-syllabic*, where we count both the number of accents and number of syllables in a line. It has been the predominant form for hundreds of years. Robert Frost's "Stopping by Woods on Snowy Evening" is a familiar example:

Namesake of the Spenserian sonnet, Edmund Spenser (c. 1552–1599) composed the epic poem *The Faerie Queene* to illustrate several of the Christian virtues. The poem was written, appropriately enough, in Spenserian stanzas —that is, eight lines in iambic pentameter followed by a ninth line in iambic hexameter.

> Whose woods / these are / I think / I know.
> His house / is in / the vil / lage though.
> He will / not see / me stop / ping here
> To watch / his woods / fill up / with snow.

Each line has eight syllables of which four are accented, or stressed. Long ago people discovered that stressed and unstressed syllables often fall into repeated patterns within the line. These groups or clusters of syllables have been named, according to the patterns they repeat, as different kinds of *feet.* These feet have the exotic names of *iambic, trochaic, anapestic, dactylic*—names borrowed from the Greeks. (The feet in the Frost poem are separated by forward slashes.) These classifications of metrical feet are often misleading to beginning poets, as well as to readers, who mistakenly think that these patterns must be rigidly adhered to in a poem. In reality, most good accentual-syllabic verse will 'violate' metrical regularity almost as often as it fulfills it.

As Robert Frost himself said, in English we basically have two kinds of meters: a rising and a falling. The *iambic* (˘ ´) is rising, as in

> Whose woods these are I think I know

and so is *anapestic* (˘ ˘ ´), as in

> An old man took his dog to Detroit.

The iambic is the most common meter, while the galloping effect of anapests is useful in light verse, such as limericks. The *trochaic* is a falling meter as in

> Martin married Ingrid's sister.

So is *dactylic* (´ ˘ ˘), which, like anapestic, tends to gallop—as it does quite appropriately in Tennyson's "The Charge of the Light Brigade":

> Half a league, half a league,
>   half a league onward
> Into the mouth of Hell rode the six hundred.

The most common accentual-syllabic lines are five-foot *iambic* lines (*iambic pentameter*) and, second, four-foot iambic (*iambic tetrameter*), followed last by three-foot or *iambic trimeter*. The prefixes *penta-, tetra-, tri-* simply mean *five, four, three* respectively. All of these, plus two-foot lines, can be found in Herbert's "Easter Wings," above. Unrhymed iambic pentameter, often called *blank verse*, is the most common form of iambic pentameter and the most common verse form in English. Shakespeare wrote his plays in this form: Hamlet soliloquizes in it, "To be, or not to be, that is the question," and Romeo and Juliet declare their undying love in blank verse:

> Two of the fairest stars in all the heaven,
> Having some business, do entreat her eyes
> To twinkle in their sphere till they return.
> What if her eyes were there, they in her head?
> The brightness of her cheek would
>   shame those stars,
> As daylight doth a lamp....

The meter sets up a pattern of stresses or beats for the accentual-syllabic poem. But there is also, playing against this, the natural rhythms of speech. The two do not always agree, in which case the speech rhythm wins and changes the meter. Note the change the rhythm of speech makes in the iambic pentameter of this line from a sonnet by John Donne: "Batter my heart, three-personed God, for you ...." In the back of our minds, like the bass beat in the background of a song, we are aware of the expected iambic meter,

di DAH di DAH di DAH di DAH di DAH.

What we actually hear is quite different:

BATter my HEART, THREE-PERSoned GOD for YOU

The counterpoint, or play, of the actual speech rhythm against the anticipated pattern of the meter gives us pleasure, just as contrapuntal rhythms do in music. Now read aloud the whole sonnet by Donne, using natural speech rhythms, and you will sense that counterpoint. You'll discover that the natural rhythm of speech differs from the meter in many places:

> Batter my heart, three-person'd God; for you
> As yet but knock, breathe, shine and
>   seeke to mend;
> That I may rise and stand, o'erthrow mee,
>   and bend
> Your force to breake, blowe, burn and
>   make me new.
> I, like an usurpt towne, to another due,
> Labour to admit you, but Oh, to no end.
> Reason your viceroy in mee, mee
>   should defend,
> But is captiv'd, and proves weake or untrue.
> Yet dearely I love you, and would

I am interested in the precise observation of small twists and turns in people, including ambivalence, rather than the grandiose beauty or the terrible darkness of humanity. The poet, Scott Cairns, is a good friend of mine and this is a portrait I thought about for at least a year before asking him to pose for me. I was most interested in his conversion to Orthodoxy and the seriousness with which he attended to prayer. He had what looked like a string bracelet with beads on it around his wrist that he used to mark the repetition of The Jesus Prayer. He told me that when he first learned the prayer his priest asked him to begin by repeating it 1,000 times. The string was red and my intention was to have part of it dangle below his coat sleeve in the painting, but as I photographed him he surprised me by singing hymns, and, seeing that the prayer bracelet was not at all visible anyway, I gave up that idea and titled the painting "The Singing Poet." As time passed and I lived with the portrait in my studio, the title became more and more boring to me and had nothing of the intense feelings I had toward what I had seen in Scott; the tension between loving God and failing Him. Scott had had some whiskey at our house the night before the photo session and "I Drink Your Whiskey and Your Sorrow" came to me as a phrase that encompassed our being bound to the earth, God's care for that, and what we both do in response to it."—Catherine Prescott

> be loved faine
> But am betroth'd unto your enemie.
> Divorce mee, untie, or breake that knot againe,
> Take mee to you, imprison mee, for I
> Except you enthrall mee, never shall be free,
> Nor ever chaste, except you ravish mee.

Notice how the pounding stresses "knock, breathe, shine" and "breake, blow, burn," sound like the battering ram of the "three-personed God" trying to enter the speaker's heart. They radically alter the iambic meter even as they "echo the sense."

In the last century poets have become even more free in their use of accentual-syllabic verse. Much free verse might more accurately be called *mixed meter*, where there is a ghost of one or more metrical patterns behind the lines of a poem, though the line lengths vary so much one can't call them truly metrical. Much of T.S. Eliot's free verse, for instance, appears to be written in mixed meter. Poets will sometimes mix not only meters but the free and metrical verse. Again, Eliot gives us an example in *The Waste Land.* (This is the best-known poem world-wide written in the last century. I might add that his longest poem, *Four Quartets*, written after Eliot's conversion, is considered by many the greatest poem in English from the twentieth century.)

Poetry is an art, and therefore *prosody* (the study of form—what we've just been doing) is itself an art and not a science. There is very little that is scientifically precise about it, and much depends upon individual interpretation and point of view. Readers will often differ as to what the speech rhythm of a line or a piece is, depending on which words they think should be stressed. And some stresses receive more emphasis than others.

Content

Unlike painting or music, poetry has all the resources of language at its disposal. It can have content and meaning, therefore, in ways that music and the visual arts cannot. Poetry can tell the story of a people, put forward a philosophy, present a vision of hell and heaven, or record the growth of a poet's mind. It can in a brief lyric capture a frog plunging into a pond or the elusive moment of falling in love.

Most beginning poets tend to think a poem has to be about one of the 'big' subjects: love, grief, God, art, the meaning of life or death. It takes a while for them to realize that they're better off focusing on small things, such as a toad in the garden, a comb with broken teeth, a craving for chocolate, or a squirrel in the attic. William Carlos Williams wrote about the cat climbing over the jam jars, and an even more famous poem about a wheelbarrow:

Robert Lee Frost (1874–1963), famous American poet who received four Pulitzer Prizes for Poetry.

> The Red Wheelbarrow
>
> so much depends
> upon
>
> a red wheel
> barrow
>
> glazed with rain
> water
>
> beside the white
> chickens

This poem does nothing more (or less) than help us *see* the wheelbarrow and chickens and perhaps lead us to reflect on what "depends" upon them. A poem about some humble object may well wind up reflecting in a fresh way on one of the big subjects such as love, beauty or death. In a poem called "Tomes," which is ostensibly about heavy books in his library, Billy Collins weighs a history textbook on his deceased mother's food scale and finds it turns his thoughts to her,

> even though it never mentions my mother,
> now that I think of her again,
> who only last year rolled off the edge of the earth
> in her electric bed,
> in her smooth pink nightgown
> the bones of her fingers interlocked,
> her sunken eyes staring upward
> beyond all knowledge,
> beyond the tiny figures of history,
> some in uniform, some not,
> marching onto the pages of this incredibly
>   heavy book.

This may be an example of how the poem that needs to be written can come along and take over the poem the poet first intended to write. Writing a poem is often a journey of discovery. At the end of the poem we learn, as perhaps Collins learned, how the tome and his mother's death fit together.

It's often helpful when looking for something to write about to get outside of yourself and the self's preoccupations. I recommend to writing students that they try to imagine themselves as someone else, either human or animal. It is helpful to imagine what it would feel like to be a tree, insect, or inanimate object and to write from that point of view. I've even suggested such alter egos as a piece of dental floss, a carpet, or coat hanger. Writing the following, I imagined myself a "Deer Tick," (the carrier of Lyme disease) addressing its victim. It begins,

> No larger than a period I scramble
> among the sequoia of your armhairs
> unable to decide in this vast wilderness

where to drill for the life-giving well
the water of life, the warm blood.
For I am sick unto death: in my abdomen

the spirochete turns its deadly corkscrew
which I must shortly confess to the stream
pulsing from your dark red heart. . . .

Though I started by simply identifying with the insect, by the time I finished the poem I found the tick and the disease had become symbols of the general human malaise we call original sin. Here is another animal, a giant panda, often seen in zoos or nature videos:

In the white mist of morning I find my place,
a square of the sun where I can balance

and chew the shoots, their green light
    in my mouth.
I sit, my footpads shiny, taking in the dim

sweet music of existence. . . .

The possibilities are endless.

A word about inspiration. It's wonderful to write a poem when you feel inspired. But what seems good in the moment of inspiration may appear flat and uninspired in the cold light of the next day. On the other hand, a poem begun with a few dry facts from an encyclopedia may catch fire as one works on it. I once saw a photo of a moose crossing a bridge from Vermont into New Hampshire. That was the germ of a poem, but I had to look up facts about the moose—dry as dust—in order to write it. Only then did I feel the poem come alive. The Muse is unpredictable—and we do need to court her in a variety of ways.

A final word about content and any idea, or message, you want your poem to contain. Poems written deliberately to convey an idea or 'message' do not often succeed as poetry. It becomes too conscious a process; the Big Idea gets in the way. Save the message for an editorial , sermon, or essay. On the other hand, if you focus on writing a good poem about a moose, a heavy book, or a toothless comb, your deepest convictions will manifest themselves in it without your intending them to.

A Christian Response

Shortly after 9/11 *The New Yorker* and other magazines invited readers to send in poems (either their own or by others) to express what they felt in the face of the terrorist atrocity. Only in poetry did people find words to express adequately their grief and horror at the 'unspeakable' event.

Next to singing in the shower, poetry may be the most universally practiced art. It seems nearly everyone at some point in life tries to write a poem. Certainly most people would agree with the bumper sticker, "Poetry says it best." The fact that they are poetry is one reason the psalms are the most popular book in the Bible. The poet William Carlos Williams claimed, "It is difficult to get the news from poems, yet men die miserably every day for lack of what is found there."

Poetry captures experiences and expresses feelings and thoughts that elude our ordinary speech and our discursive prose. Among its great values is that it can help us experience vicariously the lives, thoughts, and feelings of other people in our own space and time, and of those, like Romeo and Juliet, distant in space and time. Reading and writing poetry can give us a better understanding of ourselves, of other people, of nature, and of God. Not only does it tell us in concentrated and beautiful language what we already know—"What oft was thought but ne'er so well expressed," as Pope describes it—but it provides insights into mysteries inexpressible in other forms, as does Blake's poem "The Tyger" or these lines from Wordsworth's "Tintern Abbey:"

And I have felt
A presence that disturbs me with the joy
Of elevated thoughts; a sense sublime
Of something far more deeply interfused Whose
dwelling is the light of setting suns,
And the round ocean and the living air,
And the blue sky, and in the mind of man:
A motion and a spirit, that impels
All thinking things, all objects of all thought,
And rolls through all things.

Unlike philosophy, history, or the sciences, poetry does not exclude any human act, thought, feeling, belief, or intuition as not pertinent to its method; the whole spectrum is there, including the spiritual. Every conceivable human attitude, point of view, or feeling has somewhere been expressed in poetry. What is true of poetry is also true of the other genres and arts. The infinite variety of humanity is in all. Fortunately there are many poets whose works can feed us spiritually. A very short list would include Dante, John of the Cross, Spenser, Shakespeare, Milton, Donne, Herbert, Blake, Wordsworth, Coleridge, Browning, Hopkins, Thompson, Eliot, and Auden.

Even poets who do not profess faith may reflect the Christian neo-platonic tradition that has been with the Church from at least Augustine. Neoplatonism, as it has been assimilated in the theology of Augustine and others, maintains that God is the one source of the Good, the True, and the Beautiful, and that every creature radiates something of these qualities. They shine through the material
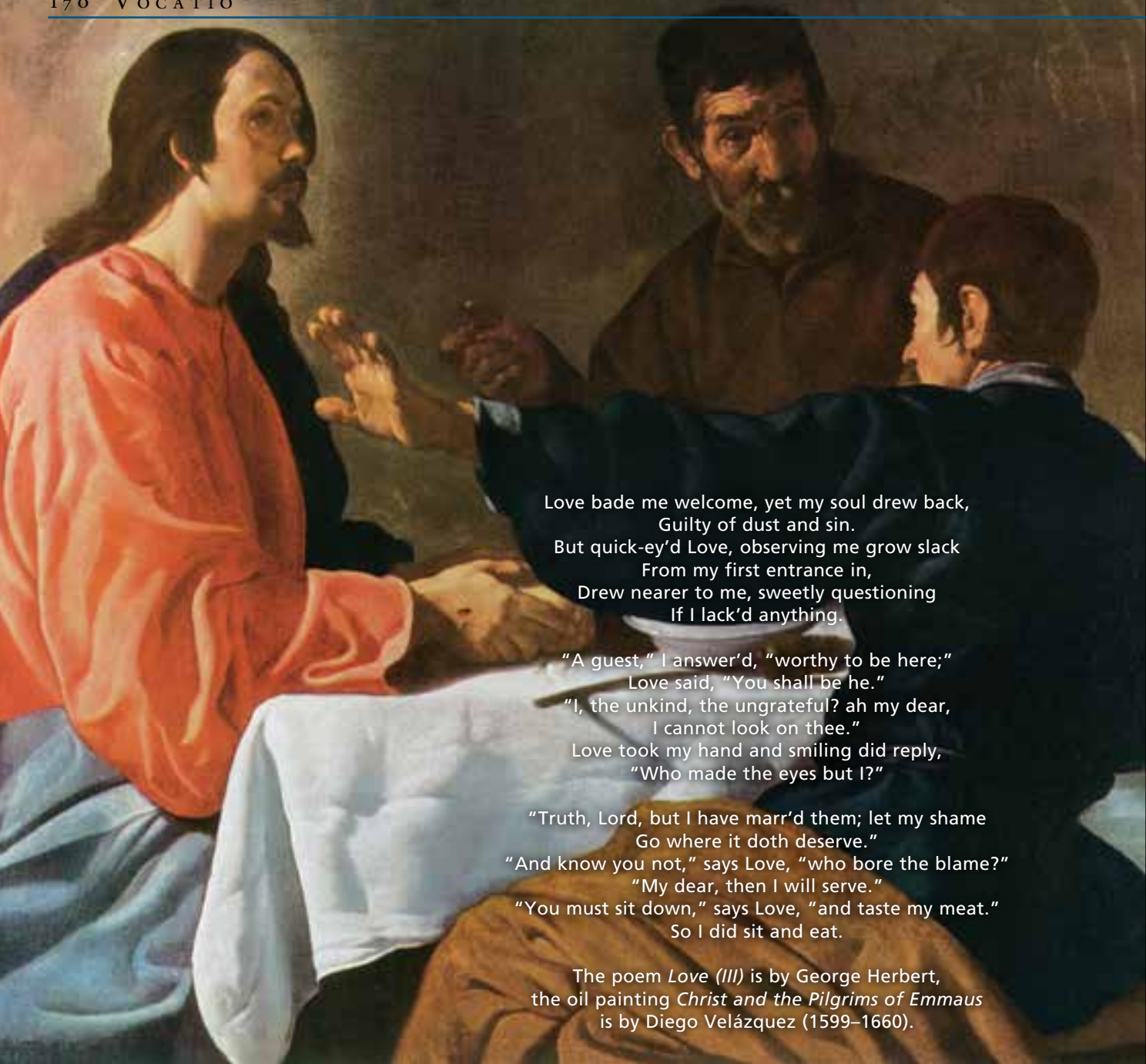
Love bade me welcome, yet my soul drew back,
Guilty of dust and sin.
But quick-ey'd Love, observing me grow slack
From my first entrance in,
Drew nearer to me, sweetly questioning
If I lack'd anything.

"A guest," I answer'd, "worthy to be here;"
Love said, "You shall be he."
"I, the unkind, the ungrateful? ah my dear,
I cannot look on thee."
Love took my hand and smiling did reply,
"Who made the eyes but I?"

"Truth, Lord, but I have marr'd them; let my shame
Go where it doth deserve."
"And know you not," says Love, "who bore the blame?"
"My dear, then I will serve."
"You must sit down," says Love, "and taste my meat."
So I did sit and eat.

The poem *Love (III)* is by George Herbert,
the oil painting *Christ and the Pilgrims of Emmaus*
is by Diego Velázquez (1599–1660).

world. Some might argue that this view has been with poets from the beginning. For David and other poets of the Psalms, everything in the world contains God. It is one animating Spirit or Logos in all things that the psalmist celebrates:

Bless the Lord, O my soul!
Who has stretched out the heavens like a tent,
Who hast laid the beams of thy chambers
    on the waters,
Who makest the clouds thy chariot,

Who ridest on the wings of the wind,
Who makest the winds thy messengers,
    fire and flame thy ministers. (Ps. 104)

This tradition has certainly been part of poetry in English from its origins to the present. As Emerson put it, "the universe becomes transparent, and the light of higher laws than its own shines through it."

In a suggestively similar verse, the apostle James

wrote, "Every good gift and every perfect gift is from above, and cometh down from the Father of Lights, with whom is no variableness, neither shadow of turning." This stunningly beautiful sentence helps remind us that poetry (and all the arts) are some of those perfect, or nearly perfect, gifts from above, from the Father of Lights. We noted earlier that poetry delights and instructs. It gives us knowledge about our world and ourselves, and stimulates us to empathize with other people and cultures. It can motivate us to good works and inspire us to seek God.

Poetry does all of these things, but one of the most important things it does is not often discussed: our imaginative response to a poem may give us an epiphany, a shining forth, a sudden intuition or realization, a communion not easy to express. As nearly perfect things, with all their parts fitting together as one, poems (and other works of art) help us to forget ourselves and experience a unity, a completeness, a wholeness, for a minute or an hour. Bruno Barnhart, a Camaldolese monk, calls this a "unitive" experience, a kind of aesthetic foretaste of the union or communion we can experience with God. In a sense, every work of art is complete, an end in itself, and invites us into its perfection. As Bruno says," It shines." As in religious experience, we forget our incomplete, divided selves, and for a moment are made one with what we are reading, looking at, or listening to. This unitive experience can lead us to see beyond the work of art itself to what shines through it—the world of meaning and spirit. Poetry may help us find such moments in the ordinary (and extraordinary) things in the world that surround us every day. Everything from a blade of grass, a stone, a certain slant of light, a human face, a song, a photo from the Hubble telescope, or a poem.

William Blake is one who understood this contemplative connection. He invites us,

> To see a World in a Grain of Sand
> And a Heaven in a Wild Flower
> Hold infinity in the palm of your hand
> And eternity in an hour.

To see a world in a grain of sand or a heaven in a wild flower, we must forget ourselves and become one with it.

Poetry and the arts are no substitute for religion, but traditionally a servant to her. The experience of beauty, or esthetic contemplation, especially the unitive experience, may lead us toward union with God. Simone Weil, a brilliant, and skeptical, young philosopher, was converted while reciting George Herbert's poem "Love III," which she had memorized for its beauty. While reciting it to herself one day, she later wrote,

> Christ himself came down and took possession
> of me. In my arguments about the insolubility of
> the problem of God I had never foreseen the possibility of that, of a real contact, person to person,

here below, between a human being and God."

> —*Simone Weil,* Waiting for God

Her witness reminds us that the experience of beauty must finally point beyond itself or it can degenerate into mere estheticism. Like images of Paradise, it points to a Heaven beyond itself.

The English poet-priest Gerard Manley Hopkins wrote poetry filled with epiphanies in the ordinary and extraordinary. He found them even under the smoke-choked sky of nineteenth century Birmingham: "The world is charged with the grandeur of God" he wrote,

> It will flame out, like shining from shook foil.
> ………….
> Because the Holy Ghost over the bent
> World broods with warm breast and with ah!
>   bright wings.

The moment of epiphany leads Hopkins to praise God, delighting in every detail of creation in all its enormous and particular variety. Here is "Pied Beauty," where he celebrates a spotted cow, rose moles on a trout, and even a workman's ordinary tools:

> Glory be to God for dappled things—
>   For skies of couple-colour as a brinded cow;
>   For rose-moles all in stipple upon trout
>   that swim;
> Fresh-firecoal chestnut-falls; finches' wings;
>   Landscape plotted and pieced—fold, fallow,
>   and plough;
>   And all trades, their gear and tackle and trim.
>
> All thing counter, original, spare, strange;
>   Whatever is fickle, freckled (who knows how?)
>   With swift, slow; sweet, sour; adazzle, dim:
> He fathers-forth whose beauty is past change:
>   Praise him.

The moment of epiphany leads to praise. Like the psalmists, Hopkins continually praises God for the natural world. Thoreau said that most of us spend our lives pushing our house and barn in front of us. Or we may spend our lives pushing other peoples' houses and barns, never pausing to contemplate finches wings or rose moles upon a trout. We push ahead, ignoring these promises of paradise, these foretastes of divine union. The unitive experience in poetry can lead us toward what Brother Lawrence, famous for practicing the presence of God in the kitchen among the pots and pans, called "the simple gaze: that loving sight of God everywhere present that is the most holy, the most solid, the easiest, the most efficacious manner of prayer." The

exercise of the imagination through poetry can help us to discover that loving sight. The union with beauty through poetry may lead us to better experience our union with God in Christ.

When you enter college, your interest in poetry and other literature may lead you to major in English. This means that you'll read plenty of literature in other genres besides poetry: notably fiction (the short story and novel), essays, and drama. The more you read of the classics in all genres, the better your understanding of them all will be. But the student who learns to read poetry carefully will find his or her ability to read the other genres greatly enhanced. The major in English, handled rightly, can provide an excellent basis for a liberal education. It should help you to think clearly and to express yourself well in speech and writing. It is excellent preparation for law and the ministry, and even business and medicine, to mention only a few fields.

In most English departments, however, you will probably discover that most, if not all, of your professors do not share your faith. In fact, they may go out of their way to let you and the rest of their students know this. You may also discover how much time and effort literary critics spend trying to convince themselves and others that writers who clearly held a belief in the supernatural, did not. My advice is not to rashly challenge this bias when you come across it. Rather, do the reading, write good papers, and impress the instructor with your mastery of the material, so that when you do take exception to some position you will present strong, reasoned arguments that meet with her respect.

To nourish your faith, feed upon the great writers of the past, most of whom have a worldview that supports traditional Judeo-Christian values. Reading through the centuries is a great way to escape what C.S. Lewis called the narrow provincialism of our own age or century. Definitely take a whole course—a year's course if you can—in Shakespeare. And take a course in Milton. At the end is a list of other writers you might try to read on your own, if you can't get them in class. Don't spend your valuable tuition on the light-weight courses offered in many departments today on pulp fiction, comic books, television series, or other trendy subjects. Look for those courses that take up the great writers of the past.

Take at least one creative writing course where you can write poetry. Writing it is one of the best ways to understand how to read it. Seek out literature courses from writers of poetry and fiction on the faculty. Writers love the literature itself, usually, and are less likely to spend their time on esoteric forms of French criticism or on political agendas of one sort or another. (Feminism, neo-Marxism, and neo-Freudianism, for example, are some recently fashionable critical postures.) Check with other students to find out what actually goes on in a particular class before taking it.

As an English major, you can continue to read the great works for a lifetime. Below is a selected list of poets you might want to come to know in college so that you may continue their acquaintance afterwards. Of the many contemporary poets worth reading, I've listed only an arbitrary few. For more of these, browse anthologies, libraries, bookstores, literary magazines, friends' bookshelves, and the Internet. (Most literary magazines and books can be sampled online.) Happy hunting!

—*Robert Siegel*

So . . . Who to Read?

Following is a selected list of English and American poets: Chaucer, Spenser, Shakespeare, Marlowe, Jonson, Marvell, Donne, Herbert, Vaughan, Traherne, Dryden, Pope, Johnson, Blake, Wordsworth, Coleridge, Byron, Shelley, Keats, Tennyson, Browning, Hopkins, Hardy, Yeats, Auden, Dylan Thomas, Whitman, Dickinson, Frost, Stevens, Williams, Marianne Moore, Eliot, Roethke, Robert Lowell, Plath, Heaney, Heyen, Cairns, Franz Wright, Jeanne Murray Walker

. . . and a few from other languages: Homer, Virgil, Li Po, Du Fu, Dante, St. John of the Cross, Goethe, Rimbaud, Baudelaire, Lorca, Neruda, Czeslaw Milosz

For Further Reading

A History of Modern Poetry: Vols. I and II. David Perkins (Belknap Press).

The Norton Anthology of Modern & Contemporary Poetry, Ellmann, O'Clair, & Ramazani.

The Norton Anthology of Poetry, Ferguson, Salter & Stallworthy.

The Vintage Book of Contemporary American Poetry, ed. J.D. McClatchey.

POLITICS

I was the oldest child of an American serviceman—a military brat. Economically, we were at the tail end of that spectrum identified as the middle class. In reality, we were probably among the more affluent of American's lower class. Neither of my parents had attended college. To my knowledge, no one on either side of our family had gone to college. We certainly did not enjoy wealth, privilege, or social standing. Nevertheless, my parents gave me a gift that was priceless—the ability to dream. They were raised in the cautious optimism that characterized post-World War II America. Therefore, while I was growing up they enabled me to believe that I could accomplish anything.

The standard line that optimistic members of the lower/middle-class told their children was, "You can grow up to be anything you want. You might even become president of the United States." That sounded good to me. I might as well aim for what everybody thought to be the top job. So, even as a young child, my ambition was to fulfill that objective. When other kids were asked what they might like "to be" when they grew up, the standard answers included fireman, policeman,

"If you join government, calmly make your contribution and move on. Don't go along to get along; do your best and when you have to—and you will—leave, and be something else."—Peggy Noonan, columnist, author, and former speech writer to President Ronald Reagan

teacher, or nurse. I told my kindergarten teacher, with some degree of confidence, that I would someday become president of the United States.

And I meant it. When I reached the advanced age of seven, armed with a round, fat pencil and that paper we all used when we started elementary school—with the wide spacing and the dotted lines—I decided I need to get about the business of preparing for my future career. Therefore, I wrote a letter to President Johnson. Shortly thereafter, I received a packet of information from the White House that included a signed letter from the President. I cannot recall what words of wisdom I included in my missive, but now that I was in direct and personal communication with the leader of the free world, I was certain that I would someday occupy the space that Lyndon Johnson called home.

As I grew up, I supplemented my political ambition with some other interests. I was all too obsessed with sports—watching them and playing them. I also started to compete in interscholastic and, later, intercollegiate speech and debate. Instead of making "connections" with a political party or running for student council president, I was "cutting cards" and traveling extensively as a scholarship debater for my university. All the while, however, I still harbored that dream of running for the presidency.

A New and Different Calling

At the end of my senior year in college, I had one more rather dramatic interruption to my political pathway (a pathway that would lead to the White House). I gave my life to Jesus Christ. I became a Christian. Suddenly, my life moved in a very different direction. Initially, I did not anticipate much of a change in my career plans. I entered a master's degree program in political science determined to enroll in law school shortly thereafter. Despite my new-found faith in Christ, I saw no reason why my career in law and eventually politics would not unfold much as I had planned.

Boy, was I wrong. Within a year of my conversion, I felt a calling into the ministry. The debate days were over. The preoccupation with sports diminished to a hobby. Instead of law school, I went off to a theological seminary in Kentucky. And, even as a seminary student, I started to minister in small churches throughout southwestern Michigan.

Although my political aspirations might appear to have been self-centered, I was certainly motivated by more than personal ambition. I love America very much. Hence, I wanted to enter politics, in part, because I felt it to be the best way to serve my country.

After I came to Christ, I started to question that conclusion. As a minister of the gospel, I would have specific responsibilities under the direction and power of the Holy Spirit: First, I would be required to help lead a congregation in worshipping "our Father which art in heaven" and His Son Jesus Christ. Second, I would disciple brothers-and-sisters in Christ by doing the same things that Jesus did—to preach, teach, and minister to those who were hurting. Third, I would do the work of an evangelist—I must share the good news of Christ to those who had yet to receive Him as Savior and Lord. Finally, I would help to lead a congregation in those things that Jesus taught us to do: to put food in the mouths of those hungry, to put water in the cups of those who are thirsty, to put clothes on the back of those who are naked, to minister to those in jails, nursing homes, mental institutions, hospitals, and the like.

In fact, when I entered the doctoral program in Government at the University of Notre Dame, it was not to enhance a political career. After seminary, we were supposed to receive some denominational support for our little church in Michigan. That support fell through. I entered Notre Dame to acquire the credentials and preparation necessary to teach at the college level. I wanted to have a tent-making ministry like the apostle Paul so that I could be as free to minister as possible—and free to minister as the Lord might lead since we wouldn't be receiving the bulk of our

livelihood from a particular church or ministry.

I reached the conclusion that service to the Lord was not only my obligation as a minister, but it was also the best way for me to serve my country. I was convinced that I could change America for the better by changing individual lives. And I believed I could best change individual lives by helping to lead people to Christ and by ministering in His name. I still was interested in politics and government. After all, I am an American citizen, and I do enjoy the give-and-take of political debate. But I assumed that I would never seek elected office.

An Unexpected Return

A few years after I started teaching in Utah, things began to change. At the urging of one of my students, I attended a caucus meeting in the Republican Party and was elected a delegate to the state convention. Five years later, a couple of elected officials drafted me to run for Chair of the Republican Party in our county. They prepared the campaign. I gave a speech at the convention. To my surprise, I was elected. Suddenly, I was the Chair of a political party in a county with between 80–100,000 registered voters—most of whom were Republicans. I was responsible for about 150 voting precincts, fielding candidates for six districts to the Utah House of Representatives and two to the Utah Senate, and to raise money and govern the party on a day-to-day basis.

It was during my term as Weber County GOP Chair that I began to consider something much more dramatic: a candidacy for the United States Senate against the popular incumbent senator, Orrin Hatch. There are a variety of reasons why I considered the run. The most important was my concern that the Senator had been in Washington so long that his real constituency had become folks in and around the

District of Columbia rather than the people of Utah. I felt like he had reached the point where he believed that he owed Utahans his inspiration and perspiration, but that he no longer owed them an explanation for his activity in the Senate. He was much like Colonel Nathanson in the film *A Few Good Men.* The Colonel told the young attorney in court that they should be thankful for the protection that he provided without asking questions. Hatch essentially told Utahans that we should be thankful for the representation he provided in the Senate without asking questions.

Note that this campaign was not an attempt to jump-start my childhood dream. I wasn't planning to use my election to the Senate as a launching pad for a long-term career in politics culminating with a presidential run. In fact, I was pretty certain that I would not be elected. I did believe that my campaign would give me the opportunity to say some important things and, perhaps, prompt the Senator to see himself as more accountable to the people in Utah.

I presented a paper shortly after the 2000 election cycle which describes the experiences in the campaign in much greater detail. A campaign against Senator Hatch within the Utah Republican Party certainly was akin to smacking the nose of a big dog in his own back yard. In the paper, I describe the highs and lows, the experience of traveling across the state to speak at county conventions, and what it feels like to speak to 7,000 people at the state convention in the arena where they later held the hockey tournament at the 2002 Winter Olympic Games in Salt Lake City.

"Don't fall in love with politicians, they're all a disappointment. They can't help it, they just are."—Peggy Noonan
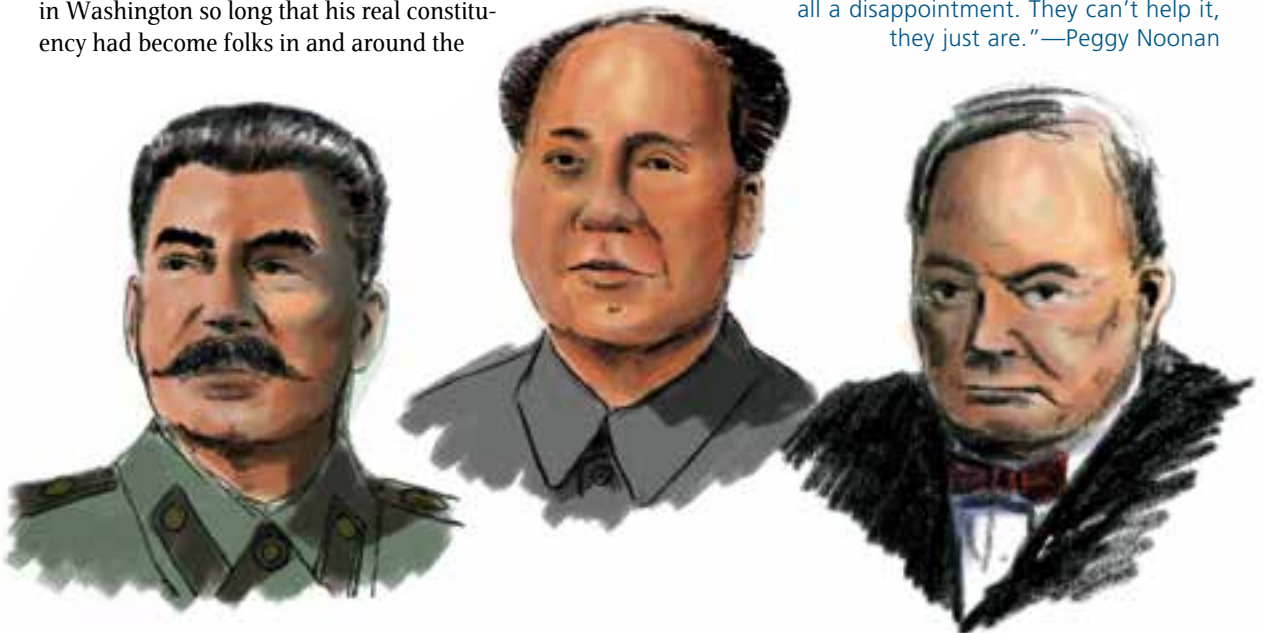
The inauguration of President Barack Obama, January 20, 2009 in Washington D.C.

Ministering through Citizenship?

As a boy I had dreamed of a career in politics. As a young Christian, called into ministry, I decided that the best way for me to serve both God and country was to become an excellent pastor rather than a politician. A few years later, opportunities surfaced that provided an opportunity to return to the political arena. I embraced those opportunities, although at times maybe a bit more like one who approaches the water by sticking in a big toe rather than fully plunging in.

What prompted the change of heart? I still consider myself, first and foremost, a minister of the gospel. I preach and teach whenever I have the opportunity and would maintain that America would be a better place if more of us were transformed through a relationship with Jesus Christ. I simply learned over the years that it is possible to minister in and through the political arena. Too often Christians, called to be salt and light to our government and culture, fail miserably if we cede the political arena to those outside of the body of Christ. We fail both as citizens of heaven and as American citizens.

In the body of Christ there has been a concern that if one is enmeshed in the affairs of government and,

much worse, politics, then one is of little value to God. Although one might identify several periods in post-New Testament history where this concern served to compel individuals to separate from the political realm, one obvious and fairly recent case study would be the reaction to politics within a large portion of the body of Christ in America from the 1920s through most of the 1970s.

During this fifty year period, many Christians extricated themselves from the political arena in order to emphasize evangelism. "We haven't the time to be concerned with the goings on of this world," they might have observed. "Our obligation to the Lord is to prepare souls for the next one." Thus, while one might exercise many of the responsibilities of citizenship, political engagement pulled one away from one's primary obligation to God. Consequently, the participation in politics was likely an utter waste of time.

There is a whole cottage industry devoted to the re-emergence of Christians back into the political arena (as critics of culture, as would-be "kings," and, increasingly, as would-be kingmakers). Several scholarly books chronicle the importance of evangelical Christians as an important player in electoral politics. There are also a large number of popular and scholarly books that are

very shrill in their opposition to Christian involvement in politics.

Rank-and-file Christians in America are reaching a point where they will make an important decision: Do we as believers challenge those aspects of our society that are the most ungodly, or do we retreat back from the political arena in favor of evangelism? This question becomes particularly prescient when many believers think that their brothers and sisters in Christ who are most shrill in the political arena are actually hurting the ultimate work of the Church.

I hope I've made it clear that for Christians to retreat from dialogic politics, the world of political ideas and discussions, would be a big mistake. Yes, I did make a clear decision that I could better serve God as a minister rather than as a public servant and believed that God was calling me in that direction. I always understood that the Bible teaches us that there is a clear connection between one's faith and the responsibilities of citizenship that call us all into politics at least at some level.

It certainly is safe to say that the political battle that Christians have fought since the late 1970s has not been without consequences. Christians are taking casualties from an enemy that is powerful, accomplished, educated, and determined not only to separate church from state but also religion from politics.

I have noted elsewhere that with regard to Christians and culture, it seems like we have only a limited number of choices:

1. We can withdraw from the secular-political world and concentrate on preparing souls for the next one as so many have suggested. This option would badly impoverish the nation.
2. We can resist by taking up arms in an attempt to purge and remake the state in God's image—a terrifying option that all but the most fervent extremists have opted to reject.
3. We might resist passively and nonviolently. Like Ghandi or King, the Church could speak out against the evils of the state and suffer—even welcome—arrest, torture, and death.
4. We can resist, from within the political arena, what we find to be immoral and unjust (whether practiced within the public or private sectors). The Constitution guarantees that, as citizens, we have a right to engage in combat in the political arena: To concede that "if we can't join them—and we can't join them—we can beat them."

If we embrace the latter, and as I suggested, I am not certain that evangelical Christians will continue to do so indefinitely into the future, then we need young believers who will run for office, run for political party leadership, speak out and write editorials, teach in colleges and universities, even start colleges and universities, start professional schools, and sponsor think tanks. While this kind of Christian activities scares the pants off of some in and

BEWARE T
POLITICALL
OBSESSED.

"Beware the politically obsessed. They are often bright and interesting, but they have something missing in their natures; there is a hole, an empty place, and they use politics to fill it up. It leaves them somehow mis-shapen." —Peggy Noonan

out of the Church, it seems to me to be quintessentially American. And fortunately America provides Christian citizens a way to impact the culture positively without stepping outside of our obligation to honor the government.

An Unlikely Political "Arena"?

Serious students of God's Word will recognize that there is an intersection between politics and governing and our responsibility as believers. It is not a connection invented by the so-called Christian Right in the late twentieth century.

The Old Testament describes man's original relationship with God, man's fall from God's favor and fellowship, and the impact of God's wrath upon the apex of His creation, mankind (Gen. 1–3). As a consequence of the Fall, man inherited a nature inclined toward sin (Rom. 5:12–21). Thus, man was in serious need of governing and law. In the Pentateuch, God governed directly and/or articulated His law through His prophets. But increasingly throughout the Old Testament, the prophets assumed a tremendous amount of authority to govern and to interpret the law.

By the time the New Testament was written, the Jewish people had participated in many of history's most important empires: Egypt, Assyria, Babylon, Persia, and Greece. The New Testament provides a glimpse, through the lenses of these Jewish authors, of the powerful Roman Empire. When we read the Gospels, and Luke's book of Acts, we are privileged to watch the decisions of many secular and religious leaders—and there is serious question which tyranny was worse. We also get to see the importance of the law in the Roman Empire (and note that the Romans had a fairly well-developed judicial system of trial courts and even appellate "courts" available to Roman citizens). The on-going disputes between the Pharisees and Sadducees offers an example of party politics and at least a partial justification for separating church and state.

But the New Testament provides more than a glimpse into what life was like for the Jews and Gentiles under an ancient empire. It tells us how God would have us live today. Through the authors of the New Testament we learn that:

1. He commands us to love—indicating that love fulfills all of the Old Testament's laws and rules (John 3:23–24, Rom. 13:8);
2. He requires us to pray for those in authority so that we might lead quiet and peaceful lives (1 Tim. 2:1–2);
3. He provides legitimacy to existing governments—and even legitimizes the authority of government to punish with the sword (Rom. 13:1–7);
4. He says that, generally, it is our duty to obey those in authority (Rom. 13:1–7, Matt. 22:21);
5. He also provides us with examples of those who legitimately disobeyed authority when rules would have them run afoul of God's commandments (Acts 4:16–20—and of course they are buttressed by the Old Testament examples of Shadrach, Meshach, Abednego, and Daniel in Daniel 3 and 6).

The New Testament provides a sweeping presentation of our duty to secular and ecclesiastical leadership and, perhaps even ironically, illustrates why we have a greater duty to obey those secular leaders in authority rather than those in the Church who might wish to compel us to taste not, touch not, drink not, etc., without a sound biblical basis (Col. 2:16–23).

Even though God's Word is principally intended to describe our relationship with Him through our Savior, Jesus, it instructs us substantially as to how He would have us operate in this world (as citizens of Heaven while here on Earth) In fact, to be a serious student of God's Word requires us to be a student of politics at least at a cursory level. If it is true that God ordained three institutions for the benefit of man; the Family, the Church, and Government, then it is important, if not imperative, that in every generation there are some smart and educated Christians who are experts in the field of government and politics. Just as Christians have an increasingly significant voice in philosophy, there should be committed Christian believers in the scholarly study of politics.

Hence, there is one additional way for Christians to be effective citizens without ever once filing to be included on a ballot: *as teachers and scholars in the field of politics.*

Can Any Good Come from Politics?

A major portion of this essay is supposed to be about the academic study of politics for students who are considering which direction they might go when entering college. I would like to do so by placing it within the context of calling and citizenship.

As I have suggested above, I think that everyone in the body of Christ has an obligation to be effective citizens as a part of our reasonable service to Him. Some undoubtedly will act on that responsibility by paying attention to our government and seeking God's wisdom when it comes time to vote. They will raise their children, pay their taxes, and do their best to obey good laws and change bad ones.

Others will engage the political arena a bit more directly. Some will play the role of the Old Testament prophets—

We have one country, one Constitution, and one future that binds us.

—George W. Bush

serv- i n g as pub- lic critics of those in power, hoping to hold them accountable to God's stan- dards. Some will seek to be "kings"— a general way of saying that they hope to hold elected office (whether Dog Catcher or President). Increasingly, some Christians will operate as "king- makers"—they will not run for office, but will do their best to elect people of like mind.

One might argue that there is at least one more way in which Christians might be called into service—as scholars who formally study political science for a living, and who use their expertise to teach politics/government to students. What does it mean to study and teach political science?

What is Politics?

I recall a conversation I had with a fellow graduate student at the University of Notre Dame more than two decades ago. He was a student in contemporary political theory; I was focusing upon constitutional theory and law. As such, we were both less than charitable toward the name of our discipline, *Political Science,* primarily because we did not believe that it best characterized the wide range of study that fell under the discipline's vast umbrella.

I suggested that the field of study might be better la- beled as *Government.* He countered with an even better suggestion. He noted that the more accurate label for the broader field of study would be *Politics.* I agree.

If one looks at a variety of political dictionaries, a po- litical encyclopedia, the ever-popular internet sites, or an introductory political science textbook, one is likely to find a whole range of defini- tions for the discipline of political science.[1] A composite of the many definitions might lead one to conclude that political science is the study of several things:

- The state and how it is governed;
- The various institutions of government;
- The effectiveness of government;
- How power is transferred legitimately in par- ticular governmental structures;
- Democracy (direct or representative; its origins and effectiveness and what factors enhance or restrict participation by "the people;"
- Who governs in the absence of democracy (e.g., tyrants, elites, interest groups)?
- How do people behave politically (What fac- tors stimulate particular kinds of political be- havior? Are people rational actors who strive to bring about their desired outcomes?
- From where do the ideas that those involved in politics come?

The distinction I identified above, between the study of politics and the formal discipline of political science, is an important if one hopes to trace out the origins of the discipline. If one is talking about the former, then ours is a very old discipline indeed. If one is asking about the latter, then political science is a relatively new addition to the modern social sciences.

For instance, in the Western tradition, one can cer- tainly trace the study of politics back to the ancient

Greeks—and even well before the famous studies authored by Plato and Aristotle. Plato and Aristotle did much to contribute to our understanding of politics.

Plato, in a variety of dialogues, used his mentor Socrates to articulate many of his most important political ideas, e.g., one's duty to the *polis* (state or government). He presupposes that one's duty to the *polis* transcends one's claim to rights that might be asserted against the *polis*. Further, he provides an evaluative hierarchy for the various types of government in existence during his lifetime. While he offers a critique of the argument that those with the greater military or economic clout should

Many Christians became engaged in politics after hearing the teaching of Francis Schaeffer but often made the mistake of thinking that a political party, Democrat or Republican, was *the* party for Christians.

hold power (or at least challenges the notion that might makes right), he also offers an equally devastating critique of democracy. Still, Plato's treatment of politics is largely from a philosophical framework. One might argue that his greatest work of politics, *The Republic*, is not a political treatise at all—it is hardly a blueprint for government. Rather, it is an illustration to help Plato define justice.

Aristotle, Plato's prize student, did provide a much more systematic and direct discussion of politics. In his work by that name, *The Politics*, Aristotle describes his study of the world's constitutions of government. He finds that they all might be placed into three categories: governments of the "one," governments of the "few," and governments of the "many." Further, he notes that within each of these types of government, there are those who are selfish and those who seek the common good. Thus, he argues that governments of the one can be identified either as tyrannies or monarchies depending upon whether the leader in charge was selfish or commons regarding (i.e., one that looked out for the interests of the people). Similarly, governments ruled by the few are either oligarchies or aristocracies. And, of course, the same thing holds true when a state is governed by the many. Aristotle holds when the state is governed by a selfish people, it is a democracy. Alternatively, when it is governed by a commons regarding people, it is a polity.

Hence, it is obvious that the study of politics emerged from philosophy. It is the important study of "political philosophy" or "political theory." Consequently, some of the seminal work in analyzing politics is offered by philosophers. St. Augustine's work offers a seminal argument addressing the ways in which religion and politics should be separate—and the ways in which they intersect or overlap. Niccolò Machiavelli's *The Prince* discussed
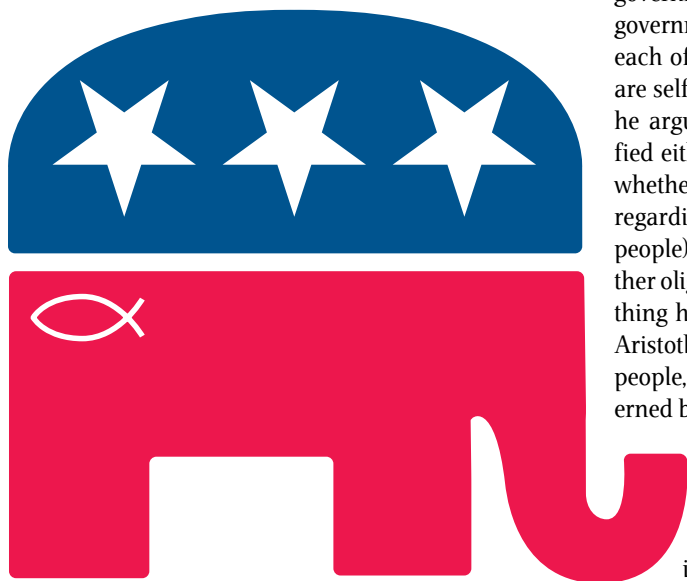
economic, social, and military policy and their impact upon government. British social contract thinkers Thomas Hobbes and John Locke provided very different critiques of classical republican thought in favor of what has been described as classical liberalism as a remedy for the consequences of a hypothetical "state of nature." Georg W.F. Hegel provided a comprehensive evaluation of politics in his work, *The Philosophy of Right*, and Karl Marx's economic philosophy, perhaps unintentionally, gave birth to a form of communism that would prove devastating to millions around the world. And in eighteenth century America a group of politically active thinkers like John Adams, Alexander Hamilton, James Madison, and Thomas Jefferson borrowed heavily from their theoretical predecessors to put together a political theory articulated in the form of a statement of separation from Great Britain, "The Declaration of Independence." The theory was built upon seven basic principles:

- That there are self-evident truths;
- That all men are created equal;
- That they are endowed by their Creator with unalienable rights;
- That among these are life, liberty, and the pursuit of happiness;
- That it is the duty of government to affirmatively protect these rights;
- That governments derive their legitimacy from the consent of the governed; and, finally,
- When government fails to accomplish these ends, it is the right of the people to alter or abolish it.

Several years later, in defense of the proposed United States Constitution,

Many try to bank on Uncle Sam, but he makes a poor god and will never really be mistaken for Jehovah Jirah.

Hamilton, Madison, and Jay authored a series of papers defending constitutional republican government in America, *The Federalist Papers*.

Thus, it is evident that the study of politics emerged from ancient philosophy and that throughout history the world was blessed with important political thinkers. The study of politics is very old indeed. In the nineteenth and twentieth centuries, however, there was a movement afoot suggesting that politics should be studied like a science—that there might be an objective way to look at constitutions and governments, so that politics was not simply the analysis of particular political personalities or the presentation of comprehensive political theories.

One might argue that the modern discipline of political science was born in the mid-to-late 1800s. During the latter half of the nineteenth century several events occurred to create this new discipline. For example, Francis Lieber was named Professor of Political Science at Columbia College in 1858. In 1876, the Johns Hopkins University created the study of History and Politics. Columbia University, under the direction of John Burgess, formed the School of Political Science in 1880. Between 1880 and early twentieth century, a number of universities founded political science journals. Too, a small number of colleges and universities created separate political science departments, and American universities began to offer the doctorate in the field.

From this genesis in the late nineteenth century, a full-fledged academic discipline emerged. A national organization, the American Political Science Association (APSA), emerged in 1903. The APSA served to promote the organization by hosting an annual national convention, and by providing opportunities for political scientists—professional teachers of politics—to have a conversation about the discipline. It also developed a committee structure to offer some rudimentary governance to the organization and, therefore, indirectly to the discipline.

Shortly thereafter, the APSA sponsored an academic journal, the *American Political Science Review* (APSR). The *APSR* serves as the flagship journal in political science ready to showcase the best scholarship in the field that might emerge through the peer-review process.

For the next several decades, the discipline of political science continued to grow across the colleges and universities in the United States. More institutions offered programs in political scientist. Consequently, they hired a larger number of jobs to political scientists. More universities offered advanced degrees in the field therefore increasing the number of Ph.D.s.

Although the discipline continued to grow, it was not free from disputation. For example, there were some political scientists who maintained that the purpose of the discipline was to prepare political activists or train college students, generally, in public affairs and citizenship (what might be similar to the call to prepare students for "civic engagement" that is so popular today). Others insisted that, primarily, political scientists were scholars who should do cutting edge work within the broader study of politics.

Moreover, even within the camp of those who urged political scientists to prepare scholarship, there were significant methodological disputes and debates about how to subdivide the burgeoning field of study. For instance, the discipline largely emerged as an extended study of "comparative politics" looking largely at the differences between politics in the United States and Europe. Increasingly, political scientists began to focus on "American politics" and the vast array of research questions available for study in the United States. Further, a considerable number of those in the discipline emphasized the study of political theory/philosophy with an aim toward understanding and explaining the great books in the study of politics (e.g., the list of political philosophers identified above).

Many in the field used the case study as their principle methodological tool. Other political scientists rejected the great books and case study methods in favor of what they believed to be the more sophisticated scientific methodological approaches used in other social sciences like psychology (e.g., Behaviorists) and economics (rational choice theorists). Accordingly, they tried to use an extensive literature review to form a testable hypothesis; they tried to draw from an increasingly larger number of methodological strategies to find the appropriate way to test the hypothesis; and, finally, they made an effort to write up the findings so that future political scientists might replicate and build upon the results.

Today, political science has become an increasingly specialized discipline. Since it emerged as an addition to the modern social sciences in the late nineteenth century, political science divided into several of the standard subfields one might find at many colleges and universities. As I mentioned above, American Politics became a large subfield distinguishable from Comparative Politics (although the latter remains as a standard within the discipline). International Politics is an important component of the discipline particularly as political scientists started to study countries outside of the United States and Europe. And, of course, Political Theory remains the cornerstone of the discipline, though sometimes to the chagrin of those who might emphasize the "science" in political science.

The movement toward specialization has pushed beyond the boundaries of the standard subfields of

American Politics, Comparative Politics, International Politics, and Political Theory. At many of our outstanding universities graduate students in political science are trained in Political Economics or Political Psychology. They study Public Administration and Public Law. In American Politics they might focus upon Political Ethics or the Politics of Women. And, while quite a number of political theorists still study the classic thinkers, others engage the modern political theorists of the twentieth century like Strauss, Arendt, Habermas, Pocock, Marcuse, Rawls, Nozick, and the like.

Political science is indeed a discipline of contrasts. In many respects its roots are in ancient philosophy. Alternatively, it is a relatively modern social science. And while many institutions of higher education might teach some very basic courses in the discipline, clustering around the larger subfields identified above, many universities will offer a vast array of courses that reflect the increased specialization in the field.

As I suggested above, it is more accurate to think of the discipline as the study of politics. Hence, like so many other fields of study, it is almost impossible for any one political scientist to fully master the discipline—anymore than any one person could master the study of politics itself.

Critical Issues

Political science is not like some academic disciplines where Christians might be automatically wary about participating therein. For example, some believers might be suspicious about the study of biology–particularly if taught exclusively through the lenses of an evolutionary framework (specifically when "evolution" becomes a philosophy/theology and scientists take on the role of advocates for that philosophy). Others might misconstrue the second chapter of Colossians to be a warning by Paul to steer clear of philosophy. Despite the fact that many mothers warned their children that the two things we should not discuss in polite company are religion and politics, there is nothing, per se, that should deter Christians from political science.

One concern might be the fear of indoctrination by professors in many of the outstanding political science departments across the United States. Again, this problem might be more acute in other fields. When I took philosophy as an undergraduate, my professor told the class that the ancient question about whether individuals have souls that are independent from the mind had been fully answered. He stated, without equivocation, that anything that one might consider to be a "soul" is simply the result of physical activity within the brain. Hence, he noted,

science has demonstrated that there really is no soul. I was not a Christian at the time, but even I was dubious of this very arrogant conclusion. There are also now a number of articles, books, and films that identify the stranglehold that evolutionary theory has over all of the sciences—and the consequences that students and even faculty face when they challenge the dominant paradigm. Evidence of this sort tends to support the concern held by some parents that their children will face indoctrination when they go to college.

Such is also the case in the social sciences (disciplines like political science, anthropology, sociology, and history). Several years ago, survey data of professors from a number of major political science departments revealed that 90-plus percent were registered Democrats and self-identified liberals/progressives. It is not just that the professors hold positions associated with those on the Left, it is also the intensity with which they hold them—and their willingness to proclaim them boldly to their students.

I have been to many a meeting with political scientists, pre-law advisors, or those working in law schools who nearly always fall on the same side of a given political issue. Furthermore, they discuss the issue with a certainty that assumes there is no other competing point of view. Thus, the concern that young Christians might be indoctrinated or otherwise face some sort of retaliation for challenging the professor's point of view is presumptively one that cannot be dismissed out-of-hand.

And, of course, there is another concern that Christian students share with everyone who might consider majoring in political science: Can someone who majors in political science get a job? For years I attended an annual "Major Fair" at my previous institution. During this festival, all of the academic departments would set up booths in the Union Ballroom. Some of the disciplines would set up elaborate displays to make their programs appear more attractive to prospective students. To entice students to come, the university held drawings for prizes during the event. We provided food and beverages. We invited juniors and seniors from the local high schools to come so that they might start to consider their future majors.

I would sit at my more modest booth advertising programs in political science, philosophy, and information about pre-law advising. I had brochures on the university's nationally-ranked mock trial team and moot court team. I was prepared to share much of the information that I presented above about our major.

Invariably, however, the first question I was asked was, "So, what can I do with a degree in political science?" Although it was frustrating to answer the same question over and over, and I suspect that the folks in the next

booth had memorized my answer and could recite it as well I as might have, in an age when it seems that the primary purpose of attending a college or university is to prepare for a job, it is probably a fair question. I am guessing that you might be asking the same question, and wonder why I have taken so long to at least raise the subject (one I will address further below).

One final concern is the "scientific" component in political science. As I indicated above, over the last century nearly every serious political science department requires its students to be familiar with how to construct a research design—to move beyond descriptive papers (or those that simply construct an argument) to papers where the writer uses his or her

knowledge of the existing literature to develop hypotheses or testable questions. Even some political theory professors will ask students to present their analysis of a thinker through the structure of a research design. Further, graduates from most of these departments will know at least some of the basic methodologies necessary to test these hypotheses and analyze data.

This requirement often comes as a serious shock to even the brightest students, who are used to writing papers where they identify an issue that they wish to discuss (e.g., the death penalty); then they take a position on the issue (e.g., capital punishment is wrong); finally, they go out and find authorities that support their point of view. Such students often think that rigorous research is discussing authors from both sides of the issue (the standard descriptive paper). Preparing a research design is often difficult for even the smartest students to do because it is so much different from what they have typically been asked to do in a history or civics class.
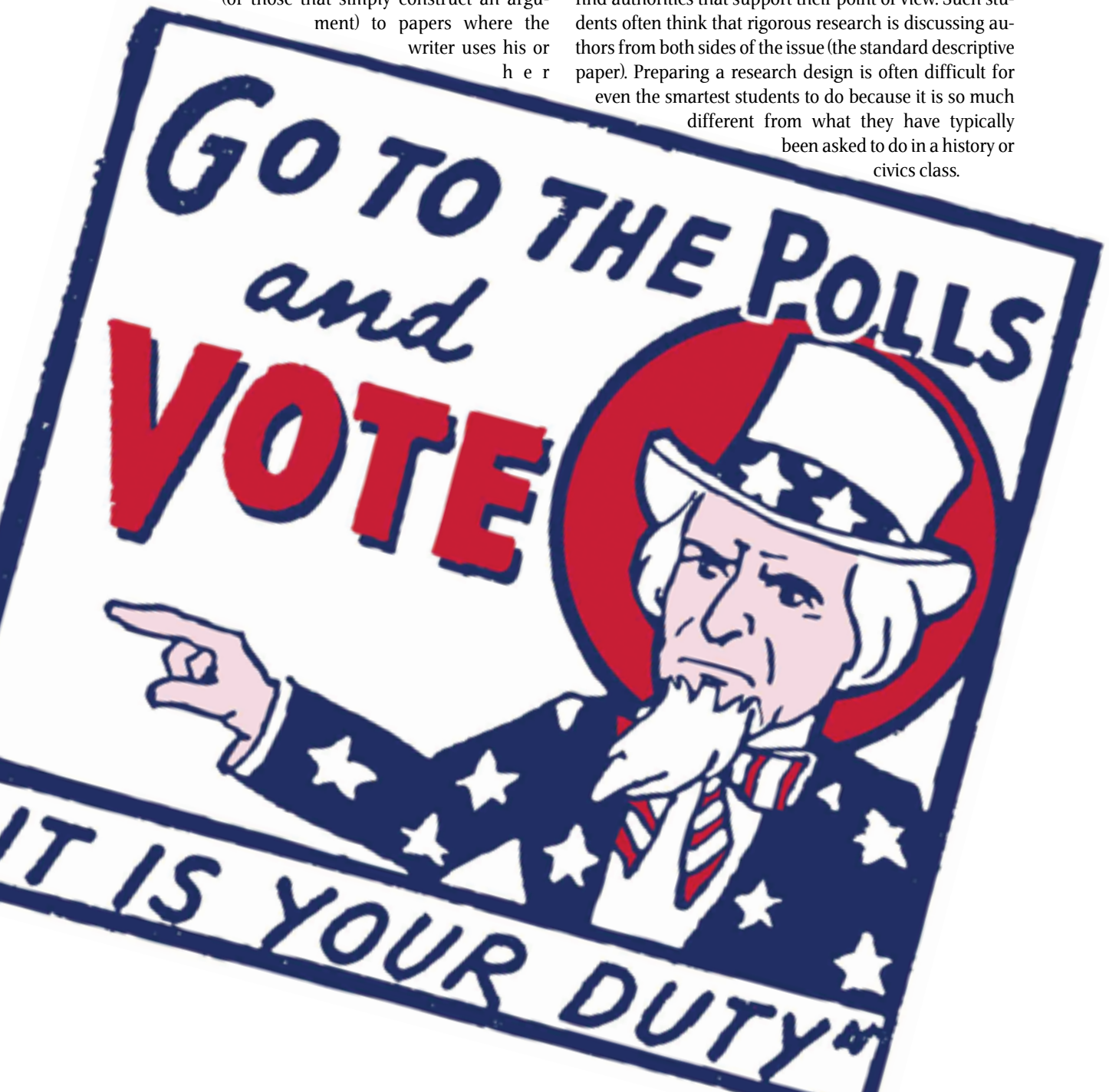
A Christian Response

While there might be a number of reasons for a Christian student to be concerned about a concentration in political science/government/politics, there are more than enough reasons to do so. These would include the very solid biblical reasons identified above as well as some important secular considerations (ah, the "Can I get a job?" answer).

Previously, I noted that although political science is a relatively new academic discipline within the social sciences, the study of politics is very old. I briefly mentioned a few of the famous western political thinkers, beginning with Plato.

Political science also offers one of the best liberal arts educations one might find in a university setting. One will have an opportunity to study everything from Plato and Aristotle to sophisticated quantitative methods. One can concentrate on any of the many general and specialized subfields that I discussed in the first section.

Increasingly there is the dilemma in higher education over the need to provide our students with a general or liberal arts education at the same time most departments are asking for a greater number of hours to provide quality major programs of study. Both sides are right.

There is so much information that we think our students need to know so that they might be generally educated. Most universities expect their students to demonstrate competencies in writing, mathematics, and government/history. They want their students exposed to art, literature, philosophy, science, and social sciences. Some now expect students to take courses in ethics, leadership, diversity, and perform some form of service learning. It is tougher and tougher to do that within the boundaries of the 30 to 40 hours many schools require for general education.

Likewise, many departments are requiring an increasing number of hours to complete their majors. They insist that the knowledge one needs to "major" in a given field has exploded over the previous decades. It is true. Even non-technological fields like history simply have much more ground to cover. I use a book in Constitutional Law that is several thousand pages (actually two volumes of the same soft-cover book; there is no way we read it all in the semester, but I need the entire book to cover all of the cases). I kid students about what a constitutional law book must have looked like prior to 1945 (skinny!).

Thus, one of the problems in contemporary higher education is how to provide an excellent broad-based education and not shortchange the major courses of study. Political science provides a way to accomplish both goals. To enjoy a full and rich major in the discipline actually *enhances* one's general education.

Ah, but what about the $64,000 question? What can I do with a degree in political science? How will a degree in political science help me get a job when I leave school? Here is what I told folks at the aforementioned Major Fests. If you are looking for a major that will prepare you for a specific job, e.g., to program computers, to work in respiratory therapy, to serve as a corrections officer or a nurse, then political science will not prepare you. But it is my experience that most employers want students who can think, speak, and write. If they can find a smart employee, they will teach him or her all the particulars of a specific job. A good political science program will enhance your ability to think, speak, and write.

As a result, I have watched our graduates step into a variety of jobs. Some go on to graduate school and study to become political scientists. Some go to graduate programs in a form of practical politics so that they might have the training necessary to manage political campaigns and work for political parties. Some enter graduate programs in public policy or public administration. I have former students who, for all intents and purposes, run cities and towns. Others enter into other forms of public life working in a wide variety of government jobs at the local, state, or national level. Still others find jobs in the private sector: they work in corporations, they own their own businesses, they are officers in the military, they are in sales, they work as journalists (print, radio, and television), they are ministers, and the like. And, of course, many go on to law school. As Chair of the Pre-Law Advisors' National Council, I have a particular passion for this career field and could likely write another essay on why political science is simply an unbeatable "pre-law" major (an argument I raise often with law school admissions representatives).

Hopefully, in this brief presentation I was able to do justice to an important academic discipline. It will be almost impossible for you to avoid "poly sci" when you go to school. Fortunately, that is because so many universities are recognizing the importance of educated people knowing something about government and politics.

It All Comes Back to Citizenship

It is also important to study politics for another reason. Even though political science is an academic discipline with serious expectations of it scholars, it has never fully gotten away from its purpose to help prepare citizens and, further, those who would be active in the political process (just as historians, economists, and others shoulder some of that obligation).

In case any of you are confused, I was not elected to

the United States Senate. Senator Hatch is now in his sixth term, and I am still teaching politics to college students.

I did have one more entry into the political arena. Based upon my performance during the 2000 Senate campaign, a group of citizens asked me to run as a candidate for Vice Chair of the Utah Republican Party. That meant another full-scale statewide campaign to more than 3,000 delegates. After I prayed about it, I agreed to run. This time, however, I was not entering the race to call attention to an issue or to otherwise make a point. I wanted to win. I ran in a tandem with a former candidate for governor. We put together a coalition of grass roots supporters from across the state. We prepared for a showdown against the heavy favorites for Chair and Vice Chair.

All of this work paid dividends. At the state convention, featuring the keynote speaker, Vice President Dick Cheney, we campaigned and presented our speeches. When the ballots were counted, we lost the bid for Chair, but I was elected Vice Chair (meaning that two different "factions" within the Party each captured one of the top-two prizes). To recount the range of experiences that I enjoyed in this party office would require another essay, but once again, I had the chance to marry the theoretical—the things I would teach in class—with the practical ("okay, that's what the book says, but here's how it really works").

I did have one experience in party leadership that made me appreciate the role of the scholar-teacher in helping to foment civic engagement. I would often be asked to attend large fund raising events as Vice Chair. At one particular event, I was at a large round dinner table with about eight to ten party activists and "fat cats." One started to share how much he always disliked politics until he took a freshman-level American Politics class at his university from a particular professor. It turns out that several of the others also were apathetic about politics or actively disliked the subject until they, too, took a course from the same professor.

It served as a good wake-up call for me as to the importance of those of us who teach these basic, required introductory courses. They might serve as the light bulb moment for so many students who previously had no interest in politics or government. I hope that you might have the chance to take a class from a dedicated, passionate, excellent political scientist. It might serve as a source of inspiration for you—a call to the importance of citizenship.

For those of you who already love the subject, I hope that you might view the study of politics as a calling—as a way to serve the LORD. If so, it can become your contribution to the kingdom of God—and you will be as excited about your work as any other area of ministry.

—Frank Guliuzza III

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ENDNOTES

1   To put together the background information on political science, I borrowed from some of the works cited in the brief bibliography at the end of the essay and other materials produced by the American Political Science Association. I also looked at some of the sources that a student might use should he or she wish to find out about the discipline.

P SYCHOLOGY

Objective evidence and certitude are doubtless
very fine ideals to play with, but where on this
moonlit and dream-visited planet are they found?
                                      —William James

What is Psychology?

Human beings are the pinnacle of God's creation
and the psychological study of people is arguably one of
the most complex and fascinating disciplines there is.
However, different religious and philo-
sophical assumptions seriously
affect how we view human
beings. Therefore, un-
derstanding   the
field of psycholo-
gy is no simple
task. Perhaps
we   should
begin by de-
fining the
field:

psychology is the science of the immaterial (invisible) as-
pect of individual human beings. It is the study of what
Christians call the "soul" (the Greek word *psyche* means
soul). The aim of this chapter is to provide an overview
of contemporary psychology, in light of its underlying as-
sumptions, and a roadmap for understanding the field
Christianly. (Of course, we speak of this discipline as be-
lievers, knowing that modern psychology, ironically, tries
to explain human beings while leaving the biblical soul
out of the equation.)
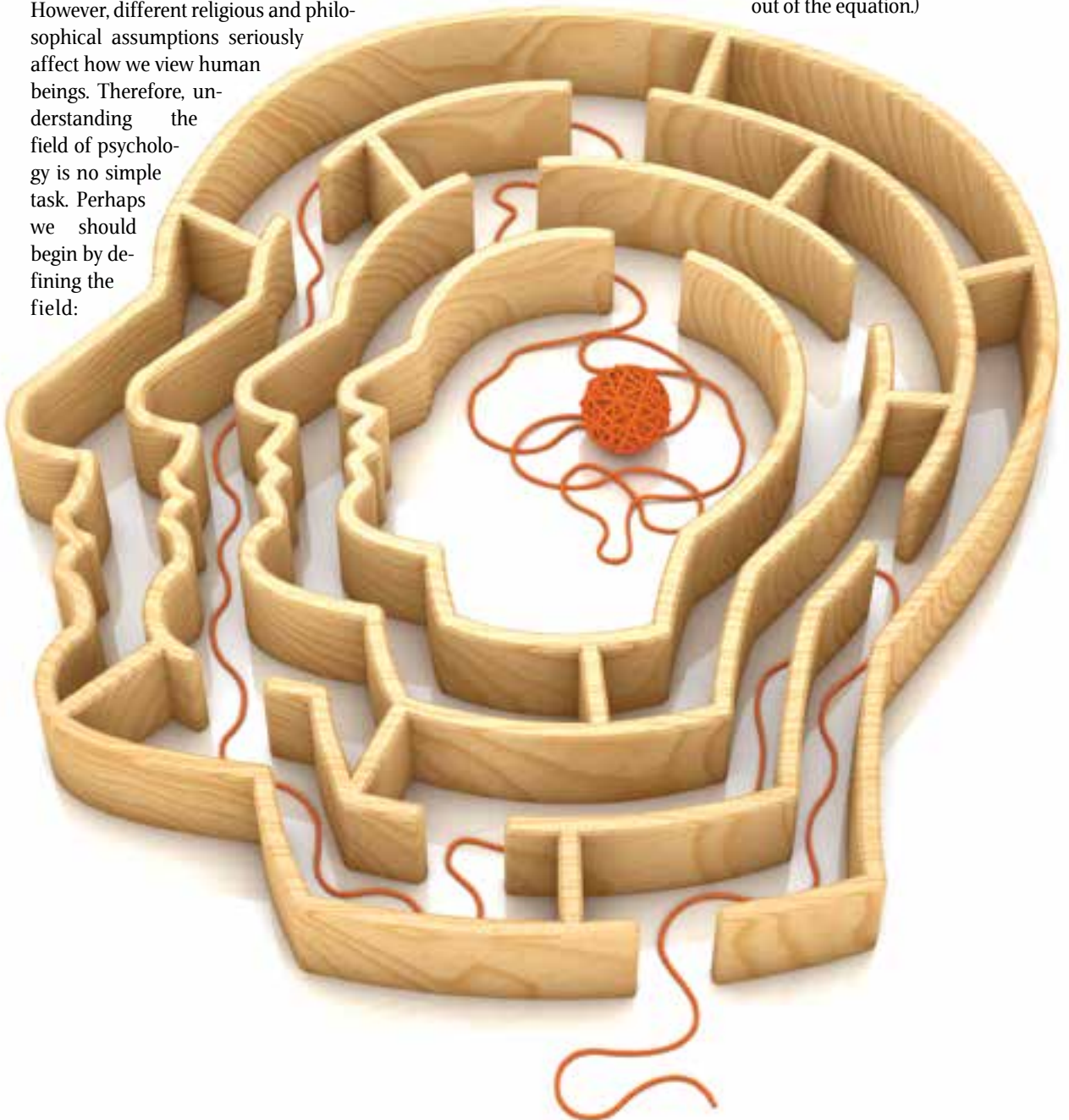
Psychology Before *Modern* Psychology

Herman Ebbinghaus, a pioneer in memory research, once quipped, "Psychology has a long past, but only a short history." Though the current approach to the field goes back just 150 years, systematic reflection and writing on the nature of human beings have been going on for more than two millennia. The ancient Greek philosopher, Aristotle, for example, carefully described many aspects of the soul, including its sensing, thinking, feeling, and remembering. Even the Bible makes reference to psychological topics, though less systematically. A few centuries later, great Christian thinkers began devoting their attention to a variety of psychological issues—Augustine, Thomas Aquinas, Julian of Norwich, and Calvin—some more philosophically, some more theologically, and some more practically, but while influenced by ancient Greek and Roman philosophers, their psychological reflections were based on a Christian worldview and influenced most by the Bible.

Modern Psychology

Impressed by the accomplishments of the natural sciences (astronomy, physics, and chemistry) and discouraged by the religious conflicts of the 1600s, Western intellectuals in the seventeenth and eighteenth centuries became increasingly convinced that disagreements between people could not be resolved by appeal to Scripture and church teachings, but only by rational argument and empirical evidence gained through well-designed experiments and evaluated with careful measurement and mathematics. They sought a sure, objective foundation for universal knowledge which all people could use to settle intellectual disputes. Signifying this shift, philosophers like Descartes, Locke, and Kant wrote on psychological topics, but they only used philosophical arguments that appeared neutral with respect to religion, since they did not rely explicitly on their Christian beliefs. These thinkers paved the way for a new kind of psychology that was entirely secular.

Three other influences contributed to the birth of what came to be known as *modern* psychology: research on sensation and the brain, the theory of evolution, and the measurement of mental abilities. In the 1800s natural science methods came to be applied to human life and experience. Investigators began studying the human senses and their limits and how brain damage compromised language and thinking abilities. Darwin's *On the Origin of Species* was published in 1859, and to intellectuals eager to leave behind Christian beliefs, it seemed to offer an intellectually satisfying account of human

Interest in Sigmund Freud's (1856–1939) psychoanalytic theories grew after his publication of *The Interpretation of Dreams* in 1899. Freud's approach is considered the first comprehensive modern theory of human personality.
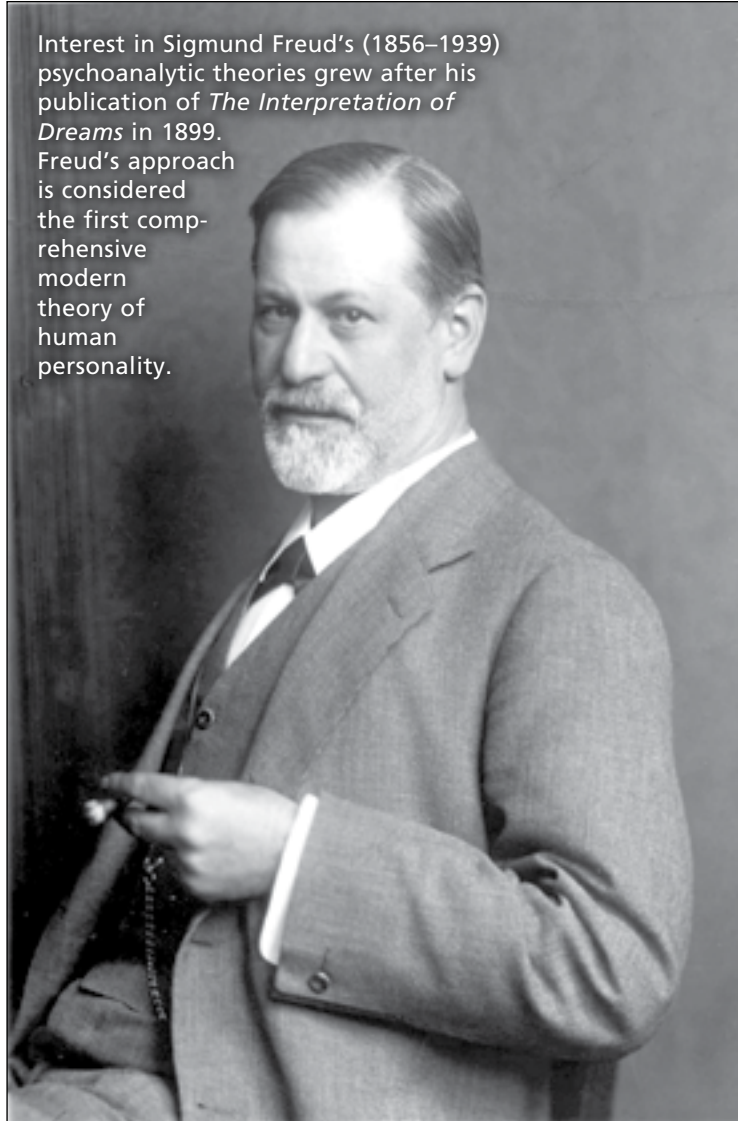
origins based on empirical evidence that required no appeal to the activity of a Creator God. Coming to believe that natural selection favored the fit, in the late 1800s interest grew in individual intellectual abilities, and researchers devised tests and statistics to measure the competitive differences between people. Such influences fit well with the growing allegiance to a purely naturalistic worldview that came to characterize modernism.

The first psychology laboratory was established by Wilhelm Wundt at the University of Leipzig in 1879. This is commonly seen as the birth of modern psychology, a secular version based exclusively on natural science methods, which were believed to provide a sure foundation that would yield universal (that is, religiously neutral) psychological knowledge. One of the first Americans to travel to Europe to study this psychology

was William James. He published a definitive review of the field in 1890, called *The Principles of Psychology*, in which he declared that "psychology is a natural science." The American Psychological Association (APA) was formed two years later.

Modern psychology quickly became the only recognized approach for understanding individual human beings in American universities, a dominance that has continued to the present. Reflecting the norms of the natural sciences, the goal of modern psychology is the description, explanation, and prediction of human brain function, behavior, and thought, all from a secular standpoint. Over the past hundred years the field has flourished as investigators have used an ever-expanding set of experimental and statistical techniques to explore ever-expanding areas of human nature, including physiology, neuroscience, sensation and perception, cognition (memory, reasoning, problem-solving, and intelligence), human development, motivation, personality, psychopathology, psychotherapy, and social influence and relationships. More research than you care to read has been published on such diverse topics as color blindness, the importance of bonding relationships in infancy (called *attachments*), the role of the neurotransmitter serotonin in depression, the formation of long-term memories, the relation between violence in media and aggressive behavior, the best counseling skills, and the dysfunction of group dynamics. At this point the amount of information amassed in a single subdiscipline of the field is enormous, and the value of most of this research is self-evident.

Given the influence of postmodernism of late across the academy, one might expect contemporary psychology to be moving away from its modernist roots. However, the American Psychological Association is in some ways still strengthening them. In a recent blueprint for undergraduate education, the APA makes the case that psychology programs should continue to emphasize empirical research since it considers psychology to be a STEM discipline (STEM = Science, Technology, Engineering, Mathematics).

Overview of Modern Psychology

To understand the voluminous and diverse findings of modern psychology, we will consider some of the major models of the person that have developed in modern psychology, as well as representative theorists of each view.

Sigmund Freud developed the *psychoanalytic* approach, credited as being the first comprehensive modern theory of human personality. According to Freud, personality can be divided into levels of consciousness (conscious, preconscious, and unconscious) and into three structures, the id (the unconscious realm of primitive desires), ego (the conscious personality), and superego (the realm of conscience, morality, and social pressure). Adults unconsciously seek to reduce the tension created by the conflicting desires of the id and superego. To achieve a state of intrapsychic reduction of tension (equilibrium), Freud proposed the existence of a number of defense mechanisms including projection, denial, and repression, which keep disturbing thoughts out of awareness. One objectionable feature of this model is the extent to which it assumes unconscious activity, which is difficult to measure objectively.
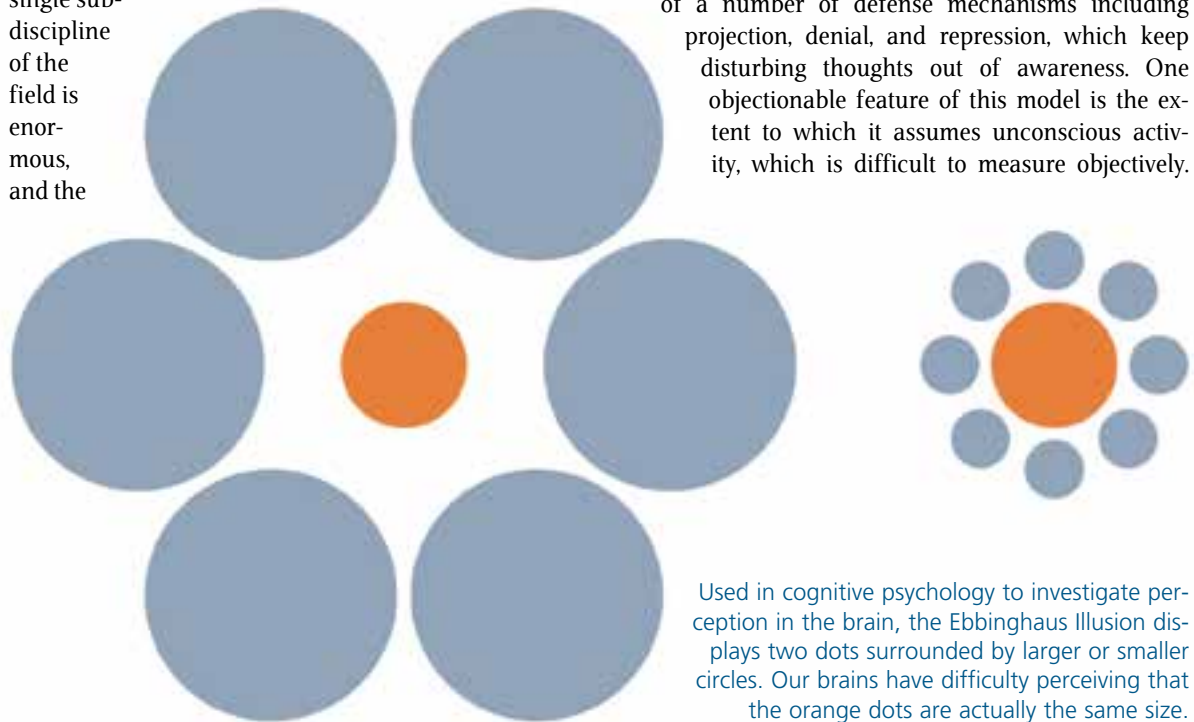
Used in cognitive psychology to investigate perception in the brain, the Ebbinghaus Illusion displays two dots surrounded by larger or smaller circles. Our brains have difficulty perceiving that the orange dots are actually the same size.

Modern psychology was born when Wilhelm Wundt (1832–1920) established the first psychology laboratory at the University of Leipzig in Germany. Wundt is called the "father of experimental psychology."

In order to uncover unconscious thoughts, feelings, and impulses, psychoanalysis uses free association (saying whatever comes to one's mind), projective tests (like the Rorschach ink blot test), and most important to Freud himself, dream analysis. Freud's most controversial theory was his model of psychosexual stages of development. Though rejected by many in the field today, the concepts of Oedipal complex and the oral, anal, phallic and genital stages are well-known and still discussed. Freud believed individuals are supposed to move through the stages without becoming fixated. Fixation at a particular stage results in corresponding adult personality problems. His most important contribution was the development of psychoanalysis to heal people from psychological problems. Freudian psychoanalysis placed the client on a couch with the therapist behind and out of sight. It often took months or years, and focused on uncovering unresolved issues in the unconscious. Over the years, serious criticisms have been leveled against his theory and therapy, even by some of his followers. For instance,

Erikson, Horney, and Adler criticized Freud for placing too much emphasis on the impact of the first few years of life on personality development, for presenting an overly negative view of human nature, and for overemphasizing the role of biological factors in development.

Rejecting the notion of unconscious drives and motivations, John Watson and later B.F. Skinner proposed that psychology focus strictly on overt behavior in order for it to be an objective science, along the lines of the natural sciences. *Behaviorism* asserted that the behavior of all organisms, including humans, is caused and maintained by two types of simple, associative learning. *Classical conditioning* involves pairing a new stimulus (like a bell) with an unlearned stimulus (like food), so that the new stimulus produces the same behavior as the unlearned stimulus does (salivation). Operant conditioning is even simpler: it uses a stimulus (called a reinforcement or a punishment) to shape behaviors in desired directions. Operant conditioning is used in animal training and throughout human life (e.g., getting paid for work is an example of reinforcement).

Reacting against the determinism of the psychoanalytic and behaviors perspectives, the *humanistic* approach focused on the healthy side of the human personality and emphasized growth, human freedom and responsibility, and the experience of the individual in the present. Carl Rogers developed the "person-centered" approach to therapy. Rogers believed that all people naturally develop towards health and fulfillment, to the extent possible given the barriers in life. The therapist's job is to establish a healthy relationship with the client that provides unconditional positive regard, genuineness, and empathy, which enable the client to resolve their own problems.

Social learning theorists made the behaviorist model more humane by explaining how people's expectations and values of reinforcements assist in the prediction of human behavior. Albert Bandura's research found that humans can learn behavior without being reinforced, but just by observing the behavior of others.

Jean Piaget developed a comprehensive and influential theory of *cognitive development*. Piaget described two basic mental processes that cause change in all human understanding: assimilation (forming a new mental *schema* based on new information) and accommodation (fitting new information into an established schema). He also described the global changes that occur in children's understanding as they pass through four stages of cognitive development. He discovered that children of different ages comprehend the world with qualitatively different "systems of understanding," leading in adolescence to the ability to reason using formal logic.

Critical Issues

In spite of its amazing accomplishments in its short history, questions need to be raised about the limitations of modern psychology and its current dominance in the field. Postmodern and cross-cultural psychologists, for example, have questioned the possibility of developing a universal science of human beings that applies to all people for all time in all cultures and have criticized most contemporary psychological research for being too westernized and focused on the individual.

But modern psychologists themselves acknowledge the challenges they face. Most of psychology is concerned with intangible aspects of human life that cannot be directly observed and measured. For example, a psychological researcher might collect observable, measurable data from the performance of 100 people on an intelligence test, but the real focus of interest is the people's intelligence, which is intangible. The observable data is necessarily one step removed from the actual intangible object of the research. Contemporary psychology research takes such matters into account mathematically and by replicating previous studies, but this "gap" between the data and the object of psychological interest keeps psychologists from claiming absolute certitude about their findings and the conclusions they can draw from them. Even more problematic, all psychological science involves making some assumptions that cannot be empirically proven (Koch, 1981). For instance, in order to investigate the process of becoming a mature person, one must have some understanding of what a mature human looks like, and different communities disagree about their maturity ideals.

Some contemporary psychologists have also criticized modern psychology's reliance on natural science methods (see Martin, Sugarman, & Thompson, 2003). They point out that some psychological features of human beings, such as human freedom, cannot properly be described just using the methods of the natural sciences. As a result, it is necessary to use *human science* methods as well, for example, narrative, ethnographic, and phenomenological (Creswell, 2007).

The Christian faith has its own set of concerns about modern psychology. To begin with, while Christians affirm that knowledge can be gained through the scientific method, there is a greater recognition that human finitude and fallenness impose restrictions on our pursuit for knowledge, regardless of our research methods. In fact, the human (or social) sciences are especially susceptible to what has been called the "noetic effects of sin," the distorting effects of sin on human understanding and research (see Moroney, 1999). Such assumptions should lead Christians to be humble about their own psychological

claims, but also to develop a "hermeneutic of suspicion" regarding psychologies based on distorted worldviews, like naturalism, which allow for no reference to God or the supernatural. Religious neutrality is a modern myth (Clouser, 2005). From a Christian standpoint, one cannot exclude God in the study of the images of God. Modern psychology, therefore, dramatically misinterprets the transcendent, God-oriented nature of human beings and views human life solely instrumentally and adaptively. For instance, it has been common in modern psychology to see concepts such as agape-love, altruism, free will, and belief in God treated as illusions and considered to be merely chemical processes in the brain that are a function of social experiences. (This is an example of *reductionism*, especially common among adherents of naturalism, a view that reduces all unique, higher-level human experience and activity to lower-level natural processes that humans have in common with the rest of the natural world.)

To understand better the impact of worldview assumptions on one's psychology, let us consider the following hypothetical interaction from the standpoint of naturalism and Christianity. During a conversation Jesse tells Jacob he doesn't have the money he needs to fix his car and get to work the following week. Jacob tells Jesse he would like to give him the money he needs, and he does not care if Jesse pays it back. Jesse expresses his gratitude repeatedly, takes the money, and they part ways. Believing that all human actions are fundamentally motivated by self-interest, an adherent of naturalism will interpret the interaction accordingly, for example, saying that Jacob's action was an attempt to hold power over Jesse for a future favor, whereas Jesse's response was merely a kind of ingratiation, performed in the hope of gaining more resources from Jacob in the future. Because of the Christian doctrine of sin, a Christian might agree that motives of crass self-interest could be at work. However, believing also that humans are created in God's image, there is also the possibility that this interaction manifested human virtue, where Jacob's action was a sincere attempt to give sacrificially to another and Jesse's response was a grateful reaction to Jacob's altruism. Such interpretive differences will decidedly affect the kind of empirical investigation the respective psychologists conduct and what they look for.

Modern psychology has yielded great gains in our understanding of many aspects of human nature, but we know now that the quest for a sure foundation for universal human knowledge that led to the development of modern psychology was misguided. "Foundationalism has failed, but [this] does not lead to the opposite errors of relativism or skepticism. We must begin with faith" (MacIntyre, 1990, p. 42).

A Christian Response

All human knowledge is founded on basic beliefs that cannot be proven to the satisfaction of skeptics (Plantinga, 1983). Likewise, all psychological knowledge entails unproven assumptions and begins with faith. The Dutch theologian and prime minister Abraham Kuyper (1898) argued that the enlightening effects of regeneration on Christians ought to lead to two kinds of human science: one based on naturalism, that considers the way humans are now to be normal, and the other based on Christianity, that considers the way humans are now to be tragically compromised by human sin and alienation from God, and therefore *needing* regeneration.

How would a distinctly Christian psychology differ from modern psychology? It would flow from a Christian anthropology (model of humanity): all human beings are created in the image of God but they currently exist in a fallen condition, alienated from their Creator, and their psychological capacities are accordingly compromised. However, through faith in Christ, humans become reconciled to their Creator, a triune God who has begun a partial restoration of their psychological capacities that is realized in Christian community and will be perfected in the age to come. The Scriptures give us some divinely inspired psychological knowledge (but not *all* the psychological knowledge God has), so the Bible has a primary role to play in a Christian psychology, along with the work of Christian thinkers and ministers over the centuries.

The goal for the Christian psychologist is to think about humans like God does. Because God has not revealed everything he knows about humans in the Bible, Christian psychologists will need to do their own research and they will also want to learn all that they can from modern psychology. For example, they will use all valid methods to study human beings, and natural science methods have proven their worth. However, their knowledge of, consent to, and love-relationship with God will provide the ultimate context for their use of all psychological methods and practices (Coe & Hall, 2010). "Recognizing God is required for the most comprehensive psychology" (Johnson, 1997, p. 16). In addition, believing

One of the weaknesses of Freud's psychoanalytical model is the extent to which it assumes unconscious activity, which is difficult to measure. Along with free association and dream analysis, the Rorschach inkblot test has been used to try to detect a subject's underlying thought processes.

that all humans are made in God's image and confident that God's creation grace is the source of all good in culture and science, Christians should expect that modern psychologists will discover plenty of psychological knowledge and contribute to many worthwhile activities (e.g., the mental health system). But their faith also leads them to expect that there will be distortions in their psychology, the closer the psychological topic is to the central issues of human life (Brunner, 1946). To cite just one example, belief in God (or at least the divine) is ubiquitous among humans, yet psychology of religion is marginalized in modern psychology, showing up in few "Introduction to Psychology" textbooks.

Christians in psychology therefore must work towards a psychology that is thoroughly Christian. This means, first, creatively engaging in psychological theory-building that is foundationally and explicitly Christian. Not only will this honor God, but it will give us a more accurate and complete picture of human beings. For instance, classic social psychology studies on conformity

and obedience have frequently focused on how these features of social life can lead to negative consequences such as aggression, also a concern to Christians. However, with Christian assumptions of human nature Christians may more readily recognize the positive role conformity and obedience can play in establishing and maintaining order in culture. Some Christian

psychology theory-building has begun regarding the emotions (Elliott, 2006; Roberts, 2008), personality (Spiedell, 2002), Christian postformal cognitive development (Johnson, 1996), happiness (Charry, 2010), and Søren Kierkegaard's psychology (Evans, 1990).

Second, this means doing empirical research that is grounded in the Christian faith, for example, studying the attribution beliefs of Christians, indwelling sin, stages of spiritual development, the identity and self-representations (like old self/new self) of Christians, true shame and guilt, Christian perfectionism, same-sex attraction and gender disorders, and so on, all from a Christian perspective. So far Christian psychologists have begun to investigate just a few psychological topics

like beliefs about sin (Watson, Morris, Loy, Hamrick, & Grizzle, 2007), beliefs about grace (Sisemore, et al, 2010; Watson, et al, 2010), Christian wisdom (Kwon, 2009), distinctly Christian therapy (Aten, Hook, Johnson, & Worthington, 2011), Christian postformal cognitive development (Johnson, 1998), and Christian self-representation (Johnson & Kim, unpublished manuscript).

Finally, this means developing distinctly Christian models of counseling and psychotherapy. More work has probably been done by Christians in this area of psychology than any. For example, there are models of transformational psychology (Coe & Hall, 2010), Catholic psychotherapy (Dilsaver, 2009; Zeiders, 2004), Orthodox psychotherapy (Chrysostomos, 2007), Reformed counseling and psychotherapy (Johnson, 2007), and many others.

Translation of Modern Psychology Truth into a Christian Psychology

Yet Christian psychology should not and need not do everything itself. So it is very interested in the work of modern psychology. Wherever modern psychologists have done good work (that is, work that is not very distorted by secularism), Christians should receive it with gratitude (1 Tim. 4:4–6). As Kuyper (1898) has said, "What has been well done by one need not be done again by you" (p. 159). This probably applies to most of modern psychology.

At the same time, in another sense, what is left out is *everything* (the triune God and his salvation and a Christian anthropology)! So, just how much a modern, secular perspective is distorting the psychological topic in a text or lecture will have to be carefully evaluated every time. This requires reading, critiquing, and wrestling with secular theories, research, and clinical practice that may on the surface seem reasonable and appropriate, but analyzed in the light of the Christian faith are found to fall short of God's comprehensive understanding. Because of modern psychology's commitment to study empirical reality rigorously, combined with its secular orientation, there will generally be fewer sins of commission than of omission. That is, from a Christian standpoint, the primary problem of modern psychology is what is left out, because modern psychologists do not share the pretheoretical assumptions necessary to recognize features of human beings that Christians do, like the image of God, sin, and the activity of God.

To oversimplify, the Christian student of psychology will sometimes have to "translate" the understandings of modern psychology into a Christian psychology language-system. This requires a good understanding of Christian psychology, the modern psychology concept of interest, and practice in such translation work. Concepts that are little distorted (like "neuron") should be simply brought over into a Christian psychology; whereas concepts that are antithetical to a Christian psychology should be rejected (like Maslow's notion of "self-actualization"). Most modern psychology understandings will be somewhere in between, requiring some Christian modification before being brought in. Consider, for example, the concept of self-esteem. A Christian orientation will vary greatly from a modern approach, since Christians believe that value is ultimately established by God (and not the self). Nonetheless, there are many findings in the modern self-esteem literature that are helpful. Modern theorists, for example, have postulated that self-esteem is related to interpersonal dynamics. Such an insight is thoroughly compatible with Christian ideas of relationship, community, and interdependence.

Finally, a Christian psychology should also develop a literature that is constructively critical of the distortions evident in modern psychology (as well as in other psychologies, e.g., Buddhist psychology). Exemplary work with this agenda includes Vitz's critique of Freud (1988) and of humanism in personality and clinical psychology (1994), Adams's critique of Freudian and humanistic therapy, and deterministic psychiatry (1970), and various analyses of therapeutic and personality models (Jones & Butman, 1991; Roberts, 1994; Browning & Cooper, 2004).

Christian psychology might seem to be out of step with contemporary psychology. However, when the discussion broadens to include philosophy of science, it becomes apparent that modern psychology is out of step, for contemporary philosophy of science by and large rejected modernist assumptions decades ago (Ratzsch, 1986). Indeed, Christian psychology is simply taking its cue from Christian philosophy (see Plantinga, 2000), which has been paving the way for a renewal of radical Christian scholarship in all the disciplines for some time now.

Working with Modern Psychologists

Nonetheless, Christians should not hesitate to work with modern psychologists wherever they can. This will be easy in areas of psychology where worldview assumptions make little difference in understanding human nature (e.g., neuropsychology, animal learning, and basic psychological structures, like cognitive and emotion systems). Moreover, all members of a culture ought to participate in its university and mental health systems. So Christians are free to wisely consider how and where they might participate as Christian minorities in fields that are currently dominated by a modern majority.

The Christians who have done the best at such participation tend to call themselves "integrationists," since they believe that Christians should integrate their faith with contemporary psychology. Though we are more critical of the secular worldview influences in contemporary psychology, we greatly appreciate their work. In some cases they have contributed to the shape of contemporary psychology, using modern rules with a Christian agenda (e.g., Everett Worthington on forgiveness and Robert Emmons on gratitude). Moreover, significant changes have been occurring in contemporary psychology over the past two decades that should excite all Christians (e.g., a growing openness to generic spirituality and religion and positive psychology's investigations of human virtue).

A Pluralist Set of Psychologies

In the future it seems likely that pluralist, democratic cultures like ours, helped by the postmodern critique of modernism, will no longer view the human sciences as universalizing disciplines based on a single worldview. Instead, it will be widely acknowledged that human sciences like psychology require that their scientists utilize their worldview assumptions in their work, so they should make explicit those assumptions. This is necessarily the case, because human beings are socioculturally-constituted, so, contrary to the "neutral" modernist agenda, it is impossible to remove one's worldview assumptions from one's human science work and duplicitous to try. This will result in a pluralist set of psychologies (modern, feminist, Christian, Hindu, Muslim, and so on), agreeing where they can (in many areas of psychology, see above), but articulating different approaches in those areas of psychology that are more *worldview-dependent* (e.g., personality, psychopathology, therapy, and social psychology).

This is not as controversial as it sounds, since even now modern psychology is not as unified as is commonly supposed. The field is composed of many different subdisciplines, some of which vary tremendously in their orientation and some of their assumptions (e.g., neuropsychology, cognitive psychology, and clinical psychology). We are only pointing out that that worldview differences also affect one's view of human beings, so, if they are taken seriously, it will necessarily result in a single discipline that has a common core in some areas, but multiple psychologies in other areas, each based on a different worldview. (This, of course, does not mean that all worldviews are equal. Different "psychologies" built on different

worldviews will be more or less effective based on how close their assumptions about man correspond to the Christian Worldview—that is, reality.)

Conclusion

Contemporary psychology constitutes a vast, complex, and remarkable human science. However, it is currently dominated by a modern, secular orientation. Christian students of contemporary psychology will benefit from understanding well their Christian faith and their own worldview assumptions, particularly a Christian understanding of human beings and salvation in Christ. There is tremendous value in contemporary psychology, but Christians need to be wary of its secular distortions. As students move through their study of psychology, it is hoped that they will develop a sophisticated Christian understanding of the field and that some will feel called to contribute to a distinctly Christian version. While William James despaired of certainty on this planet, Christians can more confidently base their psychological knowledge and practice on the divine revelation found in Scripture, acknowledge the limits of human knowledge, and find the greatest kind of certitude and happiness through faith in Christ.

—*C. Eric Jones & Eric L. Johnson*

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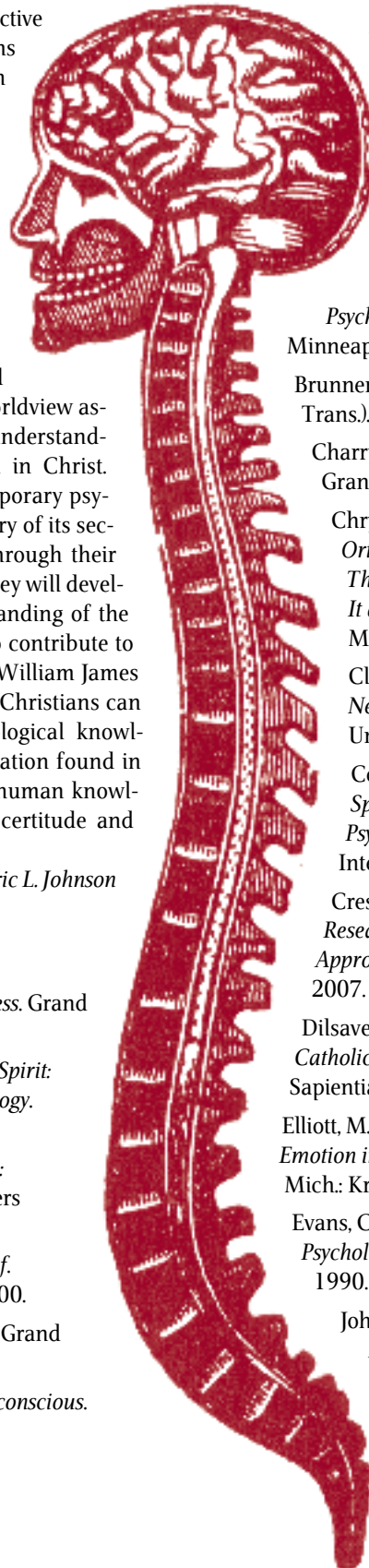
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SOCIOLOGY

It is advisable to note at the outset that one of the banes of this discipline called *sociology*—which I will define momentarily—is its addiction to jargon, some of which is justified but much of which is not. First, the discipline uses many specialized words or phrases that are obviously technical, such as *status set, anomie,* or *latent pattern maintenance.* Sociologists are also given to attaching unique "insider" meanings to everyday terms such as *deviance, role* or *status.* Thus laymen often think they know what sociological statements mean when they do not.

As if all this was not bad enough, different sociologists often assign divergent meanings to the same terms, even seemingly straightforward ones like *class, crime,* or *alienation.* This common lack of terminological standardization is due to many causes, especially: disagreement over the essential nature of the things being referred to, competing theories that have diverse ways of framing particular concepts, or shifts in the meaning of the terms across time as definitions are developed and refined. Regardless, such variations in definitions often baffle the uninitiated reader. Sadly, I will need to use some jargon in this essay. However, I will endeavor to make its meaning, as much as possible, clear within context. There is also a glossary at the end of this chapter where I will present definitions of key terms.

Sociology can be defined quite simply as "the scientific study of human society" (or, of "social relations"). The English word is based on the French *sociologie,* coined by the French social philosopher Auguste Comte (1798–1857) in 1838.[1] It is derived from the Latin *socius* (which has

meanings such as "association," "companion," "sharing," "united," and so forth[2]), tied to the Greek suffix rendered *logie* by the French ("the study of"). Now we will break down our definition a bit, to get a clearer idea of what sociology actually is and does.

First, by "society" sociologists mean any identifiable group of people who are bound together by social relationships.[3] This can encompass many levels from two or three individuals to nations or even global interrelationships, and everything in between. When sociology focuses on small groups and face-to-face interactions, it is called *microsociology;* when it examines larger groups, such as whole societies or interrelationships among them, it is called *macrosociology.*

Second, by "scientific study" sociologists generally mean conducting inquiry through the use of rigorous empirical observation. The latter can be *quantitative* (that is, gathering and statistically analyzing data that is converted into numbers) or *qualitative* (that is, the information is studied without being quantified). Either way, sociologists focus on social *variables* (that is, things that vary, as opposed to "constants").

In analyzing the latter, sociologists may simply *describe* them. Or they may try to *interpret* variations in social realities (that is, say what these variations "mean"). However, the ultimate goal most sociologists have is to *explain* social realities; that is, identify what *causes* them to vary; learn how and why they do so. For example, in looking at divorce,
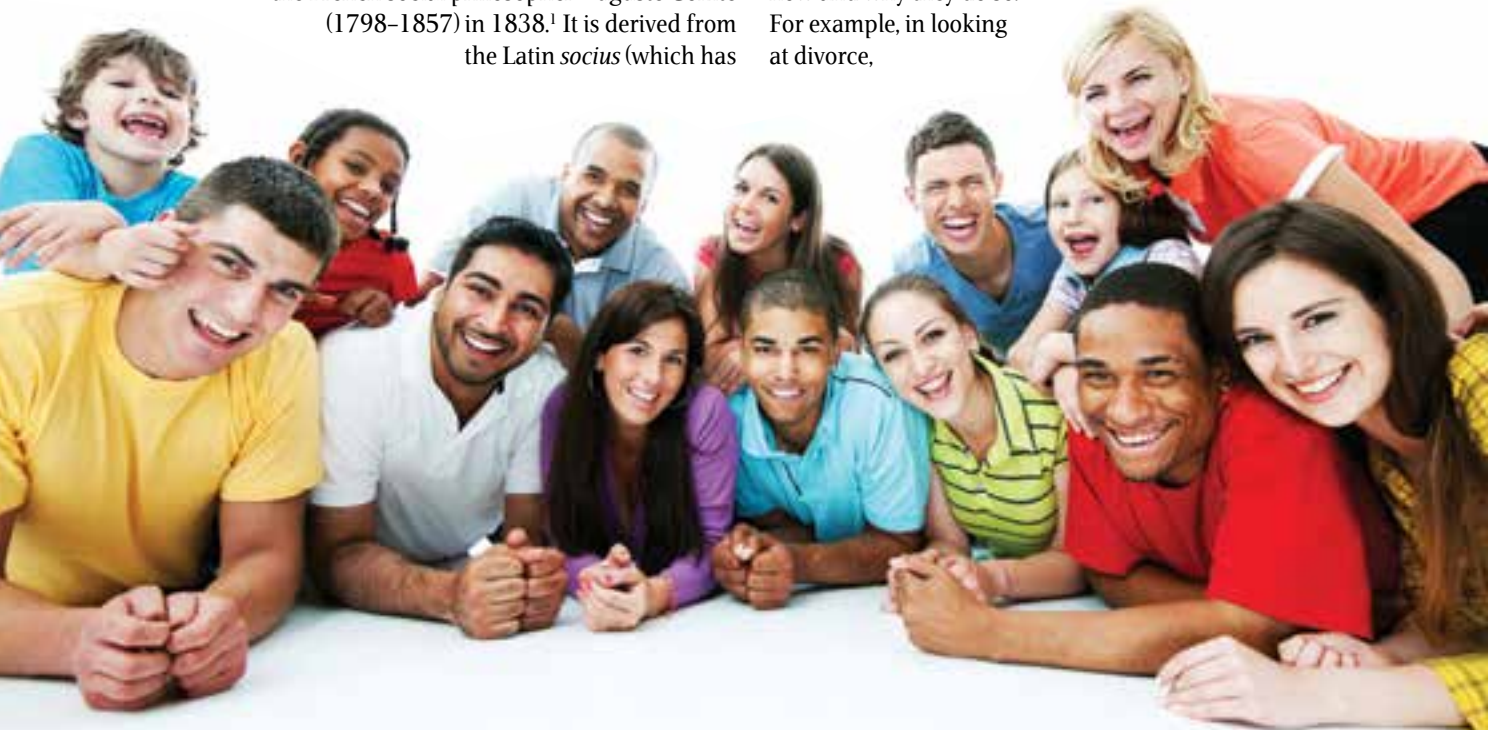
sociologists will often compare rates for different time periods, American states, nations, religious groups, and so forth (description). In doing so, they may make statements as to what this variation means; for example, does higher divorce mean that people value marriage less or personal autonomy more, and so on (interpretation). But their main interest will be in understanding *why* divorce varies; knowing what is different about the epochs, places, or groups that have lower or higher divorce rates, or about couples that divorce versus those that don't, may explain why these differences exist (explanation). When explanations are stated with some level of abstraction and include a number of interrelated variables and propositions, they are considered to be *theories*.

Finally, this "science" is carried out using a large variety of methods. These include: conducting *surveys* (questionnaires with limited choices respondents submit or pick in response to statements or questions), *interviews* (asking questions of individual subjects), *participant observation* (direct, sustained observation and interaction of individuals and groups, sometimes called "field" or "ethnographic" research), *experiments* (exposing subjects to some stimulus and then observing their response), *content analysis* (examining social artifacts such as media images, text and speech, historical documents, or even physical objects), and *analyzing rates* or other numbers that represent social aggregates (for example, comparing the number of divorces per 1,000 adults, or the ratio of males to females, between various places or time periods).

Sociology is part of a family of academic disciplines called the "social sciences," which also include such fields as economics, psychology, anthropology, political science, and criminology. While the birth of economics as a social science is commonly tied to the publication of Adam Smith's *The Wealth of Nations* in 1776 and virtually all these disciplines trace themselves to earlier roots in various ways, for the most part the social sciences, including sociology, formally emerged in the mid- to late-nineteenth century. Sometimes history, which is obviously much older, is also considered to be a social science, though this notion is somewhat controversial among historians, who think of their discipline as being one of the humanities.[4] Regardless, historical study is certainly important to sociology, as it is for many other social sciences. In fact, historical sociology is a highly respected subfield which includes some of sociology's greatest classics. Occasionally other academic fields, many of which are younger, are also included in this family, at least in those areas in which they use approaches to research and analysis that are typically associated with social science. These include such disparate areas as communications

Sociology is defined as the study of human society. Sometimes synonymous with "social science," the discipline of sociology seeks to determine why humans behave the way they do socially.

studies, public administration, international relations, business administration, marketing, geography, linguistics, or even law.

It is commonly noted that, in terms of what areas of human social life it studies, sociology is among the broadest of all of the social sciences. (In this regard, only history and perhaps anthropology would rival it.) There are sociological works and practitioners dealing with every area that are also the entire foci of other social science fields. For example, there are sociologists who study economic exchange, criminality, marriage, mental disorders, child socialization, health care policy, legal processes, political behavior, Westernization, and business organizations, to name just a few. Keeping in mind that many sociologists teach or research in a number of areas, the most well-recognized specialties in sociology are: social stratification (i.e., inequality), crime, deviance and social control, law, race and ethnicity, marriage and family, gender, political sociology, economic sociology, historical sociology, science, education, culture, health and medicine, urban and rural sociologies, environmental sociology, military sociology, sociology of religion, and social psychology (the sociological study of individual-to-individual or individual-to-group interaction, which is also a subfield of psychology). The term *broad* here is an understatement.

The development of sociology as a formal academic discipline had two major foundations. The first was the emergence of social philosophy that valued using careful observations to produce and support causal assertions about social realities, thus laying the intellectual groundwork for the field. The second was the generation, particularly beginning in the nineteenth century, of increasingly reliable population data that was suitable for statistical analysis. This collection of social facts made the realization of the dreams of social philosophers who had anticipated something like a scientific approach to understanding and explaining social phenomena much more feasible. But this activity was partly stimulated by growing concerns people had about the future of Western civilization in light of the many wrenching changes they were experiencing and their increasing desire for "scientific" solutions to social problems, giving further impetus to the emergence of sociology.

Certainly, careful reasoning about social phenomena based on observation has a long history in the West and elsewhere. Assertions of a sociological nature can be found in the writings of ancient luminaries from

In this engraving King Edward III of Great Britain struggles against a Muslim assassin during the Crusades. These conflicts contained many of the conditions that have vexed sociologist over the generations—war, race religion, commerce, power, and more.

The frontispiece to Thomas Hobbes' 1651 book *Leviathan* quotes Job 41:24 in Latin, connecting the crowned figure in the etching to the biblical beast.

Confucius to Herodotus and Plato, not to mention the biblical books of Proverbs and Ecclesiastes. The analyses of social conflict and cohesion in the *Muqaddimah*, written in 1377 by the famous Arab thinker Ibn Khaldun (1332–1406), anticipate some prominent nineteenth-century social theories to an amazing degree. However, the social and political philosophy that more immediately gave birth to sociology was advanced in the period leading into the Enlightenment up through the intellectual reactions against Enlightenment thinking that occurred in the aftermath of the French Revolution and its terror that ended in 1799.

One of these important precursors to sociology was British philosopher Thomas Hobbes (1588–1679) who, in his *Leviathan* (1651), addressed the important question "how is social order possible?" Hobbes theorized that human nature meant that people are fundamentally motivated by fear of pain and desire for power rooted in a reasonable desire for self-preservation. Since they are naturally selfish and power-seeking, if unchecked,

humans prey on one another. Human action is also heavily influenced by environment stimuli. People need to live under a "social contract" supporting a strong government authorized to use punishment and fear to protect them from each other and get them to act for the common good. Said Hobbes, this replaces the state of nature's *bellum omnium contra omnes* ("the war of all against all") with social order that enables people to live productive and happy lives.

Another important influence was the work of the French thinker Baron Charles Montesquieu (1689–1755), particularly his famous *The Spirit of Laws* (1748), which had many notions that became widely accepted in later sociology. He argued for overcoming cultural bias to be able to objectively research the "laws" that governed the variation and development of societies. He felt that society could be studied "scientifically" much as physical things can be, and that this should include proper classification into sound analytical types. Given the complexity and intelligence of human beings, said Montesquieu, such a science of society would be probabilistic rather than deterministic; that is, identifying "causes" that make given effects more likely, but not certain. Furthermore, Montesquieu claimed that social and environmental factors, including social position, affect what people think and believe. His ideas about the "general spirit" of nations also anticipated modern concepts such as "culture" and "worldview." He examined the effects of factors like climate, modes of commerce, geography, and religion upon culture, as well as looking at the effects of population growth. Meanwhile, he rejected divine intervention as a social cause. Montesquieu viewed society as a type of complex organism which has mutually interdependent parts, such that what happens in one aspect of society influences other aspects of it, often in unanticipated ways. He preferred that social change be gradual and modest rather than abrupt and revolutionary.

The French philosopher Jean-Jacques Rousseau (1712–1788) also had a great influence on some of those who became important founders of sociology in the nineteenth century, especially through his *Social Contract* (1762). He argued that while people were not essentially bad, they had become corrupted by society, which itself was not original but rose out of the need for greater food production and which began with the development of family units. Society was twisted by private property, which led to inequality, and by the need for people to increasingly specialize in order to enhance production. People should agree, said Rousseau, to a social contract in which they would submit to the "general will" of collective society, giving the state strong powers including the authority to reduce inequality. Along with
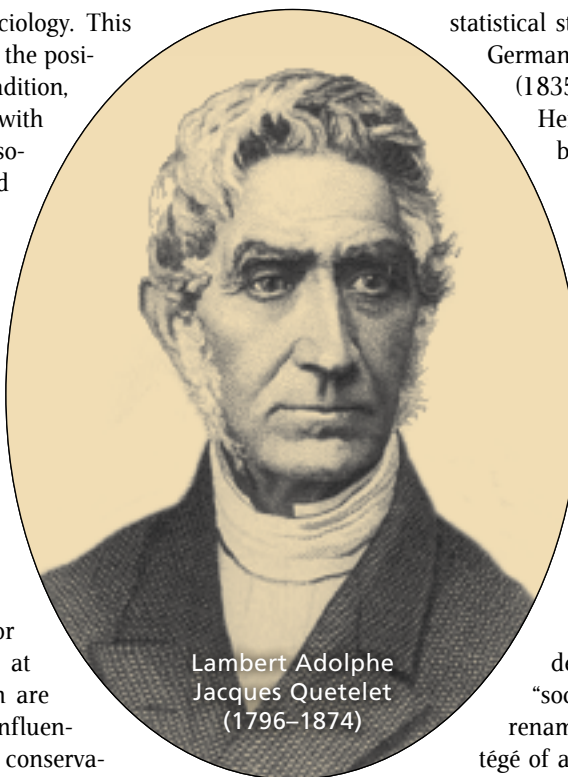
this he wanted to develop a new "civil religion" based on humanistic values and a limited number of tenets which should include "toleration," though paradoxically people who rejected this religion would be banned from the community! All of this would actually expand the personal freedom and development of individuals. Social order, said Rousseau, comes not just from fear as Hobbes claimed, but through proper socialization of children. Society should re-educate youth to break the hold of religious "superstition" and strengthen loyalty to the larger community.

The Conservative reaction to the French Revolution and its chaos also became incorporated into the larger body of social philosophy that was later to become the foundation of sociology. This included an appreciation for the positive roles of things like tradition, religion, and emotion along with a suspicion of the idea that society could be reorganized along abstract, rational lines. They emphasized the degree to which societies and their central institutions such as government, church, and family are unified, organic entities which do not benefit from radical change and replacement. Social reform should be gradual and respectful of what has existed for centuries, even where some rational justification for these things is not readily at hand. Stability and cohesion are mainly good things. Some influential representatives of these conservative, anti-revolutionary positions were the British statesman Edmund Burke (1729–1797; particularly his *Reflections on the Revolution in France*, 1790); and the French Roman Catholic thinkers Louis de Bonald (1754–1840; for example his *Theory of Political and Religious Power*, 1796; and *Primitive Legislation*, 1802) and Joseph de Maistre (1754–1821; for example, *Considerations On France*, 1794).

Moving from philosophical contributions to developments in the growing availability and use of reliable data for doing social analysis and trying to understand processes of social change, we have the groundbreaking work of another Frenchman, Andre Guerry (1802–1866). He published many studies; the one most important to

later sociology was *Essay On the Moral Statistics of France* (1833). In his research, Guerry used social data collected by governments (then called "moral statistics") to look at causes for variations in things like crime, mental illness, and suicide rates, considering such possible influences as literacy levels, age distributions, seasonal fluctuations, economic development, and population density. The Belgian mathematician Adolphe Quetelet (1796–1894) worked with Guerry and went on to publish many studies of "moral statistics." He advanced the scientific study of social phenomena, which he called "social physics." The study of moral statistics quickly spread. The Statistical Society of London was founded in 1834; in the United States Pliny Earle (1809–1892) did statistical studies of mental illness, while German economist Adolf Wagner (1835–1917), and Italian physician Henry Morselli (1852–1929), both completed major studies of suicide rates. With all of this, of course, the die was cast to utilize such research to guide government policies and social reform, ensuring an increasing role for such science in modern societies.

Lambert Adolphe Jacques Quetelet (1796–1874)

It was in this philosophical and statistical milieu that Auguste Comte (1798–1857), influenced heavily by both Enlightenment philosophy and the Roman Catholic critics of it, began developing his own vision for "social physics," which he later renamed *sociologie*. He was a protégé of a famous socialist and utopian named Henri de Saint-Simon (1760–1825) from whom he drew (and many say, stole) many of his major ideas. His major contributions to sociology were *Positive Philosophy* (multiple volumes published between 1830 and 1842). He believed that societies develop through three stages, ultimately resting on their ideas of where and how truth can be discovered—*theological* (in religious beliefs), *metaphysical* (in reason, logic, philosophy), and finally *positive* (in science). Western societies were in the beginning of that third stage, in which people would come to understand that social problems would be solved and social progress would be made through the application of science. This meant that ultimately, society should embrace a kind of socialism run by technocrats.

Moreover, science itself could be hierarchically arranged, with those dealing with the inorganic (such as geology, chemistry, etc.) below those dealing with the organic (such as biology, and of course, the social sciences), and this hierarchy reflects the order these sciences were developed in time. He placed sociology (with anthropology) at the top, calling it the "Queen of the Sciences,"[5] referring both to the idea that it emerged last and that sociology would integrate and direct the work of applying science to eliminating social problems and ultimately create a perfect society. In an endeavor that was pompous, comical, and a bit pathetic, late in his life he created a new "Religion of Humanity," based on scientific principles, to replace the old religious dogmas in our new "Positive" era, and declared himself its Pope! This helped give rise to the development of "secular humanist" groups, a movement that remains with us to this day.

Thankfully, Comte's notions about a Positive Religion and scientific hierarchy did not have a lasting impact on sociology. However, Comte's idea that sociology should address both *statics* (social structure) and *dynamics* (processes of social change) was more widely accepted. So was his recommendation that social theory should be rooted in empirical observation, experimentation, and comparative analysis, though ironically, he disdained the moral statistics of his day and never undertook real practical social science research of his own.

Comte had a major influence upon Emile Durkheim (1858–1917), who founded the first formal Department of Sociology in Europe (University of Bordeaux, France) and published a major work to help map out the new discipline, *Rules of the Sociological Method*, both in 1895. Durkheim was also heavily influenced by Montesquieu, Rousseau, and the French Catholic anti-Enlightenment conservatives. His published doctoral dissertation, *Division of Labor* (1893), and a journal he founded in 1898, *L'Année Sociologique*, were enormously influential. His "moral statistics" study, *Suicide* (1897), not only had great theoretical significance but stood as a model of social science research for the new discipline.

Auguste Comte
(1798–1857)

Durkheim believed that social structure (what he called "social facts") strongly shaped individual action and consciousness. He believed that it is the study of social facts and their impact and not directly of individuals in and of themselves that should characterize sociology. Social structures should be mapped out to reveal what their various parts are, what functions they perform, and how they interact. Society, he felt, is a reality that exists independent of individual people and constrains them. Durkheim held that healthy societies have norms (rules) and interpersonal bonds that are strong enough to provide needed direction and solidarity without being overpowering such that they smother people, an idea he developed at length in *Suicide*.

Societies are also characterized by a "collective consciousness," said Durkheim, which is a kind of unifying collection of moral beliefs and sentiments that change as societies do. For example, modern societies, which are much more diverse, have weaker collective consciences than traditional societies do. In fact in Durkheim's work, society took on a kind of quasi-religious character. This became especially clear in his later *Elementary Forms of the Religious Life* (1912), where he argued that religion is really a direct expression of social values. Religions are "beliefs and practices relative to sacred things," he said. Things that are "sacred" (as opposed to "profane") are representations of what societies most deeply value and believe. Making them objects of shared religious devotion unites people into moral communities. Essentially, Durkheim held that religion was, in many respects, society worshiping itself.

Someone who is a bit of an "outlier" in the history of the foundation of sociology as a formal discipline is the German philosopher, political economist, and communist Karl Marx (1818–1883). Why an "outlier"? Marx was never concerned with establishing sociology. He rejected Comte's attempt to unite Enlightenment thinking with insights from its Conservative critics. Also, except for his admiration for Rousseau, his direct inspiration came from very different sources from those of Comte and Durkheim, including two Germans, the

idealist philosopher G.W.F. Hegel (1770–1831) and the materialist Ludwig Feuerbach (1804–1872), as well as free market economics from Britain, particularly Adam Smith's (1723–1790) *Wealth of Nations* (1776) and David Ricardo's (1772–1823) *On The Principles of Political Economy and Taxation* (1821). Marx did attempt to utilize modern statistical facts to establish some of his ideas. But what made Marx a critical figure for sociology is the degree to which he put together a comprehensive social theory that proved to be very influential, initially as a thinker that many early sociological thinkers reacted to, and later (particularly following World War II) as a figure that attracted a fair number of followers in the ranks of the discipline.

At the center of Marx's scheme was the notion of "social classes," which he held are rooted in private property, more specifically, by whether or not people owned the central "means of production" (the key ways that wealth is created in any particular society). This always creates two major and opposing social classes in any era. In the industrial period of the modern nations of the nineteenth century, these were the *bourgeoisie* (owners; capitalists) and the *proletariat* (working non-owners; workers). Other social class-type groups that might exist are mainly seen in their relationship to these two major ones. This basic struggle affects every aspect of society and is the main engine of social change. Moreover, people's interests, values, beliefs, and ideas are all shaped by their social class. What controls societies are their ruling classes. When workers accept the dominant social arrangements, laws, and ideas of industrial society, they are guilty of "false consciousness" because they are embracing beliefs and structures that are hostile, ultimately, to their own interests. When they understand their true class interests and embrace ideas that are consistent with them, this is "class consciousness." In capitalist societies, most people are alienated, since they do not actually own most of what they create through their own labor, and are deluded by false consciousness. Eventually, the workers will attain class consciousness, become a "class" in the truest and fullest sense of the word, rise up against the capitalists, eliminate private property and embrace collective ownership and rule by the proletariat. Other things flowing out of inequality and private property, including such fixtures as crime, religion, and the nuclear family, will also disappear. This would be Communism, the final stage of history. The reason Marxism is often referred to as a form of materialism or economic determinism is because of the degree to which economic realities drive everything else. Obviously, he was also a utopian.

Karl Marx was very prolific. Some of his most important works to sociologists are *The Communist Manifesto*

The leaders of the Bolshevik Revolution built the Soviet Union upon utopian Marxist thought, where social class is a central idea. Karl Marx's ideas proved to be very influential in the discipline of sociology.

(1848), *The German Ideology* (1845) (both were written with his partner Friedrich Engels, 1820–1895), and *Das Kapital* (the first volume was published in 1867, the next two volumes posthumously in 1885 and 1894).

The most brilliant of the classical founders of sociology was the German historian, political economist, and legal scholar Max Weber (1864–1920). Some of his most important works were published posthumously. He wrote on economic and legal history (such as *General Economic History* in 1923) and on the Sociology of Religion (*The Protestant Ethic and the Spirit of Capitalism* in 1904–05, *The Religion of China* in 1915, *Ancient Judaism* in 1917–19, *The Religion of India* in 1921). His masterpiece, the comprehensive sociological work *Economy and Society*, appeared in 1922. He contributed many essays on methods and philosophy of science (such as the famous collection later published in 1949 as *The Methodology of the Social Sciences*), much of which helped lay a foundation for doing research in the fledgling social sciences. He is

famous for urging social scientists toward disinterested objectivity in their professional work, doing political partisanship only in their lives as private citizens.

The German historicists had a huge influence on Weber, particularly his friend Heinrich Rickert (1863–1936), who emphasized the differences between historical and scientific facts, and the need to understand the historical roots of current social realities, through a deep, sympathetic understanding of actors' motives and worldviews (*verstehen*). Weber was also inspired by German idealist philosopher Immanuel Kant (1724–1804), particularly in his ethical system that emphasized human freedom. Pulling these strands together, Weber viewed sociology as the study of human action by interpreting empathetically (that is, from their point of view) the subjective meanings and goals that actors attach to their actions. Weber was not sympathetic to Durkheim's idea of social structures that determined human thought and behavior.

Weber believed that the shift to modern life in the West meant increasingly embracing "rationality" in all areas of life; the objective calculation and pursuit of means and ends. This was the logic behind, for example, modern capitalism, bureaucracy, and science. He believed that this kind of instrumental thinking in the West was unleashed unwittingly by Protestantism when it embraced the idea of pleasing God by effective service in this world by seeking measurable success in earthly callings (*inner-worldly asceticism*) as opposed to the earlier Medieval idea of pursuing God by separation from the world through things like monasteries, vows of poverty and silence, and holy orders (*otherworldly asceticism*). When the belief in and devotion to God began to wane, the inner-worldly remained but the religious rationale did not, leaving behind just the idea of pursuing worldly aims in efficient ways which was going to keep taking over more aspects of human life, pushing aside the influence of things like religious devotion and tradition. Much of Weber's interest in religion stemmed from these underlying concerns: the uniqueness of Protestantism and its effects, and how and why

capitalism arose in the West from certain religious impulses, but not in other cultures. He was also interested in how varying religions lead to different types of social actions and social orders.

Weber's means of defining social stratification have now become widely accepted in sociology and differ significantly from Marx's. To Marx economic ownership determines everything, but to Weber wealth (property) is only part of the picture. One must also consider variations in power (the ability to get others to do things against their will) and prestige (*status,* social honor or respect). Moreover, power and prestige are not just byproducts of wealth. To illustrate, in 1210 a very wealthy Jew would probably enjoy less honor and "clout" than Saint Francis of Assisi, who was brutally poor. Today, someone who makes less money than a neurosurgeon can still have more power, if he is a general in the Army.

This European foundation for sociology obviously included many more thinkers than can be included here. For example, the English "Social Darwinist" Herbert Spencer (1820–1903) and his *Principles of Sociology* (1876) certainly made an impact at the time. The keenly insightful German Georg Simmel (1858–1915), a friend of Weber's, developed a fascinating approach to studying social life based on keen personal observation that inspired a lot of later "microsociology" in the United States. Ferdinand Tonnies' (1855–1936) study of the nature of the shift from traditional rural, to modern industrial, society in the West, *Gemeinschaft und Gesellschaft* (Community and Society, 1887), was also quite influential, especially upon Durkheim. Sadly, here we have had to make tough choices to highlight only those few figures and movements with the most potent and continuing influence.

During the late nineteenth century sociology also began to take hold in the United States. This was inspired not only by these philosophical and statistical movements, but by a kind of small-town liberal Protestant concern with social reform that gave American sociology an orientation heavily directed towards understanding and fixing social problems. Some wings of the field were
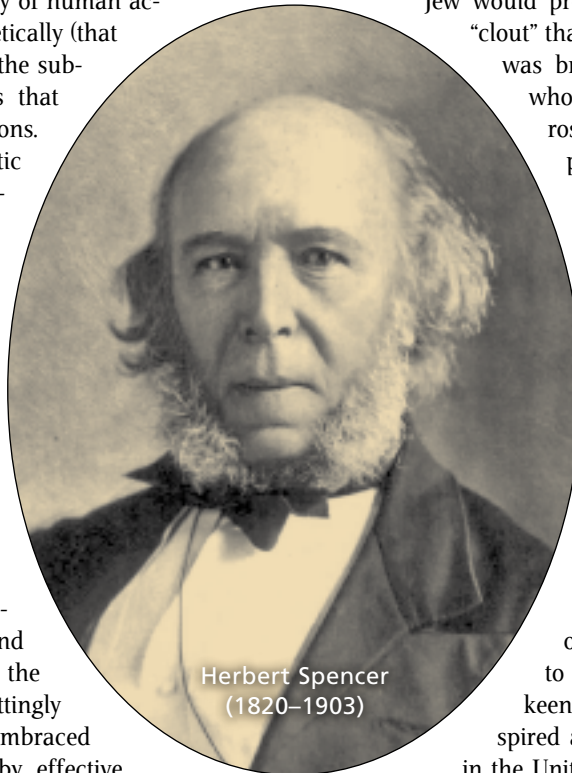
Herbert Spencer
(1820–1903)

also strongly influenced by the philosophy and social vision of American "pragmatists" such as John Dewey (1859–1952) that determines what is true by what works and emphasizes the prominent role of experience in human learning. The first sociology department in America was founded at the University of Chicago in 1892 by Albion Small (1854–1926). The American Sociological Association was founded in 1905.

Moving further into the twentieth century, sociology experienced several decades where three or four major theoretical schools were dominant, each of which continue to some degree. Then from about the 1960s forward there was an increased proliferation and fragmentation of theory.

The first dominant theoretical system is known as *Structural Functionalism*. Following Durkheim, it emphasizes social structures as determining forces, and, following Weber, it seeks to identify different types of human action and their inner logic. Overall, their idea is that social realities should be understood in light of the positive functions they serve. Whether actors are aware of the latter or not, whether they view them as positive or not, it is these functions that generate and sustain sociological phenomena. The natural bent of all "social systems" is towards harmonious functioning. Social realities that are dysfunctional or cause conflict tend to be replaced over time if the society continues to flourish. Society is also an interconnected organic reality, where each area relies on other areas, and changes in one produces shifts in others, often in unanticipated and non-obvious ways. For example, radical demographic shifts like the Baby Boom of 1946–1963, itself the unanticipated outcome of a major Depression and war, produced huge and continuing impacts upon culture,

Chart 1: **A GENERAL DIAGRAM OF STRUCTURAL FUNCTIONALISM**
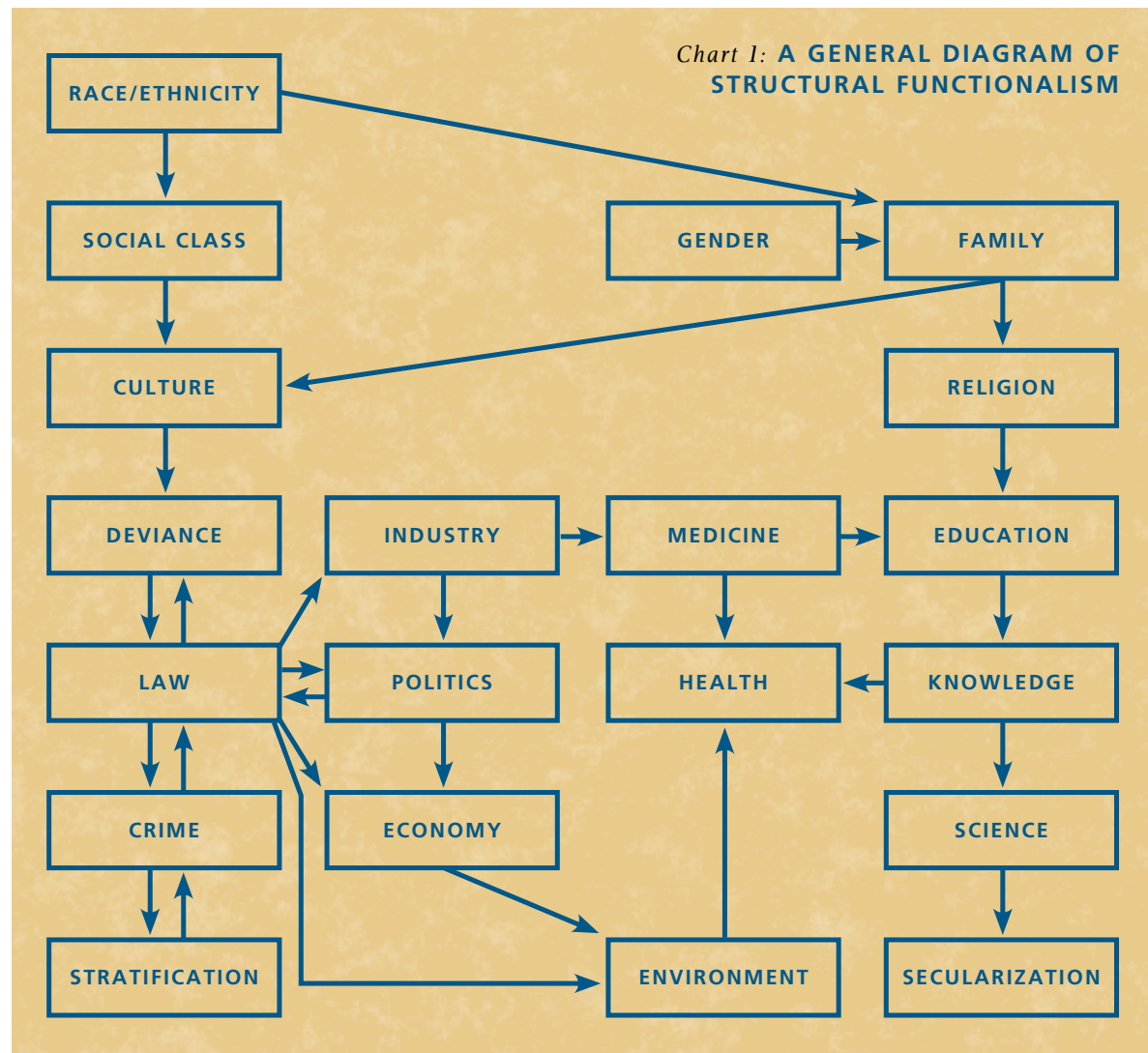
politics, economics, and education. The most well-known proponents of Structural Functionalism were Talcott Parsons (1902–1979, for example *The Structure of Social Action* in 1937, *The Social System* in 1951, and *Essays in Sociological Theory* in 1954) and Robert Merton (1910–2003, for example *Social Theory and Social Structure* in 1949, expanded and revised in 1957 and then 1968). The original centers for this school were Harvard and Columbia Universities.

Second, we have the Structural Functionalists' major rival, *Symbolic Interactionism*. Rooted at the University of Chicago, this school of thought was influenced at least as much by American pragmatism as it was by Europeans such as Simmel and Weber. Where functionalism has focused mostly on macrosociology and has been known for quantitative research using surveys and government statistics, Symbolic Interactionism is primarily microsociology that does research using observation, interview, and other direct interaction with people in natural settings.[6] Sociologists using this approach emphasize the centrality of *symbols*, which are things that stand for or represent something else, in human interaction. Social order and action is only possible where people develop common understandings of symbols and then joint lines of conduct rooted in those shared perspectives. How and why these develop is their main concern, which they apply in numerous areas of social life. A common saying among Symbolic Interactionists is a 1928 quote from W.I. Thomas (1863–1947): "If men define situations as real, they are real in their consequences." The fathers of this approach were Charles Horton Cooley (1864–1929, see *Human Nature and the Social Order* in 1902 then revised in 1922, and *Social Organization* in 1909), George Herbert Mead (1863–1931, especially *Mind, Self and Society* in 1934), and Herbert Blumer (1900–1987, particularly his *Symbolic Interactionism*, 1969).

Another rival to Structural Functionalism is known as *Exchange Theory*. It is strongly inspired by Psychological Behaviorism (see the Psychology essay in this volume for more on Behaviorism). This approach regards humans as primarily motivated to avoid pain and pursue pleasure; humans seek to enhance rewards while decreasing costs. In social life, this is done through reciprocal (two-way) interaction; social cohesion arises where people are satisfied with the balance of rewards and costs in their relationships. The most influential version of Exchange Theory is a form of microsociology rooted in the work of Harvard's George C. Homans (1910–1989, see his *The Human Group* in 1950 and *Social Behavior: Its Elementary Forms* in 1961 then revised in 1974). An alternative approach to Exchange Theory that emphasizes how this works at the large scale (macro) level was promoted by Peter Blau

(1918–2002, see *Exchange and Power in Social Life*, 1964).

Beyond this, a less coherent collection of theories mostly just share an emphasis on viewing society as fundamentally shaped by conflict between competing groups and a general (but not exclusive) focus on macrosociology. In contradiction to the previous approaches that all see the attainment of some kind of balance or harmony over time as normal, these theories see ongoing conflict as the norm. This set of theories can be roughly divided between those more loyal to the Marxian vision in which class conflict rooted in private property and economics is more fundamental (with the "haves" dominating the "have nots"), and those inspired more by Weber who see inequality, and thus conflict rooted in it, as much more multi-dimensional and complex. In the latter, for example, people strive for or seek to protect prestige and power as well as wealth, and conflict rooted in it can divide people based not only on economic class but also race, ethnicity, gender, occupational group, religion, education, and more. Perhaps the most well-known proponent of a general conflict theory rooted less in Marx and more in Weber, which was once viewed as a major alternative to Structural Functionalism, was the German Ralf Dahrendorf (1929–2009, see his *Class and Class Conflict in Industrial Society* in 1959).

Today, these theories exist alongside numerous alternatives such as phenomenology and ethnomethodology; various "critical" theories such as feminist, racial, cultural Marxist, and post-modern; lots of "neo" versions of earlier approaches (such as neo-Marxian, neo-Weberian, neo-Functionalist, etc.), sociobiology, network analysis, variants of Symbolic Interactionism (such as dramaturgical, self and identity, interaction, role, and expectations theories), and "Structuralism" (including structuration and cultural theories). Then there are more substantively focused theories in every major subfield. Some of these theories are valuable and enduring while others will likely prove to be fads. Right now, theoretically sociology is a bit of a "free for all."

Critical Issues

In the opinion of this author, present-day sociology is facing numerous critical problems. Some of these will weigh particularly hard on thoughtful, biblically-informed Christians. On the other hand, the field offers unique opportunities and promise for those seeking to preserve or realize what is good, while resisting darker tides, in modern society.

One problem is the increasing bifurcation in the field into practitioners who either engage in narrow, overly quantified and highly technical research, or who

produce "critical post-modern discourse" that is burdened by sometimes impenetrable jargon. Either way, such work fails to attract readership or social influence. Consider this 2008 quote, for example:

> I argue that agency in most current sociological formulations is but a posited other of the structure that dissolves if examined closely; it is similar to the Lacanian fantasmic object. To resolve the fundamental paradoxes in structure-agency theories, I reformulate structures as paradoxical, incomplete, and contingent symbolic formations that are always partial and unstable due to their inclusion and exclusion operations.[7]

In the past, sociology has produced numerous powerfully insightful works that had major impacts upon public perceptions and action. These have included such treasures as David Riesman's *The Lonely Crowd* (1950), William Whyte's *The Organization Man* (1956), and Daniel Bell's *The Coming of Post-Industrial Society* (1973) and *The Cultural Contradictions of Capitalism* (1976). A lot of good work continues of course, for example Barbara Dafoe Whitehead's *The Divorce Culture* (1998), Christian Smith's *Moral, Believing Animals* (2003), Mark Regnerus's *Forbidden Fruit* (2007), and Robert Bellah et al.'s *Habits of the Heart* (1985).

Certainly there is a place for narrowly focused research in sociology using quantitative methods. But sociology is at its best when it speaks about significant things in honest and informed ways using language people can understand. There is too little of that going on today.

Second, even liberal media sources complain about the Left-wing bias exhibited at some prominent sociology conferences. Too much modern sociology is harnessed to political agendas rooted in concern with alleged oppressions, particularly race, gender, class, and sexual orientation. In some sociological circles, accuracy is less important than political correctness. This can lead, in turn, to intellectual mediocrity. Sociology

has always leaned a bit to the Left. However, in the past there were more prominent conservatives in the field, such as George Homans, Pitirim Sorokin (1889–1968, see his *Social and Cultural Dynamics,* 1937–1941), Robert Nisbet (1913–1996, see his *Quest for Community,* 1953), James Coleman (1926–1995, author of a famous 1966 report challenging forced bussing of school children to achieve racial integration), and Edward Shils (1910–1995). Moreover, most of the older sociologists who identified more with the Left or middle politically sought, following Weber, to be objective in their scholarship. An example would be Seymour Martin Lipset, who said:

> Though some of us worked on political topics, we felt duty bound to be as objective as possible, to report results that contradicted our ideological concerns following, unknowingly, the advice of Max Weber.[8]

This ideological Leftism obviously includes views opposing much of biblical Christianity and modern political conservatism. Most sociologists today support things like abortion on demand, homosexual rights, affirmative action, big government, unions, feminism, choosing to have children out of wedlock, easy divorce, and so on. Most importantly many allow their biases to influence their social scientific work and the ways they treat those whose views contradict their own. For example, despite an enormous amount of empirical evidence to the contrary, most sociology of family texts downplay the negative impact of divorce and illegitimacy on children, while claiming that gay parenting is harmless to children despite very little good research evidence one way or another on that question. Most modern texts for sociology of deviance courses treat "homophobia," not homosexuality, as the real "deviance" that needs to be addressed. Further, expect social problems texts to spend a lot of time on racism, sexism, and environmental challenges while completely ignoring many things considered to be "social problems" by much of the American population, such as abortion, large and

Much of mainstream sociology today is defined by an ideology at odds with biblical Christianity and modern political conservatism and tends to advocate such leftist causes as support for abortion on demand, as depicted in this image opposing this view.

expanding government deficits and regulations, sharply rising out-of-wedlock births, and so on.

Thankfully, there are notable exceptions. Serious Christians have received sympathetic treatment in books like *Habits of the Heart* (mentioned earlier), Brad Wilcox's *Soft Patriarchs. New Men* (2004), and James Davison Hunter's *To Change the World* (2010). In fact, books like these can help inform biblical Christians in important ways. Yet when they are discussed, conservatives in general, and evangelical, Bible-believing Christians in particular, are not treated fairly, or served well, in most modern scholarship, programs, or college courses in sociology.

Another major problem confronting sociology is one we have already touched on, namely its theoretical fragmentation. This is accompanied by disagreements over some of its most basic assumptions, such as what human nature essentially is, or the basic features and functions of social order and social institutions. Closely linked to this is the spinning off of many sociologists into narrow subfields which often don't interact much with each other or the larger discipline. Increasingly, some of these sociologists in these subfields are just breaking off to form identities within separate disciplines entirely, such as public policy or criminology. These problems of division and separation are threatening the existence of sociology as a distinct discipline. Yet a sound academic study of society should be rooted in accurate, logically consistent, unifying principles and insights, even as scriptural statements about mankind are.

Lastly, there is the well-known tendency for too many (though certainly not all or most) sociologists to be personally uncivil and even combative with those they disagree with, whether it is each other, those in other disciplines, students, or the general public. This is well known among college administrators who have to deal with this; one "top ten" graduate program was shut down by faculty vote because it had become known for its vicious infighting.

In spite of these challenges, there is still much to recommend sociology. A lot of good could come of developing more academic or other research centers and scholars devoted to well-reasoned and fair-minded sociological insights and analyses. More thoughtful Christian students learning to apply biblical worldview and insights to this discipline and joining other serious believers laboring in this field would be especially wonderful.

First, as alluded to earlier, there is fine work going on in all of the major areas of sociology, which furthers our capacity to comprehend and deal with society, including current challenges and problems. This scholarship deals with very important areas of life: crime, family, marriage, religion, medicine, law, and so forth. These areas can and should concern believers,

A major problem confronting sociology today is its theoretical fragmentation. This is accompanied by disagreements over some of its most basic assumptions, such as the essence of human nature.

and are things the Bible addresses quite directly. Understandably, the value of good sociology can be difficult for laymen to appreciate, since too much of the public face of the discipline has been Left-tilted, number-crunching, and jargon-laden. Still, the scholarly excellence that is still evident in much sociology deserves to be widely read and built upon.

Second, the intellectual tradition of sociology includes some of the finest and most fascinating minds in Western social science and philosophy. Hopefully, this was made somewhat clear in the previous section of this essay. This work is worth learning and preserving, and thus it should have faithful presence and advocates in the academy.

Third, it is certainly true that sociology is a broad discipline. This is both a weakness and strength. People like to say, "Jack of all trades, master of none." On the other hand, sociology is positioned better to integrate work from across various disciplines than most of the other social sciences, and that type of synthesis is valuable. This will be even truer if sociology returns to being more unified by shared theories, concepts, and questions.

For all these reasons, it seems better to reform sociology than to ignore or discard it. That will mean attracting quality students and giving them rigorous educations that have methodological rigor as well as theoretical, philosophical, and historical depth and wisdom.

A Christian Response

Learning sociology can be an excellent way to prepare for service in the church and larger society in a number of ways. Many undergraduate sociology students plan on entering some type of profession that helps people, from school or family counseling to social work, sexual-abstinence or pregnancy counseling, work with the disabled, and so on. Others use it as an alternative path (from more specialized programs in the area) to working in the criminal justice field, either in research or practical service. Many just use it as a general degree before moving into areas such as business, marketing, or teaching. Most do not go on to graduate study in sociology, but that is certainly an option.

Moreover, many move from an undergraduate degree in sociology to graduate programs in other areas such as public policy, political science, criminal justice, social work, or other "helping profession" degrees.

In addition, a lot of organizations that do research from conservative and Christian perspectives on political, cultural, and social issues are looking for people trained in social science concepts and methodologies who will not be hostile to their mission. Given the biases in universities in general and the social sciences in particular, they often have a difficult time finding people with the right training for this kind of work. There are numerous openings for researchers in various organizations focused on the local, state, or national level in areas such as homeschooling and other education issues, marriage, family, pro-life and pregnancy issues, crime, poverty, sexual orientation, health care, and more that a sound biblical Christian could be very comfortable serving in. To name just a few of many examples of excellent organizations that benefit from people who can do sound social research, analysis, and insight, there are the Family Research Council, Cato Institute, the Heritage Foundation, Marriage Savers, the National Fatherhood Initiative, National Right to Life, and the National Council for Adoption. Just about every major social initiative for reform in the church or the larger culture can potentially benefit by sound social science research.

Are the children in this classic advertisement happy because of the peanut butter or the fact that they have both parents? Sociology seeks to answer this.

The Bible has something to say about many if not most of the specific problems and aspects of society that sociologists study: human alienation, the roots of war, terrorism, the purposes and benefits of meaningful labor, principles of social organization, the benefits versus pitfalls of various financial practices and attitudes, sinful responses to human disability and sickness. The Bible deals with all this and more. This woodcut depicts the suicide of the evil usurper Zimri, who perished when he set the king's house on fire in 1 Kings 16:18.

One of the key problems that Christians will face in this area, whether pursuing undergraduate or graduate degrees in sociology, is identifying programs that will be academically strong and at least fair to biblical Christianity and Christians. Of course, one possible route is to study at Christian college or university. This may prove an excellent choice. However, regardless of what the school touts in its catalogue, most sociology programs in Christian colleges and universities are on average almost as tilted to the Left as those in secular colleges. Some secular departments have better ideological balance than many Christian ones. Discernment is important.

In picking a place to study sociology, religious or not, it is important to visit the college and interview members of the sociology department to ask tough questions about their views on major social issues and how fair they are to students of different religious and ideological viewpoints. If it is a Christian college, ask blunt questions about fidelity to scriptural authority. Look carefully at course descriptions, syllabi, and required readings. Talk

to students in the department. If it will not be possible to be honest about one's Christian convictions, to experience balance and objectivity in the classroom and course assignments, and to get a rigorous training in the theories, methods, and concepts of sociology, go elsewhere.

Once a program is selected, course choice is critical, especially for those planning to go on to graduate work in sociology or another social science. Besides the standard core requirements, there are other offerings that are useful in attaining a sound foundation for becoming a social science professional. Microeconomics and Logic are both essential. Advanced (not just the required) courses in statistics and methods should be tackled. No competent sociologist is ignorant of history, and this should include, if feasible, world, Western, and American. A student of sociology should read good literature; great authors are almost always men or women of profound human insight. Cultural Anthropology and World Geography are very useful. Sociology is a broad discipline, so sociologists should be broadly educated. Students of sociology

should never specialize as undergraduates.

It is perfectly acceptable to apply to high-quality graduate sociology programs without an undergraduate degree in the field, so long as one has the requisite background (for example, some social science and statistics courses; and courses in research methods as an undergraduate). In fact, students entering certain graduate programs in sociology may be better off with a bachelor's degree in some other field. Undergraduate degrees in such disciplines as political science, history, economics, religion, philosophy, and psychology are very common for those who get into good doctoral programs in sociology.

Any Christian wishing to study sociology should also be a dedicated student of Scripture. Besides setting forth presuppositions and other foundational truths that are basic to comprehending everything sociologists deal with, the Bible has something directly to say about many if not most of the specific problems and aspects of society which they address. What are the social consequences when just punishment is delayed or neglected? Is divorce harmful? How are people drawn into sex outside marriage, and with what results? What about homosexuality, alcoholism and other addictions, religious proselytization and syncretism, dishonesty, marriage and marital relations, human alienation, the roots of war, terrorism, the purposes and benefits of meaningful labor, principles of social organization, the benefits versus pitfalls of various financial practices and attitudes, sinful responses to human disability and sickness? The Bible deals with all this and more.

Meaningful involvement in a sound church throughout college is critical, too. Christian students need mature, well-educated believers off which they can bounce challenging ideas.

From its beginnings the field of sociology has posed unique challenges and opportunities for thoughtful Christians wishing to understand, engage, and reform society, as well as serve others. It has a rich intellectual tradition, but one which has often been overly critical of, and even hostile towards, Christian faith and civilization. Its logic and methodologies can help us to describe, interpret, and explain social reality more accurately than can be done by casual observation alone, as well as to avoid costly and destructive errors. Applied in harmony with biblical revelation, sociology can help us to make better decisions about human affairs. But it is also clear that sociological research has often been twisted, in various ways, for political ends, in ways that have sometimes harmed people. The Christian student must approach this field with real critical discernment, aware of its pitfalls but appreciative of its promise.

—David Ayers

For Further Reading

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Further Reading Suggestions

Good Christian books that contribute directly to understanding society are also important. This should include ancient classics such as Augustine's *City of God*, relevant portions of John Calvin's *Institutes of the Christian Faith*, as well modern works like Abraham Kuyper's *Lectures on Calvinism* (1898), Pitirim Sorokin's *Crisis of Our Age* (1941), C.S. Lewis's *Abolition of Man* (1944), Herman Dooyeweerd's *A New Critique of Theoretical Thought* (four volumes, 1953–58), Francis Schaeffer's *Escape from Reason* (1968), Alan Storkey's *A Christian Social Perspective* (1979), and Herbert Schlossberg's *Idols of Destruction* (1983).

Glossary

Asceticism (inner- and other-worldly): a life strongly designed to please God; other-worldly asceticism does so primarily through separation from the world, and inner-worldly asceticism through meaningful, measurable actions in the world.

Alienation: a state of people being estranged (separated in a negative way) from others, or from social situations or processes ranging from the production and products of labor (Marxist) to psychological states tied to feeling socially isolated, uncertain how one is expected to act, or as if life has no meaning or purpose.

Anomie: a state of uncertainty regarding social norms (or, "rules").

Bourgeoisie: owners of the key ways that wealth is produced in capitalist societies.

Class consciousness: Marxist term for members of a social class having beliefs, values, and goals that are consistent with their true interests as a class.

Collective consciousness: Durkheim's term for "the body of beliefs and sentiments common to … society."

Content analysis: the analysis of various types of communication, especially written and spoken words and visual media.

Crime: a word that is subject to various definitions, from the straightforward "any violation of criminal law" (which would be highly relative and would not necessarily involve clear victims) to things like "force or fraud in the pursuit of self-interest" (which is supposed to be less relative and focus only on acts involving victims).

Deviance: violations of social norms (or, "rules").

Experiments: research where something is done, in a controlled setting, in order to see its measurable effect(s).

False consciousness: Marxist term for members of a social class having beliefs, values, and goals that are not consistent with their true interests as a class; usually used for when workers accept status quo ideas and social realities in capitalist societies.

Interview: research conducted by directly questioning respondents.

Latent Pattern Maintenance: in Structural Functionalism, aspects of society that ensure stability by maintaining key beliefs, ideas, and values over time.

Qualitative research: study of data that has not been transformed into numerical form, employing logical analysis but not statistics.

Quantitative research: study of data that has been transformed into numerical form, generally using statistics.

Role: rights, duties, and expectations associated with social positions.

Macrosociology: study of large scale social entities that usually cannot be observed directly.

As shown in these vintage postcards of Coney Island, New York, and State Street in Chicago, people tend to mass together in densely populated cities. This causes a variety of problems, which sociologists have long been interested in identifying and solving.

Microsociology: study of interaction between and within individuals and small groups, and of small groups as a whole, which can mostly be observed directly.

Moral statistics: nineteenth-century term for government statistics that were supposed to reflect the underlying moral state of society, such as suicide and crime rates.

Participant observation: study of people by observing and interacting with them while being directly involved in their life and activities; also called "field" or "ethnographic" research.

Positive: in sociology, based on empirical science.

Power: the ability to get others to do what one wants, particularly against their will.

Pragmatism: the idea that the truth, meaning, and value of anything are rooted in practical consequences and utility; "it is true because it works."

Proletariat: in capitalist societies, working non-owners ("workers").

Rates: expressing numbers in terms of numerators and denominators rather than "raw," to adjust for variations in population size and otherwise more accurately represent them; for example, if one place with 100,000 people has 20 suicides, and another with 10,000,000 has 2,000 suicides, their suicide rates would be identical (2/10,000).

Reciprocity: a mutual exchange, usually of rewards or punishments/costs.

Social class: this refers to people that share a common position in the social stratification (see below) system; for followers of both Marx and Weber this specifically means people who share about the same level of wealth, though for Marxists this is the only dimension of social stratification that is important, while for Weberians status (see below) and power (see above) are also important dimensions of stratification.

Social Darwinist: someone who believes that society does and should evolve by promoting the survival and success of its fittest members while allowing (or even actively encouraging) the weakest and least fit to die out.

Social dynamics: the study of social processes and change.

Social facts: things that are true and stable in any given society and that direct individual action; usually these are part of the social structure.

Social functions: the positive purposes that social realities serve which help to explain why they exist. Functions that are consciously acknowledged and/or intended are called "manifest"; if not, they are "latent." Harmful results of social realities are "dysfunctions."

Social statics: the study of social structures.

Social stratification: generally the vertical layering

of society into discrete levels with higher or lower amounts of something; sociologists focus on levels of wealth, prestige, or power (see above).

Society: any identifiable group of people who are bound together by social relationships.

Status: most often refers to social prestige or honor, the regard to which persons are held by others; sometimes used just to refer to someone's social class (see above).

Status Set: the multiple social positions, or roles that people occupy at one time; for example, mother, teacher, wife, friend, church-goer, etc.

Survey: collecting information from respondents by using questionnaires in which people respond in limited and fixed ways to questions or statements.

Symbol: representations; visible things that stand for ideas and thus convey meaning.

Theories: general, abstract explanations for why and how things come to happen or exist that consist of large numbers of inter-related variables and propositions.

Variables: things that vary (as opposed to those that don't, which are "constants").

Verstehen: a term associated with Max Weber that refers to empathetic understanding of actors; being able to understand reality from their perspective.

ENDNOTES

1   Though scholars now note the term appeared in an unpublished manuscript by the French writer and political thinker Emmanuel Joseph Sieyes (1748–1836) in 1780, it never caught on at the time, and there is no evidence Comte was aware of this essay.

2   As found in Lewis, Charlton T. and Charles Short, *A Latin Dictionary*, Oxford: Clarendon Press. 1879.

3   The reader is referred to Rodney Stark's excellent discussion and definition (*Sociology,* 10th Edition, Thompson; Belmont, 2006, pgs. 33–34).

4   To be fair, in virtually every field defined here as a "social science" there are practitioners who, for various reasons, do not consider themselves to be social scientists.

5   There is a great deal of debate as to exactly what Comte meant by this, with some asserting that he just meant "of the social sciences." I provide what appears to be the majority view here.

6   However, it is important to note these are tendencies only. These differences of style are not exclusive.

7   Wang, Yong, "Agency the Internal Split of Structure," *Sociological Forum* 23.3 (2008): 481.

8   "The State of American Sociology," *Sociological Forum* 9:2, 199-220, 215, 217 (1994), pg. 200.

SPORT AND RECREATION

The year is 1500. Enter any large Western European city and one building captures your attention: the cathedral. This enormous structure displays beautiful state-of-the-art architecture and is the pride of the city. Local residents sacrificially contribute large sums of money (in the form of offerings and special gifts) to fund its construction. Cities are often known by their famous cathedrals: Notre Dame in Paris, Saint Peter's in Rome, Saint Paul's in London, Saint Vitus in Prague. The cathedrals serve as tangible expressions of what is valuable to most medieval Europeans, namely the Christian religion. The cathedral memorializes in concrete and stone the kinds of things that are able to inflame the passions of medieval Europeans.

The year is 2000. Enter any large American city and one building captures your attention: the sports stadium. This enormous structure displays beautiful state-of-the-art architecture and is the pride of the city. Local residents sacrificially contribute large sums of money (in the form of bonds and special tax exemptions) to fund its construction. Cities are often known by their famous stadiums: Yankee Stadium in New York City, Fenway Park in Boston, the Rose Bowl in Pasadena, Lambeau Field in Green Bay. The stadiums serve as tangible expressions of what is valuable to most present-day Americans, namely sports. The sports stadium memorializes in concrete and stone the kinds of things that are able to inflame the passions of modern-day Americans.

Sports are not new. Their popularity and significance
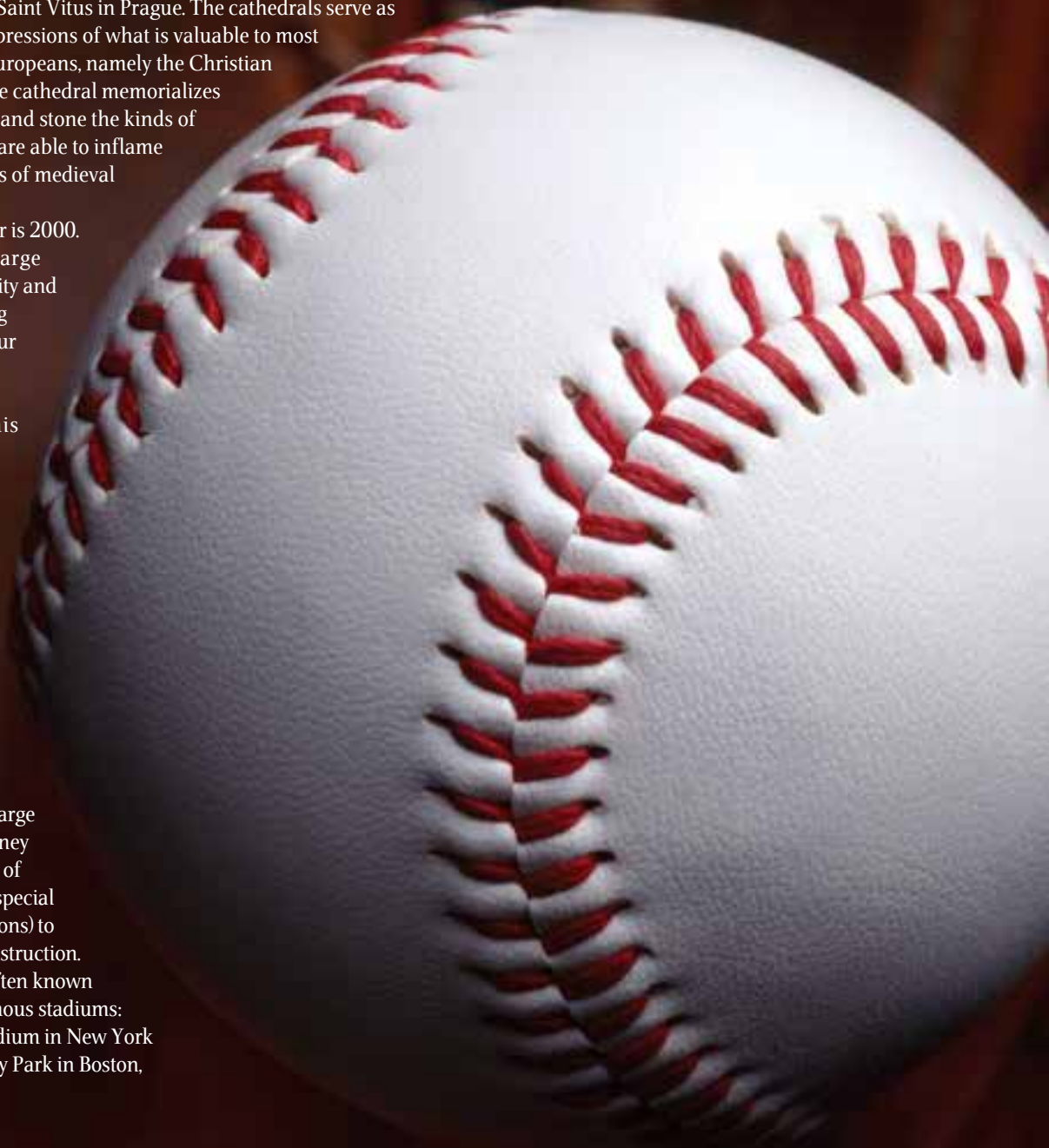
in modern America may well be unprecedented in human history, but people from all cultures have engaged in athletics throughout the entirety of human history. Native Americans were playing a game similar to volleyball by 1000 B.C. A Gaelic lacrosse-like game is so ancient that it predates Ireland's recorded history. Both the *Iliad* and the *Odyssey* describe athletic contests, and the first recorded Greek Olympic Games date from 776 B.C. The Chinese engaged in gymnastics and a soccer-like game by 300 B.C., and polo was played in ancient Persia. Married women sometimes competed against maidens and spinsters in a medieval English game similar to present-day soccer. To study sports and leisure is to study something as universal as love and war, as commonplace as families and work. It is no surprise that the New Testament uses athletic metaphors like "run with endurance the race that is set before us" (Heb. 12:1)[1] and "I box in such a way, as not beating the air" (1 Cor. 9:26). These allusions to sport are as understandable today as they were two millennia ago.

Documenting athletic competition in virtually all cultures and throughout all of human history is easy. Understanding *why* people engage in athletics is more challenging. Sport's universality suggests that all humans have something within them that can only be expressed in athletic activity. That makes sport a fundamental (and even irrepressible) human activity. In addition, recreation frequently serves vital social functions, which means it is often more than just an idle pastime. Utility (and not just fun) often accounts for the popularity of sport.

Plato had utility in mind when he stipulated that youth must receive athletic training. Written about 370 B.C., his book *The Republic* explains that the ideal education includes compulsory instruction in music and gymnastics. Music is the more important of the two, as it presents heroic role models to impressionable young boys and girls by means of storytelling and poetry. But Plato cautioned that too much music would promote softness. The remedy: physical exercise. Sport inculcates essential virtues like endurance, bravery, and self-discipline. He thought too much sport could lead to harshness and savagery, but the proper balance between music and gymnastics would produce what Plato called "the well harmonized man." Sport teaches youths to balance softness and hardness, to complement thought with action. Plato himself seems to have modeled this ideal. As a young man, Aristocles had been a prize-winning wrestler who (according to some sources) was nicknamed "Plato" by his wrestling coach. ("Plato" meant "broad" and perhaps "broad shouldered.") As an older man, he appreciated how sport cultivated human excellence.

Socrates likewise regarded athletics as more than amusement. Successful living involves struggle and perseverance, he taught, and recreation both trains one in such skills and promotes the physical health necessary for vigorous living. Aristotle was more critical of the brutish elements of sport than either Plato or Socrates. Even so, Aristotle also regarded sport as a way to properly order the physical and the mental. All three classical philosophers agreed that a good education will instruct the whole person. Man is both mind and body, so both mind and body must be trained. It is the whole man who lives life, so every part of man—including his physical body—is engaged in everything he does. "The body must bear its part in whatever men do," Xenophon reports Socrates as saying, "and in all the services required from the body, it is of the utmost importance to have it in the best possible condition."

Just as classical philosophers saw the utility of sport, so have military leaders. Track and field events, wrestling, chariot racing, archery tournaments, hunting, and ancient Egyptian "ship jousting" all developed skills that were useful in wartime. Because the Romans were concerned with training obedient soldiers, they rejected classical Greek athletics (which they regarded as excessively individualistic and specialized) for athletics that emphasized military practicality. Medieval tournaments gave knights an opportunity to sharpen their combat skills. In the wake of the Napoleonic Wars, Denmark, Sweden, and especially Germany founded gymnastics programs that were designed to produce better soldiers by encouraging obedience and discipline. The founder of the modern Olympic Games, Pierre de Coubertin, also invented a military contest for them. His new "modern pentathlon," which was added in 1912 amidst the militaristic fervor of the pre-First World War years, had athletes compete in pistol marksmanship, fencing, equestrianism, swimming, and a cross-country run. (The idea was to test the skills needed by a soldier trapped behind enemy lines.) All of these examples illustrate the long connection between sport and warfare.

Sport has also been connected intimately with religion. References to ball-oriented games in 2000 B.C. Egypt usually appear in specifically religious contexts. The first Olympic contests were conducted in honor of Zeus and featured animal sacrifices. Historian William J. Baker concludes that traditional games like German *kegels* (bowling), French *soule* (soccer), and Irish *iomáin* (hurling, which is similar to lacrosse) all were linked originally to ancient religious fertility rites. When Spaniards came to the New World, they found Aztecs playing a ball game that communicated Mesoamerican religious values. The game (which indigenous Indians believed had been invented by the gods themselves) ritualized the age-old conflict between good and evil. Aztec games also depicted the struggle between life and death, a message

that was sometimes further exemplified by having contestants sacrificed to the gods. Like art, music, and dance, sport has long played a role in religion.

What about sport in America? Scholars have studied recreation around the globe and throughout all of human history, but sport in America has received the most academic scrutiny. How have Americans thought about and engaged in sport over the past four hundred years? Answering this question will acquaint us with the facts (or raw data) regarding athletics that help us better understand the subject. Insofar as sport has rules for how it functions—insofar as it has core knowledge that informs analysis and application—we see those rules displayed in the historical record. To use the language of the trivium, we can see the grammar of sport when we see people engaging in sport.

Leisure activities in Britain's North American colonies were informal, featuring no leagues, no professional athletes, no local teams, and no official record keeping. A festive sporting culture existed in seventeenth- and eighteenth-century Europe, but it was not reproduced in large portions of colonial America. Instead, Puritan piety and Quaker spirituality resulted in the concept of "lawful sports" prevailing in New England and Pennsylvania. Blood sports, card-playing, and wrestling were frowned upon; hunting, fishing, and marksmanship were acceptable. New England children ice-skated and played various ball games (but never on the Sabbath). In Carolina, Virginia, Maryland, and the Hudson River Valley, however, a more permissive religious environment resulted in an indulgent recreational culture (and even sports on the Sabbath). As in Europe, sports here were often associated with feasting, alcohol, dancing, and merrymaking. Horseracing was widespread and created an occasion for gambling, as did cockfighting and card-playing. Gander-pulling was a favorite sport south of Pennsylvania but unheard of in Massachusetts. A live goose was hung by its feet from rope on a tree limb about ten feet off the ground. The goose's neck was greased, and men on horseback raced under the goose and tried to yank off its head. The winner enjoyed goose for dinner.

Between 1775 and 1850 several dynamics combined to give American sport an increasingly negative stigma. The Founding Fathers' esteem for classical thinking elevated austerity to something like a national virtue. For example, the First Continental Congress formally urged true patriots to abstain from "every species of extravagance and dissipation, especially all horse-racing, and all kinds of gambling, cock-fighting . . . and other expensive diversions and amusements." The Second Great Awakening revived religious fervor and reinvigorated the idea of unlawful recreations. The new business-oriented

Therefore, since we have so great a cloud of witnesses surrounding us, let us also lay aside every encumbrance and the sin which so easily entangles us, and let us run with endurance the race that is set before us. —Hebrews 12:1

middle class of the early 1800s grew increasingly influential, and its sober Victorian ethic denounced idleness and sport. Thus statesmen's republicanism, evangelists' revivalism, and businessmen's Victorianism combined to cast the sporting lifestyle as one associated with undisciplined living. Sports were increasingly relegated to a rowdy unmarried male subculture that challenged prevailing Victorian values.

After 1850 sports began to lose their negative "bachelor subculture" image and became acceptable forms of entertainment. Several factors account for this change. Urban workers' lives were structured by predictable work schedules, so they also had predictable free time and could attend scheduled athletic contests. In the cities, large numbers of adults could easily gather at ballparks to see the hometown team; large numbers of children could easily gather in streets for games of stickball. Rising standards of living meant more people could afford to buy sport equipment or a ticket to a professional contest. Sports' popularization after 1850 was also due to a new way of thinking about recreation. Intellectuals, reformers, and ministers began to regard physical exercise as a positive good, although for different reasons. A nationwide concern with improving public health led to a more salutary assessment of physical exercise. For the first time, some Americans made the classical argument that athletics could cultivate desirable character traits like bravery, self-denial, and self-discipline. Ralph Waldo Emerson expressed this new embrace of sport when he spoke of recreation's ability to improve man: "Archery, cricket, gun and fishing-rod, horse and boat are all educators, liberalizers, and so are . . . swimming, skating, climbing, fencing, riding, [and] lessons in the art of power. . . ." The Founding Fathers had associated sport with dissipation; one of America's preeminent antebellum intellectuals now associated it with education. By the late 1800s American colleges were following the British lead and using sports as a way to inculcate the virtues of manliness and teamwork.

Christians joined in this reassessment of sports. Prior to the Civil War, American evangelicals had taken an especially dim view of athletics. By the late 1800s, however, believers were alarmed by the seemingly rampant immorality in the growing cities. Some faulted what they regarded as an excessively feminized Victorian Christianity that allegedly alienated men. Others believed that urban

men needed wholesome alternatives to sinful activities. The remedy: the Muscular Christianity movement. Christians embraced physical activity as a way to promote masculinity, spirituality, and moral purity. Many American cities already had Young Men's Christian Association chapters; now these YMCAs acquired their own buildings complete with gymnasiums, bowling alleys, and swimming pools. The late nineteenth-century YMCAs, where young men could find both recreation and revival meetings in the dangerous city, symbolized the new partnership between athletics and Christianity.

Post-1920 sports have been marked by rationalization, bureaucratization, quantification, and professionalization. Organized leagues—for professional athletes, colleges, high schools, children, and church softball teams—have replaced informal contests. Official record keeping and statistics have replaced word-of-mouth recollections. In the 1920s, daily newspapers began including a section dedicated wholly to sports. Television made athletic events a significant part of its regular programming in the 1960s, thereby solidifying sports as a lucrative segment of the entertainment industry. In a culture driven increasingly by consumerism, sports have been transformed into a consumable item—which is to say it has become a form of entertainment (or a product) for which people pay. As valued commodities, athletes are now marketed as celebrities and heroes. The sport of snowboarding exemplifies the rationalization process. Invented in the 1960s as recreation for children, snowboarding's specialized equipment and universal rules evolved almost overnight until the sport became an Olympic event in 1998. An example of the quantification trend: when the gold medal gymnast scores 16.225 and the silver medalist scores 16.025, it indicates that the graceful sport of gymnastics can now be measured in precise thousandth-of-a-point increments. Though commonplace today, these things were unheard of a century ago.

Sports' appeal is understandable. Whether played or watched, games provide an escape from stress. It feels good to sink a jump shot or bowl a strike. Fans triumph vicariously when their team wins and thereby derive emotional satisfaction from the contest. Television converts athletic contests into packaged entertainment complete with human interest stories, color commentators, and dramatic storylines. However, sport may well appeal to people on less obvious levels as well. Some psychologists think athletic successes deliver more than fleeting senses of gratification; rather, they fulfill what they regard as man's basic need for self-actualization. The famously successful 1990s "Be Like Mike" advertising campaign was built upon the idea that anyone could share a connection with basketball superstar Michael Jordan by doing what he does (which is shoot a basketball) and drinking what he drinks (which is Gatorade). By narrowing the psychological distance between himself and the sports superstar, the average Joe feels better about himself. Ceremonies like the singing of the national anthem, the presentation of the U.S. flag, pre-game prayers, and the receiving of sports champions at the White House sacralize sports and convert them into a kind of civil religion. Like any religion, sport gives meaning, satisfaction, and a sense of identity to its adherents.

Problems for Christians

Recreation creates special challenges for Christians. The sad reality of mankind's sinful condition is that we can corrupt any of God's good gifts. Our sin can poison our athletic activities so that they are displeasing to God, unhelpful to men, and dangerous to our own souls. "As a result of sin," observes Arthur Holmes, longtime professor of philosophy at Wheaton College, "leisure has become laziness and play self-indulgence; players are exploited, and the playful life is perverted."

Perhaps athletics' most serious temptation is idolatry. Worshipping little statues is not the essence of idolatry; rather, idolatry is attempting to meet deep and fundamental needs through a substitute god (that is, through some thing other than the true God). Examples of "deep and fundamental needs" include the need for a sense of purpose in life, the need to be committed to something worthwhile, the need to find fulfillment and satisfaction, and the need to feel like our lives have worth. Idols claim to meet these fundamental human needs; they promise us things that only God gives. Potential idols include money, romance, popularity, jobs, hobbies, and physical appearance. It may be that sports are the idols of choice among many Americans today.

Sport idolatry can be subtle. How do I know if sport has become my idol? The first questions to ask are ones relating to identity and fulfillment. Is my identity as a person created largely by my athletic life? Do I find deep emotional and psychological satisfaction in sport? Do I organize my life around my recreation, giving it the priority that only God deserves? God Himself orients our lives through the risen Lord Jesus Christ. Deriving such purpose and contentment from money, people, material possessions, or sports is the essence of idolatry. Questions that identify what I love are also helpful. Sport may be my idol if I consistently get passionate over sports but regard serving God as laborious, painful, or boring. Because passion is committed, intense, and sustained desire, it is another indicator of what we regard as important. Which is greater: my enthusiasm for the things of God or my enthusiasm for sports? We make sacrifices for the

Thomas Hughes, a Victorian proponent of so-called "muscular Christianity," once wrote, "The least of the muscular Christians has hold of the old chivalrous and Christian belief, that a man's body is given him to be trained and brought into subjection, and then used for the protection of the weak, the advancement of all righteous causes, and the subduing of the earth which God has given to the children of men."

things that we love: how do my sacrifices for sports compare to my sacrifices for God's kingdom? We protect the things that we love: do I defend church issues as zealously as I defend sports issues? We want to learn more about the things that we love: do I know more about soccer than I do about justification by faith?

Historian Richard Davies helps us understand how sport can become idolatry. His book *America's Obsession: Sports and Society Since 1945* concludes with these thought-provoking words:

> Sports in modern America thus has taken on a significance greater than the wins and losses reported in the daily newspapers, becoming a powerful metaphor for life in the United States. Recalling his teenage years during the late 1940s, [Pulitzer Prize winner] David Halberstam writes, "The world of baseball seemed infinitely more real and appealing than the world around me.... Encouraged by [radio announcer] Mel Allen and countless sportswriters, I believed that I knew the Yankees not only as players but as people— they were part of my extended family."

Then Davies offers this illuminating insight:

> Halberstam captures one of the essential qualities of sports. They provide Americans with a safe and comfortable haven in an often confusing, unstable, and disturbing world.... Lifelong participant sports such as golf, tennis, swimming, cycling, and bowling have helped individuals find meaning and continuity in their lives.... Caught up in this era of turbulent change and vast uncertainty, many Americans have found a refuge in sports. The void often left unfilled by politics, work, family, or religion has been at least partially filled by an increased involvement in the world of sports.

Davies is discussing sports here, but he is also discussing how sports can do the things that religions typically do. After all, Christians speak frequently of havens, refuges, unfilled voids, and finding meaning. Because of sin, all humans live in a world that Davies aptly characterizes as confusing, unstable, and disturbing. We long for fulfillment and seek satisfaction. We discover that a void exists inside us and desperately attempt to fill it with all kinds of things, including sports. In the end, though, these

earthly remedies fail us. That is because only the Lord Jesus Christ can fill the God-shaped void in our souls. Only He gives real satisfaction and fulfillment. Sport is a useful gift from God, but it cannot provide a satisfying refuge in our fallen world. Only the Good Shepherd can do this: He came that we may have life and have it abundantly (John 10:10).

Making recreation into an idol is often subtle. However, sport poses more obvious challenges to believers. For example, how should Christians think about the competitive aspects of athletics? To be sure, competition can be salutary. It can be a means of developing self-discipline, teamwork skills, a healthy work ethic, and problem-solving abilities. Good-natured competition among friends can be invigorating. However, sports can also nurture a malicious and unbiblical competitiveness. Some athletes do not merely try to win; they try to crush and humiliate. They cheat because they accept the atrocious idea that (in football legend's Vince Lombardi's famous words) "winning is the only thing." They use performance-enhancing drugs that violate laws and harm their bodies. Surely the athletic playing field is not an "ethics-free zone" where God's people are exempt from biblical commands. Will the Holy Spirit lead us to disparage teammates, boo umpires, and humiliate opposing players? Of course not. Spiritual fruit like love, kindness, gentleness, and self-control (Gal. 5:22–23) can and should be displayed while engaging in athletic competition. Athletes can play to win and yet still be compassionate (Col. 3:12). Unrestrained competitiveness can train men in unrighteousness.

Sport can also fuel unrestrained egoism. Self-exalting athletic victory celebrations are sometimes little more than conceited displays of pride, which likewise damage our souls. Boastful chest-thumping is now commonplace in American sports, even among eight-year-old

t-ball players. Amateur athletes of all ages mimic the professionals they see on television by strutting, congratulating themselves, and expecting public adoration. At some point, self-aggrandizing victory celebrations make a mockery of the biblical virtue of humility. Arrogance and boastfulness are still sins (Rom. 1:30). Victory does not justify narcissism, swaggering, or sinful pride.

Idolatry, hyper-competitiveness, and egoism are temptations born of excessive sport enthusiasm. Athletics can also create challenges for believers who are not sport enthusiasts. Some Christians see sport-related problems (like violence, cheating, drug use, gambling addictions, and the immoral lifestyles of some athletes) and conclude that sport is inherently evil. They echo the Victorians' concerns in the 1800s when they judge sport to be inevitably linked to unbiblical lifestyles. The godly man, they say, will eschew athletics for more sober and profitable pursuits. He will become a kind of modern-day monk with regard to sport who separates himself from athletics to avoid its worldliness and contamination. Of course, it is true that sinful men sometimes do sinful things when they engage in recreation. However, it is also true that God created *everything* that exists, including sports (Eph. 3:9, Col. 1:16, Rev. 4:11). Moreover, everything created by

Idolatry is attempting to meet deep and fundamental needs through a substitute god. Idols claim to meet these fundamental human needs; they promise us things that only God gives. It may be that sports are the idols of choice among many Americans today.

God is good, and nothing is to be rejected if it is received with thanksgiving and made holy by the word of God and prayer (1 Tim. 4:4). Dismissing sport as worthless and inherently evil does violence to the biblical doctrine of creation. Christians should appreciate the beauty of God's creative work and delight in it. That includes God's work inside humans. Thus we glorify God when we admire His enabling of men to write poetry, paint pictures, or kick soccer balls. Graceful athleticism should be esteemed and cultivated as much as graceful music or art.

A Christian Response

Perhaps most importantly, believers must think Christianly about sports. That means the Bible should inform the Christian's response to questions like "Why do I play sports?" and "How much time and money should I spend on athletics?" and "Will I participate in these leisure activities in the same manner as unbelievers?" Good Christians may well disagree on precisely what it looks like when they think biblically about recreation and leisure. All should agree, however, that God's people must think carefully about the subject.

Sport is simply too large a part of life today for Christians to *not* think carefully about it. According to the *Sports Business Journal*, the American recreation industry in 2008 was seven times larger than the nation's movie industry and over twice as large as the U.S. auto industry. People identify themselves by referencing sports, both in speech ("Hi, I'm Frank, and I'm a Los Angeles Lakers fan.") and by wearing clothing that bears athletic logos. Americans now spend more money annually on sports-related gambling than they do on movie theater tickets, vacation cruises, and amusement parks combined. Super Bowl Sunday is probably more of a true American national holiday today than federal holidays like President's Day and Columbus Day. To not think Christianly about sports is to not think Christianly about an almost omnipresent aspect of everyday life in modern America.

Nor should Christians assume that the way modern society thinks about sports is necessarily honoring to God. Just as unbelievers are prone to think unbiblically about politics, economics, and marriage, so they are prone to think unbiblically about athletics. This does not mean that everything unbelievers think about sports is wrong. Rather, God's people should evaluate the ways the culture at large thinks about sports and avoid being squeezed into the world's mold (Rom. 12:1–2). Like work, marriage, education, and child-rearing, sports must be submitted to Christ's lordship (2 Cor. 10:5). Surely Abraham Kuyper's famous dictum applies to recreation: "There is not a square inch in the whole domain of our human existence over which Christ, who is Sovereign over *all*, does not cry: 'Mine!'"

Early Christians seem to have thought carefully and courageously about this matter. While they accepted the athleticism of the Greeks, they condemned the brutality of Roman sports. Converted gladiators who were free to leave their profession often were barred from baptism unless they did so, and Christians who attended violent Roman games were often denied communion. Believers today should think about Christ's lordship over sports as well. For example, is it true that children are deprived of something important if they do not compete on youth athletic teams? One estimate is that the typical American family spends about $3,000 annually on sports merchandise and events; is this good stewardship of God's money? Is it acceptable for a Christian to bloody his opponent in a mixed martial arts contest? Is it acceptable for a Christian to watch men bloody each other in a televised mixed martial arts contest? While the Bible may not provide specific answers to such questions, it surely leads believers to ask them.

It is unfortunate that many Christians today do not ask such questions. They seemingly think that the Bible has little to say about sport. Recreation is not commanded, forbidden, encouraged, or discouraged, they believe. Bible characters model activities like working, eating, resting, and warring, but we never see them kicking a ball. They conclude that recreation is a neutral or discretionary activity (or an "indifferent thing," a concept expressed by theologians with the word *adiaphora*). To say that Christians ought to think in certain ways about sport is to go beyond what the Bible says. Of course, these Christians say, believers should display biblical behaviors if they engage in recreation. They should play fair and not cheat. But according to this "indifferent thing" mentality, sport is simply a fun pastime. It is a kind of vacation from life when we play (or watch others play) arbitrary games. Christians are neither better nor worse for participating in sports, and there is no real value to playing or watching athletics. Those who look at sport in this manner are sometimes puzzled by the idea of thinking Christianly about athletics. There is no specifically Christian understanding of recreation, they maintain. The implication of this mentality: there is little danger in thinking about leisure in the same way as unbelievers.

But the Bible is not silent regarding sport. It provides principles that believers can (and should) apply to the issue of recreation. Those principles suggest two alternative paradigms for understanding what it means to think Christianly about sports. One can be described as the utilitarian model, and the other can be described as the intrinsic good model.
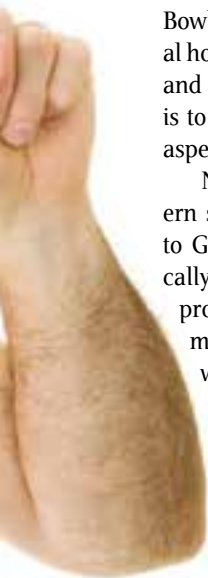
"[W]hen you go to a soccer game, your children are put on the stage. The parents are, in theory, standing on the sidelines but they are also on stage before one another. It seemed like everyone was performing. I've talked about the artificiality of this in the past and some of my friends have chided me saying, 'Well, what isn't artificial? Why are you complaining about this? Isn't this what we wanted and worked so hard to have?' They are right in a way, but this environment seems somehow more artificial. . . . *Eve in Suburbia* oddly enough evolved from the idea of the pentocrator, but instead of Christ holding the world there is this woman holding a soccer ball. She contemplates this ball with a smile on her face. There is an element of irony in representing that soccer ball as a kind of universe. There is a strong religious dimension to athletics that goes back to ancient times and is still here today. We often hear athletes after the game talking about how God helped them play and win."—Joel Sheesley[2]

The *utilitarian model* holds that athletics is good only if they serve a higher and spiritual end. According to this understanding, good recreation is recreation that equips the participant for service to God. Humans need seasons of relaxation and refreshment in order to serve God well; accordingly, leisure is both legitimate and needful. (After all, this was the original meaning of the word *recreation*: it referred to the weary man being renewed and *re-created*). To the extent that sport promotes health and health facilitates effective service in God's kingdom, sport is good. If participating with unbelievers in recreational activities leads to evangelistic opportunities, then such recreation is good.

The utilitarian model often speaks of *lawful sports*. This is an old Puritan phrase that captures the idea that a recreational activity must be tested to see if it enables one to serve God better. "Let us know that honest recreation is

a thing not only lawful," wrote John Downame, a Puritan pastor, "but also profitable and necessary." Puritan William Perkins agreed, asserting that a judicious dose of recreation made a man a better laborer. "No doubt but some sport and recreation is lawful, yea needful," advised Richard Baxter, another Puritan pastor, "and therefore a duty to some men." (What kinds of sports did the Puritans enjoy? A short list includes archery, shooting, running, leaping, fencing, bowling, swimming, hunting, and fishing.) When two Harvard College students drowned in a 1696 ice skating accident, Harvard President Increase Mather consoled the grieving parents by assuring them that "although death found them using recreations (which students need for their health's sake), they were lawful recreations."

Unlawful sports, then, are recreations that yield bad fruit. As Puritan Philip Stubbes put it, "Any exercise which

withdraws us from godliness, either upon the Sabbath or any other day, is wicked, and to be forbidden." For those who hold to the utilitarian model, recreations that promote pride or malice would be deemed unlawful. So would recreations that involve gambling. So would cruel blood sports like cockfighting or dog-fighting, as well as recreations that prevent people from engaging in legitimate duties on the Sabbath Day. (Much of the Puritans' criticism of sports was related to their sabbatarianism, as Sunday had become the preeminent sporting day in sixteenth- and seventeenth-century England.)

The idea of lawful and unlawful sports remains useful today. It provides a question with which a Christian can test a recreational activity: does this sport lead me to glorify God more fully? The Bible itself provides scriptural warrant for asking this question: "Whether, then, you eat or drink or whatever you do, do all to the glory of God" (1 Cor. 10:31). This verse implies that everything we do matters to God because everything we do either magnifies or obscures His glory. Playing or watching sports cannot be neutral; we either do it right or we do it wrong. If watching a basketball game enables me to return to my legitimate duties with new energy, or if playing basketball with my son strengthens our relationship, it is a good thing. If watching basketball games consumes so much time that I neglect needful tasks, or if playing basketball with my co-workers fuels pride in me, it is a bad thing.

Like the utilitarian model, the *intrinsic good model* also says that sports can be done right. However, this model understands sport as a good end in itself, not merely as a means to a higher end. The advocates of the intrinsic good model begin by asking the important question, "Who invented sports?" They answer with, "God did, much in the same sense that God invented music and art." God Himself created humans with the capacity and inclination to engage in athletics. Like music and art, sport is one of God's good gifts to mankind. Like music and art, sport is man's cultivation of God-given giftings and desires. God could have created humans with neither ability nor inclination to engage in physical recreation, but He did not. God instead planted the seeds of creative and expressive recreational activities inside us. Because God is a God of purpose, it is reasonable to infer that He deliberately created mankind with these innate capacities so that men might develop them. When humans pursue athletics in a godly manner, it is part of their exercising dominion over God's creation. Specifically, "doing sports right" is subduing that part of God's creation that is resident inside man himself.

The implications of this kind of thinking are profound. They mean an athlete can glorify God even if his sports seemingly have no apparent utilitarian value and do not equip him for some other God-oriented service. Likewise, God-honoring sports need not result in an evangelistic payoff. Our running, jumping, throwing, or catching is the development of God-implanted abilities, so such activities are intrinsically good.

Consider an analogy between sports and music. The godly violinist can glorify God when she makes music alone in a soundproof room. At that moment, the music neither better equips her to comfort the poor nor brings anyone to faith in Christ. The spiritual value of her music is not contingent upon some later payoff. Rather, the music can be intrinsically good simply because the violinist is developing God-given abilities. Even non-Christians say things like "music is good for its own sake" or "music is good for music's sake," but such expressions veil the Author of music. What they really mean is "music is good for God's sake." Music points to a greater Someone behind the music.

Although this kind of thinking is typically applied to art and music, it can be applied to sport as well. Does not sport share a common aesthetic element with art, music, literature, and drama? Do not even amateur athletes engage in creative acts like amateur dancers and actors? Cannot all these activities serve as entertainment and therefore be packaged as consumable products? Do not "fans" praise the great painter? Do not "spectators" applaud the great author? Is not the sports arena similar to the movie theater? "[B]aseball is a game of aesthetic form, a ritual elaborating some music of the human spirit," observes conservative author and philosopher Michael Novak. "Done well, it is as satisfying as a symphony, as moving as *Swan Lake* or *Madame Butterfly*. People who respond aesthetically to sports are sane. Those who do not may be teachable." Art is good when it displays authenticity, beauty, intentionality, originality, skill, and moral integrity; it is bad when it is derivative, trite, sloppy, and crassly utilitarian. Might not these same criteria apply to good and bad sports?

Such criteria suggest that sport is intrinsically good when authentic motives cause us to engage in it. Examples of authentic motives include, "I enjoy exercising," and "I am suited for tennis but not golf," and "I want to develop better relationships with my friends." Mindlessly wasting time on a video game is unintentional, but playing a video game with dad may satisfy the test of purposeful and meaningful activity. It is "unoriginal" when I spend six hours every Sunday watching football games on television for no better reason than I am a creature of habit. (The sports couch potato, therefore, is both unintentional *and* unoriginal.) We display skill when we try to run faster or dribble the soccer ball better. Are not some gymnastic routines and some golf shots nothing short of beautiful, especially to the amateur who can appreciate the skill involved? In the end,

We glorify God when we more fully appreciate His ample provision for our needs. Also, we are more likely to engage in sport (and benefit from it) when we see how God uses it to bless us.

the man who regards his sports as an intrinsic good often *does* see salutary fruit. However, it is the person who holds to the intrinsic good model, and not the one who believes in the utilitarian model, who can say what the Eric Liddell character in the movie *Chariots of Fire* said: "God made me fast, and when I run I feel His pleasure."

Because the intrinsic good model recognizes athletics as springing from God's creative work in humans, it harmonizes with the biblical doctrine of creation. It also harmonizes with the liberal arts educational ideal. Liberal education is not crassly utilitarian; it endorses the improving of human abilities for their own sake. The student who pursues literature simply because she loves it will not be useless in society because liberal education also cultivates wisdom in her. Wise people are never irrelevant. Disciplining latent athletic ability because it showcases human excellence is analogous to nurturing latent poetry-writing skill because it, too, displays excellence. Neither athletic nor intellectual activity need be "formed or sacrificed to some particular or accidental purpose," to borrow a phrase from the great nineteenth century champion of liberal education, John Henry Cardinal Newman. Such activities are inherently good when part of a liberal education that also imparts wisdom.

A Christian response to sport also involves appreciating the practical benefits they deliver. Recreation is more than just something that God created; it is also a good gift from God. Believers should understand *why* sport is a good gift for at least two reasons. First, we glorify God when we

more fully appreciate His ample provision for our needs. Second, we are more likely to engage in sport (and benefit from it) when we see how God uses it to bless us.

Perhaps the most obvious sport-related benefit is good health. God gives us a body and expects us to be good stewards of this great blessing. Although the issue of stewardship is typically mentioned in regard to financial matters, we are also stewards of the bodies God has given us. Good stewards take care of what has been entrusted to them. Part of taking care of our bodies is engaging in the physical exercise that is the very essence of athletics. Nor is good health restricted to good *physical* health. Research indicates that physical activity also promotes emotional and psychological health. Indeed, a standard therapy for people suffering from depression is a regimen of physical exercise. This is hardly a new idea, as the classical Greek philosophers were touting the non-physical benefits of sport in 350 B.C. God's gift of sports is indeed a *good* gift.

Sport also has the ability to promote salutary character traits. This is one reason why athletics was an integral component of classical Greek education. It is also a primary reason why Americans and Britons began including sports in their formal (and classically-based) college curricula in the nineteenth century. Like the Greeks, American and British college educators realized that athletic exertion could promote self-discipline, courage, and mental toughness. Team sports could impart skills related to cooperation. Athletes learn to display poise and

not panic. To be sure, recreation does not automatically produce virtuous character. It can reinforce both self-denying teamwork and self-promoting egoism. When done right, however, recreation indeed cultivates biblical character traits like perseverance, self-control, and humility.

"A joyful heart is good medicine," says Proverbs 17:22. For good reason, Christians reject asceticism as unbiblical. The healthy Christian life is one that includes seasons of laughter and fun. One of the benefits of sport is how it creates such seasons. It is good for friends to build camaraderie as they play soccer together. It is good for family members to laugh together when they go bowling. This is also why watching athletics can be beneficial. Viewing sport on television can trigger the kind of joy that music lovers experience when they attend a concert or that art aficionados experience when they tour an art gallery. Seeing a favorite team win or your friends compete well can help create what the Bible calls a cheerful heart (Prov. 15:15). Of course, all this can be (and often is) taken too far. Some athletes live exclusively for sports because they live exclusively for the fun that sports provide. Some spectators make "watching the game" an excuse for laziness and irresponsibility. These abuses do not negate the fact that sport—when it is done right—can be a source of what the Puritan poet John Milton called "delightful intermissions" of "joy and harmless pastime."

"All things are lawful for me, but not all things are profitable. All things are lawful for me, but I will not be mastered by anything" (1 Cor. 6:12). This principle summarizes nicely how Christians should think about recreation. First, sin can cause us to misuse sport so that it is unprofitable to us and even enslaves us. Recreation can cultivate unbiblical behaviors and character traits. It can steal our time and money. It can displace the Lord Jesus Christ as our supreme love. It can become an idol that dominates our lives, demands our sacrifices, and delivers on none of its promises. Like any created thing, sport can become an unhelpful snare. Second, sport is lawful for the faithful follower of Christ. God created recreation and the believer does well to benefit from it. The man who lives according to the law of God (or, to put that another way, according to the will of God) understands that athletics is part of the created order and thus should be enjoyed. Do you want to live lawfully? Then think *and live* Christianly when it comes to recreation.

—*Robert Spinney*

Eric Liddell

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ENDNOTES

1 Scripture references in this essay are from the New American Standard Version.

2 James Romaine. *Objects of Grace: Conversations on Creativity and Faith.* Baltimore, Md.: Square Halo Books, Inc., 2002.