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"God is the Author of Both": Science, Religion, and the Intellectualization of American Methodism

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In the spring of 1831, Methodist minister John Price Durbin delivered an evangelical sermon that assumed his listeners were familiar with the basic rules of science. "Are planetary worlds seen revolving in their orbits harmoniously and steadily?" he asked his rural Kentucky audience. "Is a little microscopic insect seen in the dust, or in the down of a peach, or in a drop of water?" The answer, of course, was yes—though Durbin saw no need to say so. His questions were merely rhetorical; the Methodists listening to his sermon knew, after all, that planetary worlds and microscopic insects existed, even if not all of them had had the opportunity to see these natural phenomena firsthand. Scientists had proved that the phenomena existed, and in 1831, the authority of science was to be trusted.

"Do we look into the mineral world and observe an internal action," the minister continued, "kept up among the integrant particles of bodies, operating according to the laws of crystallization, and thus producing the most beautiful substances, and in an innumerable variety of primary and secondary forms?" The thirty-year-old evangelical preacher from Bourbon County, Kentucky, had an extensive and enthusiastic understanding of biology, geology, and the astronomical sciences, and this understanding informed his faith. While his audience's grasp of these topics may not have been as sophisticated as his, Durbin clearly knew when he sat down to write his sermon in 1831 that ordinary Methodists were familiar with the conclusions of scientists.

Planetary worlds and crystallized minerals existed because God had deemed that it should all be so. "God is present, to do, of himself, all these wondrous things," Durbin told his listeners unequivocally. "The great and universal Operator is personally present, performing his wonders in the hand of a little child, when it holds a swelling rose-bud in the act of bursting into bloom."[1]

[1]John Price Durbin, "On the Omnipresence of God," *Methodist Magazine and Quarterly Review* (*MMQR*) 13 (1831): 49.

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Durbin saw God in everything, and the consistency of nature, revealed by the "natural laws" of science, confirmed the Creator's presence for him. The *personal* presence of God in the world—and the direct influence that that personal presence guaranteed—were integral to Durbin's Methodist theology and were, therefore, the foundation of his understanding of the relationship between religion and science. Unlike the Deists, who a generation earlier had pointed to the natural laws of the universe as evidence of God's distant relationship with the world, evangelical leaders did not worship a "watchmaker." They did, however, worship a God who had created an ordered universe—and science helped humanity discover and appreciate the wonder of that order.

Durbin delivered his sermon at a time when a number of prominent Methodist ministers in the United States were starting to direct their spiritual and intellectual attention to the relationship between religion and science. Beginning in the 1830s, these men launched a concerted campaign to publicly reconcile the discoveries of reasoned science with the fundamentals of a religious belief that was, at its core, based on revelation. These ministers were certainly not the first theologians to tackle the issue of how science and religion related to one another. Unlike Presbyterian and Congregational leaders who first took up the issue in the seventeenth century, though, Methodist leaders like Durbin were looking to defend more than just their God when they turned their attention to science in the 1830s. They were hoping to lend their denomination a degree of intellectual legitimacy and, in so doing, stake a claim for their faith on the increasingly educated landscape of American religious pluralism.

This development is one that many historians of religion and science have missed because they have assumed that nineteenth-century Methodists were simply too lowbrow—or too "democratic," in the parlance of one historian—to be concerned with the scientific ideas coming out of European and, increasingly, American universities.[2] Scholars such as James Turner, Theodore Dwight Bozeman, and John Hedley Brooke have done a marvelous job of analyzing the reactions that mainstream Protestant ministers had to science in the nineteenth century, and they have all concluded that, at least in the decades preceding the publication of Charles Darwin's theories on natural selection, science and religion were deemed by most Protestant denominations in the English-speaking world to be perfectly compatible with one another.[3] Yet, to read these historical studies, one might

[2]See Nathan O. Hatch, *The Democratization of American Christianity* (New Haven, Conn.: Yale University Press, 1989).

[3]See James Turner, *Without God, Without Creed: The Origins of Unbelief in America* (Baltimore, Md.: Johns Hopkins University Press, 1985); Theodore Dwight Bozeman, *Protestants in an Age of*

think that the largest Protestant denomination in nineteenth-century America, that is, Methodism, had absolutely no interest in scientific discoveries—and consequently no interest in reconciling science with the mandates of revealed religion.

In words that echo H. L. Mencken's deliberately hyperbolic assertion that Methodists had a "pathetic inability to keep up with human progress,"[4] James Turner tells us that a rational approach to God "would have felt decidedly out of place at a Methodist revival," and that compromises between religion and science never made an appearance in Methodist thought, since Methodists had "never subscribed to a reasonable religion."[5] In his discussions of Old School Presbyterianism, Theodore Dwight Bozeman suggests that discourses on science were a way for journals such as the *Princeton Review* and the *Southern Presbyterian Review* to "humiliate evangelical Protestantism out of its easy acquiescence in 'Methodist' anti-intellectualism."[6] John Hedley Brooke's only allusion to Methodism addresses the admittedly non-rational attitude of the faith's founder, John Wesley, noting that Wesley looked to the Bible for confirmation of nature, rather than the other way around, and that he preferred a science "not bedeviled by arrogant theorizing."[7]

Whether implied or stated, the consensus among these historians of religion has been that "Methodists[,] . . . [having] played down doctrine and all matters of the intellect," were unaffected by the nineteenth-century debates on science and revealed religion that took on an added sense of urgency after the publication of Darwin's *On the Origin of Species*.[8] It is true that in the nineteenth and early twentieth centuries, Methodists had a reputation for being somewhat anti-intellectual—as Mencken's musings make clear. It is also true that Methodists, in general, were not nearly as well educated as their Congregational, Presbyterian, and Episcopalian contemporaries, a point acknowledged by the Methodist minister Nelson Rounds in 1837 when he pleaded with a crowd in Utica, New York, to "strive to cultivate education in all our borders" because "many portions of our people . . . are not aware of the vast importance of educating the rising generation."[9]

Science (Chapel Hill: University of North Carolina Press, 1977); and John Hedley Brooke, *Science and Religion: Some Historical Perspectives* (New York: Cambridge University Press, 1991).

[4]H. L. Mencken, *Treatise on the Gods* (New York: Knopf, 1930), 322.

[5]Turner, *Without God, Without Creed*, 60.

[6]Bozeman, *Protestants in an Age of Science*, 35.

[7]Brooke, *Science and Religion*, 190–191.

[8]Turner, *Without God, Without Creed*, 75.

[9]N. Rounds, "A Lecture on Education. Delivered at Utica, April 2, 1837," *MMQR* 19 (1837): 272.

What historians have failed to appreciate, though, is that the three decades preceding the Civil War saw tremendous growth in the number of Methodist leaders like Rounds. The Methodists who had proclaimed at the turn of the century that "the Lord called neither Mr. Whitefield nor the Methodists to build colleges" were not the same Methodists who founded more than thirty colleges and universities in nineteen different states between 1830 and 1860.[10] Nineteenth-century Methodism, in other words, was not an anti-intellectual monolith, even if many contemporaries and historians have treated it as such. The fact that a number of prominent Methodist ministers appropriated a personal understanding of the "design argument" into their sermons and lectures holds much potential for our present-day understanding of Methodism's development in America—and particularly of the efforts made by some in the denomination to move away from the strong currents of anti-intellectualism that had characterized their faith's founding in the United States, and toward some degree of engagement with the intellectual culture of the period.

Methodist leaders like Durbin understood that evangelicals could not and indeed *were* not insulating themselves from science and ignoring the religious import of ideas that challenged the traditional, biblical understanding of when the world was made, or how long that creative process took. Science was not the problem. The problem was that much of the scientific inquiry that Methodists might be exposed to had been divorced from proper religious instruction, such that the discovery that nature was ruled by a set of consistent and ultimately discernible laws had led to the creation of a teleology—embraced by many men of science—that put God at a distance from the world. God was seen as acting *upon* the world, not *in* the world, and it was not possible, according to Durbin, to "conceive of any power operating *on* that is not affected by the *distance* or *space* through which it operates." The idea of a distant God was abhorrent to Methodists, and it was with that in mind that Durbin proclaimed the theological purpose of his sermon in 1831. He was there in Kentucky, he told his Methodist audience, to assert, "without denying the existence of the laws of nature[,] . . . *the personal, universal, and continual presence of the Almighty, as a perfect and intelligent Being, in all possible places and spaces at the same time.*"[11]

[10]Francis Asbury, quoted in Umphrey Lee and William Warren Sweet, *A Short History of Methodism* (Nashville, Tenn.: Abingdon, 1956), 45. William Warren Sweet, *Religion on the American Frontier, 1783–1840: Volume IV: The Methodists: A Collection of Source Materials* (Chicago: University of Chicago Press, 1946), 67.

[11]Durbin, "On the Omnipresence of God," 48.

I. Changes in American Methodism

In order to understand the thrust behind Methodist participation in the nineteenth-century debates over science and religion, we must first turn our attention to changes that took place in American Methodism during the antebellum period. The number of people who called themselves Methodists increased dramatically during the first half of the nineteenth century, and this increase was not simply the consequence of general population growth. At the outbreak of the American Revolution, Methodists were just 2.5 percent of all religious adherents in the new United States; by 1850, their numbers had grown to slightly more than 34 percent, and there were nearly twice as many Methodists in the country as Presbyterians, Congregationalists, and Episcopalians combined.[12]

With this increase came an extensive geographic and occupational expansion, such that by 1860, Methodism—which had begun in North America primarily as a southern and frontier phenomenon among yeomen—could lay claim to thousands of converts in some of the more urban, professional, and amply schooled regions of the United States. In 1810, for example, there were five Methodist churches in New York City; by the eve of the Civil War, that number had grown to more than sixty.[13] Gains were equally dramatic in Pennsylvania, where there were enough Methodists in Philadelphia as early as 1815 to support and sustain the nation's first African Methodist Episcopal church.[14] Even in Massachusetts, the cradle of colonial Calvinism, the number of Methodists had grown large enough by the early 1830s that an anonymous Presbyterian wrote to Calvin Stowe, editor of the *Boston Recorder*, to complain. "The Methodists," this man groused, were capitalizing on "difficulties which often arise in our churches between minister and people" and using the region's rising disaffection with Calvinist orthodoxy "to establish a society of their own in every town and parish in our old settlements, where there is an Orthodox minister."[15]

By mid-century, thousands of American Methodists were living and working in erudite regions of the country where science had fostered the growth of a mentality that was not concerned with God's role in the world; consequently, it became essential for these Methodists to formulate—or at the very least appropriate—an approach to science that preserved the personal understanding of God that their evangelical faith required. To do this, a growing number of Methodist leaders understood that they would first have to achieve a full and professional understanding of the science they wished to reconcile with their

[12]Mark A. Noll, *A History of Christianity in the United States and Canada* (Grand Rapids, Mich.: Eerdmans, 1992), 153.
[13]Hatch, *The Democratization of American Christianity*, 201.
[14]Sweet, *Religion on the American Frontier*, 51–53; 112–122.
[15]*Boston Recorder*, 12 July 1831.

faith. "Several of the annual conferences in the north eastern section of the Union," Wilbur Fisk told a crowd of Methodists in 1831, "had been turning their attention for some years" to the idea that the "several literary institutions" the Church had established in the country were "insufficient," and that a college that explored "the elementary principles of literature *and* the sciences" was essential to the faith's survival.[16] That college became Wesleyan University in Middletown, Connecticut, where Fisk served as the first president.

More than a generation later, after the publication of Darwin's controversial theories on natural selection in 1859, the Reverend Henry Martyn Harman hinted that it was dangerous for Methodists not to arm themselves with a basic understanding of science because it was people who had been left ignorant of the discipline's "great authorities" who were the most vulnerable to attempts to "explain the order and harmony of the natural world without having recourse to a designing mind." In making his case, Harman emphasized that "the most eminent of paleontologists, namely Cuvier, Owen, Agassiz, Barrande, Falconer, E. Forbes, etc., and all our greatest geologists, such as Lyell, Murchison, Sedgwick, etc., have unanimously, often vehemently, maintained the immutability of species."[17]

It is important to note that while the growing Methodist interest in science was strongest in the northeast, where the majority of America's educated citizens lived, this interest was not confined to that part of the country most imbued with the variegated discourse on science and natural theology. Northern and southern Methodists did have significant ideological differences that ultimately led to the creation to two separate, regional churches in 1844—but it was *slavery*, not the relationship between religion and science, that divided members of the Methodist faith. The hostile attitude toward science that would ultimately be associated with the South—and even the Midwest—after the Scopes trial of 1925 was simply not pervasive in the mid-nineteenth century, and there were, in fact, a number of prominent Methodist leaders in the region whose interest in science was well-known.

Charles Tait, for example, whose parents had been converted to Methodism by Bishop Francis Asbury himself, left his job as a federal judge in Alabama—a state he had helped to found—in 1826 so that, at the age of fifty-eight, he could enroll in geology and chemistry courses at the University of Pennsylvania.[18] Alexander Means, who became a licensed minister in the

[16]Wilbur Fisk, "The Science of Education: An Inaugural Address, delivered at the Opening of the Wesleyan University in Middletown, Connecticut, on September 21, 1831," *MMQR*, 13 (1831): 440, 430.

[17]Henry M. Harman, "Natural Theology," *Methodist Quarterly Review* (*MQR*), 56 (1863): 183, 195.

[18]Charles H. Moffat, "Charles Tait: Planter, Politician, and Scientist of the Old South," *Journal of Southern History* 14 (1948): 207, 225–226.

Georgia Conference of the Methodist Episcopal Church at about the same time, was a member of the American Academy of Sciences and a professor of chemistry at Emory College in Oxford, Georgia, from 1838 to 1856.[19] When Benjamin Wofford, a prominent Methodist minister and businessman from Spartanburg, South Carolina, died in 1850, he left a legacy of $100,000 to be applied toward the founding of a college that would improve "literary, classical, and scientific education in his native district."[20] And then, of course, there was Durbin—who assumed his Kentucky audience understood and accepted the basic scientific realities that he highlighted in his sermon in 1831, even though the first public school in the state had opened its doors just two years earlier.[21]

II. The *Methodist Magazine and Quarterly Review*

These Methodists—from the North, South, and along the western frontier—believed that the laws of science were, in the words of Alexander Means, "God's Viceregents on earth."[22] As agents of the Creator, the natural laws of the universe accomplished nothing without first receiving an explicit and direct order from God; on this point, the Methodists who studied and wrote about science in the early to mid-nineteenth century were clear. They insisted that the reality of so-called "secondary causes" was in no way an indication that God's influence on the world was not personal or direct.

Because the existence of natural laws had become common knowledge in the early nineteenth century, even among the less learned segments of society that the Methodist faith drew from, many Methodist leaders—like Durbin—felt obliged to ensure that their congregants understood the direct and inextricable link among God's will, the laws of nature, and the results of those laws. They peppered their sermons with references to modern science in an effort to show Methodists that scientific ideas about how the universe worked were perfectly compatible with evangelical faith.

Many of these sermons had a life beyond the circumstances under which they were delivered, though—and an audience beyond the ordinary laypeople who first heard them. Quite a few of the sermons and public lectures that referred to science in the nineteenth century were published

[19]Henry D. Capers, "Biography of Alexander Means," in *The Alexander Means Papers*, Special Collections Library, Emory University.

[20]Wofford College, The College Archives Website, available at http://www.wofford.edu/sandorTeszlerLibrary/archives; accessed 10 October 2006.

[21]George H. Yater, *Two Hundred Years at the Fall of the Ohio: A History of Louisville and Jefferson County*, 2nd ed. (Louisville, Ky.: Filson Club, 1987), 46–48.

[22]Alexander Means, in *The Alexander Means Papers*, Special Collections, Robert W. Woodruff Library, Emory University, Atlanta.

in the *Methodist Magazine and Quarterly Review*, a journal launched in 1830 by Nathan Bangs, a minister who had grown frustrated with the simplistic and anti-intellectual character of the articles he had been editing for an older journal called the *Methodist Magazine*. Bangs wanted his faith to have a more sophisticated voice, and the new denominational journal he launched was part of his self-conscious effort to "redeem [Methodism's] character from the foul blot cast upon it, not without some reason, that it ha[s] been indifferent to the cause of literature and science."[23]

Converted to Methodism at the age of twenty-two, Nathan Bangs was part of a new cohort of ministers whom the itinerant and self-taught preacher Peter Cartwright sarcastically referred to as "downy doctors and learned presidents and professors."[24] These ministers sought to enhance Methodism's profile on the landscape of American religious pluralism by formally educating themselves and exhorting their colleagues to do the same. If a minister failed to "put himself in connection with the age in which he live[d], and [to] keep abreast with the men of his time," the Reverend William Wightman warned South Carolina's conference of the Methodist Episcopal Church, South, in 1855, that minister would forfeit his hold on "the mind and public opinion of the time and country."[25] Charles F. Deems, in an editorial published in *The Southern Methodist Pulpit* in 1851, also expressed this sentiment when he announced that "the ministry must be . . . leaders intellectually and socially as well as spiritually," or else "our people will stray to other pastures."[26]

As part of their effort to become intellectual leaders, Methodist ministers founded colleges and universities such as Emory (1836), DePauw (1837), Baldwin (later Baldwin-Wallace, 1845), and Trinity (later Duke, 1858),

[23]Nathan Bangs, *A History of the Methodist Episcopal Church*, 4 vols. (New York: T. Mason and G. Lane, 1840–1853), 4:70.

[24]Peter Cartwright, in *Autobiography of Peter Cartwright, the Backwoods Preacher*, ed. W. P. Strickland (Nashville, Tenn.: Abingdon, 1986 [1856]), 243. Though he was seven years younger than Bangs, Cartwright chastised Bangs—and others like him—for abandoning the simple virtues that had characterized Methodism at the turn of the century. Apparently unaware of Bangs's arduous journeys throughout the seven years he spent as a circuit rider in southeastern Canada, Cartwright contrasted the early circuit riders' sense of sacrifice with the interest in college education that modern Methodist ministers seemed to have. Cartwright himself lacked any sort of formal education, and his journal reveals that he was simultaneously angered and intimidated whenever he encountered a "regular graduate in theology." See Hatch, *The Democratization of American Christianity*, 193, and Christine Leigh Heyrman, *Southern Cross: The Beginnings of the Bible Belt* (New York: Knopf, 1997), 94. For more on Bangs's ministry, see Matthew Simpson, ed., *Cyclopaedia of Methodism*, 4th rev. ed. (Philadelphia: Louis H. Everts, 1881), 85–86.

[25]William Wightman, *Ministerial Ability: A Sermon Delivered before the South Carolina Conference on Sunday Evening, December 2, 1855* (Nashville, Tenn.: E. Stevenson & F. A. Owen, 1856), 15.

[26]C. F. Deems, ed., *The Southern Methodist Pulpit* 4 (1851): 52, quoted in E. Brooks Holifield, *The Gentlemen Theologians* (Durham, N.C.: Duke University Press, 1978), 39.

serving these schools throughout the nineteenth century as professors, presidents, and trustees. Durbin was a classical languages professor at Augusta College, in Bracken County, Kentucky, before going on to become the first Methodist president of Dickinson College in Carlisle, Pennsylvania, in 1833. Charles F. Deems taught science and logic at Randolph-Macon College in Ashland, Virginia, before moving to North Carolina to become president of Greensboro Female College in 1850.[27] William Wightman served as a "financial agent," or what might today be called a "development officer," for Randolph-Macon. He later became a professor in the English department there and went on to serve as the first president of Wofford College in Spartanburg, South Carolina, in 1854.[28]

Durbin and Wightman both contributed to Bangs's *Methodist Magazine and Quarterly Review* as part of their effort to raise the intellectual profile of the Methodist faith. Discussions about science—and its compatibility with religion—were frequent fodder for publication in the pages of this magazine. More than 40 percent of the sermons and public lectures published in that journal during Bangs's tenure as editor touched on the topic of science.[29] Neither temperance nor the issue of slave colonization in Africa—both of which were extremely popular topics among ministers of all the mainstream Protestant denominations in the antebellum period—warranted as many references.

Whether this frequency was indicative of the overall content of Methodist sermons and lectures delivered throughout the period cannot be known. In all likelihood, it was not. The fact that *any* sermons made use of biological, astronomical, or even geological principles when talking about God makes it clear, though, that a sizable number of Methodist laypeople were familiar with the basic scientific truths of the day. The excruciatingly pedantic quality of the scientific discussions in some of the sermons could not have been tolerated otherwise. More important, the publication of these sermons and lectures indicates that Methodist leaders like Nathan Bangs saw scientific discussions as a means by which Methodists could stake a claim for their faith on America's growing intellectual landscape. That landscape included educated ministers from other denominations who would read the *MMQR*—frequently, if not religiously—and formulate an opinion of the Methodist faith on the basis of what they found there. When non-Methodists turned

[27]*Cyclopaedia of Methodism*, 318–19; 393.

[28]Wofford College, The College Archives Website, available from http://www.wofford.edu/sandorTeszlerLibrary/archives; accessed 10 October 2006.

[29]Twenty-two out of 48 sermons and public addresses published in the *MMQR* during Nathan Bangs's tenure as editor are either specifically about science and its compatibility with revealed religion, or else they use their audience's familiarity with and acceptance of scientific discoveries to make an argument about some other topic that may or may not be directly related to science.

to his journal to discover what Methodists in the United States were talking about, Nathan Bangs wanted to be sure they knew that Methodists were talking about science.

Sometimes, the references to science in the *MMQR* were just passing ones—though their context reveals much about the extent to which certain Methodists had come to acknowledge the authority of science. The laity's acceptance of scientific truth, for example, was used to advance a seemingly unrelated agenda in 1835, when the Reverend John Dempster told the faculty of the Philorhetorician Society at Wesleyan University not to despair if their students still held on to bad oratory habits. "Newton found it more difficult to unlearn the world what it had erroneously believed for a thousand years than to learn his vast system of truth," Dempster told the professors.[30] It was one thing to acquire scientific knowledge or rhetorical skill, and quite another to pass it on.

More often, though, the sermons and lectures Bangs chose to publish were deliberate attempts to show that—as one minister put it in 1840—"Religion [was] the nourishing Mother of Science." Whether the audience was an Independence Day gathering of the American Colonization Society in 1834 or a crop of recently graduated students from Allegheny College in Pennsylvania in 1835, a diverse group of urban and rural ministers who had gathered in Baltimore for the Annual Conference of the Methodist Episcopal Church in 1837 or an unsuspecting assemblage of lay Methodists who had gathered in Yatesville, New York, to celebrate the completion of their newest church building in 1838, the message was always the same: religion and science were not only compatible, they were complementary.[31]

The Bible "abounds with expressions that … strikingly coincide with modern discovery and enlightened science," the Reverend Seth Mattison announced to his congregants when the new Yatesville church opened its doors for the first time. The vastness of the universe was, for Mattison, a reflection of the vastness of God's love for humanity. Methodists, therefore, should draw comfort and inspiration from discoveries that revealed just how big the universe really was. Pointing to the work of Sir William Herschel, the British astronomer who had discovered Uranus and catalogued more than 800 stars, Mattison told his listeners that Herschel's stars were so far away

[30]John Dempster, "An Oration pronounced before the Philorhetorician Society of Wesleyan University, August 25th, 1835," *MMQR* 18 (1836): 112.

[31]"Judgement for the Oppressed; a Sermon, preached in the Wesleyan Chapel in Vestry-St., New-York, on the 4th of July, 1843, in behalf of 'The American Colonization Society'," *MMQR* 16 (1834): 412–423; Martin Ruter, "President Ruter's Baccalaureate Address to the Graduates and Students of Allegheny College," *MMQR* 17 (1835): 121–129; J. H. Young, "The Sufferings and Glory of Christ: A Sermon," *MMQR* 19 (1837): 318–332; Seth Mattison, "Substance of a Discourse delivered at the opening of the Church in Yatesville, June 15th, 1838," *MMQR* 22 (1840): 21–35.

"that could we employ an angel to visit one of them, and bring back intelligence—were he to leave us this moment and travel at one thousand miles an hour, it would avail us nothing; for on his return, should not the general resurrection prevent, we shall have been above four millions, five hundred sixty-six thousand years in our graves."[32]

Ebenezer Jackson, Jr., a Methodist native of Savannah, Georgia, who graduated from a Catholic college in Maryland and published frequently in the *MMQR*, firmly believed that "every new acquisition of knowledge brings man one step nearer to the Supreme Intelligence." Among the glorious consequences Jackson lay at the feet of the Protestant Reformation was the fact that humanity had been lifted out of the Dark Ages—an era when "science was the handmaid of oppressions"—and into a time when "science soared aloft, free and unfettered over the whole civilized world."[33]

God was "the author of both" religion and science, according to the Reverend P. Holmes. Drawing an analogy between science and Scripture that was brilliant for its logic and simplicity, Holmes told members of the Wyoming Literary Institute in 1840 that the men who uncovered the natural laws of the universe were not unlike the apostles who spread the words of Christ. "The pure principles of religion were the same before the Jewish and Christian dispensations shed their glories upon the world, [as] they have been since," he reminded his listeners. "So the principles and operations brought to light by the astronomical penetration of a Newton were in existence . . . before his days as they have been since."[34]

III. "Baconianism"

Methodist leaders writing and speaking in the 1830s, '40s, and '50s understood that their respect for science was a prerequisite for membership in America's intellectual community, since that community drew its inspiration from the empirical observation and inductive reasoning that were the foundation of modern scientific inquiry. Historians have noted that the so-called "Common Sense Realism" that was formulated in Scottish intellectual circles in the late eighteenth and early nineteenth centuries found a particularly welcoming environment in the new United States. "For several decades after 1800," Theodore Dwight Bozeman writes, "Realism exerted a master influence upon

[32]Seth Mattison, "Substance of a Discourse," 24–25.

[33]E. Jackson, Jr., "Address delivered to the Peithologian Society of the Wesleyan University, August 25th, 1835," *MMQR* 17 (1835): 451. Jackson briefly represented the state of Connecticut in the House of Representatives, and his biography is available in the *Biographical Dictionary of the United States Congress*, http://bioguide.congress.gov/biosearch/biosearch.asp; accessed 12 January 2007.

[34]P. Holmes, "Religion the Nourishing Mother of Science," *MMQR* 22 (1840): 362.

American thought" and "remained the single most powerful current in general intellectual and academic circles until after the Civil War."[35] The Scottish philosophy, according to Mark Noll, "offered Americans exactly what they seemed to require to master the tumults of the revolutionary age." Noll writes that the "ethics provided by the Scots offered an intellectually respectable way to establish public virtue in a society that was busily repudiating the props upon which virtue had traditionally rested."[36]

In the simplest terms, Common Sense Realism was an attempt to overcome the epistemological and moral skepticism brought on by certain Enlightenment thinkers, most notably David Hume and George Berkeley. The outside world was "real" for members of the Common Sense School, and more important, human beings could come to know this outside world through their senses. David Hume had cast doubt on the ability of the senses to engender a proper understanding of anything, but moderate Presbyterian thinkers such as Thomas Reid and Dugald Stewart re-established the authority of the senses. They bypassed David Hume and looked back to the veritable father of the Scientific Revolution, Francis Bacon, for their epistemological inspiration. Bacon's inductive method, whereby knowledge and understanding were gleaned from observation, became the cornerstone of the Common Sense School.[37]

It was this philosophy, then—this "Baconian" respect for inductive reasoning and observation of the outside world—that American Methodist leaders seeking to achieve some degree of intellectual credibility needed to grapple with as they sought to reconcile the discoveries of science with their commitment to the idea of a loving and personally involved God. They could not, in other words, look for their inspiration in the work of John Hutchinson, an opponent of Newtonian science whom Methodist founder John Wesley had embraced in England. Hutchinson's epistemology, Noll tells us, was rooted in biblical revelation rather than observation. Not only that, but most of the Hutchinsonians in the United States during the early decades of the nineteenth century were high-church Episcopalians—many of whom had been Loyalists—so Hutchinson's philosophy was tainted in the American mind with the stain of tyranny.[38]

Time and again, Methodist leaders lecturing and writing in the *Methodist Magazine and Quarterly Review* cited the work of Francis Bacon and subsequent practitioners of his inductive method as they outlined both the relationship their faith needed to have with science and the relationship

[35]Bozeman, *Protestants in an Age of Science*, 21.
[36]Noll, "Science, Theology, and Society," 104.
[37]Bozeman, *Protestants in an Age of Science*, 3–31.
[38]Noll, "Science, Theology, and Society," 107.

science needed to have with Methodism's overall educational goals. "As the philosophers of the school of Bacon sit at the feet of the God of Nature, to learn the laws of the physical world," Wilbur Fisk announced at the opening of Wesleyan University in September 1831, "so the philosophers of the school of Wesley sit at the feet of the God of Providence, to mark the signs of the times, and study the prudential duties of life."[39] President Martin Ruter warned the members of Allegheny College's class of 1835 not to fall into the trap of thinking that "genius alone, talents unimproved" could cause a man to rise to "eminence." "Those that have astonished mankind by their gigantic powers, and rendered their names immortal by scientific researches," he announced, "Bacon, Locke, Newton, Herschel, and others . . . have accomplished their work, not so much by superiority of natural talents, as by patient attention and persevering industry."[40] That same year, students at Dickinson College were warned by their science professor, Merritt Caldwell, to exercise humility as they explored the natural world. "Facts are often attempted to be accounted for on wrong principles," he noted, "and false causes are assigned . . . in every department of science." Caldwell decried the tendency of unnamed scientists to refer to "gravity, electricity, magnetism, &c." as "ultimate causes," and he blamed this willingness to deny God's direct agency on a want of "patient investigation and an honest love of the truth." He noted, though, that truly great scientists did not jump to such conclusions. "Bacon, and Euler, and Locke, and Newton, and Reid, and Franklin, had the power of predicating their judgments on full and mature reflection," the science professor reminded his students. "The truth is, we often have to acknowledge our ignorance."[41]

IV. Critiquing Science

In classic and deliberately "Baconian" form, Methodist intellectuals, disturbed by the growing tendency of some western scientists to consign God to a distant role in the universe, defended their theology. It was not by accident that George Peck, the Methodist minister who took over the editorship of the *MMQR* from Nathan Bangs in 1841, chose a scientist to write his journal's review of the highly controversial *Vestiges of the Natural History of Creation* in 1846. Peck understood that an intellectually credible critique of the work—and its

[39]Fisk, "The Science of Education," 440.
[40]Ruter, "Baccalaureate Address," 121–122.
[41]Merritt Caldwell, "Professor Caldwell's Address—An Address Delivered before the Trustees and Students at the Annual Commencement of Dickinson College, Carlisle, Pennsylvania, July 16th, 1835," *MMQR* 20 (1836): 97, 99.

theological implications—would have to engage scientists on the level of science.

Published anonymously in 1844, the *Vestiges* had put forth a theory of natural development that was, in the estimation of many Methodists, threatening to their theology, since it posited that the existing world had "evolved" into its current form and was not the same world God had initially and purposefully created, as outlined in the book of Genesis. Darwin would later write that the *Vestiges* had paved the way for the publication of his own investigations into the process of natural selection by "removing prejudice" against the idea and "thus preparing the ground for the reception of analogous views."[42] Whatever Darwin may have thought, the "ground" that was prepared by the *Vestiges* did not amount to a great deal of acreage; the book was a bestseller, but it was widely criticized by scientists and ministers alike, and Methodist voices were loud in the chorus of denunciation.[43] Indeed, the publication of the *Vestiges* provoked an undeniable change in the tone American Methodists used when speaking of science. Their attacks on what they considered to be misguided and inaccurate science became less patient and more personal. They did not, however—at least not at this point—retreat to their Bibles and abandon the premise that science and religion were, ultimately, conciliatory.

The scientist whom George Peck chose to write the *Methodist Quarterly Review*'s evaluation of the *Vestiges* was William C. Wilson, a professor of natural science at Dickinson College. Even as he condemned the book's author for "professing to admit God as the creator and legislator of the primordial matter, but den[ying] him any direct agency in the subsequent work of creation, and in the government of mundane things," Wilson understood that he would have to minimize his references to biblical revelation and "leave the weapons of the theological armory for the use of the doctors of divinity" if he wanted to offer a proper and intellectually meaningful review of the book. The *Vestiges*, after all, was a work of science, not theology.

William Wilson made it clear in his review that the *Vestiges'* most egregious flaw was not its misguided theology, but rather, its unabashed effort to "bewilder even right-minded persons, who have not enough of scientific knowledge to expose its assumptions." In words that seemed to foreshadow Henry Martyn Harman's response to Charles Darwin in 1863, Wilson told his readers that his goal was to engage the author of the *Vestiges* "on his

[42]Charles Darwin, *On the Origin of Species By Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life*, 3rd ed. (London, 1861), xv.

[43]See Ryan C. MacPherson, "America's Vestiges of Creation: Nature's Development and Divine Presence amid Pre-Darwinian Struggles for Civilization," Ph.D. diss., University of Notre Dame, 2003.

own ground, and to show that though nature cannot be false, she may find, and has found, a false interpreter."

From the standpoint of modern-day scientific understanding, many of Wilson's attacks on the *Vestiges* seem simplistic and naive. By that same token, though, many of the ideas put forth by Robert Chambers—who was revealed to be the author of the *Vestiges* nearly forty years after the book was first published—also seem simplistic and naive, and for our purposes what matters is not the accuracy of the science but rather the decision of George Peck to publish a review for his Methodist readers that appealed to science, rather than biblical revelation, when challenging the "atheistic" implications of Chambers's book. William Wilson questioned whether Chambers fully understood the laws of physics. He criticized Chambers's reliance on previously performed experiments that were known in the scientific community to have yielded ambiguous results. He challenged the purity of Chambers's scientific methods and pointed to numerous holes or assumptions in Chambers's scientific reasoning. "No man, whose intellect has been trained in the severe school of the inductive method," Wilson told the readers of the *Methodist Quarterly Review*, would ever make the kinds of intellectual leaps that Robert Chambers made when formulating his theory of natural development.[44]

William Wilson was not hostile to science; he was, after all, a professional scientist himself. What he was hostile to was *bad* science—or what he perceived to be such—and for him, bad science was the only kind of science that could lead to the conclusion that God was not directly and personally involved in every change that took place in the natural world. Not all Methodists agreed with William Wilson on this point, though. Some Methodists writing for the *MQR* actually insisted that scientists who challenged evangelical theology were not necessarily sloppy, even if they were mistaken. Indeed, it was possible for the anonymous reviewer of John William Draper's *Treatise on the Forces which Produce the Organization of Plants* to call that book an "honor to the scientific character of our country," even as he lamented that "the great object of the first chapter . . . is to show that organization and life are not originated and sustained by the indescribably 'vital principle' of the old physiologists, but are the legitimate result of the same forces that regulate the movements of all inanimate nature."[45]

Life, for Draper, was just a concoction of chemicals. This notion disturbed his book's Methodist reviewer, who chose to be identified only by the initial

[44]W. C. Wilson, "Review of the Vestiges of the Natural History of Creation," *MQR* 17 (1846): 292–327.

[45]H., "Review of John William Draper's *Treatise on the Forces which Produce the Organization of Plants*," *MQR* 17 (1846): 614–615.

"H.," because it completely denied the special status given to living things by the Bible.[46] Although he does not say so, Mr. H. must also have been baffled by the reality that Draper, of all people, had put forth such an idea, since the botanist had been raised in England by a Methodist minister, attended Methodist-run schools, married a devoutly Methodist woman, and settled in a Methodist enclave in Virginia when he immigrated to the United States in 1832.

The fact was, though, that Draper had been secretly questioning the elements of his evangelical upbringing for nearly fifteen years by the time his book came out in 1844. The questioning had started shortly after he entered college in London. There, he had come under the influence of a young chemistry tutor who endorsed the controversial ideas of the Swedish chemist Jöns Berzelius. Berzelius denied the legitimacy of what was commonly referred to as the "Vitalism Theory," which explained the difference between organic and inorganic matter by ascribing a special, God-given "vital force of life" to the former.[47]

Challenges to the Vitalism Theory were not unheard of in 1844, but they were still controversial enough that Mr. H. was certain that many of Draper's reviewers, Methodist or otherwise, would share his concerns about the conclusions presented in the book's first chapter. "We presume [the author], himself, scarcely expects these ideas will pass unchallenged," Mr. H. noted. In words that reveal the commitment that many Methodist leaders still had to science, the anonymous reviewer insisted that any formal challenges issued to Draper's ideas should come only from men who had a proper understanding of the science upon which Draper had based his misguided dismissal of Vitalism. The problem, after all, was not the science that Draper had put forth in his book—and anyone trained in the rigors of the scientific method would see that. The problem was that Draper simply failed to understand that the science he articulated was perfectly compatible with God's special and direct agency in the maintenance of organic matter.[48]

Indeed, Mr. H.'s review in the *MQR* reads more like a warning to religious leaders who dared to condemn scientific arguments they could not understand than it does an admonition of scientists like Draper who deigned to deny the direct agency of God. "Many theologians, jealous of what might to the

[46]Mr. H.'s insistence that a full understanding of science is the best defense against atheism is quite similar to the critique of Charles Darwin issued by Henry Martyn Harman in 1863. It seems unlikely, though, that Harman and Mr. H. are the same person, given that Harman would have been just twenty-three years old when Mr. H.'s critique was published. He also did not graduate from college until 1848.

[47]Donald Fleming, *John William Draper and the Religion of Science* (New York: Octagon Books, 1950), 1–19.

[48]"Review of a book by John William Draper, MD, professor of Chemistry at the University of New York," *MQR* 16 (1845): 159–160.

unreflecting appear a leaning toward atheism," Mr. H. informed his readers, "have laid themselves open to severe attacks on account of . . . a hasty ascription of observed phenomena to the direct agency of God without the intervention of law." These hasty ascriptions were unnecessary, Mr. H. assured his readers, because "the one grand truth, that all nature is the emanation of a Supreme Being, who upholds it and directs it in its wondrous evolution of cause and effect, science never has controverted and never can."

When anxious ministers failed to appreciate this reality, though, and attempted to criticize the work of scientists—lacking a full understanding of the principles on which the scientific work was based—they damaged the reputation of their faith. The simple fact of the matter was that not all nineteenth-century Methodist leaders embraced the continued discoveries of science; Bangs, after all, would not have had to rescue his faith from the "foul" allegation that it was anti-intellectual if they had. Understanding this, Mr. H. advised any theologian who might be tempted "to show how God works by one short sentence, 'speaking and it is done,' irrespective of the laws with which He has previously invested nature," to "confine himself to his own ground" and not venture into the scientific "by-ways," where he could only be "exposed to discomfiture and defeat."[49]

V. The Challenge of Natural Selection and Evolution

The *Methodist Quarterly Review*'s evaluation of Draper's work clearly endorsed the idea of "secondary causes"—the notion that God used people and natural laws to accomplish his work in the world. Because nineteenth-century Methodist leaders were so uniformly insistent that God's influence on the world was "direct," historians seem to have assumed that Methodists did not accept the viability of secondary causes. What else would explain their failure to explore Methodism's engagement with science? Such an assumption on the part of historians is not necessarily unreasonable; indeed, the attention that the *Methodist Quarterly Review* paid to the compatibility between secondary causes and the idea of a personally involved God suggests that some—perhaps even many—nineteenth-century Methodists were uncomfortable with the assertion that their God used "viceregents" when exerting an influence on the world. But as everyone from John Price Durbin, to Alexander Means, to Mr. H. made evident, nineteenth-century America was full of Methodists who believed, in the words of the Methodist

[49]H., "Review of John William Draper's *A Treatise on the Forces which Produce the Organization of Plants*," *MQR* 17 (1846): 615–616.

astronomer Samuel D. Hillman, that secondary causes were "not at all detrimental to the interests of religion."[50]

To be sure, there was disagreement within the Methodist community about the extent to which secondary causes should be endorsed, as Mr. H.'s review acknowledged. Samuel Elliott Coues, a prominent merchant and naturalist from Portsmouth, New Hampshire, published a "bold treatise aim(ed) at nothing less than the overthrow of the established doctrines of physics" in 1851. His reviewer in the *MQR*, a Methodist clergyman from Massachusetts named Richard Sutton Rust, praised Coues for having the courage to admit that science "treats too exclusively of secondary causes." Calling Coues's research a "harbinger of a brighter era," Rust told his readers that the naturalist from New Hampshire did "not believe that God needs to provide any counteracting forces to prevent some of his planets from rushing outward, and others from being drawn inward," and that "whatever God doeth, he doeth directly, at once and forever." For Rust, it was "the recognition of the immediate presence of the Creator with the work of his hands" that constituted "a chief excellence of this work."[51]

Rust's willingness to condemn the viability of secondary causes such as gravity was unusual, however—at least among those essays published in the *MQR*. Indeed, every other author who addressed the issue of secondary causes in that journal mirrored the attitudes of Mr. H. Samuel Hillman, for instance, insisted that the ongoing discovery of the universe's natural laws did not threaten Methodist understandings of a personally involved God; rather, these discoveries—and the "useful arts" they engendered—were a "fulfillment of the primal command given to the race at the beginning to subdue the world and have dominion over it." Hillman believed in 1860 that "the conflict between natural science and the Christian faith" was "waning," and that "a corrected Scripture philology," combined with "an abatement of some scientific pretensions and conclusions which had been carried too far," were the reason.[52]

The notion that interpretations of Scripture might need to be "corrected" in the light of science was not problematic for the authors who contributed to the *Methodist Quarterly Review*. Many people of faith in the nineteenth century, Methodist or otherwise, angrily denied the challenges to a literal reading of Scripture that were inherent in the findings of geologists Georges Cuvier and Charles Lyell. According to the Bible, the earth was approximately 6,000 years old, and any science that suggested otherwise could only be

[50]S. D. Hillman, "Alexander von Humboldt and his Cosmos," *MQR* 31 (1860): 425.
[51]R. S. Rust, "A New Theory of Physics: Outlines of a System of Mechanical Philosophy, by Samuel Elliott Coues," *MQR* 36 (1854): 102, 108.
[52]S. D. Hillman, "Alexander von Humboldt and his Cosmos," *MQR* 42 (1860): 415, 414.

"atheistic." But Henry Martyn Bannister, a Methodist minister who taught Hebrew at the Garrett Biblical Institute in Evanston, Illinois, and whose oldest son, Henry, would become a part of the Western Union geological expedition to Alaska in 1865, understood that "in all ages of the Christian era such alarm has sprung up occasionally, and interpretations of portions of the Bible have several times had to yield to the force of scientific fact."

Bannister reminded his readers that at one point the earth was thought to be flat, and "a thousand figurative expressions in the Bible were adapted to this appearance of things." Christians also once believed that the earth stayed in one place; yet now the "humiliations Galileo [had] met with from Church authority on this subject" had passed into the realm of "schoolboy knowledge." Bannister noted that "we look back with mortification that the human intellect should ever have believed these things," assuming without comment that his Methodist audience shared his shame about the ignorance of their Christian ancestors. Yet, "the same weakness" was apparent in the nineteenth century—as it was always apparent "when[ever] a new scientific truth breaks through the enclosure which human interpretation has thrown around the Bible."

It was not surprising to the minister that "the religious community" had been "slow to receive the geological announcement that this globe is countless ages older than the Bible appears to them to reckon it." Bannister understood that it would take time "for it to be fully understood that the conflict of geology is really not with Moses, but with a favourite, a cherished interpretation of Moses" that saw each of the "days" mentioned in Genesis as a twenty-four hour period, rather than an "immense epoch." The Methodist minister firmly believed that the discoveries of geologists would one day be accepted by all Christians, and that these future generations would look at the fossils uncovered by scientists and see "an upward succession of improving organic types, each advancing toward the perfection which is consummated in man, and each displaying power, wisdom, and goodness on a scale, as to number and magnitude, never dreamed of by our friends who are so alarmed at the strides which science is taking."[53]

These last words by Bannister, written near the close of his article, suggest that the minister may have accepted that the creatures populating his world in 1854, when his essay was published, were different from the ones God had created at the beginning of time—and that evolution may have been one of the secondary causes through which God chose to exert an influence on the world. Darwin was not the first scientist to suggest that life advanced through a process of evolution, and Bannister was clearly familiar with some of the theories and discoveries that preceded the publication of *On the*

[53]H. M. Bannister, "Science and Revelation," *MQR* 36 (1854): 213, 223, 225.

Origin of Species (such as the ones articulated by Robert Chambers in the *Vestiges of the Natural History of Creation*). What was revolutionary about Darwin's findings—and what proved to be troubling to Christian leaders of *all* denominations—was the scientist's theory of natural selection, that is, the idea that changes in the natural world were the consequence of chance, rather than God's will.[54] Natural selection suggested to some that God was irrelevant, and of all the secondary causes revealed by science in the nineteenth century, this idea proved to be the one that even Methodists deeply involved in the sciences had trouble accepting.

Although the animosity toward natural selection and its partner in crime, evolution, could be found on both sides of the Mason-Dixon line, resistance to Darwin's ideas grew more rapidly among Methodists in the South as the decades progressed. The passage of legislation that prevented the teaching of evolution in Tennessee's schools in 1925 bears witness to this fact. Still, the road toward reconciliation with Darwin was not an easy one in the North, either. William C. Wilson, the scientist from Dickinson who had been so careful in 1846 to confine his critique of the *Vestiges* to Robert Chambers's scientific methods, actually resorted to ad hominem attacks when he reviewed *On the Origin of Species* for the *MQR* in 1861. "The author of this ingenious book is a grandson of Mr. Darwin, the celebrated author of 'The Botanical Garden,' 'The Loves of Plants,' 'Zoonomia,' and other poetical and scientific works, full of fanciful theories and rather suspicious theology," Wilson informed his readers sarcastically. "Whatever, therefore, may be [the author's] speculative eccentricities, we may fairly presume that he has come honestly by them."[55]

Even as Wilson disparaged Darwin, though, there were those within his faith who rose to defend the British scientist's controversial theories, albeit in a qualified manner. " 'Natural selection' operated with wonderful success," according to Daniel Denison Whedon, editor of the *MQR* from 1856 to 1884. It needed "a framework," though, and a "system within which to work." That system was "inexplicable without the supposition of design."[56] The minister who had been born in New York, educated in Connecticut, and stationed in New Jersey accepted that mutations were responsible for the physical development of plants and animals, as Darwin had postulated.[57] What he did not accept was that these evolutionary mutations happened by chance, or that they were not a part of some divine plan. "The exclusive naturalist will say 'birds fly because they have wings,' " Whedon told his

[54]Turner, *Without God, Without Creed*, 181–186.
[55]W. C. Wilson, "Darwin on the Origin of Species," *MQR* 43 (1861): 605.
[56]D. D. Whedon, "The Denial of Final Causes," *MQR* 45 (1863): 177–178.
[57]*Cyclopaedia of Methodism*, 1358.

readers. "The *philosopher* will say 'birds fly because they have wings, AND they have wings in order that they may fly.'"[58]

VI. Science and Methodism in the South

Daniel Whedon was unwilling to retreat in the wake of Darwin from the supposition that science and religion complemented one another. He was not unusual among Methodists in this respect. Such an attitude was evident even among Methodists in the South, the region of the country where evangelicals were—and have been—most heavily painted with the post-Darwinian, anti-science and, more broadly speaking, anti-intellectual brush.[59] To fully understand the southern commitment to science, though, one must look beyond the journal Whedon edited because, after the breakup of the Methodist Church in 1844, the *Methodist Quarterly Review* ceased, really, to be an official voice for Methodists in the South.

Although it is reasonable to assume that southern Methodist leaders were familiar with the ideas discussed in the *MQR*—and that they endorsed most of these ideas (save for the ones that touched on slavery)—it is the *Quarterly Review of the Methodist Episcopal Church, South*, that served as the true intellectual journal of record for southern Methodists. The journal's editor, Henry Bidleman Bascom, made it clear in the very first issue that he was loath to take on controversial issues such as the one that had led to the church's split. He saw the willingness of many antebellum publications to "trade among the current sympathies" as a "ruinous fault," and he condemned these journals for failing to embody an "earnest contention for truth and principles." It is instructive to note, therefore, that among the "important subjects" Bascom felt he could safely address in his journal without generating "inordinate passions" were the "toils and triumphs of science and learning."[60]

The scientific discussions featured in the *Quarterly Review of the Methodist Episcopal Church, South* were, in general, not as rigorous or even as informed as those featured in the *MQR*. Overwhelmingly, though, the southern authors who chose to address the relationship between religion and science insisted that "more injury has been done to religion, than good has been realized, by timidly recoiling from the progress of discovery."[61] Although a few authors

[58]Whedon, "The Denial of Final Causes," 179.

[59]Charles A. Israel, *Before Scopes: Evangelicalism, Education, and Evolution in Tennessee, 1870–1925* (Athens: University of Georgia Press, 2004), 1–10.

[60]Bishop Bascom, "Introduction," *Quarterly Review of the Methodist Episcopal Church, South* (*QRMECS*) 1 (1847): 11, 19, 8.

[61]"Review of *The Principles of Geology Explained, and viewed in their relations to revealed and natural religion.* By Rev. David King, L.L.D," *QRMECS* 5 (1851): 165.

were hesitant to reconcile Scripture with scientific theory, their hesitancy was rooted in caution, rather than the antagonism that would later characterize southern evangelicals' relationship with science. In evaluating the so-called "nebular theory" of the solar system's origins, which was almost as controversial in the mid-nineteenth century as the theories of Darwin, one writer asked only that his fellow Methodists let the theory "mature, and when its principles have become fixed and inflexible, then if they seem to conflict with Scripture, show if you can how they may be harmonized."[62]

The reality that many Methodists in the South did not retreat from science after the publication of Darwin's theories is nicely exemplified by the career of Alexander Means, a Methodist minister originally from North Carolina who chaired the chemistry department at the Atlanta Medical College throughout the Civil War. Indeed, the popularity of a series of sermons on the physics of the Resurrection that Means wrote in 1871 serves as a testament to the faith that many southern Methodists still had in science, even a dozen years after Darwin first implied that God was irrelevant. After their publication, the sermons were picked up and reiterated by Methodist ministers across the South, some of whom translated the sermons into Spanish and used them as a part of their missionary efforts in Texas.[63]

The resurrection Means was concerned with was the General Resurrection—the one all of humanity would experience after the Second Coming of Christ. Specifically, the minister was interested in explaining how every human being who had ever lived (*and* accepted Jesus Christ as his or her personal savior) could be physically brought back to life, if the atoms that had made up their bodies were constantly being recycled, as Newtonian physics taught. "It may be humiliating to human pride to admit that earth's illustrious statesmen, orators, and heroes are, in their physical organization, but the remodeled compounds of disbanded atoms that once occupied a place in . . . the putred (*sic*) ox, or . . . the slain and decomposed warrior whose bones have bleached upon the battle-field," Means told his congregants. But such was the "established intercommunion of the atomic constituents of the organic and inorganic worlds." The question before all scientifically minded Christians, then, was "to whose body . . . these migratory atoms (shall) be assigned" on the day of the General Resurrection. Science had shown, after all, that no two forms of matter could occupy the same place at the same time; the opposite, then, must also have been true, that "*no one* particle of matter can occupy *two* or *more places* at the *same time*."

[62]"The Nebular Theory," *QRMECS*, 2 (1848): 505.

[63]Means, letter to Mrs. Rufus Wright Smith (née Oreon Mary Summerfield Mann), 13 May 1875, in *The Alexander Means Papers*.

The solution Means offered to this conundrum did not, interestingly enough, insist on the omnipotence of God in all things. The Creator, according to the chemistry professor, could not simply snap his fingers and allow one atom to occupy two or more places, completely usurping the laws of physics. Indeed, in a statement that is remarkable for the controversy it did *not* generate, the Reverend Alexander Means insisted that even God, "from His innate perfection and His eternal attributes, is restrained from the accomplishment of *some* things." The laws of nature may have been deliberately created by God to serve as His "viceregents" on Earth—and according to the mandates of Methodist theology, God may have been "personally present" in every example of their implementation. But Means insisted that this involvement could not consist of the laws' dismissal.

In the estimation of the minister and scientist, resurrected human beings would not necessarily have the same bodies that they had had during their previous, earthly existences. The miracle of the General Resurrection would be that God created *new* atoms from which *new* bodies would be formed. "From [the] disclosure of scientific laws," Alexander Means asserted, "It is neither *philosophical*, *necessary*, nor *desirable* to suppose that, in order to preserve its identity, the resurrect[ed] body should have the same form, organ, [and] molecules which characterize[d] it while living." Not only was the exact resurrection of the earthly body not possible according to the laws of physics, but the idea was also an insult to the benevolence of God. Such an exact resurrection would, according to Means, necessitate the "presence of imbeciles, cripples, and monstrosities in the Kingdom of Heaven," and it was "repulsive to every sentiment of the pure and the sublime, that these miserable abortions of nature are to be perpetuated in the ranks of the redeemed above!"[64]

Alexander Means's respect for science compelled him to accept that human beings were made up of atoms that used to occupy the bodies of other human beings, or even—as he insisted to the countless Methodists who heard his sermons throughout the South—the bodies of farm animals. This reality may have been "humiliating," but it was something late-nineteenth-century Methodists in the South could accept. What is less clear, though, is whether they or their leaders could—as Whedon of the *Methodist Quarterly Review* had done—accept the idea that the human species might not have been initially created by God in His own image, that is to say, in an already perfect form.

The reality that southern evangelicals did, eventually, come to believe that Darwin's theories could not be applied to humanity—and that the biblical story of creation was the only legitimate explanation for the origins and development of life—was made obvious by the infamous Scopes "Monkey

[64]Alexander Means, *Sermons on The Resurrection* (Macon, Ga., 1871), 32–35.

Trial" of 1925. The question of whether that opinion was widespread among southern Methodist leaders fifty years earlier, though—particularly among Methodists who attended and ran the many sectarian universities founded in the region throughout the nineteenth century—is complicated by the story of Alexander Winchell, a Methodist geologist who was hired, and then fired, by Vanderbilt University in the 1870s. The circumstances surrounding Winchell's dismissal are murkier than historians—and even some of his Methodist contemporaries—have conveyed, and the official explanation that was offered to America's intellectual establishment for Winchell's firing suggests that some Methodist leaders in the South may have wished to protect their faith from the allegations of anti-intellectualism that had haunted it for more than a century.

VII. Evolution vs. Polygenesis: The Ambiguity of the Southern Reaction

Winchell was dismissed shortly after he published a book in which he theorized that Africans were descended from a group of beings who predated the biblical Adam. That book, *Adamites and Pre-Adamites*, was published in 1878, yet Winchell had come out as a proponent of evolution nearly four years earlier, when he published a book called *The Doctrine of Evolution*. This book had already been widely reviewed by the religious press by the time Bishop Holland McTyeire of the Methodist Episcopal Church, South, asked Winchell to chair the Geology and Mineralogy Department at Vanderbilt University in 1875. The invitation was extended even though the geologist had made it clear in his book that he not only endorsed Darwin's theories, he also believed those theories could be applied to the human species. "It is no more derogatory to man's dignity to have been . . . an ape than to have been that red lump of mere flesh which we call a human infant," Winchell wrote toward the end of his book. "If the means by which the babe had developed into a man do not . . . seem to exclude Deity from the process, why should we feel that Deity is necessarily excluded from a similar process in leading man up from the monkey?"[65]

Winchell's book was not reviewed by the *Quarterly Review of the Methodist Episcopal Church, South*, but it does appear that religious leaders in the region had at least a passing familiarity with his work. In a personal letter to Winchell, Bishop McTyeire told the geologist that he had many "friends in the Southwest and South who . . . are acquainted with you as an author and

[65]Alexander Winchell, *The Doctrine of Evolution: Its Data, Its Principles, Its Speculations, and Its Theistic Bearings* (New York: Harper and Brothers, 1874), 115.

a scientist."[66] Additionally, the school's trustees had personal and professional connections with northern Methodists who regularly read the *Methodist Quarterly Review*, where an evaluation of Winchell's book *had* been published. Among those northern connections was Frances Crawford, whose marriage to Cornelius Vanderbilt had helped her cousin secure more than a million dollars for the university.

The *MQR* was not troubled by Winchell's application of evolution to the human species. The journal's review of *The Doctrine of Evolution* was overwhelmingly positive, insisting that Winchell's book proved that "the real evolution revealed by science in the progress of the creation is not unintelligent." Not a word was said about the passages in which Winchell insisted that "man" had developed from "the monkey." Indeed, the only flaw the reviewer could find with the book was that its "clear thought is enveloped in too scientific a terminology," and its "esoteric dialect," therefore, made it inaccessible to the "large body of popular readers."[67]

Winchell's penchant for impenetrable prose did not concern officials at Vanderbilt when they asked him to teach at their university—and neither did his opinion that the natural development of human beings was perfectly compatible with his Methodist faith. The trustees were keen to use the endowment they had received from the Commodore to build up the school's academic reputation. That reputation would necessarily bolster the intellectual credentials of the Methodist faith. Securing the likes of Winchell among the ranks of the new school's faculty was an important step in the trustees' campaign to establish Vanderbilt University's legitimacy.[68] Winchell's reputation among scientists was already celebrated, and the trustees knew this.

Every year, starting in 1876, Winchell lectured for twelve weeks on the topics of geology and zoology, and although the text of those lectures has not survived, it is reasonable to assume that Winchell would have shared his ideas about evolution with his students. The lectures were without incident until 1878, when Winchell published *Adamites and Preadamites*, and a Methodist newspaper in St. Louis ran an editorial condemning the book for suggesting that "the black races … were here before Adam was, and did not descend from Ham."[69] Two weeks

[66]Holland N. McTyeire to Alexander Winchell, 2 February 1875; reprinted in Leonard Alberstadt, "Alexander Winchell's Preadamites—a Case for Dismissal from Vanderbilt University," *Earth Sciences History* 13 (1994): 97.

[67]D. D. Whedon, "Review of the Doctrine of Evolution," *MQR* 56 (1874): 516–518.

[68]Israel, *Before Scopes*, 55–56, 133.

[69]The paper's editors were referring to a popular, de facto justification of race-based slavery that drew on Genesis 9:20–28 and concluded that Africans were the descendents of Noah's cursed son, Ham. For more on this justification, see Stephen R. Haynes, *Noah's Curse: The Biblical Justification of American Slavery* (New York: Oxford University Press, 2002).

after the editorial was published, the trustees at Vanderbilt voted to abolish Winchell's position.[70]

What is most interesting about the newspaper's critique is that it did not criticize Winchell for taking liberties with the biblical story of creation—the primary concern lawmakers in Tennessee would express nearly fifty years later when voting to ban evolution from all public schools. The editor of the *St. Louis Christian Advocate* was not defending biblical inerrancy; what he was defending was Christianity—and its core belief that Christ's death offered all human beings the only possibility of redemption. "(Are) these pre-Adamite races sinners … and, if so, have they any Savior?" the newspaper wanted to know. "Did Christ die for them … or, being outside the limits of the Ademic [*sic*] races, have they any part in any of these matters?" The problem for the Methodists running the newspaper was not that Winchell's thesis had drawn on the theory of evolution; the problem was that he had implied that black people had no claim to the messianic promise—an unacceptable postulate for Methodists, even in a racist society. If Africans had no need for salvation, "the Christian Churches ought to know it," the *St. Louis Christian Advocate* sarcastically remarked, "as it may save them a vast amount of labor and expense."[71]

It soon became apparent that Missouri's Methodists were not the only ones who were angry. The *Nashville Christian Advocate* joined the chorus of discontent, insisting that parents had the right to expect "the safety of [an] atmosphere [of orthodoxy]" when they sent their sons away to school.[72] Members of the Tennessee Conference of the Methodist Episcopal Church, South, saw Winchell's research as an example of the "scientific atheism" that was becoming increasingly common in the United States. Following Winchell's dismissal, they congratulated Vanderbilt University for having the "courage to lay its young but vigorous hand upon the mane of untamed Speculation and say, 'We will have no more of this.' "[73]

Vanderbilt's trustees were not looking for public praise, though, when they voted not to renew Winchell's contract. Indeed, they seem to have understood that America's intellectual leadership would not tolerate such

[70]It should be noted that David N. Livingstone believes that Winchell was dismissed not because of the "atheistic" implications of his theories but because he had "committed in Southern eyes one unforgivable folly—he had made Adam the descendant of blacks." I believe this interpretation is based on a misunderstanding of Winchell's work. Winchell did not make Adam the descendents of blacks. He made blacks the descendents of a being who existed before Adam, the first human. See Livingstone, "The Preadamite Theory and the Marriage of Science and Religion," in *Transactions of the American Philosophical Society* 82:3 (1992): 49.

[71]*St. Louis Christian Advocate*, 22 May 1878.

[72]*Nashville Christian Advocate*, "Vanderbilt University and the Critics," 13 July 1878.

[73]Quoted in Andrew Dickson White, *A History of the Warfare of Science with Theology in Christendom* (New York: D. Appleton and Co., 1896), 1:315.

a censorious reaction to the scientist's scholarship, and although many of the trustees undoubtedly believed they were doing the right thing for the right reasons, they nevertheless hoped to keep the circumstances surrounding Winchell's termination quiet. Bishop Holland McTyeire showered the scientist with public accolades when he announced his dismissal, and he presented Winchell's departure from the school as a cost-cutting measure.[74] Winchell, however, was not interested in maintaining this charade, and he went straight to Tennessee's largest secular newspaper, the *Nashville American*, with his story.[75] Long after Winchell had accepted another position at the state-run University of Michigan, scientists around the country were still talking about his dismissal from Vanderbilt—which many saw as a confirmation of the old, anti-intellectual stereotype about Methodists. The incident at Vanderbilt, according to Edward Livingston Youmans, editor of *Popular Science Monthly*, was a clear sign that the "Tennessee Methodists" were "desperately in need of education."[76]

The problem, as America's intellectual community saw it, was that Methodists were antagonistic to science—and to evolution in particular. This is certainly how Winchell depicted the situation when he published an editorial in the *Nashville American* shortly after his dismissal. He claimed the trustees had fired him because he had committed "heresy," and that "this heresy consist[ed] in holding with the great body of scientific men, that a method of EVOLUTION has obtained in the history of the world."[77] This understanding of the controversy was reinforced by an editorial published in the *Nashville Christian Advocate* by Thomas O. Summers, a minister in Vanderbilt's Biblical Department who two years earlier had written in his private diary that he found evolution to be irreconcilable with Scripture.[78] According to Summers, Winchell's "development of evolution and polygenism [*sic*]" had become "so pronounced in the last year as to raise and press the question, Is Prof. Winchell's connection to the University beneficial to it?"[79]

It is not clear, though, that Summers's interpretation of the trustees' reaction to Winchell's scholarship is accurate, even though it is in accord with Winchell's own explanation of his dismissal. Summers was personally opposed to evolution, after all—and Alexander Winchell, it should be remembered, had every reason to make the trustees who had fired him look

[74]Israel, *Before Scopes*, 135.
[75]White, *Warfare of Science with Theology*, 1:314.
[76]E. L. Youmans, "Vanderbilt University Again," *Popular Science Monthly* 14 (1879): 237–238.
[77]Alexander Winchell, "Science in Nashville," *Nashville American*, 16 June 1878.
[78]Oscar Penn Fitzgerald, *Dr. Summers: A Life of Study* (Nashville, Tenn.: Southern Methodist Publishing House, 1885), 288–289.
[79]T. O. Summers, quoted in Alberstadt, "Alexander Winchell's Preadamites," 110.

bad. By Winchell's own admission, though, evolution was not the issue Holland McTyeire had first raised with him when the bishop warned the geologist that his presence at the university was no longer welcomed. "Our people are of the opinion that [your] views are contrary to the 'plan of redemption,' " Winchell claimed McTyeire had said to him, suggesting that intellectual leaders at Vanderbilt were troubled not by Winchell's support of evolution, but by his support of polygenesis—and more specifically its implication that Africans were beyond God's promise of salvation. When Winchell insisted to McTyeire that "the redemption of man could as well operate retroactively from Christ to races older than Adam, as from Christ to Abraham or Adam," the bishop reportedly responded that he was "not offering any objections myself, but our people are complaining, and the University will suffer."[80]

It is significant that Methodist intellectuals at Vanderbilt were disturbed by polygenesis, since Darwin, too, opposed the idea that the different human races did not share the same ancestor. Darwin's reasons for denying polygenesis were, of course, quite different from the concerns about redemption expressed by American Methodists. The review of *Adamites and Preadamites* that was published in the *Methodist Quarterly Review*, though, actually drew on Darwin's theory of natural selection—and even its mechanism of happenstance—when attempting to defend Christianity from the implications of Alexander Winchell's ideas about Africans. "Paleontology is full of displays of plasticity and variation of animal life," the reviewer wrote, and it was undeniable that "species do seem to start up with strange suddenness and develop in forms, and rapidities, and magnitudes." In the case of the "immense variety of colors and characters" that could be found in the human species, though, it was "an intense susceptibility to climatic influences," rather than polygenesis, that caused the "rapid physiological variability," and this variability, according to the *MQR*'s reviewer, was concomitant with "a tendency to abnormal specialties hardly belonging to the human species, except by accident."[81]

VIII. Conclusion

Alas, the *Methodist Quarterly Review* said nothing about Winchell's dismissal from Vanderbilt or the circumstances surrounding it, and in the months and years that followed, the interpretation of the incident as an example of Methodist opposition to evolution in particular, and science in general, was

[80]Winchell, "Science in Nashville," *Nashville American*, 16 June 1878.
[81]"Review of *Adamites and Preadamites*, by Alexander Winchell," *MQR* 60 (1878): 565–566.

allowed to gain resonance, feeding the collective American view of Methodism as an inherently anti-intellectual faith.[82] That many Methodists throughout the South were ignorant of and antagonistic toward the conclusions of scientists is undeniable. This reality, though, did not go unrecognized—or unrued—by Methodists themselves. Leaders in the northern branch of the Methodist Episcopal Church lamented that, in spite of southern Methodist intellectuals like Henry Bidleman Bascom, Alexander Means, William Wightman, and Charles F. Deems, the "educational condition of the South is deplorable." They blamed themselves for the situation, saying the schism of 1844 had created a situation whereby "the mass of the people have been left . . . by the Churches in ignorance."

Fifteen years after Lee's surrender at Appomattox, religious leaders in the North pointed optimistically to the fact that the northern Methodist Episcopal Church had established 27 annual conferences in the South. They saw these conferences as a sign that the region might gain "moral strength" and be saved from its ignorance.[83] Dayton, Tennessee, was one of the places where the northern arm of the Methodist Church had taken up residency after the war, and many years later, two men who attended a northern Methodist Episcopal church in Dayton openly challenged Tennessee's anti-evolution laws: George Rappalyea and John Scopes.[84]

Put simply, it is not true that Methodists "never subscribed to a reasonable religion," as James Turner has surmised—or that in the wake of Darwin, Methodist leaders did not face the same intellectual crisis that other Protestant leaders faced after years of embracing and endorsing the idea that science was and could be a revelation of God's presence in the world. To take Methodist anti-intellectualism as a given, and to assume that American Methodists in the nineteenth century were unaffected by the growing debate over science and religion because they "played down . . . all matters of the intellect" is to miss important regional, educational, and philosophical differences between and among Methodists as the faith matured and expanded in the United States. More important, such assumptions deny historians an important means for understanding the process whereby religious denominations move—or attempt to move—from the margins to the body of the cultural and intellectual narrative in America.

[82]Two important books do take issue with the idea that evangelicals were uniformly antagonistic to evolution, although neither work is denominationally specific. They are David N. Livingstone's *Darwin's Forgotten Defenders: The Encounter between Evangelical Theology and Evolutionary Thought* (Grand Rapids, Mich.: Eerdmans, 1987), and Jon H. Roberts's *Darwin and the Divine in America: Protestant Intellectuals and Organic Evolution, 1859–1900* (Madison: University of Wisconsin Press, 1988).

[83]"Our Southern Field," *MQR* 62 (1880): 225, 228, 230.

[84]Edward J. Larson, *Summer for the Gods: The Scopes Trial and America's Continuing Debate over Science and Religion* (Cambridge, Mass.: Harvard University Press, 1997), 88, 91.