Evangelicals, Creation, and Scripture: An Overview

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Introduction

In the domain of religion and science, decisions, actions, attitudes, practices, and conflicts of the present moment require careful assessment for what they mean now and how they may affect the future. Conservative Protestants today, for example, offer many reasons for leaning against or actively combating the consensus of modern scientists concerning evolution. Some of those reasons concern narrowly defined issues of physical evidence or the interpretation of specific biblical passages, while others range to broader issues of theology, philosophy, ethnicity, family order, public education, or government. To offer historical explanations for the standoff, which this paper tries to do, is not the same as explaining the individual motives of those who engage such issues today. But it is a good way to see that contemporary stances represent an amalgamation of discrete attitudes, assumptions, and convictions, and that the components of this amalgamation all have a history.

The purpose of this paper is to specify fifteen of these attitudes, assumptions, and convictions, to indicate when they rose to prominence, and to suggest how they relate to affect contested issues of science and religion. To the extent possible for a historian who does not believe in Creation Science and who looks to guidance on these issues to practicing scientists who are also orthodox Christians, this paper tries to be as objective as possible. In addition, my own judgments concerning the fifteen factors I isolate are mixed: some seem to me damagingly mistaken in their entirety, and for a combination of theological, biblical, and intellectual reasons. Most, however, seem much more difficult to evaluate, often because they once made a genuine contribution to the spiritual health of churches and the civic stability of society and may, in fact, continue to do so even when the circumstances in which they came into existence are no longer present. Yet taken together, the continuing functioning of these fifteen factors has created a serious problem—intellectually, biblically, theologically, apologetically, and spiritually—that damagingly constricts conservative Protestants in their engagement with contemporary science.

Deep Background

The recondite debates of thirteenth-century Catholic philosophers may seem a strange place to begin explaining the attitudes toward science of contemporary conservative Protestants, but only a little explaining will show why this is so. The particular dispute that resulted in a very important assumption in later western history concerned the relationship of God's being to all other beings. Thomas Aquinas, the Dominican Friar who lived from 1225 to 1274, argued that this relationship was analogical, that is, while humans and the created world were certainly like God in many ways, the essence of God remained ultimately a mystery known only to himself. Aquinas may well have been thinking of the passage in Isaiah 55:9 where the Lord tells the prophet, "As the heavens are higher than the earth, so are my ways higher than your ways and my thoughts than your thoughts."

The fact that God created the world out of nothing (creatio ex nihilo) was a crucial part of Aquinas' argument, because it meant that, while human minds could understand communication from God (i.e., revelation in nature, in Scripture, in Jesus Christ), yet human minds in principle could never grasp the essence of God. An interesting by-product of this position, which has taken on surprising relevance in contemporary debates, was Aquinas' understanding of randomness or contingency. Everything in the world, he insisted, happened because of God's direction. But some things happen contingently, or with the

appearance of randomness. The logic of their contingency was perfectly clear to God, but because God in his essence is hidden to humans, humans may not be able to grasp how what they perceive as random could be part of God's direction of the universe.

The opposing view was maintained by the Franciscan priest and philosopher, Duns Scotus, who was a younger contemporary of Thomas Aquinas living from 1266 to 1308. His position argued for the univocity of being. The only way to know the essence of anything is through its existence. Although God is much greater and much wiser than humans, his being and the being of all other things share a common essence. God is the creator and redeemer of humans, but his actions toward humans can (at least potentially) be understood reasonably well because the same laws of being apply to God as to everything else; the same way that we explain causation in every other sphere explains how God causes things to act and to be.

Scotus' approach to metaphysics (= the science of being) became, with a few exceptions, the dominant view in later western history. It was particularly significant when joined to one more principle, this one from the English Franciscan, William of Ockham (1288-1348). Ockham's famous "razor" held that the simplest explanation was always the best explanation ("do not multiply entities unnecessarily"). Applied to science, this principle came to mean that if a natural event is explained adequately by a natural cause, there is no need to think about supernatural causes or even about the transcendent being of God. The combination of these philosophical positions is responsible for the very widely shared assumption that (1) once something is explained clearly and completely as a natural occurrence, there is no other realm of being that can allow it to be described in any other way.

For a very long time, this assumption was not regarded as anti-Christian, since God was considered the creator of nature and the laws of nature as well as also the active providential force that kept nature running as he had created it to run. During the Reformation era, Protestants began to place a new stress on the importance of Scripture for understanding God, themselves, the church, and everything else. That emphasis was one of the important factors accelerating the rise of modern science. In particular, as Protestants set aside symbolic interpretations of Scripture, which had been prominent in the Middle Ages, they stressed straightforward examination of texts in what was often called a literal approach. This approach, in turn, stimulated a similar effort at examining the natural world in such a way that the medieval idea of God communicating to humans through "two books" (nature and Scripture) took on greater force. The assumption that became very important in this process was that (2) those who believed God created the physical world and revealed himself verbally in Scripture should *harmonize* in one complete picture what they learned about nature from studying nature and what they learned bout nature from studying Scripture. In both cases, literal knowledge was crucial, along with a belief that sources of literal knowledge could be fitted together harmoniously.

By the late seventeenth century, when science in its early modern form began to expand rapidly, yet a third conviction became important, which was worked out especially in the many efforts that went into constructing natural theology. Natural theology was the project of explaining, often in considerable detail, what God's purposes were in creating the various parts of nature. Natural theology became a major enterprise when the earlier assumptions—metaphysical univocity and harmonization of the Two Books--encountered rapidly expanding knowledge about the physical world. Learned believers recognized the potential threat of this expanding knowledge—if scientific investigation could explain how nature worked as a system unto itself, maybe reliance on God and reference to the Scriptures were expendable. In response to this challenge, savants like Cotton Mather in the American colonies (The Christian Philosopher, 1721) and

William Denham in England (Physico-Theology, 1713) offered elaborate explanations for how the structures of the physical and animal worlds revealed God's purposes in creating things as he had made them.

The tradition of natural theology received its most famous exposition in a book by William Paley, an Anglican archdeacon, published in 1802. Its title explained what it was about: Natural Theology: or, Evidence of the Existence and Attributes of the Deity, collected from the appearances of nature. Paley's method was to describe features of animal, human, or material reality and then to show how these features manifested God's design in and for nature. For example, the fact that animal and human bodies were symmetrical in outward appearance even as their internal organs and functions were asymmetrical provided to Paley "indubitable evidences, not only of design, but of a great deal of attention and accuracy in prosecuting the design." [1] The very important assumption behind the natural theology promoted by Paley was that (3) not only did God create and providentially order the natural world, but humans could figure out exactly how and why God ordered creation as he did. This assumption became critically important when later investigators of nature concluded that there was no obvious intention of God that explained what they discovered, and so belief in God was wrong-headed. Such views naturally antagonized those who did continue to believe in God and therefore insisted either that new discoveries did in fact reveal a providential design or that the new discoveries had to be false.

Perhaps not many today who are engaged with contemporary debates in science and religion pause to think about historical turning points deep in the past. But the assumptions of univocal metaphysics, harmonization, and natural theology created powerful channels in which much subsequent discussion has flowed.

In American history, the attitudes, convictions, and assumptions that continue to shape contemporary disagreements arose during three distinct eras: during the years of the early republic; during the years when the modern universities came into existence; and during the recent prominence of public culture wars.

The Early Republic

The history of the United States during its first decades is important for questions of science today because of how widely held attitudes, which still influence the present, came to prominence in that period. During the late eighteenth century, the churches in the new United States existed in a state of confusing transition. They had suffered much destruction during the American Revolution, only to confront even greater challenges after the war was over. One was figuring out how to carry on religious life without the partnership of the state, another was figuring out how to bring Christianity to the vast open spaces of the new nation.

From time out of mind in Christian history, churches had been supported (and regulated) by the European states; this is also how religious life had been organized in most of the American colonies. But now, with the pluralistic religious situation of colonial Pennsylvania, New Jersey, and New York as a precedent, the United States as a whole was moving rapidly toward a free market in religion. In 1791 the First Amendment to the U.S. Constitution guaranteed the "free exercise" of religion and prohibited the creation of a national state church; soon thereafter all of the states changed their laws to meet this national standard.

A variety of powerful motives stimulated this development. One grew from the conviction that freely chosen religion required the separation of church and state. Even more widely influential was

commitment to the republican ideology that carried over from the revolt against Britain to dominate public thinking in the new nation. This republican ideology stressed the dangers of unchecked authority, the corruptibility of inherited power, and the tyrannical effect of tradition. It explained why the War for Independence had to be fought to keep colonists from being enslaved by the corrupt British Parliament and the power-obsessed British monarch.

Put positively, republican thought expressed great trust in the virtue of private persons as the best guarantee of public well-being. Because so many leading Protestants had supported the Revolution, the churches after the War embraced a kind of "Christian republicanism" in which the "virtue" required to overcome the "vice" of political corruption was depicted as flowing from the gospel.

The religion of "Christian republicanism" necessitated audacious new assumptions about authority and communication. Americans who had fought for independence to defend their "liberty," fundamentally distrusted authority handed down from on high or bestowed by virtue of inherited titles; rather, it was authority won by earning the trust of "the people" that mattered. In this republican view of social order, networks that individuals created for themselves were considered more reliable than lines of communication controlled by designated authorities.

After leaving behind religious establishments and the European reliance on tradition, and in response to the challenge of the nation's wide-open spaces, American religious life underwent a great transformation. The religious practices of groups that had been marginal in the colonial period now began to set the pattern for all. Methodists under the leadership of Bishop Francis Asbury, Baptists instructed by countless local preachers, and Disciples and "Christians" guided by the creative leadership of Alexander Campbell and Barton Stone took the lead in preaching the salvation of souls, organizing congregations, and recruiting young men (also a few young women) to serve as itinerants. With these upstarts in the lead, the more traditional churches of the colonial era (Congregational, Episcopal, Presbyterian) also accommodated themselves to the new nation's republican and democratic values. Very soon even American representatives of the European churches with the strongest traditions of church-state cooperation (Lutherans, Catholics) adjusted to this approach.

In the effort to build churches with forms and assumptions that fit the new American nation, most of Europe's traditional authorities came under severe attack. The great exception was the Bible. Passages from Scripture had been invoked everywhere during the Revolution, though often in symbolic ways (like referring to the British Parliament as "Egypt" and George Washington as "Moses") rather than in deciding whether the Revolution was a just war. In the early republic, the great engine of the revival preaching that proved so successful for Methodists, Baptists, and many others was the Bible. Scripture was preached by itinerants and by regular clergy; it was the basis for organizing churches on the frontier and maintaining stability in settled regions. In the absence of well-developed social institutions or government structures, the King James Version of the Bible was the closest thing to a universal cultural authority. And because the Bible was the people's book, which all who could read might appropriate for themselves, it almost completely escaped the suspicion that fell upon the other mainstays of historical European Christianity.

The only other authority beside Scripture to escape the attack on tradition was science, understood as an objective organization of facts not dominated by inherited authority. As with Scripture, in an intellectual environment created by republican ideology, the science that dominated early American history took a hands-on, bottoms-up, popular form. Amateurs like Benjamin Franklin or Thomas Jefferson were lionized for their contributions, respectively, to electrical theory and natural philosophy. The same popular

impulse that opened the Bible to every serious reader opened the natural world to every investigator able to persuade the populace about the results of an experiment, whether the investigator had received official certification or not.

Popular reliance on the Bible fit perfectly with the voluntaristic organization of religion that came to replace the previous reliance on church-state establishments. Voluntarism was a mind-set keyed to innovative leadership, proactive public advocacy, and entrepreneurial goal-setting. Voluntarism also became an extraordinarily influential practice that, beginning with church organization, soon mushroomed to inspire mobilization on behalf of myriad social and political causes. First came the extensive voluntary societies—like the American Board of Commissioners for Foreign Missions (1810), the American Bible Society (1816), or the American Education Society (1816)—that were rivaled in their religious impact on the nation's culture only by the Methodist church. But then came schools, hospitals, political parties, and even (to some degree) businesses organized often by Bible-trusting believers and even more often by an up-from-the-bottom approach.

With this new mode of organization, a period of tumultuous, energetic, and contentious innovation first reversed the downward slide of religious adherence and then began to shape all of American society. Most remarkably, voluntary evangelical religion even conquered the South, where an honor-driven culture of manly self-assertion posed a more difficult challenge to Christian faith than in Northern regions. By demonstrating how religion could thrive despite the absence of an establishment, the period's dynamic evangelicals established an enduring pattern for the future. Other religious movements that differed greatly in belief and practice from evangelicalism would flourish in the United States by adopting, to at least some degree, the free-form and populist traits that evangelical Protestants pioneered.

The results of religious transformation in the early republic were remarkable. Between 1790 and 1860, the United States population increased eight fold, but the pace of church adherence grew at double the rate of population growth. The number of Methodist churches alone multiplied by twenty-eight in this period. By 1860, although Jews and, even more, Catholics had began to increase rapidly, the nation's formal religious life was dominated by Protestants: over 83% of the value of church property and over 95% of the churches themselves (about 50,000 of them). And the combined budgets of the churches and religious voluntary agencies—most of them evangelical Protestant—came close to matching the income of the federal government.

Alexis de Tocqueville, the period's most famous foreign observer, dwelt at length on how he thought Protestantism had shaped the entire course of the new nation. During his visit to the United States in the 1830s, Tocqueville observed what he described as a conundrum: why did religion, which because of the Constitution's separation of church and state "never mixes directly in the government of society," nonetheless exist as "the first of [the nation's] political institutions." His explanation centered on how Protestant faith had aligned itself with republican principles of liberty: "if [religion] does not give them the taste for freedom, it singularly facilitates their use of it." In particular, Tocqueville pondered the "great political consequences" that "flowed from" the flourishing of disestablished Protestant churches. His final judgment was comparative: In Europe, "I had seen the spirit of religion and the spirit of freedom almost always move in contrary directions. Here I found them united intimately with one another: they reigned together on the same soil." [2] Tocqueville recognized that it had not been primarily government, nor an inherited religious establishment, nor Big Business that had built the American civilization he observed in the 1830s, but the enterprising activities of the churches, most of them evangelical Protestant.

The striking success of the evangelical churches in the nation's early history solidified a number of attitudes, assumptions, and convictions with broad implications for later science and religion discussions. Prominent among these was the belief that (4) the best medium for nurturing the Christian faith in a republican and democratic society was churches organized democratically on a voluntary basis.

Practices guided by this conviction unleashed tremendous spiritual energy with long-lasting effects. Voluntary churches, which were moving in the direction of modern parachurch organizations, combined flexible structure and creative innovation with democratic empowerment. New ideas, like establishing missionary and social-service agencies through the good will of ordinary individuals and aiming them at specific problems flourished in this voluntaristic milieu.

For the intellectual realm, however, democratic voluntarism had its problems. Long-lasting institutions, respected landmarks, and patient cooperation have all been important—along with daring innovation—in the history of modern science. In the American environment of the early nineteenth century, which the Protestant churches did so much to build, an overabundance of innovation and a relative scarcity of other intellectual virtues prepared the way for problems later.

The early history of the United States also witnessed a number of specific developments relating to Scripture and its use. Especially important was the conviction that (5) the Bible was a uniquely powerful agent for evangelism, training in godliness, guidance to churches, and—also—the construction of social order. Americans had given up many of the historical props of European Christendom, including state churches, the iron fist of inherited precedent, and automatic deference to tradition. But in the Scriptures, which were increasingly accessible to any one who could read, the nation's believers possessed a supreme religious authority that provided the guidance necessary for personal spiritual growth and the development of strong local churches, as well as the public norms for a republican society.

In fact, at a very early point in the nation's history, it became clear to many of the nation's intellectual leaders that (6) the Bible, appropriated democratically, alongside science, also appropriated democratically, were the safest possible guardians against the corruptions of tradition and the perils of infidelity. In these terms, the United States became a laboratory for showing how Scripture, science, and democratic common sense could overcome the corruptions of European Christendom.

Christian apologetics combining scriptural principles and empirical methods rapidly became the norm. What historian T. D. Bozeman has helpfully described as "Baconian" theology flourished; its use of a rigorous empiricism deployed on facts of consciousness and facts from the Bible became the standard for justifying belief in God, revelation, and the Trinity.[3] At Yale, Timothy Dwight gained renown for restoring a lively Christian faith after he was named president in 1795. At least as the story came down to later generations, Dwight attacked specifically the charge made by infidel students that "Christianity was supported by authority, and not by argument." In the face of this challenge, Dwight boldly called all comers to debate the question, "Are the Scriptures of the Old and New Testament the Word of God?" After appealing for those who doubted the Scriptures to "collect and bring forward all the facts and arguments which they could produce," Dwight "triumphantly refuted their arguments[,] proved to them that their statement of facts was mistaken or irrelevant," and by "the exposure of argument" recovered the ground for full-blown Christianity.[4]

Similar empirical procedures marked out the royal road to moral certainty in ethics and also provided a key for using physical science itself as a demonstration of religious truths. In every case, as Samuel Stanhope Smith, the president of Princeton, put it in 1810, the appeal was "to the evidence of facts, and to

conclusions resulting from these facts which . . . every genuine disciple of nature will acknowledge to be legitimately drawn from her own fountain." [5]

In the rough and tumble of the new nation, the ability to reason clearly from the Scriptures and from "the facts" of nature or consciousness—and the ability to show how Scripture aligned perfectly with these facts—was much more than a casual academic sideline. Instead, this combination offered a sturdy intellectual scaffolding that undergirded personal religion, church health, and an orderly society.

The respect for such use of the Bible in the uncertain conditions of the new republic often led to an ideology of "the Bible only." Benjamin Rush, the renowned if also controversial Philadelphia physician, revealed his trust in Scripture as the ideal guide for the new nation, when he published a grand plan for educational reform in 1791: "We profess to be republicans, and yet we neglect the only means of establishing and perpetuating our republican form of government, that is, the universal education of our youth in the principles of Christianity, by means of the Bible: for this Divine book, above all others, favors that equality among mankind, that respect for just laws, and all those sober and frugal virtues, which constitute the soul of republicanism." [6] Fifty years later, Robert Baird, author of the first comprehensive history of the American churches, explained to a European audience why the American churches could cooperate so well with each other on so many projects: "they hold the supremacy of the scriptures as a rule of faith, and that whatever doctrine can be proved from holy scripture without tradition is to be received unhesitatingly, and that nothing that cannot so be proved shall be deemed an essential point of Christian belief." [7] Rush, Baird, and many others in this period were advocating the belief that (7) "the Bible only" provided the ideal anchor amidst the tumults of an otherwise unstable world.

A final biblical conviction that became well established in this early period concerned hermeneutics, the method of interpreting Scripture. The question of how best to interpret the Bible was not a major point of contention in the early national period, since the most active churches that were reviving religious life and shaping public order came from the broadly Reformed wing of British Protestantism. In contrast to Roman Catholics, Reformed believers defended sola scriptura against the magisterium's employment of tradition to interpret the Bible. But Reformed hermeneutics were also set apart from other Protestants who also claimed to follow scriptura sola. Especially those Reformed communities with strong democratic tendencies mistrusted the Lutherans, who seemed to let tradition sneak back in by the back door, and also the Anglicans, who seemed to give too much authority to reason and to the church's leaders. Instead, it was the Bible as read by ordinary believers and the Bible understood as straightforwardly as possible that allowed God's revelation to shine forth clearly and powerfully. A contributor to the Methodist Quarterly Review in 1843 summarized succinctly these principles of biblical interpretation as they had undergone American development in a populist and antitraditional way: "We claim to be, not only rigid literalists, but unsparing iconoclasts--ruthless demolishers of all theories. We wish to strip the passage of all the superincumbent strata which ingenious men have deposited all round it, and come down to the plainest and most obvious literal reading the text." [8] In the United States, this particular hermeneutic strengthened the assumption that (8) the best biblical interpretation was the most literal interpretation as grasped by the most democratic audience of readers.

It is important to restate the sequence that undergirded the attitudes that took firm hold in early American history. Conventions in biblical interpretation were not worked out in academic isolation but were agents of tremendous public power forged in the crucible of practical necessity. A democratic, populist, and literal hermeneutic was the interpretive strategy that evangelical Protestants exploited to win the new republic for Christ. The social transformation that resulted seemed to validate the evangelicals' approach to

Scripture. For reaching the unreached with the Christian message, for organizing congregations and building churches, for creating agencies to construct and reform society, reliance on the Bible alone, literally interpreted, worked wonders.

With such sturdy signposts marking the path that American Bible-believing evangelicals had embarked upon, much in the later history of religion and science becomes readily understandable. Given the foundational principles put in place during this early period, only a major shift in direction could have prevented the confusion that did in fact result when the broader intellectual landscape changed. When those changes did take place in the last third of the nineteenth century, evangelicals, rather than modifying their earlier attitudes, convictions, and assumptions, expanded and strengthened them instead.

The Modern University

The intellectual and religious history of the United States entered a new era after the Civil War. The War Between the States had itself been a special trial for evangelical Bible-believers, since their principles of democratic scriptural interpretation had led to helplessness in the face of national crisis. Unlike the situation in earlier decades, when trust in Scripture and a common hermeneutic had fashioned spiritual and social order out of chaos, controversy over slavery paralyzed the evangelical churches. Some found it self-evident that the Bible defended slavery, some felt the Bible required abolitionism, some held that it mandated gradual improvement for the slave's lot. Evangelical voices, thus divided, were marginalized as a strong view of national union and the North's big armies took over the task of defining the national character. Shortly after the war, the social landscape also shifted dramatically because of a number of important developments. The litany is familiar from every survey textbook: immigration of non-Protestants and non-Christians challenged evangelical hegemony over public life; the growth of great urban centers undercut the influence of rural and small town environments where evangelical Protestantism had flourished; and capitalist mobilization on an unprecedented scale removed most of the nation's economic life out from under the influence of the churches.

Intellectually, a number of forces imported from abroad coincided with fresh efforts to ramp up American higher education in order to match the intellectual depth and sophistication of Europe's great centers of learning. A simple chronology indicates the directions of these intellectual changes. In 1859, Charles Darwin's Origin of Species popularized general views of natural development that had been circulating for some time, but also proposed the mechanism of natural selection as an explanation for evolutionary change over time. The former challenged literal readings of Genesis, the latter challenged the assumptions about natural theology and the harmonization of evidence from God's two books that had been popularized by William Paley. Then in 1860, seven Anglican clergymen-scholars published a book entitled Essays and Reviews, which for at least a decade received more attention than Darwin's Origin. This book was notable for advancing two notions that offended the common assumptions of many evangelicals: first, a notion of historical understanding in which past events were interpreted according to their place in the skein of natural development rather than in relation to God; second, a notion of Scripture as needing to be interpreted like any other ancient text. The very next year, 1861, Yale University issued the first Ph.D. to be granted by an American institution of higher learning.

The drum beat of innovation accelerated rapidly. In 1869, Charles Eliot became president of Harvard and immediately embarked on a scheme of modernizing the curriculum through the promotion of science; it was a scheme that most other American colleges and universities soon followed. That same year, Andrew Dickson White, who had become the founding president of Cornell University only three years before, gave

a lecture in New York that announced a thesis he would continue to develop throughout his professional life: "In all modern history, interference with science in the supposed interest of religion, no matter how conscientious such interference may have been, has resulted in the direst evils both to religion and to science, and invariably; and, on the other hand, all untrammeled scientific investigation, no matter how dangerous to religion some of its stages may have seemed for the time to be, has invariably resulted in the highest good both of religion and of science." [9] Five years later a young English philosopher, F. H. Bradley, published a widely noticed essay entitled "The Presuppositions of Critical History" in which he argued that responsible historical study needed to follow the lead of science and that science was illegitimate if it referred to forces outside the natural sphere—in other words, if it referred to God. Two years later, in 1876, the Johns Hopkins University was founded with the express purpose of promoting graduate-level education in all fields, but using primarily the tools, presuppositions, and methods of the kind of critical science championed by A. D. White and F. H. Bradley.

The way that these events in the broader world of American higher education interacted with events in the world of evangelical Protestants is indicated by two other events from this same period. In 1876, the same year as the founding of Johns Hopkins University, a Presbyterian minister, James H. Brookes, convened the first of what became known as the Niagara Bible Conferences when the annual event was permanently located at Niagara-on-the-Lake in Ontario. The Niagara Conferences were notable for enlisting missionary volunteers and for increasing interdenominational fellowship. They also became a powerful venue for promoting a dispensational, premillennarian approach to Scripture that featured literal, Baconian approaches to the prophetic parts of the Bible. In addition, the Niagara Conferences also served as a spur to the formation of Bible colleges and Bible institutes that offered the broader evangelical community an alternative to the nation's new research universities.

Five years later, as part of an internal debate among American Presbyterians on the reception of advanced biblical criticism from Europe, two conservatives, Archibald Alexander Hodge and Benjamin Breckinridge Warfield, published a definitive paper entitled simply "Inspiration." [10] It offered a strenuous, painstaking defense of the belief that the Scriptures were without error in all that they revealed.

For several decades it was not apparent how developments in American higher education and developments among American evangelical would relate to each other. Into the early twentieth century, it seemed possible that some evangelicals might combine renewed commitment to classical views of God, Scripture, and divine providence with considerable acceptance of the scientific advances and scientific methods promoted in the new universities. For example, B. B. Warfield, after defining biblical inspiration in traditional terms, devoted much effort in his later career to indicating how a conservative view of the Bible could accommodate some, or almost all, of contemporary evolutionary theory.[11] When in the 1910s the booklets entitled The Fundamentals were published to defend conservative Protestant doctrine, their authors included a few scholars, like James Orr of Scotland who joined Warfield in suggesting that evolution should be regarded as the divinely ordained means of organizing the natural world.

By the 1920s, however, it became clear that much of the evangelical community was alienated from the American research university and their aggressive promotion of scientific research. To many evangelicals, research universities were places that popularized ideas destructive of Christianity and where those ideas often seemed to drive out all other contenders. In this picture, denizens of the universities delighted in teaching that historical perspective meant excluding the supernatural, that scientific rigor meant denying the supernatural, and that biblical scholarship meant denying the supernatural or greatly modifying what was meant by the supernatural. As a consequence, modern research universities might be

useful places for believers to be certified for employment or for other pragmatic reasons, but it was always necessary to remember that they were institutions dominated by anti-Christian principles. For many evangelicals, therefore, the conviction spread that (9) the modern research university defines enemy territory that can be explored only with the greatest caution and only with defenses constantly on guard for intellectual battle.

As they saw the practical and intellectual dangers of American life in the early twentieth century, most evangelicals turned with increasing fervor to traditional Christian confidence in the Bible, but also the Bible as it had functioned so powerfully in earlier American history. Thus, they boldly proclaimed their conviction that (10) the Scriptures—as preached to all, read by all, and applicable to all—provide the strongest support for Christian life and truth amidst the perils of the modern age.

Despite the efforts of a few evangelical intellectuals like B. B. Warfield and James Orr, to work patiently through the mid-level scientific literature of the day, evangelicalism as a whole relied more on popular argumentation aimed at democratic audiences, rather than on discriminating advanced learning, to counter the anti-Christian uses of modern science. Powerful social forces fueled this populist approach. During World War I, wide swaths of the American populace, and not just evangelicals, explained what the Allies called German barbarism as an outgrowth of the godless evolutionary theories taught in the Kaiser's universities. William Jennings Bryan's famous crusade against evolution was based on a similar linkage. For Bryan, evolution may have posed some problems for biblical interpretation, but its really devastating effect was how evolution supported the Social Darwinism that trampled on women, children, and the poor. Consequently, Bryan's campaign against evolution was part of his life-long effort to mobilize popular support for better treatment of society's weakest members. Given this association between evolution and besetting sins of western civilization, it became common for evangelicals to think that (11) popular mobilization appealing to the commonsense of ordinary Bible readers and to time-tested explanations for how God relates to nature—univocal metaphysics, harmonization, and natural theology—is the best way to enlist the Scriptures for combating infidelity and moral decline.

In making these judgments, evangelicals by no means gave up their commitment to empirical—or what they considered properly scientific--methods, but they took these methods to be Baconian, harmonizing, and literal. They were Baconian in favoring interpretations that treated individual verses from throughout Scripture like component pieces of data to be assembled into larger themes and doctrines. They were harmonizing in wanting to keep together in one world-picture under God what the Scriptures revealed and what study of nature revealed. In this perspective, science per se was not the problem, but science distorted and misapplied for anti-Christian purposes. The conclusion followed inevitably, that (12) when scientists or the popularizers of science make use of new proposals about nature to undercut traditional belief in God, the problem is almost always with those who make the proposals and almost never with assumptions about the neutral character of science or assumptions about how science and Scripture should be aligned.

Evangelical biblical interpretation also leaned strongly toward the literal. Particularly in an era when so many modernist proposals were explaining away so much of Scripture as merely metaphorical, or legendary, or spiritual but not factual, literal Bible interpretation often looked like the only way to retain any meaningful revelation from God. Many evangelicals were certain that to attempt anything but non-literal interpretations of any part of Scripture was to slide toward the anti-supernatural interpretations that had dominated university-level higher education from the late nineteenth century.

This bent toward literal interpretation also owed a great deal to the popularity of dispensational premillennialism. That interpretive scheme exerted special influence through the many prophecy gatherings run on the model of the Niagara Conference and through the notes of the widely distributed Scofield Reference Bible, which was first published in 1909. Literal interpretation of biblical prophecy about the end of the world, and especially of the book of Revelation at the end of the Bible, was easy to link with literal interpretation of biblical accounts of the origin of the world, especially as given in the early chapters of the book of Genesis. Moreover, literal interpretation of the outer portions of Scripture seemed to many evangelicals only a natural extension of—and sturdy protection for—literal interpretation of the Bible's central account of the life, death, and resurrection of Christ. Thus, a complex web of assumptions and practices led to the wide spread belief that (13) the norm for interpreting all of Scripture as God's life-giving revelation is strongly supported by literal interpretations of the first and last parts of the Bible.

Evangelical history in the early national period and in the era when research universities emerged provides the necessary background for understanding contemporary concerns of conservative Protestants about science. While important new developments have taken place since the end of the Second World War, it is no exaggeration to say that most of what creates tensions, conflicts, and uncertainties today involves the continued influence of convictions, attitudes, and assumptions that were well established before contemporary controversies arose.

Culture War

Since World War II, most of the uneasiness among conservative Protestants about science has resulted from carrying earlier trajectories into the present. Current uneasiness arises from the ongoing force of deeply entrenched convictions, attitudes, and assumptions. Sorting out these matters is difficult, however, in part because there are so many different factors feeding into the current situation, and in part because evaluating these factors requires delicately balanced judgments. As examples, the sense that non-believers of several types regularly use the supposedly assured result of modern science to attack traditional Christianity is hardly a baseless fantasy. In addition, Christian believers of all sorts can only applaud the devotion to Scripture that has been so prominent in evangelical history, but many believers today—including a growing number of evangelicals—question some of the assumptions about how best to interpret Scripture that evangelicals often treat as interchangeable with trust in Scripture itself.

Historically considered, the modern strength of young-earth Creation Science is almost entirely explainable as the continuation of former predispositions. To be sure, skillful publications like John Whitcomb and Henry Morris' The Genesis Flood, which appeared in 1961, have added new elements to the mix. But the impact of this and similar works depends almost entirely on a skillful evocation of assumptions about metaphysical univocity, harmonization, natural theology, and the locus of problems when science and religious seem to clash (1, 2, 3, 12) combined with forceful assertion of convictions about the truth-telling character of the Bible (5, 7, 10) along with attitudes or assumptions about the necessity of interpreting the Scriptures literally (8, 13) and the dangers of the modern research university (9)—and all promoted democratically to the public at large as the presumed best judge of such issues (4, 11).

Likewise, the Intelligent Design movement, with more sophistication, demonstrates an especially strong commitment to metaphysical univocity, harmonization, and natural theology (1, 2, 3), with a penchant for regarding the court of public opinion as a capable judge of controversial issues (4, 11).

Moreover, this modern situation is complicated by the fact that many of the critics of Creation Science and Intelligent Design, both believers and unbelievers, also share some of these attitudes, especially those derived from metaphysical univocity, harmonization, and natural theology.

What is new in recent decades is the place of modern science in American society and the engines of communication that now provide information and opinion on issues of science and religion—and many other matters too. From the 1950s, massive amounts of government investment in scientific research has spilled over into the provision of national science curricula for schools at all levels, including public schools. The historian Ronald Numbers has shrewdly pointed out that ideas about evolution were one thing, but teaching about evolution that was funded by the federal government and mandated for local public schools was another.[12] This combination has led many evangelicals to think that (14) when scientific teaching that appears to undercut Christian belief is supported by both the federal government and by the scientific establishment, truth and morality are under deadly assault.

Much recent debate over science and religion has also been caught up in the massive expansion of public communications and the even more recent democratization of mass communication through the Internet. The result has been a politicization of information unlike anything seen previously in American history. Of course information has always been delivered with political, partisan, and ideological overtones. But the fervent debates that now roil the public display mistrustful extremism—and from every point on the ideological compass—reaching much farther up, out, and down than ever before. The result is that debates over science and religion are often folded into debates on many other topics. Thus, for at least some evangelicals, (15) opposition to evolution is a useful shorthand for opposing radical feminism, the sexual revolution, the normalization of homosexuality, and alternative family definition, as well as for opposing perceived attacks on Christianity.

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If what I have sketched in this paper portrays the past with any accuracy, it should be clear that when conservative Protestants voice objections to different aspects of modern science, they do so for a complex set of well-established reasons. Progress on this front probably depends most on increasing the number and quality of believers Christians who are willing to enter the world of university level science with commitments to historical Christianity and the modern practice of science firmly in place. It may also be helped by Bible-believing evangelicals who are willing to ask how truly biblical are the convictions, assumptions, and attitudes they bring with them to the consideration of modern science.

Further Reading

The literature on subjects treated in this paper is immense. Nonetheless, a beginning can be made by attending to the discussions (and the bibliographies) found in outstanding treatments of the general subject, including John Hedly Brooke, Science and Religion: Some Historical Perspectives (Cambridge University Press, 1991); David C. Lindberg and Ronald L. Numbers, eds., God and Nature: Historical Essays on the Encounter between Christianity and Science (University of California Press, 1986); and David C. Lindberg and Ronald L. Numbers, eds., When Science and Christianity Meet (University of Chicago Press, 2003). Reliable orientation to the deep backgrounds of this story is found in Amos Funkenstein, Theology and the Scientific Imagination from the Middle Ages to the Seventeenth Century (Princeton University Press, 1986); and Peter Harrison, The Bible , Protestantism, and the Rise of Natural Science (Cambridge University Press, 1998). On Darwin,

Darwinism, and the reception of Darwinism, outstanding accounts have been provided by Adrian Desmond and James Moore, Darwin (Warner, 1991); James R. Moore, The Post-Darwinian Controversies: A study of the Protestant struggle to come to terms with Darwin in Great Britain and America, 1870-1900 (Cambridge University Press, 1979); and John H. Roberts, Darwinism and the Divine in America: Protestant Intellectuals and Organic Evolution, 1859-1900 (University of Wisconsin Press, 1988). On modern debates, see especially Ronald L. Numbers, The Creationists, expanded ed. (Harvard University Press, 2006), with a good general survey also in Michael Ruse, The Evolution-Creation Struggle (Harvard University Press, 2005). An excellent account on the many surprising twists and turns in the history of issues discussed here is David N. Livingstone, Adam's Ancestors: Race, Religion, and the Politics of Human Origins (Johns Hopkins University Press, 2008). On matters more particularly related to America, see Mark A. Noll, America's God: From Jonathan Edwards to Abraham Lincoln (Oxford University Press, 2002); and on evangelicals, David N. Livingstone, Darwin's Forgotten Defenders: The Encounter Between Evangelical Theology and Evolutionary Thought (Wm. B. Eerdmans, 1987); and David Livingstone, D. G. Hart, and Mark A. Noll, eds., Evangelicals and Science in Historical Perspective (Oxford University Press, 1999). An outstanding general reference is Gary B. Ferngren, ed., The History of Science and Religion in the Western Tradition: An Encyclopedia (Garland, 2000).

Notes

1. William Paley, Natural Theology, ed. Matthew D. Eddy and David Knight (New York: Oxford University Press, 2006 [orig. 1802]), 101.
2. Alexis de Tocqueville, Democracy in America, ed. and trans. Harvey Claflin Mansfield and Debra Winthrop (Chicago: University of Chicago Press, 2000 [orig. 1835/1840]), 281-82.
3. Theodore Dwight Bozeman, Protestants in an Age of Science: The Baconian Ideal and Antebellum American Religious Thought (Chapel Hill, 1977), 3-31.
4. "Memoirs of the Life of President Dwight," as prefaced to Dwight, Theology: Explained and Defended, in a Series of Sermons, 4 vols. (New Haven, 1843), 1:22-23.
5. Stanhope Smith, An Essay on the Causes of the Variety of Complexion and Figure in the Human Species, 2nd ed. (New Brunswick, N.J., 1810), 3.
6. Benjamin Rush, "A Defense of the Use of the Bible as a School Book" (dated March 10, 1791), published as pp. 53-65 in John Eyten, Our Lord Jesus Christ's Sermon on the Mount . . . Intended Chiefly for the Instruction of Young People, 2nd American ed. (Baltimore, 1810), 65.
7. Robert Baird, Religion in the United States of America (Glasgow, 1844), 658 (emphasis added).
8. "The Millennium of Rev. xx.," Methodist Quarterly Review 25 (Jan. 1843): 87, as quoted in James Moorhead, "Prophecy, Millennialism, and Biblical Interpretation in Nineteenth-Century America," in Biblical Hermeneutics in Historical Perspective, ed. Mark S. Burrows and Paul Rorem (Grand Rapids, 1991), 297.
9. This quotation is from A. D. White's preface to his book, A History of the Warfare of Science with Theology in Christendom, which was published in 1896; it comes from a two-volume edition published by Peter Smith in Gloucester, MA, in 1978.
10. A. A. Hodge and B. B. Warfield, "Inspiration," Presbyterian Review 2 (1881): 225-60.
11. See David N. Livingstone and Mark A. Noll, eds., B. B. Warfield: Evolution, Science, and Scripture: Selected Writings (Grand Rapids: Baker, 2000).
12. Ronald L. Numbers, The Creationists, expanded ed. (Cambridge, MA: Harvard University Press, 2006), 264-65.