

# The Fundamentalist Origins of the American Scientific Affiliation

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*In the aftermath of the Scopes trial, few would have expected heirs of fundamentalists in 1941 to found an association dedicated to demonstrating the harmony between Christianity and science. What makes the origins of that organization, the American Scientific Affiliation, all the more remarkable from the perspective of 1925 is that it drew upon professors, not pastors, with earned doctorates in science from mainstream academic institutions, and was committed to a relatively open policy regarding theories about human origins, the very issue that had animated fundamentalists. This paper traces the continuity between conservative Protestant attitudes toward science in the Scopes era and the period of the ASA's founding. Focusing strictly upon fundamentalist opposition to evolution obscures the broader evangelical context out of which fundamentalists' attitudes toward science emerged. Through an examination of the writings of J. Gresham Machen, Frank E. Gaebeline, George McCready Price, and Harry Rimmer, and articles published by Moody Monthly in the 1920s and 1930s, this paper argues that fundamentalist perceptions of science were not out of character with both earlier and later evangelical habits of mind. To be sure, nineteenth-century evangelical Protestants had not been so quick to condemn the findings of scientists. But evangelical accommodations of science had often been for revivalistic, and, therefore, pragmatic reasons. Evangelicals writing about science during the fundamentalist controversy perpetuated the approach to science they inherited from the nineteenth century and their convictions proved an important stimulus to the founding of the ASA.*

When Will H. Houghton, president of Moody Bible Institute, in 1941 wrote F. Alton Everest, a professor of engineering at Oregon State University, about starting an organization that would demonstrate the harmony of Christianity and science, evangelicals with particularly sensitive ears must have thought they heard the secularists of the world snickering. After all, Houghton, who had attended college for only a semester, was a premier radio revivalist of the day, not a theologian or academic. Meanwhile, presiding over Moody Bible Institute had not nurtured Houghton's intellectual attainments. Though one of the largest Bible institutes in America, Moody had been founded, like similar institutions, along the lines of an adult vocational school, preparing people with meager educational backgrounds for evangelism and missions. Indeed, Houghton's letter to Everest, what Wilbur M. Smith called the "birth certificate of the American Scientific Affiliation," had all the earmarks of the mental habits that had resulted in the Scopes trial. Houghton expressed his concern that "some scientific facts [were] not having proper recognition, while some hypotheses [were] being

presented as laboratory truth." According to Houghton, the theory of evolution was still bedeviling fundamentalists who needed to get the word out that Christianity not only had the facts of the Bible but also the facts of nature on its side.<sup>1</sup>

One man who was spreading that word and who originated the idea for the ASA was Irwin A. Moon. A self-taught amateur scientist and formerly pastor of a church in Los Angeles, Moon left the pastorate in 1937 to devote his energies to his peculiar form of itinerant preaching. Like many fundamentalists, Moon feared the effects of standard collegiate scientific instruction upon impressionable students. His "Sermons from Science" were designed not only to counter such instruction but also to use the marvels of nature to convert young men and women. In the winter of 1937 Houghton added Moon to the Institute's expansive undertakings by making these "Sermons from

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Science" part of the Bible Institute's Extension Department. Eventually, with Moon's help, Moody would produce its famous Science Films and create an Institute of Science in Los Angeles. But one of Moon's first successes was to enlist Houghton's support and Moody Bible Institute's resources for the ASA.<sup>2</sup>

Like many aspects of post-World War II evangelical intellectual life, the ASA's origins present a puzzle that deserves some consideration. The Affiliation's roots were firmly in the soil of fundamentalism and revivalism. Like William Jennings Bryan fifteen years earlier, Houghton and Moon were clearly worried about the moral and theological implications of scientific explanations that made no reference to God. Furthermore, their interest in science was pragmatic rather than theoretical. Their objections to evolution did not stem from an abstract concern to discover the proper models for understanding the workings of nature. Instead, science was something that was turning souls away from Christ. But, as Moon showed, it could also be used for evangelistic purposes.<sup>3</sup>

Yet these fundamentalist impulses were soon channeled into more conventionally academic directions. Houghton and Moon had the good sense to enlist evangelical scientists with reputable degrees and to let these scientists control the organization. Even more surprising, considering their fundamentalist heritage, was the decision of the ASA's leadership not to make opposition to evolution the organization's reason for existence. To be sure, the ministerial and scientific wings of the ASA's founders believed that anti-Christian attitudes in the academy could be traced, in the words of Everest, "directly to the door of evolutionary teaching." Still, the Affiliation's leaders decided not to adopt "deluge geology, anti-evolutionism, or anything else" as the organization's rationale. The ASA's goal was to demonstrate that Christianity was compatible with scientific investigation and that the Bible would withstand scientific scrutiny. As Everest explained to a would-be member, the ASA's leaders were convinced that the new organization would only be a "powerful tool in the hands of the Lord" if it did not wave "red flags before the eyes of scientists just to see the sparks fly."<sup>4</sup>

How, then, did the ASA emerge from the revivalist ethos of fundamentalism? Was the organization a fluke that the ASA's scientific leadership quickly steered into

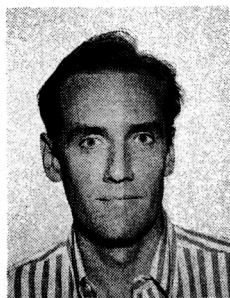
more academically respectable channels? Or did fundamentalist attitudes to science contain elements that were favorable to the establishment of such an organization? The answer to these questions lies in the ASA's curious embodiment of the positions that fundamentalists elaborated during debates about science and religion in the 1920s and 1930s. Fundamentalists were committed, on the one hand, to the harmony of religious and scientific truth. But, on the other hand, they were even more concerned to counter the dangerous moral and social effects of evolution. This concern for America's spiritual well-being was an important catalyst in the formation of the ASA. During the late 1930s, as fundamentalists recovered from the public and ecclesiastical defeats of the 1920s, they established a series of networks and organizations that would carry the gospel out from the fundamentalist ghetto to the nation. The ASA, as it turns out, was the scientific component of that larger evangelical enterprise.

## Reuniting Science and Scripture

Understanding fundamentalist concerns about science is impossible without looking first at the way that liberal Protestants had appropriated modern science. Fundamentalists were, by definition, anti-modernist, and this was no less true when it came to science. Scientific discoveries or methods were rarely at issue. Instead, what bothered fundamentalists was that mainline Protestants had superficially reconciled modern science and Christian beliefs.<sup>5</sup>

Undoubtedly, the conflict over evolution in the 1920s came as something of a surprise. The so-called war between science and religion in the late nineteenth century had produced a compromise sufficiently durable to please all but fundamentalists and the most skeptical. What that compromise involved was a tidy separation between religion and science. Religion, many said, concerned piety and morality while science explored what was observable, rational, and physical. Conflict between religion and science was unlikely, if not impossible, because these two realms of human experience did not overlap.<sup>6</sup>

Many churchmen and scientists continued to invoke these terms during the 1920s. One writer attributed the controversy over evolution to the failure of fundamentalists to recognize the different aims of science and



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religion. Facts were the "business of science," he argued, while religion's purpose was to make "war against evil" and establish "righteousness, ... peace and good will." Kirtley F. Mather, a loyal Baptist and Harvard geologist, believed that opposition to evolution stemmed from materialistic conceptions of natural history that contradicted Christ's teaching of "fellowship and self-sacrifice." Mather's solution was to factor in "the role of service ... during geologic history," thereby infusing evolution with "moral values of the finest Christian type."<sup>7</sup>

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Mainstream biblical scholarship of the era reinforced the separation of religion and science by identifying Jesus' ethical instruction as the essence of Christianity. According to sociologist Charles A. Ellwood, New Testament scholars had through their patient and extensive labors established Jesus as a "teacher of love." He agreed with Harry Emerson Fosdick, who assured readers that critics had rediscovered "the historic Christ" and liberated the gospel from dogma. Meanwhile, many scientists cited the findings of biblical scholars to defend their own research by demonstrating that evolution did not contradict Christianity because it did not dispute Jesus' teaching.<sup>8</sup>

Implicit in this truce between religion and science was the distinction between religion and theology, or between faith and dogma. Many explained the conflict over evolution as the result of a misunderstanding. Fundamentalists had mistaken their own doctrines — biblical inerrancy, the virgin birth, the resurrection, and the atonement, for example — for the essence of Christianity. But the controversy all but disappeared once Christianity was understood apart from formal theology. The Bible, accordingly, was not a book of doctrinal teaching, as fundamentalists maintained, but a collection of inspirational writings. Furthermore, genuine Christian faith did not depend upon intellectual assent to theological propositions. Instead, it consisted of vital religious experience. Nurtured by the non-confessional character of American Protestantism and philosophical developments in the late nineteenth-century, this distinction between theology and religion was best summarized by Shailer Mathews, dean of the Divinity School at University of Chicago, when he wrote, "Christianity is not a hard and fast system of philosophy or orthodoxy" but "the attempt of men to rely upon Christian principles in meeting the needs of their actual life-situations."<sup>9</sup>

Ironically, by drawing the lines so sharply between religious experience and theological expression, liberal Protestants were in effect ceding concern for the intellectual implications of Christianity to fundamentalists. To be sure, liberals were far more involved and established in aca-

demical circles than fundamentalists and could make a good case that their recasting of Christianity was accomplished with the assistance of modern scholarship. Yet, fundamentalist attention to the theological ramifications of science was no less intellectually serious than liberal efforts to adapt Christianity to modern thought. Until recently, the fundamentalist concern for intellectual coherence was rarely noted by American historians who focused on the movement's anti-intellectualism. But some fundamentalists of the period were quick to turn the epithet of anti-intellectualism back upon the proponents of Protestant modernism.<sup>10</sup>

None of the fundamentalists made more of liberal Protestantism's tacit anti-intellectualism than J. Gresham Machen, professor of New Testament at Princeton and Westminster seminaries, and controversialist extraordinaire in the Northern Presbyterian Church. Machen himself had the kind of academic background that gave his charges credibility. He did his undergraduate work and a year of graduate study at the Johns Hopkins University, finished a masters in philosophy at Princeton University while completing the course of instruction at Princeton Seminary, and rounded out his studies with a year of advanced work in New Testament criticism at Marburg and Goettingen universities. Of course, as a defender of the New Testament's historicity, Machen's chief gripe against liberalism was theological. Liberal conceptions of God, Christ, human nature and salvation, for starters, departed to such a degree from historic Christianity that they deserved to be called by another name.<sup>11</sup>

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Yet Machen also argued that these departures from orthodoxy, though rooted in the desire to square Christianity with modern scientific conceptions, were fundamentally un-scientific and anti-intellectual. The science that Machen had in mind was not biology, geology, or physics. Rather, the latest findings from New Testament studies, Machen said, showed that the liberal conception of Jesus as "a mild-mannered exponent of indiscriminating love" was not at all compatible with modern research that showed the authors of the Gospels portraying Jesus as a supernatural person, fully aware of his sinlessness and messianic role. To be truly scientific, then, modern Protestants would have to come to terms with biblical scholarship. Such a task would force a choice between the Jesus of liberal Protestant fancies or the historic Christ of the Bible.<sup>12</sup>

Furthermore, liberal Protestantism was anti-intellectual, according to Machen, because it consigned Christi-

anity to the realm of ideals and experience, a realm entirely separate from scientific investigation. By reducing Christianity to its experiential and ethical aspects and by stripping it of its theological and historical content, liberals could perhaps dodge the grasp of science for a while, but eventually psychologists and philosophers would subject even the affective and moral dimensions of Christianity to criticism. Thus, the process of modifying Christianity to accommodate science showed a lack of intellectual resolve. Machen's charge of anti-intellectualism infuriated liberals, but made sufficient sense to be repeated by H. L. Mencken, the irreverent and skeptical journalist from Machen's home town, Baltimore. According to Mencken, "it is one thing to reject religion altogether, and quite another thing to try to save it by pumping out of it all its essential substance ... [reducing it] to a series of sweet attitudes possible to anyone not actually in jail for felony."<sup>13</sup>

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Part of Machen's appeal to Mencken, however, was his avoidance of the evolutionary controversy. Although Machen avoided the subject in public, in his correspondence he espoused a view of human origins not unlike his mentor at Princeton, Benjamin B. Warfield, who argued that God superintended the evolutionary process and intervened to create the human soul. Of course, this position was unusual among fundamentalists. But Machen's larger point — that the compartmentalization of science and religion was in effect an admission that Christianity did not correspond to scientific descriptions of reality — was one upon which most fundamentalists agreed. Indeed, one of the central fundamentalist arguments about science was that because all truth was God's truth, something could not be true in one sphere and false in the other. Fundamentalists were deeply committed to intellectual consistency and scorned liberals for abandoning the enterprise. Machen's way of achieving coherence was to defend the historicity of the New Testament. Because, at the very minimum, Christianity was bound up with a man who lived and died in first-century Palestine, he said, it could not be sequestered from the world of learning. Fundamentalist objections to evolution followed a similar logic. Because Genesis made particular claims about the origins of the universe and humankind, scientific findings on those matters could not be ignored.<sup>14</sup>

Of course, many fundamentalists defended the veracity of Scripture's creation account against evolution, but the most notable and influential were the creation scientists, George McCready Price and Harry Rimmer. Of the two, Price, a geologist at several Seventh-day Adventist schools

and author of many books, gave the appearance of being more accomplished in scientific matters. During the Scopes trial when Clarence Darrow asked William Jennings Bryan for scientists who shared his views, the only living scientist he could name was Price. Price's early books were published by denominational houses but by the 1920s his views were sufficiently popular to be published by the reputable Fleming H. Revell Company. Rimmer, whose only scientific training came during two terms at a homeopathic institution that required no more than a high-school diploma for admission, was a Presbyterian minister and evangelist and well-skilled in public delivery. He gave thousands of lectures and, by his own reckoning, never lost a debate. Together, Rimmer and Price popularized among fundamentalists a formidable alternative to mainstream scientific views.<sup>15</sup>

Reversing the village-atheist tactic of pointing out the apparent contradictions of the Bible, Price and Rimmer reveled in the apparent inconsistencies of science, often by pitting the findings of one discipline against those of another. For instance, in *The Facts of Biology and the Theories of Evolution*, Rimmer argued that the transmutation of species assumed the uniformity of cells since evolution taught that all forms of life came from a single primitive cell. But, as Rimmer was quick to note, biology had shown that all cells were not the same. Indeed, cells of different species varied as well as did cells within the human body. This simple fact disproved evolution and revealed the prejudice of established scientists who adhered to evolutionary views despite such basic evidence to the contrary. In a similar fashion, Price was ever alert to discrepancies in the fossil record. All over the world, he argued in *Back to the Bible*, rocks could be found that were out of order and that contradicted the "invariable order of the fossils" scientists had imposed upon the data. For Price and Rimmer, such facts did not simply prove the inadequacy of modern science and the willful ignorance of godless scholars. Most importantly, differences between cells and confusion in the fossil record confirmed the biblical account of the special creation of each species.<sup>16</sup>

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The details of the creationists' arguments are not as important as their larger claims about the relationship between science and religion. Though their methods and arguments may have been spurious, their explicit deference to the norms and models of science demonstrates that fundamentalists were no less desirous than their liberal antagonists of the authority and prestige that science could bestow. But fundamentalists were unwilling to abandon their traditional understanding of the Bible in order to make Christianity and science fit. So rather than reading Scripture as a source of moral and spiritual truth, they

developed a science that started with God's revelation and made the historical and scientific facts of the Bible central. In opposition, then, to liberal Protestants who contended that the truths and methods of religion were of a different order than those of science, fundamentalists insisted that all truth was ultimately from God and therefore harmonious. God "is the Author of both creation and [Scripture]," Rimmer wrote. "It follows as an elemental fact, that the Word of God and the works of God must agree." Price shared Rimmer's sentiments. "I cannot thus put asunder what God has joined together," he confessed; "to me religion and objective facts are only different aspects of one great unity." Some might content themselves with a religion that knew its place, but not the faithful remnant who, as Price put it, "in their hearts [were] still clinging to the Bible as in very deed the authentic word of God."<sup>17</sup>

### Darwinism's Social Threat

Fundamentalist cognitive objections to evolution should not obscure a deeper concern. Like most people, fundamentalists did not relish living with cognitive dissonance and wanted to know that the truths they affirmed on Sunday mornings were not going to be contradicted by what they might read in newspapers or books during the week. Still, the intellectual difficulties posed by evolution were not new in the 1920s. Like William Jennings Bryan, who believed that the earth was older than 6,000 years and accepted the possibility of the evolution of all species aside from man, many fundamentalists had probably made their peace with Darwinism in some fashion. Something else was at work in the rise of anti-evolution sentiments during the 1920s.<sup>18</sup>

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As much as fundamentalists complained that evolution was just a theory and lacked the support of evidence, the moral and social implications of evolution were far more disconcerting. Indeed, evolution's cultural threat makes more sense in explaining the particular timing of the anti-evolution crusade than do developments in biology, geology, or Rimmer's favorite, histology. As George Marsden has argued, World War I generated a cultural crisis that prompted conservative Protestants to question many of the assumptions about social progress that were prevalent in American culture. Because the terms and categories of evolution had often been used to support this progressive outlook, doubts about social improvement predisposed conservative Protestants to take issue with mainstream scientific thought. Furthermore, anti-German sentiments, fueled by the war, helped to unite evolution, liberal Protestantism, and German barbarism in fundamentalist minds. Germany, many argued, was a prime example of the moral and social decline that followed from evolution's godless principles. Bryan made the connection between

Darwin's biology and German militarism explicit when he blamed the war upon the intelligence of this so-called science. "The battleships," Bryan wrote, "were built by college graduates; ... scientists mixed the poisonous gases and manufactured liquid fire. Intellect guided the nations, and learning without the heart made war so hellish that civilization itself was about to commit suicide."<sup>19</sup>

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Darwinism's social threat was immediately evident in the controversies during the 1920s over education. In fact, Bryan, the cause celebre of the anti-evolution campaign, was drawn into the fray precisely because of evolution's dire threat to students. He had opposed Darwin's teaching as early as 1904 and his arguments for the Bible's infallibility changed little over time. What did change, however, was the intensity and pitch of Bryan's misgivings. A statistical study of the effects of college education upon religious beliefs published in 1916 confirmed Bryan's suspicions. The study, conducted by James H. Leuba, a professor of psychology at Bryn Mawr, found that 40 to 45 per cent of college graduates either denied or doubted many of the religious convictions that they held when they entered college. Leuba's findings squared with Bryan's own perceptions as a frequent visitor and lecturer at colleges throughout the country. According to his wife, Bryan received many letters from parents all over the country complaining "that the state schools were being used to undermine the religious faith of their children."<sup>20</sup>

Still, secondary education, not higher education, was what animated fundamentalists most and what sent Bryan to Dayton. Indeed, the anti-evolution crusade must be understood against the backdrop of public education's dramatic expansion. High school textbooks in the life sciences, as Edward J. Larson has shown, introduced students to evolutionary theories as early as the 1880s, and by 1920 evolution was standard fare. Fundamentalist opposition to Darwinism in the 1920s cannot be explained, then, by a sudden influx of evolutionary teaching into public schools. But if the content of science instruction did not change, the recipients of that instruction did. In 1890 the federal Commission of Education reported that America's 2,526 public high schools enrolled roughly 202,963 students. By 1920 those numbers had increased to 1,851,968 students in 14,326 schools. Larson concludes that "the public perception of such a change is the stuff of which popular crusades can be made." The anti-evolution crusade thus coincided with an expansion of public schooling that taught its students the lessons of evolution. Even Bryan admitted that evolution had not done more harm before the 1920s because a smaller percentage of children had attended high school then.<sup>21</sup>

The specific harms that evolution generated were increasing degeneracy and immorality. Indeed, fundamentalists' scientific and theological objections to Darwinism were subsumed in the more basic desire to preserve traditional morality and the social order that depended upon that morality. Fundamentalists, after all, were heirs of an evangelical heritage that had often appropriated the findings of science or used arguments for God's existence and the truthfulness of Scripture for the very pragmatic reason of upholding Christian virtues. Indeed, throughout American evangelical history, one standard that could be called upon to adjudicate disputed intellectual matters was morality. If a particular idea, whether religious, philosophical, or scientific, appeared to undermine evangelical convictions about human responsibility and the certainty of an afterlife where individuals would be rewarded or punished for their actions, said idea was automatically suspect.<sup>22</sup>

Bryan's arguments are very interesting in this regard. Despite his claims that Darwin's hypothesis was not as "firmly established as the law of gravitation or the roundness of the earth," the scientific correctness of evolution is a minor theme in Bryan's writings. Instead, he repeatedly underlined the dire consequences for religion and society that followed the acceptance of evolution. For instance, Darwinism took Darwin from an orthodox believer — one who often quoted the Bible as an "unanswerable authority on some point of morality" — to an agnostic. If that was what Darwinism did for Darwin, Bryan argued, imagine its effects upon "immature students who are throwing off parental authority and who gladly accept any hypothesis that will justify them in throwing off the authority of God." Not only did evolution undermine God's authority, but by linking humans and beasts physiologically, it denied humankind's spiritual capacity and so led to "the abandonment of belief in a future life with its rewards and punishments." Bryan's concerns went beyond the next generation of Christians to the very foundation of Christian civilization. Opposition to evolution was therefore a continuation of the statesman's social activism. In his mind Christianity provided the only basis for "universal peace" and "universal disarmament." But Darwinism robbed Christ of his glory and made him "impotent to save."<sup>23</sup>

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Frank E. Gaebelein, an evangelical educator and thoughtful advocate of Christian scholarship, resorted to the same sort of logic in one of the more interesting debates of the period, an exchange between him and Harry Elmer Barnes, a militant secularist, in the *North American Review*, a journal with deep roots in the patrician culture of New England gentlemen. Gaebelein's debate with Barnes is interesting because throughout much of it he made cogent arguments for Christianity's credibility. For instance, he

showed a good knowledge of biblical criticism and scientific developments and explained intelligently how belief in traditional Christian verities was compatible with modern learning. Yet, in the end the debate digressed into a discussion of Christianity's effectiveness in making individuals and society better. Barnes noted the defects in Gaebelein's utilitarian case by pointing out the happiness that Islam, Buddhism and atheism had inspired among their followers while observing that Christianity had promoted "persecution, witchcraft, inquisitions, incredible tortures, intolerance, ... wars, avarice and other untold horrors." Gaebelein responded by taking a "proud" stand on the argument from Christian experience. The grace of God had changed numerous lives and cultures for the better, from the cure of alcoholics to the "beneficent effects of missions." On the basis of the "verifiable fact" of Christ's transforming power Gaebelein challenged Barnes "and all our other free-thinking intelligentsia to produce a single similar trophy of atheism, agnosticism, utilitarian hedonism, or even modernism."<sup>24</sup>

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George McCready Price, Bryan's lone scientific authority, was equally concerned to show Christianity's positive influence by pointing out the lethal effects of evolution on society. In his book, *Poisoning Democracy: A Study of the Moral and Religious Aspects of Socialism*, Price gave voice to the fears and suspicions of Bolshevism that were common among many Americans during the Red Scare after World War I. If his attack upon communism was unsurprising, his strategy of linking socialism and evolution was indicative of fundamentalist objections to evolution. As a result of the wide acceptance of evolution, Price lamented, "the world as a whole has completely lost its bearings regarding the fundamentals of morals and ethics." This "pagan philosophy" with its "ruthless ethics" was responsible for Germany's aggression in World War I and for the "doctrine of class war" that Karl Marx's followers were invoking around the world. With such connections established, Price spent the rest of the book tracing socialism to German philosophy and "the teachings of biological and geological science." Like Bryan, Price was no less convinced of the indispensability of Christianity to a moral and just society. But unlike Bryan, whose post-millennialism led him to believe that a revival of religion could put human history back on track, Price was a pre-millennialist and concluded on a somber note. The world's "impending doom" was certain and Christians needed the perseverance and patience to avoid "the frantic temporary expedients of those who would seek to prolong the present dying agonies of a doomed world."<sup>25</sup>

Although the *Moody Monthly* regularly published articles by Price, its other contributors were not quite so willing to acquiesce before the inevitable demise of American society. Some signs of hope, for instance, surfaced



in the magazine's concerns about the next generation of Christians who were attending America's schools and colleges. "We are going through an era of collegiate and high school moral turpitude," warned one writer, in large measure because "man is reduced in the minds of the pupils to the level of the beast, via a so-called scientific evolutionary hypothesis." Another complained that modern educators were using "young men as laboratory material for teachings that are more than doubtful." The results of such teaching were alarming and depressing. According to one author, the reason why fourteen young men had committed suicide over a two month period in 1927 was that evolutionary teaching deprived modern education of a spiritual basis and bred skepticism and despair. But such a gloomy situation did provide a course of action and a glimmer of hope. The proverbial silver lining was the necessity of Christian education. If young Christians could not receive a proper education at a liberal arts college, then, advised one minister, they should go to a Bible institute, a place "where the Word is taught" and where they could learn those things that would enable them to defend their faith.<sup>26</sup>

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While the concern of parents to pass on their beliefs to their children was a catalyst for combating evolution, Darwinism touched a deeper nerve. It went to the very heart of the course of human history and America's place in God's plan. Fundamentalist objections, thus, went beyond utilitarian arguments about the moral degeneracy that followed from evolutionary teaching to examples of the cultural crisis to which Darwinism had brought America and the world. Fundamentalists repeatedly ridiculed the idea, commonly implied by evolution's advocates, that society had shown considerable progress. To demonstrate the folly of such a proposition one editorial in the *Moody Monthly* asked,

Is man better morally today than formerly? Has science brought improvement into his soul? Who will hazard an affirmative reply? Is man not today as selfish, as covetous, as boastful, as proud, as blasphemous as he ever was?

Nations also provided counter-evidence to evolutionary assumptions about progress. The United States, according to one Philadelphia minister, was one such example. Evolution and theological modernism had undermined the Lord's Day, the home, and the school, the institutions upon which national well being depended. An even better example of national decay was "Red Russia," a society that had followed "evolution to its conclusion and eliminated Christ." The specter of communism, in fact, intensified fundamentalist opposition to evolution and

prompted sweeping generalizations about the contagion of modern science. Marx and Engels, wrote one author, applied Darwin's theories about natural history to human history and the spread of communism was a sure sign that the spirit of the anti-Christ was abroad in the world. The links between atheism, communism, and evolution made another minister even more suspicious of American schools and colleges where the hypothesis of evolution was being taught as a fact irrespective of the evidence.<sup>27</sup>

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The debates over evolution, then, brought to a head a basic cleavage among American Protestants about the character of their society. Fundamentalists and modernists were antagonists in a controversy that pitted Protestants who supported and identified with established cultural institutions and those who were at odds with the general direction of American society. The idea that God was immanent in the evolution of nature was, of course, quite congenial to liberal Protestants who were committed to constructing a Christian society through traditional religious and social structures. Fundamentalists believed, however, that God's grace was an immediate and supernatural disruption of the natural course of human affairs and so they were inherently suspicious of human efforts to improve society. For them, Darwinism was synonymous with godlessness and unbelief because its naturalistic explanation of human origins denied God's creative and gracious hand in nature and human history. If modern science denied God's sovereign intervention into history, then, fundamentalists reasoned, a society that relied upon and nurtured the application of science to all areas of life was one where atheism and immorality were sure to prevail.<sup>28</sup>

## Revivalism, Science and the ASA

Fears for a civilization that exalted science over the Bible naturally fostered a negative view of the science. Fundamentalists' cultural pessimism, therefore, foiled their otherwise positive estimate of science that flowed from their commitment to demonstrating the unity of God's revelation in nature and the Bible. Yet, opposition to science should not be interpreted necessarily as a form of anti-intellectualism. Fundamentalists invested a good deal of intellectual capital in the idea of objective and absolute truth, conceived of faith in highly rational terms and defined that faith along strict doctrinal lines. Rather, their objections to science were a form of social protest. Indeed, since the 1920s, fundamentalist and evangelical discontent with modern society has been expressed often in denunciations of science and the educational establishment. They have correctly perceived that science, not religious tradition or revelation, holds tremendous authority in modern culture. Putting restraints upon the claims of scientists is just one way of asserting the rights of ordinary believers. But the reverse is also true. In the same way

that fundamentalist repudiation of modern science indicated displeasure with society, appropriating science or demonstrating its harmony with Christianity reflected a desire to win back the culture. With the exception of a Machen or a Gaebelstein, positive fundamentalist attitudes to science stemmed less from an interest in the life of the mind than from concerns to reach the lost.<sup>29</sup>

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*In general, positive fundamentalist attitudes to science have stemmed less from an interest in the life of the mind than from concerns to reach the lost.*

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The assistance that science could provide for evangelistic endeavors helps to explain how fundamentalists who were generally on the defensive with respect to science hatched the idea for the ASA. Fundamentalists were heirs of two religious traditions, pietism and revivalism, that were inimical to the life of the mind. Pietism first found expression in 17th century Protestant churches. It stressed the importance of vital Christian experience over formal theology, the psychological aspects of faith over the rational and objective elements of Christianity. Revivalism was a particular version of pietism that swept churches in England and America as early as the first half of the eighteenth century. It became the dominant force in American Protestantism and reinforced the anti-intellectual tendencies of pietism. Revivalists called upon believers to accept Christ themselves and encouraged the idea that everything of value in the Christian faith had to originate from the individual's own conversion experience. As a result, revivalism was deeply suspicious of tradition, especially traditions of learning. By encouraging people to take the step of faith for themselves, evangelicals came to distrust most forms of knowledge that the individual believer could not figure out for him or herself. Revivalism and pietism, then, exalted the ordinary individual over learned elites, intuitive experience over mediated knowledge, and practical over theoretical considerations. For these reasons American evangelicals have not encouraged or been an audience for first order scholarship. The pragmatic desire for tangible results, whether in holy lives or mass conversions, has been a sure criterion for evaluating ideas or institutions, and thus the hallmark of the evangelical mind.<sup>30</sup>

The intellectual legacy of pietism and revivalism was especially evident in fundamentalist opposition to evolution. Fundamentalists were generally uninterested in and oblivious to the theoretical aspects of evolutionary theory. They were much more concerned with the practical results of such scientific teaching. All around them they could see signs of what evolution was doing to their society. Its effects upon the churches and the schools, two important institutions for passing on the faith and for maintaining social stability, were particularly alarming. Given the individualistic and pragmatic character of evangelicalism, it was fitting that the most visible chapter of the evolution controversy was a political struggle that pitted

northeastern elites fully in sympathy with the educational establishment against simple believers who wanted to decide for themselves what their children would learn and whether evolution was true.

Exchanges between Clarence Darrow and William Jennings Bryan at the Scopes trial were indicative of the intellectual substance that informed this political conflict. During one interchange Darrow asked Bryan what he thought about a particular interpretation of the Bible. Bryan responded, "I do not think about things I don't think about." Darrow followed by asking, "Do you think about things you do think about?" Bryan answered, "Well, sometimes." Despite such gaffs in his testimony, Bryan was clear about one of the central issues of the Scopes case when in his opening remarks he objected to the testimony of scientists. "Why is it not absurd," Bryan asked, "to call experts from New York and Illinois to challenge the right of the people of Tennessee to legislate as they please, and according to their own sense of responsibility and their own judgment as to what is harmful and as to what is objectionable from a Bible standpoint?" As a good evangelical, Bryan knew that the people, no matter how well educated, were competent to decide whether the Bible or Darwin was right. And he also knew and was able to articulate for many fundamentalists that far more important than such theoretical matters as scientific or exegetical arguments was the social and moral decay that evolution was producing in America.<sup>31</sup>

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*As a good evangelical, Bryan knew that the people, no matter how well (or poorly) educated, were competent to decide whether the Bible or Darwin was right.*

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As dispensationalists, fundamentalists were already inclined to think that society would degenerate further and that the end of the age was near. The public defeats that they experienced through their inability to purge evolution from the schools and liberalism from the churches heightened fundamentalist cultural pessimism. As a result, during the late 1920s and throughout the 1930s fundamentalists withdrew from mainstream society to form their own institutions that would sustain the faithful remnant until the second coming. Yet, as much as they felt estranged from the dominant characteristics of modern American society, fundamentalists were also heirs of a religious tradition that had been dominant in America's past. Consequently, while functioning as outsiders, fundamentalists still thought of themselves as insiders who were responsible for preserving the evangelical faith and Christian civilization in America.<sup>32</sup>

During the late 1930s, as fundamentalists recognized that they could not abandon their neighbor while waiting for the Lord's return, they initiated a determined effort to reestablish evangelical Christianity in America. The failed public campaigns of the 1920s, however, provided



an important lesson for evangelical renewal. Rather than using ecclesiastical or civil courts, fundamentalist leaders turned to the revival as the surest means for righting America's wrongs. The new medium of radio broadcasting was especially important to this project. In the years just prior to the ASA's founding, Will Houghton, along with Charles Fuller and Donald Grey Barnhouse were among the most popular preachers on the air. Houghton, under the auspices of Moody Bible Institute, started a series of broadcasts entitled, "Let's Go Back to the Bible," that played on major stations in New York, Boston, Buffalo, Pittsburgh, Cincinnati, Detroit, Chicago, Denver and Philadelphia. His initial message captured fundamentalist ambivalence about American society and the growing sense that revival could dramatically change the nation's direction.

The spiritual condition of America is deplorable, indeed .... Conscience has gone into an eclipse, and moral standards have been thrown on the scrap heap .... Yet God has a stake in the nation and He is concerned that his word of warning and invitation shall be given forth. Extraordinary days call for extraordinary methods, and the time has come to carry our message to the people who will not seek a message .... Oh, that men might see again what God's Word has meant in the life of America and what it will mean if our people return to it in repentance and faith.<sup>33</sup>

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*Interestingly enough, the ASA was one of the first manifestations of this new spirit of cooperation among evangelicals.*

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This resurgence of revivalistic zeal produced a number of cooperative ventures among fundamentalists that were designed to carry the message of revival forward. The crisis generated by the threat of another war also convinced fundamentalist leaders of the need to unite for the purpose of promoting revival. Individuals with ministries of their own increasingly talked of laying aside their own differences in order to further a national revival. J. Elwin Wright, the leader of the New England Fellowship, toured the country between 1939 and 1941 calling evangelicals from all denominations to promote a revival that would restore a Christian witness. Wright's efforts had the blessing of the two leading radio revivalists, Will Houghton and Charles Fuller. And out of Wright's labors came the coalition of "progressive fundamentalists" who were responsible for the resurgence of evangelicalism during the 1940s. Sometimes called "The New Evangelical Coalition," this movement brought together such important leaders as Billy Graham, Harold Ockenga and Carl Henry, and gave birth to such influential institutions as the National Association of Evangelicals, Fuller Theological Seminary, and *Christianity Today*. The primary impulse behind this new evangelicalism was to reform fundamentalism. Houghton, Wright and Ockenga had not in any way abandoned fundamental Christian truths. But they did want to move fundamentalism beyond its separatistic and combative ways to have a positive influence upon America.<sup>34</sup>

Interestingly enough, the ASA was one of the first manifestations of this new spirit of cooperation among evangelicals. In fact, the new evangelical initiative of the early 1940s helps to explain why fundamentalists who were still suspicious of evolutionary views came together to form a scientific organization. Individual leaders within the ASA were well connected to the greater evangelical enterprise. Will Houghton, as already noted, was a prominent leader in devising a strategy for national revival and the man who provided the impetus for the ASA. Houghton's recruitment of Alton Everest was no accident, since Everest had been a classmate of Irwin Moon's wife at BIOLA and Moon and Everest had talked about an organization like the ASA as early as 1940. Another sign of the "progressive fundamentalist" network was Houghton's selection of Peter W. Stoner, a professor of mathematics and astronomy at Pasadena City College. Stoner was a member of Pasadena's Lake Avenue Congregational Church, the temporary site for Fuller Seminary in 1947 and the congregation where Charles Fuller held his membership.<sup>35</sup>

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*True to their evangelical and fundamentalist heritage, the ASA's scientific and ministerial leaders demonstrated a utilitarian attitude toward science.*

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Furthermore, several of the principles that gave momentum to plans for the ASA bore the imprint of the new evangelicalism. True to their evangelical and fundamentalist heritage, the ASA's scientific and ministerial leaders demonstrated a utilitarian attitude toward science. This tendency manifested itself in the Affiliation's organizers' concern for the effects of scientific instruction upon the faith and morals of young people. Moon's original idea for the ASA stemmed from his countless encounters with students who repeatedly asked him whether faith in the God of the Bible was compatible with the instruction they received in science courses. As a result, two of the first aims of the ASA were to help Christian students in the university and to enable lay Christians to understand science better and the place of interpretation in both science and Scripture. To be sure, these attitudes reflected older Christian beliefs about the unity of God's revealed truth in nature and the Bible. But they also revealed a certain mental habit, typical of evangelicals, that evaluated science more from the perspective of whether it confirmed or denied the faith rather than a genuine interest in scientific discovery. The ASA's founders, like many evangelicals in the past, were interested more in the application of science — specifically in this case, the application of science to religion — than in the sheer delight of researching the complexity of God's handiwork.<sup>36</sup>

Another telltale sign of the ASA's roots in the new evangelical coalition was its commitment to unity and cooperation. The specific item upon which ASA leaders

called for unity was evolution. Though opposed to evolution and its pernicious effects, the ministers and scientists who shaped the ASA were agreed that the organization should not adopt a specific rendering of Genesis' scientific implications that would become a criterion for membership. In fact, at the planning meeting for the Affiliation, several expressed disagreement with Peter Stoner's interpretation of Genesis but did not think this was sufficient grounds for disrupting the organization. According to Everest in his account of these early deliberations, the success of the ASA was premised upon the membership's ability to agree on basics, to exhibit tolerance on divisive matters, and to refrain from adopting a standard ASA interpretation of scientific matters.<sup>37</sup>

The ASA's commitment to tolerance was remarkably similar to the pragmatic rationale for the National Association of Evangelicals, probably the most visible organization of the new evangelical coalition. Like the ASA, the leaders of the NAE wanted to put aside fundamentalist nitpicking in order to unite evangelicals in bringing revival to America. The doctrinal or ecclesiastical issues that might divide evangelicals were considered unimportant compared to the greater burden of reaching the lost. In a similar fashion, the ASA overlooked the specifics of different ways to understand creation. The reasons for exhibiting tolerance on scientific details, however, stemmed less from intellectual openness than from pragmatic need. The majority of the ASA's founders were no less opposed to evolution than the most stalwart creationists. Yet they knew that getting bogged down in specific theories about creation would yield results similar to debates between fundamentalists about separation from the mainline churches. The architects of the new evangelical movement were convinced that precise ideas, whether theological or scientific, should not detract from the more important task of revival. This meant that just as the NAE presented itself as more moderate than the militant American Council of Christian Churches headed by Carl McIntire, the ASA tried to preserve its own identity apart from the aggressive anti-evolutionary views of its early rival, Price's Deluge Geology Society.<sup>38</sup>

Members of the ASA and other historians will have to decide to what extent the fundamentalist origins of the Affiliation have affected the development of the organization. But the influence of fundamentalism upon the founding of the ASA is clear. The organization was conceived in the hopes for a national revival, took shape in response to growing fears about evolution's effects upon society, and was designed to unite fundamentalists for the common goal of evangelistic outreach. Ronald Numbers has argued that evangelical scientists in the twentieth century have lived uncomfortably in two intellectual worlds, the religious world of creation and the scientific world of evolution. The fundamentalist origins of the ASA suggest another source of ambivalence that may be even more difficult to overcome, namely, the tension between pursuing science for the sake of exploring God's creation, and following science in order to reach the lost and improve society. If evangelical scientists want to shore up their flagging support from the evangelical laity, they

might do well to address this dilemma before attempting to reconcile Genesis and evolution.<sup>39</sup> ❊

## NOTES

- <sup>1</sup>Smith, *A Watchman on the Wall: The Life Story of Will H. Houghton* (Grand Rapids, 1951), 142; Houghton quoted in Smith, *Watchman*, 142. The best treatment of Bible institutes can be found in Virginia Lieson Brereton's *Training God's Army: The American Bible School, 1880-1940* (Bloomington, 1990).
- <sup>2</sup>On Moon, see Smith, *Watchman*, 144-8; and Mark A. Kalthoff, "Evangelical Scientists: The American Scientific Affiliation as the Twentieth-Century American Interface between Science and Christianity," Paper presented at the Evangelicals, Voluntary Associations, and American Public Life Conference, Institute for the Study of American Evangelicals, June, 1991, 4.
- <sup>3</sup>Post-World War II evangelical intellectual life has not received sustained attention, but valuable insights can be found in Mark Noll, *Between Faith and Criticism: Evangelicals, Scholarship, and the Bible* (San Francisco, 1986), chaps. 5-9; George M. Marsden, *Reforming Fundamentalism: Fuller Seminary and the New Evangelicalism* (Grand Rapids, 1987); and idem, "The State of Evangelical Christian Scholarship," *Christian Scholar's Review* 27 (1988), 347-60.
- <sup>4</sup>Everest, "What is *The American Affiliation of Scientists*?", typed manuscript, Dec. 6, 1941, and Everest to A. P. Kelly, Oct. 4, 1942, quoted in Kalthoff, "Evangelical Scientists," 7, and 24, note 12.
- <sup>5</sup>The standard work on fundamentalism is George Marsden's *Fundamentalism and American Culture: The Shaping of Twentieth-Century Evangelicalism: 1870-1925* (New York, 1980).
- <sup>6</sup>See for example, Albert Edward Wiggam, "The Religion of the Scientist," *World's Work* 50 (1925): 391-9; Harry Emerson Fosdick, "Science and Religion," *Harper's* 152 (1926): 296-300; Edwin Grant Conklin, "Science and the Faith of a Modern," *Scribner's Magazine* 78 (1925): 451-8; Charles A. Ellwood, *The Reconstruction of Religion* (New York, 1922); William E. Hammond, *The Dilemma of Protestantism* (New York, 1929); Shailer Mathews, *The Contributions of Science to Religion* (New York, 1924); and Jabez T. Sunderland, *Evolution and Religion* (Boston, 1925). On late nineteenth-century conflicts between science and religion, see 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, 1979); David N. Livingstone, *Darwin's Forgotten Defenders: The Encounter Between Evangelical Theology and Evolutionary Thought* (Eerdmans, 1987); James Turner, *Without God, Without Creed: The Origins of Unbelief in America* (Baltimore, 1985), chap. 6; Frederick Gregory, "The Impact of Darwinian Evolution on Protestant Theology in the Nineteenth Century," in *God and Nature* 369-90; and Glenn Altschuler, "From Religion to Ethics: Andrew D. White and the Dilemma of Christian Rationalism," *Church History* 47 (1978): 308-24.
- <sup>7</sup>Durant Drake, *The New Morality* (New York, 1928), 253, 255; Mather, "The Psychology of the Anti-Evolutionist," in *Controversy in the Twenties: Fundamentalism, Modernism, and Evolution*, ed. Willard B. Gatewood, (Nashville, 1969), 194, 196. See also Harry Emerson Fosdick, "Science and Religion," *Harper's* 152 (1926): 299-300; and Havelock Ellis, *The Dance of Life* (Boston, 1924), 190-5.
- <sup>8</sup>Ellwood, *Reconstruction of Religion*, 147, 151; Fosdick, *The Modern Use of the Bible* (New York, 1924), 272-3. See also Shailer Mathews, *The Faith of Modernism* (New York, 1924), chap. 3; William Pierson Merrill, *Liberal Christianity* (New York, 1925), chap. 5; J. Macbride Sterrett, *Modernism in Religion*, (New York, 1922), chap. 7; Eldred C. Vanderlaan, "Modernism and Historic Christianity," *Journal of Religion* 5 (1925): 225-38; Nolan R. Best, *Inspiration* (New York, 1923); George A. Barton, *Jesus of Nazareth, A Biography* (New York, 1922); Robert Andrews Millikan, *Science and Life* (Boston, 1924), 53-4; and H. G. Wells, *The Outline of History* (New York, 1921), 499-505.
- <sup>9</sup>*Faith of Modernism*, 16-7. See also W. S. Rainsford, "The New Religious Reformation," *World's Work* 50 (1925): 391-9; Conklin, "Science and the Faith of a Modern," Roy Wood Sellars, *Religion Coming of Age* (New York, 1928), 122-32; Charles A. Dinsmore, *Religious Certitude in an Age of Science* (Chapel Hill, 1924); *Contributions of Science to Religion*, 1-13; and Fosdick, *Modern Use of the Bible* chap. 4. On the anti-confessional character of American evangelicalism, see Nathan O. Hatch, "Sola Scriptura and Novus Ordo Seclorum," and George M. Marsden, "Every One's Own Interpreter? The Bible, Science, and Authority in Mid-Nineteenth-Century America," in *The Bible in America*, ed. Nathan O. Hatch and Mark A. Noll, (New York, 1982), 59-78, 79-100. For the influence of philosophical idealism on American Protestantism, see Bruce Kuklick, *Churchmen and Philosophers: From Jonathan Edwards to John Dewey* (New Haven, 1985), chaps. 13-5; and James Turner, *Without*

- God, *Without Creed: The Origins of Unbelief in America* (Baltimore, 1985), chaps. 6-9.
- 10 Richard Hofstadter, *Anti-Intellectualism in American Life* (New York, 1962), 117-36, is a fairly representative treatment of fundamentalism prior to the work of Paul A. Carter, "The Fundamentalist Defense of the Faith," in *Change and Continuity in Twentieth-Century America: The 1920s*, ed. John Braeman, Robert H. Bremmer, and David Brody, (Columbus, 1968), 179-214; Ernest R. Sandeen, *The Roots of Fundamentalism: British and American Millenarianism* (Chicago, 1970); and Marsden, *Fundamentalism and American Culture*.
  - 11 Machen makes this argument most forcefully in *Christianity and Liberalism* (New York, 1923).
  - 12 *Ibid.*, chap. 5; quotation on 84.
  - 13 Machen, *Ibid.*, 5-8; Mencken, "Doctor Fundamentalism," *Baltimore Evening Sun* (Jan. 18, 1937).
  - 14 On the Princeton Theology and evolution, see Warfield, "Calvin's Doctrine of Creation," in *The Princeton Theology: Scripture, Science, and Theological Method from Archibald Alexander to Benjamin Warfield*, ed. Mark A. Noll, 293-8; and David N. Livingstone, *Darwin's Forgotten Defenders: The Encounter Between Evangelical Theology and Evolutionary Thought* (Grand Rapids, 1987), 112-22.
  - 15 On Price and Rimmer, see Ronald L. Numbers, "The Creationists," in *God and Nature: Historical Essays on the Encounter Between Christianity and Science*, ed. David C. Lindberg and Ronald L. Numbers, (Berkeley, 1986), 398-401.
  - 16 Rimmer, *The Facts of Biology and the Theories of Evolution* (Glendale, 1929), 10-13, 26; Price, *Back to the Bible or The New Protestantism* (Takoma Park, 1916), chap. 3.
  - 17 Rimmer, *The Harmony of Science and the Scriptures* (Glendale, 1927), 3; Price, *The Phantom of Organic Evolution* (New York, 1924), 9; *idem.*, *Back to the Bible*, 6.
  - 18 For Bryan's views on evolution, see Numbers, "The Creationists," 402; and Lawrence W. Levine, *Defender of the Faith, William Jennings Bryan: The Last Decade, 1915-1925* (New York, 1965), 260-72.
  - 19 Bryan, "Darwin's Christ Was Nobody," in *Controversy in the Twenties: Fundamentalism, Modernism, and Evolution*, ed. Willard B. Gates, (Nashville, 1969), 137. For the impact of the war on fundamentalism, see Marsden, *Fundamentalism and American Culture*, 141-52. For the influence of evolution on American thought, see Paul F. Boller, *American Thought in Transition: The Impact of Evolutionary Naturalism, 1865-1900* (Chicago, 1969); and the essays in *Evolutionary Thought in America*, ed. Stow Persons, (New Haven, 1950).
  - 20 Bryan's wife quoted in Levine, *Defender of the Faith*, 267. The book that confirmed Bryan's suspicions was James H. Leuba's *The Belief in God and Immorality* (Boston, 1916).
  - 21 Larson, *Trial and Error: The American Controversy over Creation and Evolution* (New York, 1989 [1985]), chap. 1, quotation and figures from 26, 27.
  - 22 On the centrality of morality for 19th century evangelicalism, see Timothy L. Smith, *Revivalism and Social Reform: American Protestantism on the Eve of the Civil War* (Baltimore, 1980 [1957]); Donald H. Meyer, *The Instructed Conscience: The Shaping of the American National Ethic* (Philadelphia, 1972); and with special bearing on science, Charles E. Rosenberg, "Piety and Social Action: Some Origins of the American Public Health Movement," and "Science and Social Values in Nineteenth-Century America: A Case Study in the Growth of Scientific Institutions," in *No Other Gods: On Science and American Social Thought* (Baltimore, 1976), chaps. 6 and 8. On the perpetuation of these convictions among contemporary evangelicals, see Grant Wacker, "Searching for Norman Rockwell: Popular Evangelicalism in Contemporary America," in *The Evangelical Tradition in America*, ed. Leonard I. Sweet, (Macon, 1984), chap. 10.
  - 23 Bryan, "Darwin's Christ," 135, 138; *idem.*, "Education without Morality," in *Controversy in the Twenties*, 230. On the connections between Bryan's involvement in the evolutionary controversy and his political activism, see Levine, *Defender of the Faith*, 268.
  - 24 Gaebelien, "An Evangelical's Defense," *North American Review* 232 (1931), 26-32; *idem.*, "More Dust," *North American Review* 232 (1931), 531-41, quotations on 533, 534, 537; and Barnes, "Throwing Dust," *North American Review* 232 (1931), 303-12, quotations on 310.
  - 25 (New York, 1921), 24, 25, 31, 157.
  - 26 "Morality of the High School," *Moody Monthly* 28 (July, 1928), 503; J. D. Eggleston, "What Makes a School Christian?" *Moody Monthly* 31 (Sept., 1930), 15; John W. Ham, "Atheism and Suicide in Our Universities," *Moody Monthly* 27 (April, 1927), 388; C. C. Meeden, "Should the Prospective Minister Attend College?" *Moody Monthly* 36 (Oct. 1935), 81.
  - 27 "Nitwit" Motorists, a Modern Type of the Natural Man," 36 *Moody Monthly* (Jan., 1937), 240; Merril T. MacPherson, "The Menace of Modernism," *Moody Monthly* 36, (April, 1937), 454; Luther M. Harwood, "Why Christians Are Opposed to Evolution," *Moody Monthly* 26 (Nov., 1925), 108; Dan Gilbert, "The Rise of Beastism in America," *Moody Monthly* 39 (Sept, 1938), 14; and John B. Kenyon, "A Finished Education," *Moody Monthly* 40 (June, 1940), 533.
  - 28 On the cultural dimension of the evolution controversy, see George M. Marsden, "A Case of the Excluded Middle: Creation Versus Evolution in America," in *Uncivil Religion: Interreligious Hostility in America*, ed. Robert N. Bellah and Frederick C. Greenspahn, (New York, 1987), chap. 7; Ferenc Morton Szasz, *The Divided Mind of Protestant America, 1880-1930* (University, AL, 1982), chap. 11; and Paul A. Carter, *Another Part of the Twenties* (New York, 1977), chaps. 3 and 4.
  - 29 James R. Moore, "Interpreting the New Creationism," *Michigan Quarterly Review* 22 (1983), 321-34, observes the irony of recent creation scientists aping the very culture of professionalism and expertise they oppose.
  - 30 This paragraph is based largely on the work of Mark Noll, "The Evangelical Mind in America," a paper presented at the Institute for the Study of American Evangelicals' Religion and American Culture Seminar, April 10, 1990. See also the similar reflections of Nathan O. Hatch, "American Evangelicalism as a Democratic Movement," in *Evangelicalism and Modern America*, ed. George Marsden, (Grand Rapids, 1984), chap. 6.
  - 31 Bryan's responses to Darrow come from *The World's Most Famous Court Trial* (New York, 1971 [1925]), 199, quoted in Marsden, *Fundamentalism and American Culture*, 187. Bryan's opening remarks are excerpted in L. Sprague de Camp, *The Great Monkey Trial* (Garden City, 1968), 222. For a positive estimate of Bryan's arguments, see Garry Wills, *Under God: Religion and American Politics* (New York, 1990), chaps. 8-9.
  - 32 This and the next paragraphs follow the argument of Joel A. Carpenter, "The Renewal of American Fundamentalism, 1930-1945," Ph.D. dissertation, the Johns Hopkins University, 1984.
  - 33 Quoted in Smith, *Watchman*, 128-9.
  - 34 See Joel A. Carpenter, "From Fundamentalism to the New Evangelical Coalition," in *Evangelicalism and Modern America*, chap. 1; and Marsden, *Reforming Fundamentalism*.
  - 35 Kalthoff, "Evangelical Scientists," 4-7, makes these connections.
  - 36 F. Alton Everest, *The American Scientific Affiliation: Its Growth and Early Development* (n.p., 1986), especially Appendix 1a.
  - 37 Everest, *American Scientific Affiliation*, Chap. 1 and especially 27, 28. On the importance of tolerance and cooperation within the broader evangelical movement, see Carpenter, "Renewal," chap. 5.
  - 38 Kalthoff, "Evangelical Scientists," 8-9, makes a similar point.
  - 39 Numbers, "The Dilemma of Evangelical Scientists," in *Evangelicalism and Modern America*, chap. 12.

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The conflict between theology and science was quite as much a conflict between authority and observation. The men of science did not ask that propositions should be believed because some important authority had said they were true; on the contrary, they appealed to the evidence of the senses, and maintained only such doctrines they believed to be based on facts which were patent to all who chose to make the necessary observations. The new method achieved such immense successes, both theoretical and practical, that theology was gradually forced to accommodate itself to science.

Bertrand Russell, *Religion and Science*, 1961