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The philosophy of science in late nineteenth century Southern Presbyterianism

Smith, Frank Joseph, Ph.D.

City University of New York, 1992

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4

THE PHILOSOPHY OF SCIENCE IN LATE NINETEENTH CENTURY SOUTHERN PRESBYTERIANISM

by

FRANK JOSEPH SMITH

A dissertation submitted to the Graduate Faculty in History in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York

1992

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This manuscript has been read and accepted for the Graduate Faculty in History in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

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Abstract

THE PHILOSOPHY OF SCIENCE IN LATE NINETEENTH CENTURY SOUTHERN PRESBYTERIANISM

by

FRANK JOSEPH SMITH

Adviser: Professor Hans Trefousse

This dissertation explores the tremendous interest in science which characterized Southern Presbyterianism in the period from 1861 (which marked the formation of the Southern Presbyterian Church) to 1900.

This fascination was manifest in a variety of ways: much discussion of natural science and the discoveries thereof; the relationship between science and religion; and the viewing of all of life--including church life and theology--in a scientific way. Darwinism helped to shatter the confidence that churchmen had long displayed with regard to science: no longer could men of science be counted on to foster belief in the Bible or to use their discoveries to reenforce Scriptural teachings. With the collapse of the traditional natural theology, a new apologetic had to be forged, one which was more philosophical and sophisticated and which approximated what would in the twentieth century be known as presuppositionalism.

The challenge of James Woodrow--a Calvinist who came

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gradually to believe in a form of evolution--threatened the church with schism. His views were eventually repudiated, and he was driven from his teaching post at Columbia Theological Seminary, though he retained his ministerial credentials.

Woodrow's antagonists--particularly John Lafayette Girardeau and Robert Lewis Dabney--helped to sharpen the definition of that which constitutes genuine science and to acquire a more acceptable understanding of how does one know something scientifically.

The dissertation also relates how scientific thinking affected other subject matters of discussion--from egalitarianism to doctrine, from civilization to worship.

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PREFACE

War. Conflict. Clash of ideals. Challenges to the faith. Increasing technological knowledge and industrialism. Upset of social institutions. The Southern Presbyterian Church was born in 1861 into a world that was turning upside down.

This dissertation is an exploration of how these Calvinists from Dixie dealt with one broad area of challenge to their Christianity, viz., science. Included here is documentation that science not only was a topic of great interest, but that indeed the very way these churchmen approached life, ecclesiastical issues, and theology was largely informed and influenced by their views on science.

Southern Presbyterianism, of course, was not only its own world. It was also a world within a world, and it shared many values and presuppositions with much of American Protestantism. The unique approach and concerns of the Southern Presbyterians will be this book's primary focus. But this will enable it to understand some of the concerns of American Protestantism as a whole, as well as to consider the challenge of unbelief, particularly from Europe.

A City College of New York professor over three decades ago took note of the fact that there was a need for "a comprehensive and scholarly history and analysis of those [evangelical] churches during the period of the [evolution]

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controversy."[1] Our hope is that we have at least begun to meet this need with regard to the Southern Presbyterian Church; and that we have done so by our dealing with evolution in the ecclesiastical context in which science as a whole was of tremendous importance.

As one historian wrote concerning his own doctoral dissertation, "The written sources of Presbyterian history--thanks to the emphasis placed by Presbyterians upon education and to their love of verbal expression--are almost discouragingly extensive."[2] The same wealth of material among Southern Presbyterians has been a difficulty for this author, too. Accordingly, in addition to numerous unpublished documents, he has had to confine himself largely to several written primary sources, especially the Southern Presbyterian Review, the Christian Observer, and the Presbyterian Quarterly. These three publications were premier in the church for information and representative writings. The Review was widely recognized for its scholarliness, both in and out of the denomination; and after its demise (in large measure because of the evolution controversy) the Quarterly took its place. The Observer was by far the circulation

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[1]Joseph A. Borome, "The Evolution Controversy," in Donald Sheehan and Harold C. Syrett, eds., Essays in American Historiography: Papers Presented in Honor of Allan Nevins (New York: Columbia University Press, 1960), 190.

[2]Lewis G. Vander Velde, The Presbyterian Churches and the Federal Union, 1861-1869 (Cambridge: Harvard University Press, 1932), vii.

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leader of the popular church press[3]; and it had the added advantage of having a number of subscribers and contributors from above the Mason-Dixon line. The other periodicals reflected the same sentiments as found in these major magazines.

I wish at this time to express my appreciation to my advisor, Professor Hans Trefousse, who has never ceased to cheer me on in my quest for the Ph. D. Thanks are also due to the first reader, Professor Alan Brinkley, and the second reader, Professor James Jacob, whose course inspired a research paper which served as the basis for this present project. A special note of gratitude must also go to Dr. Harold Parker, professor emeritus of Western State College, Gunnison, Colorado, for having read much of the original manuscript. All of these gentlemen gave graciously of their time and made helpful suggestions in order to improve the final product. Any remaining defects, of course, are completely my responsibility.

I am grateful for the help I received from the staff at

---

[3]For confirmation of this, see "Southern Religious Papers," Christian Observer (Literary & Miscellaneous), Vol. 49, n. 28 (July 13, 1870), 2, in which the following subscription figures were given: Central Presbyterian, 3300; North Carolina Presbyterian, 3000; Southern Presbyterian, 5200; Southwestern Presbyterian, about 1500; Christian Observer, 8400. The point of the article was to take alarm at the very low percentage of subscribers to Roman Catholic publications in Southern states in relation to that church's membership figures (1.5%, in comparison to 27% for Southern Presbyterians): "What will be the future of this country if Rome should ever obtain the immense supremacy for which she is so earnestly struggling?"

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the archives in Montreat, North Carolina, who were more than gracious in putting up with me for a whole month in the summer of 1990: Mr. William Bynum, Mrs. Diana Ruby Sanderson and Mrs. Deborah Cribb-Bagwell deserve special mention. The South Caroliniana Library in Columbia also graciously provided useful information (especially Mrs. Laura Costello), as did Reformed Theological Seminary in Jackson, Mississippi, whose librarian, the Rev. Tom Reid, is a long-time friend and former seminary roommate. Without the kind assistance of the secretarial services personnel--and particularly Mrs. Nancy Girardi--at Iona College, where I have been an adjunct professor while completing this dissertation, I don't know how I would have been able to put it in its present form. The librarians at Iona, especially Miss Adrienne Franco and Mr. Anthony Todman, have been invaluable in their helping me to put the finishing touches on this work. Gratitude must also be expressed to Mrs. Michael D. Fryga of Columbia, South Carolina, a relative of John Lafayette Girardeau, one of the major players in this story, for supplying relevant documents.

My family also deserves a mention. I am sure that my parents never thought, when I was growing up, that they would have to put up with my being enrolled in countless years of graduate school. I trust that their patience has not been too sorely tried, and that they, too, can rejoice in the completion of this academic degree.

During my studies at City University of New York, I have

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been Senior Pastor of Affirmation Presbyterian Church in America, in Westchester County, New York. I am grateful for the congregation's understanding and its willingness to see me pursue this goal.

Finally, I would be remiss if I did not express my thanks to the One from whom all blessings flow.

--Frank J. Smith
Somers, New York

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INTRODUCTION

A. BRIEF HISTORY OF THE PRESBYTERIAN CHURCH IN THE U. S.

1. Calvinistic and Scottish Roots

Presbyterianism traces its roots historically to the time of the Protestant Reformation. Martin Luther had rediscovered the Scriptural teaching of how a guilty sinner could get right with God. "Salvation through grace alone" and "justification by faith alone"[1] became watchwords of the Lutheran reform. The doctrine of the priesthood of all believers underscored the gracious character of salvation, as well as undercut the hierarchical structure of the medieval world.

The Reformed faith which Presbyterians claim as their own built on this Lutheran foundation and expanded it. John Calvin, the great systematizer and perpetuator of the Reformation, promulgated the theology which serves as the basis of Presbyterian belief.

Through his voluminous writings--including commentaries on almost every book of the Bible and his famous Institutes of the Christian Religion--and his efforts to transform Geneva into a model city, this Frenchman changed the course of history. The glory of God drove the Calvinistic set of

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[1]Two key Latin phrases were sola gratia and sola fide.

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beliefs. Its emphasis was on His sovereignty, both absolutely (foreordaining whatsoever comes to pass--including individual salvation or condemnation) and ethically (complete submission to His will as revealed in the Word of God written--holy, inerrant, inspired, the only infallible rule of faith and practice).

The Reformed branch of the Reformation spread across Europe--through most of the Swiss cantons, to the Huguenots of France, to the Waldensians of the Italian alps, to Hungary, to Poland, to southern Germany, to Holland, to England, and to Scotland. Much of the Calvinistic influence in the British Isles came about because of Marian exiles returning from Geneva after the demise of Bloody Mary in 1563. Among these pilgrims was John Knox, a fiery trumpeter of God's reign and righteousness.

Knox had been captured by the French after a successful siege of a Scottish castle, and forced to serve for nineteen months as a galley slave. After release, he was a preacher in northern England before having to flee to the Continent. Knox's burning desire was for his native land to come to the Saviour and be reformed according to His Word: "Give me Scotland, or I die!" is a prayer that reflected his sentiments and those of many presbyters through the centuries.[2]

---

[2]See Richard L. Greaves, Theology and Revolution in the Scottish Reformation: Studies in the Thought of John Knox (Grand Rapids, Mich.: Christian University Press, 1980), for a stimulating discussion of some aspects of Knox's work and thought.

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The reformation which the Calvinists desired was total conformity to the Bible. Sola scriptura, which Luther and his followers claimed as a phrase to describe their own efforts, came to have special significance in Reformed (i.e., Calvinistic) thought. Unlike the Lutherans, who utilized the phrase basically only with regard to soteriology, the Calvinists were far more radical in applying it to the Church's life, government, worship, and work. Whereas Luther was content to shape liturgy or polity in accordance with the Roman Catholic notion that whatever is not forbidden is allowed, Calvin held to the view that, ecclesiastically, whatever is not commanded in Scripture is forbidden.

Of all places where this idea took hold, perhaps none epitomized it better than Scotland. A rugged land which offered more than its share of martyrs to the cause of reformation, Scotland was blessed with men like Knox who were unwilling to compromise their convictions regarding the Lordship of Christ over His Church or the implications of His rule for the country as a whole.

One of the keys to this reform was church government. Calvin had pioneered in the redeployment of the office of elder, and the Reformed faith in several nations put this office into place. The Greek word for elder is "presbyter."[3] The reformed Kirk of Scotland was so identified with its polity by elders that it and its derivative churches are known

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[3]Presbuteros.

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by the name "Presbyterian."

Scotland developed a graduated system of church courts, too. There is evidence that regional (synod) and national (general assembly) courts perpetuated historic entities. Nevertheless, their composition radically changed and therefore so did their dynamics: instead of being filled with bishops appointed by papal authority, they were now run by elders elected by the people. Further, the presbytery, the regional body between synod and the session (which governed the congregation), came into greater play, especially through the efforts of Andrew Melville, who picked up the mantle of Knox after his death.

The congregation approved also the pastor. The people thus had a say in who their spiritual leaders would be--whether "teaching elders" (ministers) or "ruling elders" ("lay" leaders).

Liturgically, these Presbyterians applied the regulative principle of worship with rigor. Commitment to do in worship only what God required had led all the Reformed churches to sing the psalms, to emphasize the preaching of the Word, to retain only baptism and Lord's Supper as sacraments, to abolish musical instrumentation and in general to streamline the service in accord with the New Testament principle of simplicity. But the Scots, with consistency, rejected all man-made holydays: only the weekly Sabbath (along with, on occasion, days of fasting and of thanksgiving) was to have any

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religious significance.[4]

Knox's courageous withstanding of a wily monarch and her efforts to re-Catholicize Scotland, and his fearless thunderings against the "monstrous regiment of women," helped to preserve the country for the Presbyterian faith.[5] However, even after the deposition of Mary Queen of Scots, the nation would face serious challenges to its religious convictions, particularly in the seventeenth century.

Although Elizabeth I had enough sense basically to leave the Scots alone, her successors in London were not so judicious. James I of England--who was also James VI of Scotland--realized the threat of Presbyterianism to the security of all royalty. "No bishop, no king" was the aphorism he coined to express his hostility to decentralized church government.

James I was largely successful in suppressing the Puritans of England and in dividing Presbyterian forces in Scotland. His son, Charles I, wanted to go even farther. With the blessing and encouragement of the king, Laud, the Archbishop of Canterbury, attempted to impose on the Scots not only a hierarchical structure of church government, but also

---

[4]Kevin Reed, "John Knox and the Reformation of Worship in the Scottish Reformation," in Frank J. Smith and David C. Lachman, eds., Worship in the Presence of God (Greenville, S. C.: Greenville Seminary Press, 1992), 301-40.

[5]For a nice account of this famed Reformer's battles, see W. Stanford Reid, Trumpeter of God: A Biography of John Knox (New York: Charles Scribner's Sons, 1974).

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the Anglican Prayer Book. The resulting revolt started a chain of events that drove Charles to call Parliament back into session in 1640 after an eleven year hiatus and that eventually cost him his crown and his head.

The Long Parliament, as it came to be known, refused to be prorogued and forced concessions from King Charles. After he fled London and raised an army to fight the Parliamentary hosts, Parliament entered into the Solemn League and Covenant in 1643 with Scotland. In exchange for Scottish troops to wage war against the Royalists, the English agreed to call for a special assembly to formulate standards that would guarantee uniformity throughout the three kingdoms of England, Scotland, and Ireland with regard to doctrine, worship, and polity. The Westminster Assembly produced a set of documents known as the Westminster Standards, which included the Westminster Confession of Faith, Larger and Shorter Catechisms, The Directory for the Publick Worship of God, and The Form of Presbyterial Church-Government.

Called the greatest confessional creed ever written, the Westminster Confession of Faith was quickly adopted by the Scottish Parliament and by the Kirk's General Assembly. It, along with the Catechisms, has been the standard for Presbyterianism ever since.

The Confession of Faith, recognizing the importance of establishing a basis of authority, starts with a chapter on the Word of God. It then proceeds to deal with the doctrine

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of God, including the Trinity and His eternal decrees. There is no shrinking from the implications of predestination with regard to election and reprobation. Further chapters speak of the Creation, of Providence, of man's fall into sin, of God's covenant with man, of Christ the Mediator, and of various doctrines of soteriology (including justification by faith alone). Other chapters address such issues as the Law of God, Christian liberty and liberty of conscience, the worship of God and observance of the Sabbath, oaths and vows, the civil magistrate, divorce, the Church and the sacraments, and the final judgment.

Both the Larger and Shorter Catechisms begin by setting forth the basic beliefs of the Church with regard to the Bible, God, and salvation. They then touch upon such matters as the Ten Commandments, the sacraments, and prayer.

Questions and answers from the Shorter Catechism especially have become classic expressions of the faith.

> "What is the chief end of man?" "Man's chief end is to glorify God and to enjoy him forever."
>
> "What rule hath God given to direct us how we may glorify and enjoy him?" "The word of God, which is contained in the Scriptures of the Old and New Testaments, is the only rule to direct us how we may glorify and enjoy him."
>
> "What do the Scriptures principally teach?" "The Scriptures teach, what man is to believe concerning God, and what duty God requires of man."
>
> "What is God?" "God is a Spirit, infinite, eternal, and unchangeable, in his being, wisdom, power, holiness, justice, goodness, and truth."
>
> "What are the decrees of God?" "The decrees of God

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> are, his eternal purpose, according to the counsel of his will, whereby, for his own glory, he hath foreordained whatsoever comes to pass."
>
> "What is the work of creation?" "The work of creation is, God's making all things of nothing, by the word of his power, in the space of six days, and all very good."
>
> "What is sin?" "Sin is any want of conformity unto, or transgression of, the law of God."
>
> "Who is the Redeemer of God's elect?" "The only Redeemer of God's elect is the Lord Jesus Christ, who, being the eternal Son of God, became man, and so was, and continueth to be, God and man, in two distinct natures, and one person, forever."
>
> "What is justification?" "Justification is an act of God's free grace, wherein he pardoneth all our sins, and accepteth us as righteous in his sight, only for the righteousness of Christ, imputed to us, and received by faith alone."[6]

Catechizing was not merely a church affair--the father of a household was expected to inculcate these doctrines to those under his care. The repetition of these truths through many generations fostered a spiritual strength among Scottish Presbyterians.[7]

Such spiritual fortitude was necessary to sustain this people through the many trials they would experience throughout most of the remainder of the seventeenth century. The restoration of the Stuart line to the throne of England meant repression, persecution, and martyrdom. An estimated

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[6]Westminster Shorter Catechism, Q/A 1-4, 7, 9, 14, 21, 33.

[7]It has been said that the humble farmer who was catechized knew more genuine doctrine than many of the theologians of his day--an observation that would apply with even greater truth to most contemporary theologians.

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18,000 Scotsmen--men, women, and children--either were put to death or were banished during the "Killing Times" under Charles II and James II. The Covenanters who would not approve of a submission of the Church to the State paid dearly for their testimony for the crown rights of King Jesus.

The accession of William and Mary to the throne in the Glorious Revolution brought an end to the bloodshed, and the Settlement of 1690 formalized the understanding between the crown and the Kirk. Not all the Scots could go along with that settlement, on principial grounds; thus the stage was set for internal ecclesiastical controversy and finally division and separation.

This book cannot explore all the divergent branches of Scottish church history.[8] Suffice it to say that virtually all of the different churches that formed in Scotland were transported to America, and that each played a role in defining Presbyterianism in this country.

2. Development of American Presbyterianism

The Calvinistic faith was represented in the New World from the very beginning of permanent English colonization. The original settlers of Jamestown apparently were of the Puritan persuasion, though loyal members of the Church of

---

[8]For a recent overview of Scottish church history, see J. H. S. Burleigh, A Church History of Scotland (London: Oxford University Press, 1960).

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England.

A closer expression to the Reformed theology of Presbyterianism may be found in the Pilgrims and Puritans of New England and in the Dutch Reformed who settled New Amsterdam.

The Pilgrims were Separatists. Believing the Church of England to be apostate, they felt they had no choice but to separate from its organization. Greatly persecuted and hounded in England and in Holland to which many of them fled, a small company of them sailed to Plymouth Colony in the Mayflower in 1620. Ten years later, Governor John Winthrop and five shiploads of Puritan colonists founded Massachusetts Bay Colony. The Puritans were non-separatists: even though they concurred with the judgment that the Anglican communion was in great need of spiritual reviving, they worked to purify the church from within.

Both of these groups shared much in common, and they eventually joined forces. Both were congregational in polity. Both were Calvinistic in theology. Both believed in simple, unadorned worship.

There would be tensions between these Congregationalists and their Presbyterian brethren, especially with regard to the authority of the broader church: was the advice of an association of churches non-binding and non-compulsive; or did a presbytery have power to compel obedience to its injunctions? But on the great majority of issues,

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Congregationalists and Presbyterians were one--whether considering opposition to hierarchy in church government, or the basic belief in predestination and other tenets of Calvinism.

Many Congregationalists would find their way into the Presbyterian Church, especially as they emigrated from New England to other American colonies. Presbyterianism also absorbed many from Dutch Reformed and French Huegenot descent, and a smattering from other nations as well.

The Presbyterian Church as such got its start in America largely through the labors of Francis Makemie, a Scotch-Irish preacher who ministered first along Maryland's Eastern Shore starting in 1683. By 1706, there were enough churches to form the Presbytery of Philadelphia. Eleven years later, a synod was formed, comprised of three presbyteries.[9]

Significantly, the synod meeting in 1729 dealt with the question of theological subscription to the Westminster Standards. The result of the discussions was the Adopting Act, which expected full compliance of the minister with the system of doctrine contained in the standard documents, but which also allowed a man to state exceptions which the presbytery was to judge as to whether they struck at the

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[9]Sydney E. Ahlstrom, A Religious History of the American People (New Haven and London: Yale Univ. Press, 1972), 268.

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vitals of the religious system.[10]

In the face of confusion regarding thelogical subscription, Synod interpreted and reaffirmed the Adopting Act in 1737. But the coming earthquake was only beginning to be felt, as the Great Awakening shook the fledging Presbyterian Church to its core and ultimately caused a great schism in 1741.

Central to the disputes that led to the split between Old Side and New Side were two issues: the question of a converted ministry (and the issue of what to do when revivalists were convinced that the resident pastor was not truly "born again") and the use of "new measures" in evangelism and worship.[11]

After the two sides could not walk together and went their separate ways, the New Side grew rapidly and soon had many more members than the traditionalist group. This swift growth was especially seen on the frontier, where the emotional preaching and subjective worship were appealing to the settlers.[12]

After seventeen years of division, the two churches reached a settlement which led to official reunion. Part of this 1758 accord, however, allowed for "elective affinity"

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[10]For a full discussion of this history, see Charles Hodge, The Constitutional History of the Presbyterian Church in the United States of America (1851; rpt. Columbus, N. J.: American Presbyterian Press, 1983).

[11]Ibid.

[12]Ibid.

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presbyteries, by which Old Side and New Side judicatories could overlap and a minister could be ordained in whichever one he chose.[13]

Particularly after this merger, the Presbyterian Church spread even more quickly. Its strength was in the middle colonies, but New Side preachers such as Samuel Davies and Samuel Doak carried the Calvinist message to Virginia and to the hinterlands beyond. Davies in particular was one of those Dissenters who successfully contended for the right to preach in the Old Dominion without having to submit to civil government control. This struggle for "religious liberty" was to have tremendous implications for Virginia internally and in terms of her later breaking away from British rule.[14]

The other stronghold in the South for the Presbyterian faith was in the Piedmont of the Carolinas, especially North Carolina. Many Scotch-Irish settled there. This hardy stock proved to be stalwart in the coming Revolution against the English.[15]

Most Presbyterians were Patriots, and they supplied many of the troops for the American side. It has been said that as many as nine-tenths of the officers in Washington's army were Presbyterian elders. The only clergyman to sign the

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[13]Ibid.

[14]See Ernest Trice Thompson, Presbyterians in the South, Vol. I: 1607-1861 (Richmond, Va.: John Knox Press, 1963), 53-57, 96.

[15]See ibid., 88-93, 96.

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Declaration of Independence was John Witherspoon, a Presbyterian originally from Scotland, who was President of the College of New Jersey (later Princeton). The member of Parliament who scornfully remarked that the American colonies had run off with a Presbyterian parson undoubtedly had Witherspoon in mind; but it is also true that numerous preachers from the Presbyterian Church were actively involved in the Revolution.

The creation of a new nation and ultimately a new constitution had a profound impact upon the churches. At the same time as the Constitutional Convention was meeting in 1787, the highest American Presbyterian judicatory was in session down the street in Philadelphia. The 1788 meeting produced agreement on a Plan of Government and Discipline, a Directory of Public Worship, and a distinctively American version of the Westminster Confession of Faith. Four synods would now comprise a general assembly, and there were at this time sixteen presbyteries.[16]

Presbyterianism continued to show vitality throughout the early national period, bolstered especially by two developments. First, the Second Great Awakening stimulated growth, particularly on the frontier. The Baptists and Methodists, who were not as inhibited as the Presbyterians in their worship nor as concerned for a formally trained ministry, were propelled at this time to their place of

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[16]Ahlstrom, A Religious History, 375.

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dominance. But the Presbyterians made significant inroads as well.

Second, a Plan of Union was effected with the Congregationalists in 1801, whereby federated-style churches would be planted in the new Northwest Territories. As already noted, the Congregationalists were dominant in New England, with the Presbyterians holding the middle states and the South for the Calvinist faith. Because of the common doctrinal heritage and even the similarity in terms of church polity, this Plan was thought to be of great mutual benefit to all concerned.

Within a generation, problems arose with regard to this arrangement. The early nineteenth century saw an increasing awareness of denominational distinctives, including issues of polity. Far more serious was the fact that many from New England no longer held to Calvinist orthodoxy, and that representatives from these hybrid churches did not have to subscribe to the Westminster Standards in order to be seated in Presbyterian church courts.

Controversy over such theological matters as original sin and the meaning of the atonement led to the second major rupture in American Presbyterian history, the division into Old School and New School churches. The 1837 General Assembly declared the Plan of Union to be unconstitutional and on that basis exscinded almost half of the denomination--four out of nine synods were cut off.

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Generally speaking, the New Schoolmen were "liberals," and were quite tolerant of various heterodoxies. This was true of much of the Southern wing of the new church, although at least some of those from Dixie who cast in their lot with this group did so because they viewed the excision as being a violation of the ecclesiastical constitution.[17]

The matter of slavery, despite valiant attempts, could not ultimately be avoided in the Presbyterian Church. The New School's abolitionist position in 1857 caused its Southerners to leave to form the United Synod of the South, a body which would later merge with the Southern Presbyterian Church. But it was the coming of war which decisively broke the main body of Presbyterianism into Northern and Southern parts.

3. The Formation of the Southern Presbyterian Church

When commissioners gathered for the 1861 Old School General Assembly in Philadelphia, there was hope that the Church could transcend political boundaries as well as the warfare just then starting. Southern presbyters looked to Charles Hodge and the other conservative stalwarts of Princeton Theological Seminary to prevent any measures from dividing the denomination.

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[17]For a full discussion of the New School history, see Edward D. Morris, The Presbyterian Church New School, 1837-1869: An Historical Review (Columbus, Ohio: Champlin Press, 1905).

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But the introduction of motions designed to put the Church on record as being in favor of the Federal Union and passage of them by a Northern-dominated Assembly produced division. Approval of the Gardiner Spring Resolutions, named after the New York City minister who proposed them, guaranteed the withdrawal of 47 presbyteries in the Confederacy to form the Presbyterian Church in the Confederate States of America (PCCSA), after 1865 called the Presbyterian Church in the United States (PCUS) and informally known as the Southern Presbyterian Church.

The First General Assembly gathered at First Presbyterian Church in Augusta, Georgia, on December 4, 1861. One of the crucial tasks was to justify the existence of a new manifestation of the Church to a watching world. Noted theologian James Henley Thornwell, former President of the University of South Carolina and at the time Professor in Columbia Theological Seminary (located then in the state capital), was the major architect of an Address to be sent to all Churches of Christ around the world. This document demonstrated the rationale for separation from the Northern brethren, as well as positively set forth what would become Southern Presbyterian distinctives.

These Southern churchmen justified division on the basis of the fact that the General Assembly had intruded a political question into the domain of the Church. Or, to put it another way, that the Northerners had in ecclesiastical court exalted

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Caesar above Christ. The Address stated,

> The only conceivable condition . . . upon which the church of the North and of the South could remain together as one body, with any prospect of success, is the rigorous exclusion of the questions and passions of the forum [of political issues] from its hall of debate. This is what always ought to be done. The provinces of church and state are perfectly distinct, and one has not right to usurp the jurisdiction of the other. The state is a natural institute, founded in the constitution of man as moral and social, and designed to realize the idea of justice. It is the society of rights. The church is a supernatural institute, founded in the facts of redemption, and is designed to realize the idea of grace. It is the society of the redeemed. The state aims at social order; the church, at spiritual holiness. The state looks to the visible and outward; the church is concerned for the invisible and inward. The badge of the state's authority is the sword, by which it becomes a terror to evil-doers, and a praise to them that do well; the badge of the church is the keys by which it opens and shuts the kingdom of heaven, according as men are believing or impenitent. The power of the church is exclusively spiritual; that of the state includes the exercise of force. The constitution of the church is a divine revelation; the constitution of the state must be determined by human reason and the course of providential events.

The paper noted that the unconstitutional intrusion of political questions into the courts of the Church would not in and of itself be sufficient grounds for separation; but that "the consequence of these proceedings make them so offensive," for they open the door "for the worst passions of human nature in the deliberation of church courts."[18]

With regard to slavery, the Assembly declared,

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[18]Minutes of the First General Assembly, Presbyterian Church in the Confederate States of America, 51ff; cited in Morton H. Smith, Studies in Southern Presbyterian Theology (1962; rpt. Phillipsburg, N. J.; Presbyterian and Reformed Publishing, 1987), 38-39.

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> In the first place, we would have it distinctly understood that, in our ecclesiastical capacity, we are neither the friends nor the foes of slavery--that is to say, we have no commission either to propagate or abolish it. The policy of its existence or non-existence is a question which exclusively belongs to the state. We have no right, as a church, to enjoin it as a duty or condemn it as a sin. Our business is with the duties that spring from the relations--the duties of the master on the one hand, and of the slave on the other. . . .
>
> Is slavery, then, a sin?
>
> In answering this question, as a church, let it be distinctly borne in mind that the only rule of judgment is the written Word of God. The church knows nothing of the intuitions of reason, or the deductions of philosophy, except those reproduced in the sacred canon. She has a positive constitution in the Holy Scriptures, and has no right to utter a single syllable upon any subject, except as the Lord puts it into her mouth.[19]

The PCUS also at its inception demonstrated its commitment to missions. This interest was manifest in its view that the "Great Commission" as found in Matthew 28:19, 20, was

> the great end of her [the Church's] organization, and obedience to it as the indispensible condition of her Lord's promised presence, and as one great comprehensive object, a proper conception of whose vast magnitude and grandeur is the only thing which, in connection with the love of Christ, can ever sufficiently arouse her energies and develop her resources so as to cause her to carry on, with the vigor and efficiency which true fealty to her Lord demands, those other agencies necessary to her internal growth and home prosperity.[20]

But it was also evident in the adoption of the Thornwellian position with regard to executive committees rather than

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[19]Ibid., 39.

[20]Ibid., 41.

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boards and agencies to carry on the work of the Body of Christ.

Thornwell had battled with Hodge on the floor of the united Assembly several years earlier over the propriety of having semi-autonomous boards to do the work of the Church. The South Carolinian, although losing the vote, had, in the eyes of many, won the argument. With the formation of a conservative Southern denomination, his views could now be implemented. The Assembly averred:

> The only thing that will be at all peculiar to us is the manner in which we shall attempt to discharge our duty. In almost every department of labor, except the pastoral care of congregations, it has been usual for the church to resort to societies more or less closely connected with itself, and yet logically and really distinct. It is our purpose to rely upon the regular organs of our government, and executive agencies directly and immediately responsible to them. We wish to make the church not merely a superintendent, but an agent. We wish to develop the idea that the congregation of believers, as visibly organized, is the very society or corporation which is divinely called to do the work of the Lord. We shall therefore endavor to do what has never yet been adequately done--bring out the energies of our Presbyterian system of government. From the session to the Assembly we shall strive to enlist all of our courts, as courts, in the department of Christian effort. We are not ashamed to confess that we are intensely Presbyterian. We embrace all other denominations in the arms of Christian fellowship and love, but our own scheme of government we humbly believe to be according to the pattern shown in the mount, and, by God's grace, we propose to put its efficiency to the test.[21]

At its inception, the Southern Presbyterian Church thus manifested a deep committment to its Calvinistic and Puritan

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[21]Ibid., 40.

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roots. In particular, it was determined to display the doctrine that came to be known as the "spirituality of the Church"--that political and social questions should not be allowed to disturb the peace of Zion. And, concommittant with that spirituality, the PCUS wanted the Church as the Church to be totally organized for and involved in the work of ministry which King Jesus had given to His Bride.

These characteristics would distinguish Southern Presbyterianism as this denomination took its place among the Churches of the world. But they would also play a role in the subsequent history of the PCUS, and would even affect various responses within it to the philosophy of science.

4. Progress of the Southern Presbyterian Church

Being born in a time of war and great social upheaval was difficult for the fledgling denomination. Invading armies prevented many churches from having proper pastoral services: to cite just one famous example, Benjamin Morgan Palmer, the first moderator of the General Assembly, was forced to flee his pulpit at First Presbyterian Church of New Orleans when Union troops captured that city in 1862. Congregations saw their buildings used for other purposes than divine worship, or used by rival Northern-based denominations. Many of the young men were killed or incapacitated, thus depleting the ranks of actual and potential ministers. Economic chaos

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caused poverty among the people and therefore among the churches. As the War came to what was from the Southern perspective an unsuccessful conclusion, the South experienced disillusionment with the churchmen who helped lead the drive to secession and the fight for the Confederacy.

Despite all these obstacles, the Southern Presbyterian Church grew. One reason was the series of spiritual revivals that swept through the Confederate armies and brought countless thousands of conversions, at least some of whom joined the Presbyterian Church.[22]

Another reason was the addition of members through ecclesiastical mergers. During the War, the Independent Presbyterian Church (located in the Carolinas) and United Synod of the South (the group which left the New School Presbyterian Assembly after its 1857 anti-slavery declaration) united with the PCUS.[23] Immediately after the War, most of the Synods of Kentucky and Missouri left the Northern Presbyterian Church because of abolitionist resolutions and political ones regarding the "rebellion" which the General Assembly had passed. These border state synods soon joined

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[22]For a full account of these revivals, especially in the Army of Northern Virginia, see J. William Jones, Christ in the Camp (rpt. Harrisonburg, Va.: Sprinkle Publications, 1986).

[23]"The Independent Presbyterian Church and Reunion in the South, 1813-1863," in Harold M. Parker, Jr., Studies in Southern Presbyterian History (Gunnison, Colorado: B. and B. Printers, 1979), 57-58; and Harold M. Parker, Jr., The United Synod of the South: The Southern New School Presbyterian Church (New York; Westport, Ct.: Greenwood Press, 1988).

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with their Southern brethren, bringing many churches and communicants with them.[24] Several churches in Maryland withdrew from the Northern Church and formed the Presbytery of Patapsco (later Potomac), which also identified with the Southern Presbyterians.[25] And at least one presbytery of the Associate Reformed Synod of the South left its denomination for the PCUS.[26]

Much of the pioneering growth came on the "frontier"--whether in the virtual wilderness of Florida, or the wilds of the Southwest (particularly Texas). The interest in missions led not only to overseas ventures, but also to a desire to reach out to the entire nation with the gospel of Christ and with the peculiar Southern Presbyterian views of the spirituality of the Church. As a matter of fact, the selection by the PCCSA in 1865 of an official name that was national in scope rather than regional is indicative of the intention of the denomination to affect the whole of the United States.

Nevertheless, growth did not keep up with the Methodists and Baptists. Furthermore, rivalry with the Northern Presbyterians threatened the Southern Church in border states

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[24]"The Synod of Kentucky: From Old School Assembly to the Southern Church," in Parker, Studies in Southern Presbyterian History, 1-23.

[25]"Much Wealth and Intelligence: The Presbytery of Patapsco," in ibid., 24-38.

[26]"The Kentucky Presbytery of the Associate Reformed Presbyterian Church," in ibid., 79-96.

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such as Kentucky and Missouri and in relatively new areas such as Florida and Texas: inadequate salaries just could not compete with Yankee opulence.

Some of the issues troubling the Church during the late 1800's included fraternal relations with the North. A merger in 1869 brought the Old School and New School together and put pressure on the Southern Presbyterians to put the past behind them and join with their counterparts. Various approaches were made, especially in the 1880's, with a view toward eventual union; but despite cordial expressions of mutual affection, healing the breach proved to be an insuperable obstacle.[27]

Another issue was that of ministerial qualifications. Presbyterians had always been known for being sticklers for an educated ministry, and in the increasingly technological age many thought that highly trained pastors were only more needed. However, many believed that "guild" requirements such as a theological treatise written in Latin were discouraging to young men who might otherwise aspire to the ministry. Paltry salaries that might be construed to show a society's lack of respect for pastors did not help the Southern Church to supply its pulpits.[28]

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[27]See Thompson, Presbyterians in the South, Vol. I, 223-64.

[28]See Diana Louise Ruby Sanderson, "'Laborers Unto the Harvest': Becoming a Minister in the Presbyterian Church in the United States," an unpublished master's thesis at Louisiana State University, 1989.

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Besides the scientific questions that will be discussed at length, the other major issue that stirred controversy was the matter of race. How the church should relate to the freedman was a perpetual source of tension in the Southern Presbyterian Church.[29]

B. Intellectual Climate

1. Egalitariansism

Students of American history differ greatly as to whether or not the Age of Jackson was really a triumph for the common man and democracy. But whatever the reality, the rhetoric clearly indicated rabid interest in and approval of the democratic ideal.

Besides the notion of popular government, democracy was noted for its optimistic view of man. This ideal goes directly contrary, of course, to the Calvinistic belief of man's total depravity and to the political philosophical consequences thereof which led the Founding Fathers to reject democracy in favor of a republican form of government.

Southerners were in somewhat of a dilemma. Their native son, Thomas Jefferson, had written the Declaration of Independence with its radical commitment to liberty; and he would later champion the French Revolution. Yet these

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[29]See Thompson, op. cit., 195-222.

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equalitarian views were those which the South came to reject, not only because of the threat to the region's way of life, but also because of their un-Biblical character.

"Freedom's ferment" led to all kinds of radical proposals in the nineteenth century, including socialist-style utopias and universal public education. But it was abolitionism which posed the greatest immediate challenge to Dixie.

Obviously, a system which broke down all societal distinctions would also soon break down the whole fabric of a society which practiced slavery. As the Northern states flexed their economic and industrial muscle and experienced a population explosion--thanks in large part to wide-scale immigration--the South lagged behind. Political turmoil wracked the nation as the Republican Party called for "free soil, free men, and free labor."

Slavery was the occasion for fraticidal warfare, but the cause was two differing conceptions of freedom and of society itself. The South tried to buck the rising tide of the abolitionists' view of liberty.

Part of the egalitarian impulse went into the feminist movement. Surely it is no accident that feminists championed abolitionism, for they saw their essential agreement with the abolitionist mindset.

Southern Presbyterians were in the forefront of the fight against egalitarianism. James Henley Thornwell, personal friend of John C. Calhoun, early set forth the pro-slavery

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position. Robert Lewis Dabney, professor at Union Theological Seminary (then at Hampden-Sidney and later in Richmond, Virginia), wrote his apologetic for his "murdered mother, [the Commonwealth of] Virginia" at the conclusion of the War.[30] In it, he castigated the Yankees for engaging in the slave trade and thus creating the society in which the South found itself; detailed the legal status of slavery in the United States prior to the War; gave a history of emancipation; dealt with Old Testament, New Testament, and ethical arguments regarding slavery; and wrote on the economical effects of slavery. In a section entitled, "Abolitionism is Jacobinism," Dabney maintained,

> If men are by nature sovereign and independent, and mechanically equal in rights, and if allegiance is founded solely on expressed or implied consent, then not only slavery, but every involuntary restraint imposed on a person or a class not convicted of crime, and every difference of franchise among the members of civil society, is a glaring wrong. Such are the premises of abolition. Obviously, then, the only just or free government is one where all franchises are absolutelry equal to all sexes and conditions, where every office is directly elective, and where no magistrate has any power not expressly assented to by the popular will. For if inequalities of franchise may be justified by differences of character and condition, of course a still wider difference of these justify so wide an inequality of rights as that between the master and servant. Your true abolitionist is then, of course, a Red-Republican, a Jacobin. Is not this strikingly illustrated by the fact, that the first wholesale aboliiton in the world was that enacted for the French colonies by

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[30]Robert L. Dabney, A Defense of Virginia, [and through her, of the South,] in Recent and Pending Contests Against the Sectional Party (1867; rpt. Harrisonburg, Va.: Sprinkle Publications, 1977), 5.

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> the frantic democrats of the 'Reign of Terror?' And this hint may serve to explain to the aristocracy of Great Britain the popularity of the authoress of 'Uncle Tom's Cabin,' and of her slanderous book, among the masses there. It was not because Britain was so exempt from cases of social hardship and oppression at home, that its people had all its virtuous sympathies at leisure and unoccupied, to pour forth upon the imaginary wrongs of Uncle Tom: but it was because the Jacobinism of the abolitionist theory awakened an echo in the hearts of the lower classes, still seething with the recent upheaval of 1848. The community of agrarian sympathies made itself felt. The noble Lords and Ladies, who patronized the authoress and her book, were industriously fanning the very fires which are destined to consume their vested privileges.[31]

Dabney also argued vehemently against the women's movement. In an article entitled "Women's Rights Women," he wrote:

> . . . A few years ago this movement was the especial hobby of a few old women of both sexes, who made themselves the laughing-stock of all sane people by the annual ventilation of their crotchet. Their only recruits were a few of the unfortunates whom nature or fortune had debarred from those triumphs and enjoyments which are the natural ambition of the sex, and who adopted this agitation as the most feasible mode of expressing their spitefulness against the successful competitors. To-day the movement has assumed such dimensions that it challenges the attention of every thoughtful mind.[32]

Dabney noted that the

> . . . very axioms of American politics now are, that "all men are by nature equal," that all are inalienably "entitled to liberty and the pursuit of happiness," and that "the only just foundation of

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[31]Ibid., 262-63.

[32]Robert L. Dabney, Discussions, C. R. Vaughan, ed. (1897; rpt. Harrisonburg, Va.: Sprinkle Publications, 1979), Vol. IV, 489.

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> government is in the consent of the governed." There was a sense in which our fathers propounded these statements; but it is not the one in which they are now held by Americans. Our recent doctors of political science have retained these formularies of words as convenient masks under which to circulate a set of totally different, and indeed antagonistic notions; and they have succeeded perfectly. The new meanings of which the "Whigs" of 1776 never dreamed are now the current ones. Those wise statesmen meant to teach that all men are morally equal in the sense of the Golden Rule: that while individual traits, rights, and duties vary widely in the different orders of political society, these different rights all have some moral basis; that the inferior has the same moral title (that of a common humanity and common relation to a benignant Heavenly Father) to have his rights--the rights of an inferior--duly respected, which the superior has to claim that his very different rights shall be respected. The modern version is that there are no superiors or inferiors in society; that there is a mechanical equality; that all have specifically all the same rights; and that any other constitution is against natural justice. . . .[33]

The Southern Presbyterian Church was definitely anti-egalitarian.

2. An Age of Science

Ever since the sixteenth century, the Western world has had a fascination with science. The nineteenth century witnessed an even greater reverence for science and for the "scientist," a designation which was beginning to indicate a "profession" as distinguished from "amateurs" trained in other fields. The 1800's also were a time of discovery, inventions,

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[33]Ibid., 491-92.

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and technological developments.

Churchmen were not immune from this interest in scientific matters. Indeed, the Reformation gave much impetus to what is regarded as modern science. And in the nineteenth, churchmen participated enthusiastically in the scientific enterprise, viewing "natural theology" as an ally of the Christian faith.

3. Darwinism

Charles Darwin's publication of The Origin of Species in 1859, just prior to the specific time period under consideration, had a profound impact upon the world.

It was not that transmutation theories had not been propounded before Darwin. It was that now the world had gone through philosophical changes and was therefore ready to embrace such theories.

Among the philosophical changes were the acceptance of the Hegelian dialectic. No longer was there any such thing as absolute truth. Truth was now held to be constantly in flux. This mindset enabled man to think that the fixity of the species may be an outworn dogma.

The philosophy of science changed as well. Instead of the inductivism of Lord Bacon, speculation was accorded a special and essential role in the scientific endeavor.

Even the prevalence of democracy had an effect. Instead

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of believing in man having fallen from grace, democracy tended to say that a man was really a pretty good fellow who was, collectively if not individually, making progress on the road to perfection.

Darwinism affected science, but it also impacted all areas of society. In the new fields of social science, "Social Darwinism" was used to justify the new industrial order and the doctrine of the survival of the fittest.

But Darwinians formed a challenge to the Church and her traditional views regarding Creation, and, indeed, regarding the entire view of what constituted genuine science. It is this debate in Southern Presbyterianism which forms the bulk of this study.

4. Higher Criticism

By the nineteenth century, much of what had been a Christian Europe was spiritually burned out. This fact was especially relevant in Germany, where churchmen went in several different directions in reaction to the decline of the faith.

One direction was pietism, an ascetic withdrawal from the world and its corruptions. Another was rationalism.

Rationalism came to expression in a new view of Scripture. Proponents of "higher criticism" no longer regarded the Bible as the very Word of God, holy, inerrant,

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infallible, and inspired. Rather, it was regarded as an important collection of stories and accounts which man should evaluate according to rational principles to see what should be believed and obeyed and what should not be.

Higher criticism had very little direct effect on the Southern Presbyterian Church during the late nineteenth century, although there are some magazine articles which attack it. However, this German rationalism did affect the United States as a whole, and these views did become pervasive throughout the country.

5. Religious Movements

Unitarianism was a powerful force in New England. Through its radical fringe, including the Transcendalists, it sought to impose its beliefs on the entire nation, especially the South.

Horace Mann used his post as the first state commissioner of education to foster ideology directly contrary to the Calvinism of the Congregationalists. During the war that divided North and South and during Reconstruction, Unitarianism formed a direct challenge to the Protestants in the South.

Skepticism was on the rise in the nineteenth century, no doubt fostered by Darwinism.

The Southerners felt pressure from Roman Catholicism.

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Papists were relatively few in number in Dixie, except in Louisiana and Texas. But the numerous articles denouncing Romanism in the popular Southern Presbyterian magazines demonstrate the fact that there was very much of a perceived threat.

Much of the concern was because of the increasing fascination with ritualism and "high church" thinking. The simplicity of Puritan-style worship is always difficult to maintain, and especially so in a materialistic and carnal age. Further, there was some comfort in uncertain times from a hierarchy which tells people what to do, in contrast to a system which sometimes operates in an untidy fashion.

On the opposite end of the spectrum, the Baptist Church continued to make inroads among the Southerners. Southern Presbyterians wrote countless articles, pamphlets, tracts, and books to try to combat Baptistic distinctives and to inform their constituents and the world why infant baptism was a Christian duty and why sprinkling or pouring was the Biblical mode of baptism.

Finally, one can note the rise of the cults and the occult. The most significant of the cults was Christian Science with its philosophy of mind healing. Mormonism was another prominent cultic group. Paranormal phenomena and the supernatural threatened to lure many away from belief in the God of Scripture.

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I. SCIENTIFIC INTEREST AMONG SOUTHERN PRESBYTERIANS

A. INDUCTIVISM

1. Sir Francis Bacon

Francis Bacon, as has been noted, was a crucially influential thinker not only for seventeenth century Britain but also for nineteenth century United States. Protestants of all varieties valued his approach, which reflected so well both the Reformation emphasis on sola Scriptura and the Puritan development of that doctrine.

Bacon's inductivism was critically important for Christians facing an age of science. Left to its own, science could develop a "secular and heretical view of nature," especially by means of theories which "avoided attributing cause and order in Divine agency [and] also failed to exhibit the necessary harmony between the God of nature and of Scripture." In response, Presbyterians did not withdraw from science, but sought to monitor it.

> For this purpose, the inductive philosophy seemed a strategic godsend, suggesting at least five basic tactics: (a) identify objectionable findings with the dubious realm of "theory" and "hypothesis"; (b) emphasize that authoritative induction must embrace all relevant facts; (c) point out that biblical "facts" cannot logically be excluded from a scientific induction if pertinent; (d) present a self-effacing style of "humility" as the prerequisite attitude for inductive research; (e) underscore the incompleteness and mutability of

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scientific explanation.[1]

In the 1850's, Christian Baconians supplemented these defensive postures with two major constructive thrusts: "a fusion of catastrophist geology with the biblically forecast millennium [and] a proof that the Baconian Philosophy itself originated under the stimulus of the Protestant Reformation."[2]

The use of the inductive method in natural science lent itself to application in the field of Scriptural interpretation. "Based on a concept of biblical content as fact verified in sensory experience, this would produce as pure a strain of literal truth as any of the Baconian natural sciences and equally uncorrupted by arrogant abstractions."[3]

Underlying all of this was a commitment to that which is rational. Christians of many denominations strove to demonstrate not only that Christianity is reasonable, but also that the particular beliefs of any given tradition are also the most reasonable.[4]

This dedication to Bacon, which other historians have demonstrated to be true for the antebellum South, held true also for the rest of the nineteenth century--at least in

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[1]Theodore D. Bozeman, Protestants in an Age of Science: The Baconinan Ideal and Antebellum Religious Thought (Chapel Hill: University of North Carolina Press, 1977), 39.

[2]Ibid., 160-62.

[3]Ibid.

[4]E. Brooks Holifield, The Gentlemen Theologians: American Theology in Southern Culture, 1795-1860 (Durham, N. C.: Duke University Press, 1978).

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Southern Presbyterianism.

The Englishman was held up as the paragon for science and for its relationship with religion. One author waxed eloquent:

> . . . It is . . . manifestly the dictate of true philosophy, as it is the instinct and habit of enlightened piety, to maintain a wise suspension of judgment when any discrepancy is alleged between science and Scripture, and no satisfactory method of mutual conciliation immediately appears. This is undoubtedly the Baconian method. It is that which Lord Bacon, the Joshua who led the enslaved the imprisoned sciences out of the house of bondage into the land of promise, himself commended and practised. No man has spoken more wisely and weightily than he on this standing difficulty. No man has ever done more to extend the empire of science, and lay down her metes and bounds; to define the law of her progress and the limits within which she may profitably pursue her researches; and yet no man has spoken more reverently of the paramount authority of the divine Scriptures and of religious faith within her own sacred sphere, or has offered more humble and fervent prayer to God for the illumination of grace to guide him into the deep mysteries of his works in the domain of natural law and of the natural world.[5]

Baconianism proved to be useful not only for the scientific enterprise per se. For example, an 1863 article utilized Lord Bacon's statement that "'a credulous man is a deceiver'" and then took to task the radical partisan leaders of the North who said the conflict would last about three months. The author then wrote:

"Is not the principle which Bacon calls 'a law of our nature'

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[5]J. M. Atkinson, "Natural Law in the Spiritual World. By Henry Drummond, F. R. S. E., F. G. S." Southern Presbyterian Review, Vol. XXXVI, n. 3 (July 1885), 501.

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in harmony with the words of the Saviour? 'With what measure ye mete, it shall be measured to you again'--words often fulfilled by the hand of a retributive Providence."[6]

Fascination with Bacon extended even to interest in the question of whether he was really the author of Shakespeare's plays. After a spirited exchange among several writers using pseudonyms,[7] "Exey" made a "reasonable" case for Scripture being the Word of God, appealed to "common sense" against the skepticism of Hume and the resultant rationalism of Germany, and concluded,

> In this skeptical age, when a great German scholar has denied that Homer wrote the Iliad, when an accomplished historian refuses to Romulus the credit of having founded Rome, and when geologists assert that Europe and not America is "the new world," Shakespeare could not expect to keep undisputed possession of his laurels.[8]

So the great British natural theologian of the 1600's was put to work not only in the interests of science as such, but in the broader realms of political philosophy and Biblical studies. And, even a discussion of whether he was the real Shakespeare shows both the commitment to inductive argumentation and the importance of that methodology to a defense of the Christian faith.

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[6]"A Thought from Lord Bacon," Christian Observer and Presbyterian Witness, Vol. XLII, n. 26 (June 25, 1863), 2.

[7]For example, see "Was Bacon the Author of Shakespeare?", Christian Observer and Presbyterian Witness, Vol. XLVI, n. 6 (February 7, 1867), 2.

[8]Ibid.

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2. "Realism" vs. "Idealism"

Prior to 1861, Presbyterianism in this country, both North and South, exhibited a dedication to the Scottish Common Sense Realism championed by John Witherspoon at the College of New Jersey (now Princeton) in the late eighteenth century. This Scottish philosophy, formulated by Thomas Reid (1710-1796) and Dugald Stewart (1753-1828), was set forth to combat Hume's skepticism and Berkeley's Idealism. This school was deeply affected by Lord Bacon's approach; the principal "Baconian" elements put forth by these Scots are these:

1. A spirited enthusiasm for natural science.
2. A scrupulous empiricism, grounded upon the confident "trust in the senses" and in the reality of the outer world supplied by the Realist doctrine of "judgment."
3. A sharp accent upon the limits of scientific method and knowledge, directed to the inductive control of generalizations by continuous reference to "facts." Abstract concepts not immediately forged from observed data have no place in scientific explanation.
4. A celebratory focus upon "Lord Bacon" as the progenitor of inductive science; a flat identification of Newtonian methods with Bacon's "induction."[9]

Illustrative of this belief in Realism is a review of James McCosh's The Scottish Philosophy, Biographical, Expository, and Critical, from Hutchison to Hamilton. The reviewer noted with approval McCosh's signalizing three features of the Scottish school: inductivism ("rigid Baconianism"); "'the use of self-conscious as the instrument

[9]Bozeman, op. cit., 22, 30.

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of observation'"; and "the assertion of principles in the mind, which though reached by observation, are yet prior to and independent of experience." The genuine adherents of the Scottish school may use a variety of terms: "principles of common sense," or "fundamental laws of human belief," or "simple and original intuitions," or "a priori forms and conditions." But they all are unified in their view "that there are laws, principles, or powers in the mind anterior to any reflex observation; and that these laws or principles are necessities of the intelligence and the indispensable conditions for organising the facts of observation and experience into systems of philosophy and science."[10]

Commitment to Realism continued among Southern Presbyterians throughout the period specifically under consideration. One of the best articles to underscore this commitment is that written by John Lafayette Girardeau in 1887.

A South Carolinian from Huguenot background, Girardeau was known for his preaching to the slaves as well as for his keen intellect.[11] He was a professor at Columbia Theological Seminary during the evolution controversy and a staunch

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[10]"Critical Notices," Rev. of James McCosh, The Scottish Philosophy, Biographical, Expository, and Critical, from Hutcheson to Hamilton, Southern Presbyterian Review, Vol. XXVII, n. 1 (January 1876), 167-69.

[11]See his Discussions of Theological Questions, ed. by his son-in-law, George A. Blackburn (Richmond, Va.: Presbyterian Committee of Publication, 1905; rpt. Harrisonburg, Va.: Sprinkle Publications, 1986).

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defender of the Church's historic views--whether regarding science, theology, or worship.[12]

The very first article in the brand new Presbyterian Quarterly was Girardeau's on "Berkeley's Idealism." He attacked various aspects of the bishop's views, including his basic principle of esse est percipi (to be is to be perceived), and pointed out some of the absurdities thereof. Girardeau concluded by warning against the occilation between the extremes of Materialism and Idealism and by positing that the "sober student of the facts of consciousness," along with the Christian Theist who believes the Bible, will "tread a middle path": they will "refuse to sublimate the world to unity with God, or sink God to identity with the world . . . ."[13]

Another key article appeared about a decade earlier in the Southern Presbyterian Review. The author acknowledged Berkeley's chief object in writing his treatise, namely, to "stand against the encroachments of a materialistic philosophy." After an attack on the materialism of Spencer and Alexander Bain, the writer dealt with the difficult

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[12]For example, see his Instrumental Music in the Public Worship of the Church (1888; rpt. Havertown, Pa.: New Covenant Publication Society, 1983) for a classic treatment of the view that a capella singing should be the norm for the Church's worship.

[13]John L. Girardeau, "Berkeley's Idealism," Presbyterian Quarterly, I, n. 1 (July 1887), 30-31. The editor of Berkeley's Works was Professor Alexander Campbell Fraser of the University of Edinburgh; the Reviewer of Spencer was a Professor Bowne.

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problem of the relation between perception and reality. What followed was an appeal to natural laws, which exist apart from human existence--indeed, which existed "for untold ages before any percipient intelligence made its appearance on this planet."[14]

What we see in this article in particular is the deep philosophical commitment to realism, a commitment that transcended the consideration of whether one was an evolutionist or not. Further, a belief in natural laws permeated the thinking of Southern Presbyterianism. It is to this presupposition that we now turn.

3. "Laws" of Nature and Science

In the late antebellum period, a remarkable article appeared in the premier journal among Southern Presbyterians. Its purpose was to relate morphology to fine art! It began by noting that "the knowledge of law is always science, whether it be the formal laws or causal laws--for law is the expression of Divine thought."[15]

These same themes of the Divine derivation of natural law

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[14]"Berkeley and the Philosophy of Idealism," Southern Presbyterian Review, Vol. XXIX, n. 4 (October 1878), 662-69.

[15]"Morphology and Its Connection with Fine Art," Southern Presbyterian Review, Vol. XII, n. 1 (1859-1860), 83. The article also maintained that there is no secondary cause to the structure of the science of organic forms--only the Great First Cause can write the phenomenal laws regarding Morphology (84f).

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and of the necessity of laws for the conduct of all enterprise are found in the Rev. A. F. Dickson's review of The Reign of Law, written by the Duke of Argyll. Dickson stated that the Church has yielded too much to the "new sciences," and wrote:

> It is, indeed, amazing that any who knew God should have forgotten that the reign of God is necessarily the reign of law. Religion without law is superstition. Superstition is atheism in a delirium. And he to whom the Almighty Maker has become known, even in outline, must surely see that creation expresses thought, that thought necessitates a plan, and that plan, by excluding chance, enthrones law.

Dickson appealed to the phenomenon of "cause and effect moving in ordained sequences." Whether the physical sciences, sociology, or religion, "all, all confess the presence and prosper in the sway of law. Law is the one, supreme, and universal predicable of being."

Dickson utilized the Duke of Argyll in addressing the question of what is a natural law:

1. "law as applied to an observed order of facts"
2. "To that order as involving the action of some force or forces, of which nothing more may be known"
3. "As applied to individual forces, the measure of whose operation has been more or less defined or ascertained"
4. "As applied to those combinations of force which have reference to the fulfillment of purpose or the discharge of function"
5. "As applied to abstract conceptions of the mind--not corresponding with any actual phenomena, but deduced therefrom as axioms of thought necessary to our understanding of them."

After dealing with each of these five characteristics in order, Dickson passed on to a couple of topics which the Duke had not treated. The first was "the appearance of law in

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evil." This does not lead to the conclusion that law implies an evil lawgiver; on the contrary, Good is the normal and Evil the anomaly.

The second was the problem of miracles. Dickson's solution was that a miracle was not a negation of law, but reflected the operation of a higher law. There is a pyramid of systems of laws, the zenith of it being Jehovah. "His essential attributes are the laws of his nature. Out of his absolute freedom, in his perfect reigning, all his works proceed. The culminating series in the ascending scale of laws is that of the laws of the divine life." The kingdom of grace, especially in the Person and Work of Christ, breaks into the realm of law. "Every department of the vast kingdom of God is characterized by some law of its own--some principle at least not so prominently applied elsewhere. And the special law of the spiritual kingdom is the law of personal union with God by faith through grace."[16]

The same magazine some years later carried a critical review of Thomas Scott Bacon's The Reign of God Not the Reign of Law. In it, Robert L. Dabney attacked this Episcopalian clergyman's rejection of Calvinism, as well as his acceptance of the Thomistic view that God is the only real agent in the universe. Dabney wrote also that the Thomistic doctrine "contradicts the testimony of our senses and common sense,"

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[16]A. F. Dickson, "The Reign of Law," rev. of The Reign of Law by the Duke of Argyll, Southern Presbyterian Review, Vol. XXI, n. 4 (October 1870), 521-22, 526-27, 533-34, 538-40.

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which "tell us that second causes are not simulacara of causation, but are endued (by and under God) with real power." Dabney warned that this Thomism "is not far off from idealism," which can lead rather easily to pantheism. Dabney concluded his review by noting that children are told by many parents and pastors "many false things about fairies, ghosts, goblins, transubstantiation, purgatory." What is the distinction between a child's belief in these and a belief in God? "The simple appeal of natural theology to reason and conscience, sustaining the testimony to the latter. . . . But when he [God] sends only a fallible, human witness, that recognition must be rational in order to ground certainty; and that is natural theology."[17]

So then, natural laws and natural theology were important not only for inductivism, but also as a defense against pantheism and a Romanist view of authority. They thus constituted a significant part of the Southern Presbyterian apologetic and polemical arsenal.[18]

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[17]R. L. D., "Critical Notices," rev. of The Reign of God Not the Reign of Law by Thomas Scott Bacon, Southern Presbyterian Review, Vol. XXX, n. 2 (April 1879), 403ff, 407-09.

[18]For an example of the apologetic use of natural laws, see "Rev. of Herbert W. Morris, Natural Laws and Gospel Teachings," Presbyterian Quarterly, Vol. II (1888), 168-69: "The author's object . . . is to resist the attack made upon the christian [sic] faith by those who array the laws of nature against the laws and miracles of Christ, and the record of matter against the record of the Spirit. The first chapter is a careful presentation of the coincidence of the evangelists' statements with those of recent explorers in relation to the physical features, natural productions, cities

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And yet, reliance upon natural law could be a tricky proposition, as is illustrated by three articles which reviewed a book by the Scottish Free Church theologian, Henry Drummond, entitled Natural Law in the Spiritual World.

J. M. Atkinson was not uncritical of Drummond's work, claiming even that Drummond "is often the victim of his own ingenuity" in that "he finds or fancies a resemblance between the facts and phenomena of the natural and those of the spiritual world, where none really existed or was intended by the common and glorious Author of both." Nevertheless, Atkinson conceded that "he does really bring out many [resemblances] of great force and value which had eluded all previous observers, or had been overlooked by all." Atkinson noted that Drummond's arguments represented an advance for the evidences of Christianity in that he believed the relationship between the laws in the natural and spiritual realms was that of identity rather than mere analogy. Demonstrating the identity of natural and spiritual laws would found the "evangelical system on a rational basis as incontestable as the ascertained laws of nature." Not only would this "silence the batteries of natural science," but these "would be turned

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and villages, streams and routes, of the land in which the scenes of the gospel were enacted, showing that the minute and perfect accuracy of the Scriptures as thus tested should confirm our confidence in their truthfulness as to those matters in which we cannot test them. . . . The book is a safe one, practical, sensible, and sound. It will do to put into the hands of over-smart young men who imagine that they can overthrow every statement of the Bible by some of their fancied difficulties."

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into powerful engines of defence." Atkinson approved of removing the distinction between the natural and the supernatural, and he quoted a Romanist writer whose book just off the London press illustrated the progress that this "germinal thought" was making.[19]

Even a superficial reading of Atkinson makes one feel that he has given himself over to a rationalistic apologetic. It is noteworthy that this article appeared in the Southern Presbyterian Review during the height of the evolution controversy with its editor, James Woodrow; and that the article following this one was entitled, "Evolution and Theology. The Consensus of Science Against Dr. Woodrow's Opponents."

The premier journal among Southern Presbyterians after the demise of the Review was the Presbyterian Quarterly, which was designed to champion traditional views of science after the bruising battles of the 1880's. A couple of review articles on Drummond's book appeared in the first two volumes of the Quarterly.

R. A. Webb began his review by stating:

> The present idolatry is the worship of Natural Law. Its priests cold-bloodedly expound its inexorableness in glittering sentences, and endorce the reception of its religion by gilded sophisms. All beings, acts, events and relations are bound upon its altar and sacrificed to its unpitying nature. There is no escape from its relentness pursuit, no rescue from its iron hand. No prayers

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[19]J. M. Atkinson, "Natural Law in the Spiritual World," 504-05.

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> are ever heard, no relief is ever afforded. Its wheels crush unmercifully, and they whirl everywhere. When troubles come--when sorrows sweep over the soul like drowning seas, and helpless hands are seen above the angry waves, and strangling cries are heard across the plunging waves--these ministers of Natural Law stand serenely on the shore, and preach across the roaring surge the gospel of the inevitable, the religion of the inexorable. And when these same sorrow-waves dash over their hearts and darken all their vision, a part of the Carmel-scene is re-enacted as these Baal priests call frantically upon their God for some pitying recognition, the extension of some helping hand. The Gospel of Natural Law is a miserable failure, a mere religion of bleak despair. In its system there is no place for the miracle, for a supernatural interference in order to salvation. Whatever happens, happens according to unfeeling, unbending Natural Law. It is as cheerless as despair, as black as night. It is the Gospel of unkindness, thoroughly unfriendly to a guilty and suffering race. It lets in the facts of sin and misery, but excludes grace and its scheme of redemption.

Webb then ripped into Drummond for his adherence to this school of thought, which is demonstrated by his "conscious and declared aim" to "obliterate the old and valuable distinction between the Natural and the Supernatural." Indeed, Drummond worships devoutly "at the shrine of Natural Law," desiring to bring all things "under its relentless sway." Webb pointed out that all of the parallels which Drummond drew between the Natural and Spiritual worlds was for the purpose of obliterating any distinction: ". . . after Prof. Drummond has discovered that the laws of the Natural world are the laws of the Spiritual world also, can any doubt that, to his mind at least, the two spheres are the same in kind? If Natural law reigns in the Spiritual world, then the Spiritual must be

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Natural."[20]

Towards the close of his critique, Webb listed those distinctions which the Scotsman wished to do away with: that between Theology and Natural Science; between the Natural and the Supernatural; between the Natural and the Miraculous; and between the Natural and the Spiritual. Webb concluded his piece by saying, "We do not like the companions of Prof. Drummond. The prominence of a whole page and italics are given to excerpts from the writings of Herbert Spencer, Leslie Stephen, Frederick Harrison, Emerson, Carlyle, Rousseau, and such like."[21]

D. E. Frierson wrote the other article, in which he quickly stated that "we repudiate the whole doctrine of apologetics for religion. It contains seminally an admission of defect in the department of religious thought that damages the whole subject. It directly concedes that an innate suspicion hangs to the matter of direct communications between God and men, and that only that knowledge is originally well founded which is reducible to the domain of natural law."

Frierson attacked Drummond's attempt to appeal to "'the younger and abler minds of this age'" by doing away with the "'ordinary forms of belief.'" Drummond attributed the difficulty of the modern mind to accept orthodoxy to the

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[20]R. A. Webb, "Natural Law in the Spiritual World," Presbyterian Quarterly, Vol. I (1887-88), 190-92.

[21]Ibid., 196-98.

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forms. "But this is by no means the cause. Who has ever yet been led to accept or retain the doctrine of election or of total depravity by couching them in any other terms which did not change the substance of the doctrine itself?" Frierson continued by noting that opposition to the "little flock" of Christianity has come not because of adherence to "antiquated and unscientific" ideas, but because the faith sets forth the doctrine of the cross and because it also seeks to raise men "to the highest moral culture." Frierson scored Drummond's theory which "enshrine[s] deity in the archives of nature and give[s] him a ubiquity in natural law." "But while it [that theory] enthrones him as the symbol of natural law and universal agency, it denies to him the power of breaking the charm of awful continuity in which he has enrapt himself. It is a theory which comminutes all the great creative acts into thousands of little creations taking place around us."[22]

Frierson ended his article by stating that "no amount of human lore can divest religion, as a subject, of its most essential element, the miracle. Actual miracles have ceased. Recorded miracles remain. Without the recorded miracle adequately attested, it could never be demonstrated to the present generation, or to any generation, that God even existed."[23]

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[22]D. E. Frierson, "Prof. Drummond's Apology to Scientists," Presbyterian Quarterly, Vol. II (1888), 472-73, 474-75, 479.

[23]Ibid., 480.

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Southern Presbyterianism thus wrestled with the ever-present danger of denying God's absolute sovereignty and free will--the doctrine that He is above all things and not bound by any "natural laws" which He has ordained. Adherence to and belief in natural law were therefore not absolute, and these Calvinists tried to maintain a balanced approach which recognized that secondary causes were real but which also did not put the Almighty into a box.

B. THE IDEA OF SCIENCE IN AN AGE OF SCIENCE

1. The Uses of Science

Not only was there tremendous interest in science in Southern Presbyterianism, but there was also concern that science be put to its proper uses. Illustrative of the position taken by many of these Calvinists is an address given at Oakland College in August, 1842, upon the inauguration of a professor of chemistry, and published in 1874.

The Rev. Dr. I. R. Hutchison began his address by noting that "Providence seems sometimes designedly to have held back the mind of man from the perception of certain great principles because the world was not ready for them; their time had not yet come." He cited the printing press as an example of a device that would have been put to ill-use if invented before mankind began "to call in question the old and

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time-hallowed dogma that none but kings and priests should possess power and learning--that it was a sin against God for the common people to investigate political and theological opinions."

Accordingly, Dr. Hutchison noted that "The Physical Sciences, previous to the fifteenth century, were the main agents and hand-maids of superstition." The "mysterious alchymist--the cunning priest, the ambitious ruler"--hoarded scientific knowledge of natural phenomena and utilized various sciences (such as acoustics, hydrostatics, mechanics, and especially optics) in order to terrify the mass of people and to lend credence to superstitious worship of false deities. But now, "the right arm of superstition has been broken" and "man can now walk abroad, and gaze upon nature in all her external displays or hidden wonders, unawed, unterrrified."

Positively, the physical sciences have now become diffused:

> The custom, ever since the revival of learning, of writing all scientific works in the Latin language (a language unknown to the people); the scarcity and high price of books; the want of philosophical instruments, in connection with the warlike habits of the world--all conspired to render science, for many ages, a monopoly, and confined it to the call of the monk, and the dusty garret of the alchymist. But now the spell is dissolved. Nature has thrown wide her doors, has revealed her hidden wonders, and all men are invited to enter and worship at her shrine.

The effects of Lord Bacon ("who pointed out the only true mode of philosophizing"); the discoveries of Galileo, Kepler, and Newton; and "a large number of popular works on natural

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history, geography, astronomy, and experimental philosophy" issuing from the printing press from the middle of the 1700's, gave rise to "a new order of things." This new era means that the arts and science are "the birthright and blessing of all men." "Multitudes in the humbler walks of life, who would once have been spurned as unworthy to set their unhallowed feet upon the threshold of the temple of science, are astonishing the world by their inventions and discoveries." Indeed, "'many are running to and fro, and knowledge is increased.'"

Hutchison hailed the new science not only for its universality but also for its practicality. He berated the speculative medieval philosophy, whether in theology or physical science.

> Look at one toiling from youth to hoary age to find out the philosopher's stone; another, the secret of transmuting all metals into gold; a third is bent upon the perpetual motion; a fourth tortures Nature to extract from her a universal medicine, by which to cure all earthly diseases and rejuvenate the powers of man; while a fifth consults the stars to foretell coming events, and cast the horoscope of kings. . . . But now this age of learned folly, of wise ignorance, of sublime nonsense, has passed forever away, and been succeeded by an age of practical utility.

Astronomy, metereology, geology, natural history, botany, chemistry, mechanics, and steam power exemplify the fact "that every branch of physical science is now cultivated, primarily, for the sake of utility."

Physical science is also useful because "it is confirmatory of revelation. It is becoming the direct

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auxiliary of Christianity. And every new fact and development is only adding to that great cloud of witnesses which attest the divinity of our holy religion." The Church used to view science with suspicion.

> But . . . [e]very science and every system is now bringing its offering, to lay them at the foot of the cross. Science and Revelation walk hand in hand, the one as the queen, the other as the queen-daughter by her side. And the missionary of salvation, as he goes far hence to enlighten the teeming millions of the East, has only to teach the first principles of physical science, and many of the systems of heathenism begin to crumble and their idols totter to the ground. Glorious aspect of the sign of the times. The revelations of nature are in harmony with the revelations of Scripture. And future Lockes, placing it above all philosophy; and Bacons, above all learning; and Newtons, above all science; and Miltons, above all song--each bearing his precious gift--shall come, like Eastern magi, with their gold, their frankincense and myrrh, and lay them in lowly worship at the feet of the Prince of Peace.[24]

The themes of which Hutchison spoke--the freeing of science from the bondage of medieval Romanism, the practicality of science which has been opened up to all men, and science's handmaid role with respect to the Christian religion--are found throughout the period under discussion; and we shall have opportunity to explore these themes at greater length as we proceed. Furthermore, the doxological side to the scientific enterprise was not forgotten by these Presbyterians, who believed that "Man's chief end is to glorify God and enjoy Him forever."

39I. R. Hutchison, Reminiscences, Sketches and Addresses, Selected from My Papers During a Ministry of Forty-Five Years in Mississippi, Louisiana and Texas (Houston, Texas: E. H. Cushing, 1874), 36, 39-48.

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2. Beauty and Science

Concommitant with the praise of God, the natural universe was viewed as a place of great beauty, which should bring forth worship of the Creator.

For example, a Scotsman, writing for the Christian Observer, wrote of the twenty-ninth Psalm, which, from first to last,

> is an interpretation of the voice of God in its loudest utterances, for it follows the course of a thunder-storm. We sometimes contrast the sublime and the beautiful, but there is beauty in the sublime. In that Psalm the thunder-storm first crashes against the cedars of Lebanon, then shakes the wilderness of Kadesh, and, as it advances, issues flaming forks that send their glare into the depths of gloomy forests, while worshippers crowd to the temple of Jerusalem to call on him who doeth these great wonders. But in these sublime manifestations they see the "glory" of the great Lord of all; and drawing from them the assurance that his irresistable power will ever be exercised from the good of his people, they go home with the assurance that "the Lord will bless his people with peace."[25]

More poetically, a writer in the 1860's waxed eloquent on "Grace and Beauty in Nature":

> . . . By what wondrous alchemy is it, that the same juices going up one stem will make a rose here, a lily there--here an apple, there a peach. It is wonderful to think, what forces in nature are constantly in action. . . . What intense, never ceasing activity! Laws of gravity, of heat, light, electricity, mechanical agencies, chemical agencies, vital agencies all quietly, yet unceasingly doing the behests of Him whose name is Wonderful! What a cunning laboratory it is, what

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[25]Prof. W. Garden Blaikie, "The Beauty of Nature the Voice of God," Christian Observer, Vol. 87, n. 19 (May 10, 1899), 7.

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> beating of pulses and breathing of lings, had we the senses to discern it!
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> It is with the world of nature, as with the world of revelation. The more the pious heart studies God's Word, the more and more he sees God in it, and thoughts, words, phrases, that excite no idea of God . . . to the careless or idle reader, shine to him with heavenly light.[26]

William Sterling Lacy wrote of aesthetics as being a science, "the science of the faculty of taste, or of man's aesthetic nature, which is a complex of intellect and emotion, and is so far purely psychological. It is also the science of the beautiful in objects, and is so far not psychological; but the same is true of the science of ethics, which embraces both the science of man's moral nature and of the good."[27]

Lacy's essay on "Beauty" continued by asserting that "Nature . . . is the ideal of art; and who can view the beauty of the world, so varied, so affluent, so prodigal, without wonder, admiration and gratitude?"

> Contemplate with me that daily miracle of nature as it appears on these sweet June mornings--"dark summer dawns," as Tennyson finely phrases it--or as I witnessed it a few days past. You step forth from the confined air of your chamber, the first sensation being that of delicious coolness and exhilaration. The sky is without a speck or stain,

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[26]"Eph." to "Yapheth," "Grace and Beauty in Nature," Christian Observer and Presbyterian Witness, Vol. 47, n. 25 (June 18, 1868), 2. Significantly, the author also stated, "But the harmony, the sweetness, the quiet, the grace, the varied beauty of the outward world seems to me fairer and more lovely than ever by contrast with the disorder, the confusion, the upturning of all things, the passions and revolutionary fanaticism that afflict our society."

[27]William Sterling Lacy, William Sterling Lacy: Memorial, Addresses, Sermons (Richmond, Va.: Presbyterian Committee of Publication, 1900), 20.

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rich, dark, mysterious. The stars twinkle industriously in the ebon vault, their myriad eyes gleaming like fire. As your questioning soul looks in mute admiration they are silent. The winds are whist, the woods are still. The flowers are heavy with dew and the air with fragrance. In the east hangs low the decadent moon, a glittering silver sickle on a black velvet ground. As her escort a royal guard of stars appears. The golden lamp of Venus burns with an intense and steady blaze of liquid, tremulous light, revealing her conscious beauty; her companion, the mighty and more distant Jupiter, with smaller, but not less brilliant beam, while Saturn, almost eclipsed by their superior lustre, is barely seen, a point of light far away. But, lo! their splendors pale! Along the horizon is a faint glimmer of gray. You glance upward, and see that the ebon hue of the vault above is gone. The stars wax dim and slowly fade from view.

"The ancient moon hangs on its nether horn
A frighted ghost."

The skies grow lighter and bluer. Again you turn your eye to the coming morn. Streaks of light, "God's glorious shadow," to use Plato's fine thought, shoot upward to the zenith--at first colorless, then growing cool gray, soft pearl, with the faintest hint of gold and pink, the purest and most delciate of tints, shaded with utmost nicety. It is the daily battle of light and darkness. Now a mist rises, and strips of fleece are seen. They seem the advancing squadrons of the armies of the King, planting their white banners on the deserted field, as the hosts of darkness sullenly retire. Those white banners suddenly become rose and flame-colored. The whole east flushes and glows at the coming of her lord; and while rays of golden glory from the advancing splendor leap across the heavens, objects of the familiar earth come into view--the dark forest, the old homestead, the open plain. At length he comes! The eye of morn peeps over the eastern hills. . . .

And now what a change greets the soul! There is a happy rustle of the leaves. The joyous breeze springs up to tell the glad world of the great transformation. The marshalled clouds move steadily, softly onward as if in triumph. There is a noise of merry music. Happy birds carol in unrestrained glee. Sounds of hope and delight fill the enchanted ear and thrill the soul. All is life, animation, beauty; and this is a daily scene

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of nature, reproduced in infinite and wonderful variety.[28]

Lacy mentioned "three modes in which nature . . . delights the soul--sound, color and motion"[29]; and stated that "the purpose of beauty in the world" is "not merely to gratify the taste which, untrained, may be a rude whim, a crude untutored ideal, but to exalt, ennoble and refine the moral nature; to garnish truth and to adorn goodness, that the completest glory of the Supreme One may be manifested in the harmonious blending of the three; for when beauty is divorced from these, which constitute its true strength and support, it fails and is debased."[30]

Beauty was therefore seen as important for the appreciation of the physical universe. Art and science, natural theology and worship, commingled in one organic whole in praise of the Creator.[31]

3. Thinking "Scientifically"

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[28]Ibid., 26-28.

[29]Ibid., 28.

[30]Ibid., 32-33.

[31]For a representative sample of writing that exults in creation, see R. L. Dabney, "Mont Blanc," Christian Observer, Vol. 59, n. 41 (October 13, 1880), 4. Written from Geneva, the article describes the splendor of the famous mountain, including its glaciers and the cloud-caps. See also "Eph.", "The Voices of Nature," Christian Observer and Presbyterian Witness, Vol. XLV, n. 29 (July 18, 1867), 2.

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The idea of science in an age of science permeated the thinking of Southern Presbyterianism. Not only was there a desire to be "reasonable," there was also an effort to employ the methodology and terminology of science in virtually all endeavors.

John Rice wrote of science as being "systematized knowledge." "A complete science of any subject, is the orderly arrangement of all the knowledge that we possess concerning it, in such a manner as to exhibit the mutual relations of all the parts to each other and to the whole system." If we desire a perfect science, we must "have all attainable knowledge consistently wrought into one grand system." What may be surprising is that these quotes come from an article on the science of pastoral theology!

Rice admitted that there had never been an attempt to enunciate distinctly the "fundamental principles" of pastoral theology, "much less has there ever been a systematic combination of them in scientific form." And, given present attitudes, it was going to require a future generation of the Church to create this science. Nevertheless, this science could be quite useful in ascertaining the wisdom or folly of using the "anxious seat" in revivals, rather than depending upon "simply empirical" science which is based on personal observations instead of a generalizing embracing "the experiences of the whole Church of all ages."

This science is helpful for church discipline,

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homiletics, and all the Christian activities of minister, elder, and deacon. All the materials of this science "must be found in the Sacred Scriptures." Indeed, it is much wiser and safer to start with the Bible rather than with church history, since the Scriptures are "the infallible source of all knowledge of God and duty."

Rice discussed four departments of the one great science of theology: 1. Exegetical Theology; 2. Didactic or Dogmatic Theology; 3. Executive or Administrative Theology; and 4. Historical Theology. "In order that we may have a complete science of theology in its widest acceptation, every one of these separate departments must embrace and systematize, according to its own specific nature and design, but in mutual harmony with all the others, every truth and principle contained in the Scriptures. It must also rigidly exclude every thing not given in the revelation of God."

The teacher of administrative theology must create this science. God had revealed the system, which is "a grand harmonious unity, and a true science of pastoral theology will exhibit this harmony and unity down to the minutest details of daily pastoral work." In utilizing this science, one must not forget the fundamental principle, that the Church must function in accordance with its doctrines and in accordance with the purpose for which Christ gave authority to the Church. "The Church, to its minutest fibre, must be pervaded by the energy of a divine life, and this life must be

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supported by the truth as it is in Jesus."[32]

Employing scientific language and concepts with regard to practical theology was not confined to the 1860's. George D. Armstrong, a scientist and a minister who fought against evolution, wrote an 1892 article on "A Scientific Study of the Doctrine of Prayer."

In the first place, prayer is instinctive--"instinctive in the strict, scientific sense of that term." After giving several scientific definitions of "instinct," Armstrong gave illustrations of it from nature. Armstrong maintained that instinct, "in its proper sphere, is the most perfect guide of conduct with which we are acquainted"--more trustworthy than reason. Because prayer is an instinct, we are obligated to pray and to believe in its efficacy.

Secondly, prayer ordinarily is answered through the operation of second causes. While eschewing a mechanistic view of natural law, Armstrong adhered to the necessity of laws (rather than constant miracle) so that we can understand God's working in the world. He quoted Sir Isaac Newton that the laws of nature "are but 'the established modes of the Divine working.'"

Third, the nature of true prayer is the sincere expression of the soul, in the spirit of the Pauline injunction to "pray without ceasing." But the vain repetition

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[32]John Rice, "The Science of Pastoral Theology," Southern Presbyterian Review, Vol. XVII, n. 3 (November 1866), 330-36, 339.

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of words (even of the Lord's Prayer), as in Roman Catholicism, "is but an incantation, the utterance of a charm." The prayers of "Babylon," which is drunk with the blood of the saints, should not be used to demonstrate the inefficacy of (genuine) prayer.

Fourth, the range of effective prayer is "as wide as the range of God's providence," and so extends to physical as well as spiritual needs. "Prayer is an efficient power in the material universe, not directly, as light, heat, and gravity are; but indirectly, by calling into active exercise the will-power of God."

Fifth, there is distinction between natural and Christian prayer. Sin has obscured the truth of God's fatherhood, a necessary truth for genuine prayer. "Hence it comes to be true, that while all prayer is instinctive, man needs to be taught to pray a Christian prayer; there is need that revelation should supplement the work of instinct here."

Armstrong also pointed out in this regard that the advocates of "faith-cure," in ascribing lack of healing to a lack of faith by the petitioner, completely miss the fact that the true faith connected with prayer always totally submits to the will of God. "'Confidence without submission,' as Dr. A. A. Hodge has well said, 'is the most offensive form of unbelief which disgraces man or offends God.'; it is unbelief which strikes at, not the word, but the very nature of God."

Sixth, the author discussed Professor Tyndall's "prayer-

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test" in which he proposed that the efficacy of prayer be tested by having a ward of a hospital prayed for by the faithful and the resulting mortality rates compared with other hospitals. Armstrong took exception to this manipulative view of prayer: Tyndall himself recognized that prayer does not fit into the category of a physical cause, but is rather a moral cause, since the "free will-power of our Father in heaven is interposed between prayer and its answer. Prayer acts directly upon our Father in heaven, disposing him to attend to our wants in the exercise of his infinite wisdom and love." Moreover, careful observation is as thoroughly scientific as is experiment (as in the case of astronomy). "Tested by observation, the efficacy of prayer has been satisfactorily established by the experience of Christians in every age."

Armstrong concluded his article by stating: "To all . . . cavils and objections, in so far as they claim to be scientific, the sufficient scientific answer is: Prayer is instinctive--natural and Christian prayer alike. . . . Now, if there is anything certain in science, it is that, within its own proper province, Instinct is a safer, more trustworthy guide than Reason."[33]

And yet, even "science" has its limits with regard to practical theology. An article on homiletics, while noting that its subject matter is "'the science that teaches the

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[33]George D. Armstrong, "A Scientific Study of the Doctrine of Prayer," Presbyterian Quarterly, Vol. VI (1892), 227-45.

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fundamental principles of public discourse as applied to the proclamation and teaching of divine truth in regular assemblies gathered for the purpose of Christian worship,'" also pointed out that many of the great preachers of the day broke all the rules in their effective presentation of the gospel.[34]

The same phenomenon can be seen with regard to the more theoretical sides of theological endeavors. One author expressed that "[w]e owe a debt to Mr. Herbert Spencer for the practical introduction of these terms [organism, environment, correspondence] into our philosophical vocabulary, and we are further indebted to Mr. Drummond for his use of them in theology." The article went on to employ these terms with regard to man's relation to heaven, noting the lack of "correspondence between the organism, man, even renewed man, and his true environment, the will of a holy God." But at death, believers are made perfectly holy and immediately pass into glory. "Here there is perfect correspondence between the perfectly holy saint and his eternal, unchangeable environment, heaven, into which nothing unholy can enter."[35]

"Heaven is figuratively a cube." One author took that notion from the Book of Revelation, and pointed out that nearly all substances in nature, when crystallized, form into

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[34]"Modern Homiletics," Southern Presbyterian Review, Vol. XXXVI, n. 2 (April 1885), 179-217; the quote is from 181.

[35]S. L. C., "Organism--Environment--Correspondence," Christian Observer, Vol. 69, n. 23 (June 4, 1890), 1.

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cubic shapes.[36]

A correspondent from New York, writing in the Southern Presbyterian Review, discussed a variety of topics using the analogy of a virus. Sin causes loss of knowledge of God; He alone can supply the antidote. Further, "The virus is Antichrist." Among its manifestations are: a worship of science which blinds people from recognizing the omnipresent God; Popish apostasy; and the strange language of Henry Ward Beecher which leads to atheism.[37]

The leading theologians accepted the notion that theology was the queen of sciences and the science of religion. W. T. Hall's inaugural address at Columbia Theological Seminary in May 1896 abundantly illustrated the prevalence of this idea.

Hall began his speech by contending for the importance of a theological education in order for the church to maintain a proper and divinely-given ministry. He then quoted from the venerable Dr. Thornwell: "'I accept the definition now generally given, that theology is the science of religion; that is, it is the system of doctrine in its logical connection and dependence, which, when spiritually discerned, produces piety.'" Thornwell made a distinction between the "'truth objectively considered [which] is theology'" and the

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[36]E. F. R., "The Tabernacle and Temple. Their Symbolic Significance," Christian Observer and Presbyterian Witness, Vol. 47, n. 32 (August 6, 1868), 1.

[37]G. J. A. Coulson, "Virus, Mental and Moral," Southern Presbyterian Review, Vol. XXV, n. 4 (October 1874), 505-23.

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truth "'subjectively received, under divine illumination, [which] is religion.'" "'In relation to religion, therefore, theology is a science only in the objective sense. It denotes the system of doctrine, but not the mode of its apprehension.'"

Dabney, too, was quoted. "'Theology has come to be used commonly to describe the whole science of God's being and nature, and relations to the creature. The name is appropriate: Science of God.'"

However, Hall raised two objections to Dabney's (and Hodge's) definition. First, God's infinity, eternality, and unchangeableness "represent to our minds only negations, and yet they pervade and qualify the remaining terms of the difference--his being, wisdom, power, holiness, justice, goodness, and truth."[38] Thus we can attribute to God "the personal qualitiies we find in ourselves," but "we do so only by way of analogy. God is not simply man upon a larger scale." "The positive element which enters into our definition of God transcends the capacity of human speculation." Secondly, their definition "does not bring out with sufficient distinctness the practical character of theological truth." Limiting the view of theology "to divine revelation, the medium of the knowledge of God," is inadequate. Theology can be either Natural or Revealed, and

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[38]The reference here to the definition comes directly from the standard answer to the question, "What is God?", found in the Westminster Shorter Catechism, Q/A #4.

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the source determines the kind of theology.

Therefore, Hall decided to adopt the definition of theology of his predescessors at Columbia, Thornwell and Girardeau. He preferred it because it "includes all the terms of theology--God, man, and the God-man"; "because it covers all the relations involved in theology--Creator, Ruler, Redeemer"; "because it enables us to make a true distinction between the natural and the supernatural in religion"; "because it has the elements of a real definition--knowledge is the genus, and religion is the specific difference"; and "because it is suggested by the use of the covenants as a mode of revelation."

After affirming the independence and personality of God (in contrast to pantheistic schemes), Hall dealt with how his definition of theology impacted on methodology. He noted that it was no accident that Lord Bacon was a product of a Protestant nation, since for Protestants "the Bible is the rule of faith." Hall continued his argument by stating that pantheistic systems, which identify God with His works, of necessity "involve an a priori or deductive method in science." "But on the supposition of an intelligent Creator, who worketh all things according to the counsel of his own will, . . . [t]he process is inductive." This applies both to nature and to the Scriptures: "What nature is to the man of science, the Bible is to the theologian." The Bible is "a storehouse of revealed facts." When the Bible's facts are

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gathered, "they are found to arrange themselves into a harmonious system of truth." The more the theologian is able to let the Scriptures speak for themselves, the more successful will he be--and Hall clearly implied that it is the Reformed theologians in the Augustinian tradition who are the ablest. "It was no disparagement to the genius and skill of the builders of Solomon that they sought to realize the pattern showed to Moses in the Mount. Nor do Bacon and Newton suffer because they refused to follow the barren method of more ambitious philosophers."

Hall concluded by noting that although it was possible to be "scientific theologians" and "dry and unfruitful preachers," it was a "serious mistake" to believe that "men can be able and successful preachers without being theologians."[39]

This article is very revealing. Not only does it illustrate the continuing scientific way of thinking throughout our period, but it also demonstrates that even within the strictest orthodoxy (as represented in such giants as Thornwell and Girardeau, and Dabney) there were differences with regard to what scientific theology meant. Further, the evidence clearly tells of continued dependence upon Lord Bacon and inductivism. And, this scientific methodology was used to

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[39]W. T. Hall, "Theology the Science of Religion," Presbyterian Quarterly, Vol. X, n. 37 (July 1896), 267-80. See John L. Girardeau, "Theology as a Science, Involving an Infinite Element," Southern Presbyterian Review, Vol XXVII, n. 3 (July 1876), 462-85.

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combat not only Pantheism, but also all non-Reformed (that is, anti-Calvinistic) systems of thought.[40]

John Lafayette Girardeau's Discussion of Theological Questions, compiled posthumously in the early twentieth century by his son-in-law, George A. Blackburn, also dealt with the issue of theology as a science. After contrasting Evangelical Protestantism with Paganism, Mohammedanism, Romanism, and Rationalistic Protestantism, Girardeau concluded that "the true Protestant . . . is entitled to define theology as the science of biblical religion" and that "the science of the Christian religion is the science of the Bible religion." The South Carolinian answered the criticisms of those who would contend that theology is not a science, including, the notion that constructing such a science is "needless and arrogant"; and that it is impossible because of the "transcendent nature of the contents of divine revelation."

Girardeau wrote that anyone who follows "the deductions of his mere reason" instead of the true theology of the Bible "will pursue an ignis fatuus, and his pretended science will be but a tangled morass." Using that premise, the Southern

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[40]See F. P. Ramsay, "Theology the Science of Religion," Christian Observer, Vol. 84, n. 33 (August 12, 1896), 16. His article included an insistance on an orthodox ministry and doctrinal preaching. See also Benjamin B. Warfield, "Rev. of Systematic Theology by John Miley," Presbyterian Quarterly, Vol. VII (1893), 453-59. Warfield attacked Miley's Arminianism because, among other things, he maintained that Adam's depravity has been transmitted to the human race "simply on the basis of a 'law of nature'" (458). Although Warfield ministered mostly at Princeton Theological Seminary, he was a product of the South.

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theologian defined Rationalism as the belief that "the Natural Reason is the ultimate Source, Rule and Judge of religion"; and proceded to judge Pantheism, Intuitionalism, Deism, Technical Rationalism, Mysticism, Romanism, and Infidelity of all sorts as all being Rationalistic.[41]

Finally in this regard, one should consider R. L. Dabney's evaluation of the "science" of comparative religion. He began his article by stating that

> [t]here is a science of Comparative Anatomy, because there are other creatures besides man which are real living creatures. . . . Had [Baron] Cuvier attempted to run a parallel between the living organs of a man and the inside of a wax madonna, a gilt clay Brahma or Vishnu, or even that of the automaton chess-player, he would have been a fool instead of a philosopher.

Dabney pointed out the two birth-marks of Comparative Religion. First, it was a strategem of evolutionists: "Tyndal and Herbert Spencer would give us a creation without a Creator. These deceitful imitators mean to give us a religion without a God." Second, this "science" is "a covert attempt to re-establish the most deadly latitudinarianism."[42]

Southern Presbyterians were not bashful about using the concepts of science in their theologizing. Nevertheless, they were unwilling to use such concepts for their own sake; and

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[41]John L. Girardeau, Discussions of Theological Questions, George A. Blackburn, ed. (Richmond, Va.: Presbyterian Committee of Publication, 1905; rpt. Harrisonburg, Va.: Sprinkle Publications, 1986).

[42]R. L. Dabney, "The Science of Comparative Religion (Sic!)", Christian Observer, Vol. 72, n. 16 (April 19, 1893), 1.

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they were careful to try not to utilize them in a rationalistic fashion or in a way that would contradict the special revelation of Scripture.

C. GEOLOGY

In the ante-bellum period, geology was one of the most hotly-debated sciences. This is the case not only because it was a relatively new field of scientific exploration, but also because its seeming findings formed a challenge to the Church's traditional views on Genesis 1 and the age of the earth.

Much of the pioneering geological work had come from British scientists. Though they started in the nineteenth century with the traditional piety of regarding science as bearing witness to God and His providences, many of these geologists throughout the 1800's increasingly abandoned such belief.[43] Their apostasy had a profound effect on the American scene as well.

1. The Nature of Geology as a Science

At the very beginning of the open hostilities between North and South, Robert L. Dabney anonymously wrote an article

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[43]See Charles Coulston Gillispie, Genesis and Geology: The Impact of Scientific Discoveries upon Religious Beliefs in the Decades before Darwin (New York: Harper & Row, 1951).

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for the premier Southern Presbyterian journal, entitled "Geology and the Bible." He started by protesting that geologists have often evidenced an "arrogant and offensive spirit" in presuming that their new science has made a definite case regarding the antiquity of the earth. It is especially presumptuous for them to think that clergymen, just because they have objections to some of these new alleged findings, are somehow less intelligent than a "crowd of London mechanics" to whom a geologist is making a one night lecture in the hopes of convincing them of the seven geologic ages.

The attitude of churchmen, on the other hand, has also been unwise, for they have too often been ready to concede positions on the basis of attacks by science which has not yet been proved. "It will be time enough . . . for us, as professional expositors of the Mosaic history, to settle and proclaim a plan for expounding it in harmony with geology, when geology has settled itself."

Dabney noted that "all truths are harmonious inter se," and that there were significant differences between Scriptural employment of phenomenological language in describing things in nature according to their popular appearance, and things that are more essential in nature. For one thing, "the reference to physical facts in the record of creation is not merely subsidiary to the narrative or statement or some theological truth, but is introduced for its own sake." Indeed, "creation is not only a physical fact; it is a

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theological doctrine." Secondly, "the fact of creation had no apparent phase, different from its true scientific one, like the seeming dome of the skies, the rising of the sun, the stable earth; for the simple reason, that it had no human spectators. Hence, there could be no popular mode of representation, different from the true scientific rationale, as there was no people to observe the apparent phenomena and describe them." Third, it is essential to maintain the independence of special revelation from natural science. "The position to which [geologists] consign God's Word is that of a handmaid, dependent, for the validity of the construction to be put upon its words, upon their permission." Dabney boldly asserted that that view is "intrinsic rationalism." It is a "baptized infidelity"--such as Socinianism, Neologism, and Abolitionism--which exalts "the conclusions of the human understanding over the sure word of prophecy."

Dabney insisted that the burden of proof rested with the geologist who was asserting an hypothesis hostile to the Mosaic record. "We are not bound to retreat until he has constructed an absolutely exclusive demonstration of his hypothesis; until he has shown, by strict scientific proofs, not only that his hypothesis may be the true one, but that it alone can be the true one; that it is impossible any other can exclude it." Dabney then pointed out various examples of uncertainty in the work of geologists.

The author invoked Lord Bacon in proving that an

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application of inferences "can never raise more than a meager probability of the correctness of its conclusions, where it is not supported by some better canon of induction."

> As to the origin and history of nature in the past, [reasonings] are valid no farther back than we can be assured of the absence of the supernatural; and we know not how such assurance can be gained by us, save by the testimony of human experience, or of inspiration. This conclusion does, indeed, curb the arrogance of human science, but it does not affect in the least any part of its legitimate dominions, or of its practical value to mankind. It does, indeed, disable us from determining the age, date, and origin of the structures nature presents to us, but it does not prevent our discovering the laws of those structures; and the latter is the discovery to which the whole utility of science belongs.

Dabney concluded:

> Once admit a Creator and a creation, and the validity of all inferences from the seeming analogies of nature, as to origin of things, is vitiated the moment we pass back of the authentic light of historical testimony. Once admit a Creator and a creation, and nothing is gained, in logic, by attempting to push back the creative act.[44]

James Woodrow, editor of the Southern Presbyterian Review, responded with an anonymous article of his own: "Geology and Its Assailants." He said that the first mistake of anti-geologists regarding the nature of the science of geology is that they assume that it is cosmogony (or at least geogony). Geology has been placed in a dilemma: if it attempts to approach close to the "mysteries of creation" through "probable conjecture," it is viewed as "impiously

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[44] [Robert L. Dabney], "Geology and the Bible," Southern Presbyterian Review, Vol. XIV, n. 2 (July 1861), 247-48.

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presumptuous, and it is falsely represented as requiring its conjectures to be received as certainties." Or, "if it modestly confine itself to rigid reasoning and ascertainable truths, it is angrily driven away as grossly atheistic."[45]

This difference of perspective led to an exchange of articles between Dabney and Woodrow in the 1870's in the Southern Presbyterian Review. In a letter to Dabney, Woodrow put the crux of the matter this way: "Dr. Dabney insisting that the absence of the supernatural must be proved before the law of uniformity [i.e., causality] may be applied; we insisting that the presence of the supernatural must be proved before we are debarred from applying it. We maintain that the former principle leads inevitably to universal skepticism, and that the latter leads inevitably to the knowledge of the truth."[46]

Thus geology was the first battleground in the war between two different views of science--a war that would culminate in the nineteenth century in the fight over evolution.[47]

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[45][James Woodrow], "Geology and Its Assailants," Southern Presbyterian Review, Vol. XV, n. 4 (April 1863), 557-58, 560.

[46]Cited in Thompson, Presbyterians in the South, Vol. II, 459. See also "An Old Minister," "Moses and Geology," Christian Observer (Literary & Miscellaneous), Vol. 50, n. 4 (January 25, 1871), 2, in which the author said that ministers and geologists tended to be mutually ignorant of the other's field of study.

[47]See "Presbyter," "Is Geology a Science?", Christian Observer and Free Christian Commonwealth, Vol. 49, n. 45 (November 9, 1870), Literary and Miscellany, 1. See also

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2. Long-age Theories

The primary practical contention in this battle regarding geography was the age of the earth. An early contribution in the Southern Presbyterian Review attacked the scientific knowledge of the critics of geology; and, though admitting that geology, like every science, "has its unsettled theories and vague hypotheses," argued on the basis of Genesis 1 for a creation of the world prior to the six day creation.[48]

Numerous articles in the Christian Observer magazine in the 1860's and into the 1870's took up this topic. For example, J. H. M. tried to reconcile the apparent findings of geology (which led him "to believe that the original matter of the globe was created millions of years ago, or at some exceedingly remote period in the past") with the Bible, by postulating that there was a chaotic state of the earth for a great period of time prior to the six (literal) days of Genesis 1.[49]

"Genesis and Geology" (an article copied from American Messenger), Christian Observer and Free Christian Commonwealth, Vol. 48, n. 33 (August 18, 1869), 1, in which geological "facts" have now confirmed the Scriptural account of creation, in that "granite and its kindred rocks of the 'primary strata' have not been formed by the igneous process, but by the aqueous process."

[48]"David N. Lord's Geological Writings," Southern Presbyterian Review, Vol. XIII, n. 3 (1861), 537-78. The quote comes from 566.

[49]J. H. M., "Sacred History of the Creation," Christian Observer and Presbyterian Witness, Vol. XLV, n. 13 (March 29, 1866), 1.

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"S. S." worried that failure to affirm the existence of various animals whose remains have been found, would impeach the character of God. "If those bones never had life, they are a standing untruth in the volume of nature which God's own hand has written!" In point of fact, "[t]he witnesses are innumerable--the evidences incontestible; and they all plead for time--time."

The author contended that the multiplicity of species seen in geological strata "passed out of existence long prior to the Adamic period. Hence no members of any existing species have been found entombed with them."[50]

Three weeks later, the same writer spoke of these creatures from the past, including "Mastodan" [sic], various fishes, and Megatherium. The next edition showed his use of this geology to lead to the gospel:

> Were it not for the promises of God, the rocks would only proclaim degradation and death to man--they would spread the mantle of eternal night over him. Ah, the records of the rocks are cold, dark, cheerless, hopeless as the grave. Indeed, they are the graves of the past. Marvel not, then, that infidelity rejecting God's only promises, can write on the grave of man, as on the graves of the ante-Tertiary monsters, "Death an eternal sleep." Let any one reject Christ, and he rejects the promises, and hence, the blackness of darkness forever hangs over him--a night of death--a night of eternity, that will know no morning--no day-star of hope. Ah! it will be a night of despair![51]

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[50]"S. S.", "Wonders in the Earth. Monsters of the Pre-Adamite Earth," Christian Observer and Presbyterian Witness, Vol. XLVI, n. 18 (May 2, 1867), 1.

[51]"S. S.", ibid., Vol. XLVI, n. 21 (May 23, 1867), 4; and n. 22 (May 30, 1867), 4.

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"Ssgma Sigma" wrote of the geologic ages, and how different strata contained fossils of different kinds of animals.[52]

Another author wrote that the articles by "Ssgma Sigma" which traced in detail the geological testimonies, demonstrated that "they confirm the Mosaic account of creation." He drew this conclusion because the rocks show that the lower forms of life, as in the order in the book of Genesis, are found in the lower strata and the higher forms in the upper strata.[53]

"S. S." began a series in the summer of 1867 on "The Ages." In the first article, he laid out the issue as being one of honesty: unless these species actually lived over a long period of time, God would have been a deceiver of thousands. The writer set forth the position that the "day" of Genesis 1 was actually a long period of time, and he based this belief on several factors. For example, Christ and His apostles frequently referred to the "ages," which "appear to be God's measurements of eternity." The Bible often uses the word "day" in a non-literal sense. The traditional argument, regarding God's rest on the seventh day, begs the question, since it is the law of proportionality which is being set

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[52]See "Ssgma Sigma," "The Ages," Christian Observer and Presbyterian Witness, Vol. XLV, n. 21 (May 22, 1866), 4.

[53]"E--," "Another Number on Geology," Christian Observer and Presbyterian Witness, Vol. XLV, n. 47 (November 22, 1866), 3.

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forth, and His Sabbath could be viewed as continuing. If Genesis 1 is describing events that occurred within only 144 hours, then why would it be important to state that it did not rain during that period? Various traditional cosmogonies in heathen nations maintain that "the demiurgic or creative days were of long duration"; and Origen thought of them as metaphorical. The book of Hebrews makes mention of the Son of God Who made the aionas, a term which would comport well with understanding the "day" of Creation as being a long period of time. And, it is possible that there was a "vast period of time . . . before the commencement of the first age." "In that dark, unnumbered period, the first age began, that is, the first day of Moses--the first genesic day."[54]

Later in the series, he demonstrated his attempt to harmonize geology and Genesis:

> The fifth day [of Genesis 1] appears to have covered the whole of the Secondary Formation. This period, was not only prolific in its vegetable productions, but the waters brought forth abundantly, as the rocks attest; the fowls flew in the midst of heaven, and the creeping things abounded. During this age, many upheavals and subsidences took place--many great mountain ranges were thrown up, causing wonderful depositions of many kinds of rocks. The animacules of this period were of almost incredible numbers, forming vast depositions, especially of Calcareous rock.
>
> But though rocks of this age, are of vast depth, and of wonderfully diversified character, they are not like those of the two previous days, of unknown depth. As the rocks of this aion, were not subjected to the action of extreme heat, vegetables

[54]"S. S.", "Time of the Creation. The Ages," Christian Observer and Presbyterian Witness, Vol. XVI, n. 26 (June 27, 1867), 1.

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> appear in them. As they had been called into existence two ages previous, and consequently, were existing at the commencement of this, it is to be expected that their remains should be found lower in the rocks than those of any of the animate beings; and such is the fact. The rocks of this period, give evidence of the existence of all the things described in these verses.

During the day described in Genesis 1:24-26, there was formed

> the system of rocks known as the Tertiary Formation. This day, commenced with the Tertiary, and ended with the creation of Eve. Its end, was perhaps, about the close of the Pleistocene, or Alluvium period. During this day, there was little Plutonic action compared with the previous days; but it was great compared with the Seventh day. Hence, it was better adapted to the higher forms of life than the previous, and therefore, they were called into being. As the earth became fitted, higher and higher forms were called into existence.

Eschatology was also brought in. "The seventh age . . . commenced with the close of the creation, and will end with the Millennium." After this will be the eighth day, when "the great work of creation will re-commence and be carried on to perfection."[55]

Two weeks later, "S. S." continued the series by stating that "perfect harmony exists" between the two kinds of revelation (natural and special). "That theory that arrays nature against the Bible--God against himself, so that his kingdom is divided, cannot be true. It dishonors God, and

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[55]["S. S."], "The Ages--No. 4, History of the Creation," Christian Observer and Presbyterian Witness, Vol. XLVI, n. 33 (August 15, 1867), 1.

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perils souls."[56]

The next installment came a fortnight later. In it, the author stated that although the rocks do not tell us "which [eternal] state shall be ours," yet "[j]oined with inspiration, they are calculated to carry terror to the soul of the impenitent."

> Reader,that you escape that degradation, fly at once to that Saviour whom the inspired volume reveals. . . . Cling to the Saviour and rest on Him, and in the new creation of the coming age, a new creation--a higher state of existence awaits you. Rest on Him, and He who made the ages, will sustain you--bear you up amid the convulsions which will end "this evil age," and will introduce you to a higher life and a better age.[57]

Two weeks following, there was again a theme of eschatology with regard to geology. Sin was not present during six geologic ages, "and the sure Word informs us that it shall not be so again during the endless succession of ages." Only in the present age is there the reign of Satan--"his usurped godship on earth."[58]

An article the next year asked rhetorically why Genesis 1 sets forth the work of Creation with several "pauses"? ". . . was not the beautiful panaroma of its [creation's]

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[56]["S. S."], "The Work of Creation. The Ages--No. 5," Christian Observer and Presbyterian Witness, Vol. XLVI, n. 35 (August 29, 1867), 4.

[57]["S. S."], "The Order of the Creation. The Ages--No. 6," Christian Observer and Presbyterian Witness, Vol. XLVI, n. 37 (September 12, 1867), 1.

[58]["S. S."], "The Order of the Creation. The Ages--No. 8," Christian Observer and Presbyterian Witness, Vol. XLVI, n. 39 (September 26, 1867), 1.

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progress intended to impress our minds 'with the glory of the Creator.' . . ?"[59]

A continuation of the article stated that Scripturally we do not have to "regard the six creative days as successive periods of twenty four hours each." St. Augustine saw intimations that Moses did not intend the common solar day, "at a time when there were no scientific facts, and nothing in philosophy known, which would drive his truth-seeking mind to such conclusions."[60]

Yet another article in 1868 elaborated on Augustine's views that the days of Genesis 1 are called such symbolically: ". . . the solemn pauses in the Divine work, indicated by successive evenings and mornings, are evolutions in nature belonging to a higher chronology of whose measurement we have no revelation." The author developed the theme of the Bishop of Hippo, that "day" could hardly mean a solar day before God created the sun.[61]

The next year, "S. S." took issue with a New York Christian magazine (Witness) which stated that one must choose between God and geology. He took the standard position about perfect harmony existing between Nature and Revelation; and

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[59]"The History of the Creation," Christian Observer and Presbyterian Witness, Vol. 47, n. 26 (June 25, 1868), 1.

[60]"The Days of Creation," Christian Observer and Presbyterian Witness, Vol. 47, n. 27 (July 2, 1868), 1.

[61]"Prof. Lewis' Interpretation, of the First Chapter of Genesis," Christian Observer and Presbyterian Witness, Vol. 47, n. 31 (July 30, 1868), 1.

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wrote, "I do not believe that the Bible teaches absurdities; and if the views of anti-geologists are correct, it must." He based this statement on the fact that there was no dry land until the third day of Creation, and therefore there was no necessity for a mist to water the earth in so short a period of time if the days were only of twenty-four hours in length. Further, Scripture teaches that there were various "beginnings" (Hebrews 1:10; cp. Genesis 1:1 and John 1:1, where the article does not appear in the text).[62]

"S. S." continued his writings two weeks later by stating that the rocks clearly testify that there was more than one beginning to the earth: "There were stages in the great creative work, when destruction befell every animal." Making a "Scriptural conjecture," he estimated that the astral systems were formed over a period of not less than forty-nine thousand years: " . . . light has reached us from those distant orbs, therefore, they must have had an existence before our world. Yes, their rays of light would lead us to infer that their beginning must have been at a period of time ten thousand times more distant than the creation of the heavens." This author also took the somewhat unusual position that the term in Genesis, "a spirit of Elohim," was not the

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[62]"S. S.", "'Geology or God: Which?'--Both," Christian Observer and Presbyterian Witness, Vol. 48, n. 1 (January 6, 1869), 1. The writer also made reference to the Noahic flood in demonstration of the contention that it would have been absurd to have had a watering of the earth in such a brief time-span.

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Holy Spirit: God's means "was the Divine spirit, influence, energy or afflatus acting upon the waters."[63]

One month later, an editorial pleaded that just because geology was not yet a reliable science, it does not follow that there is no value in the work of its students, "for they have promoted research and inquiry, in every department of natural science in the wide field opened by the immensity and minuteness of the works of God." The author asserted that it would be presumption to assume that creation was in progress for more than forty thousand years, as well as to maintain that it was finished in 144 hours; for, God's works are "profound mysteries, not to be comprehended by any mortal." Even the teaching by "S. S." that hydrogen and nitrogen were in solid form at the time of creation cannot be known with certainty.[64]

Immediately adjacent to that column is another anonymous article, which attacked the views of Chalmers (who believed that there was a vast period intervening between the second and third verses of Genesis 1), "S. S." ("who assures us that God took 42,000 years for the work"), and the traditional view of six literal days. This article asserted that the traditional view was "a doctrine of nursery theology," which could be disproved from various considerations "drawn not from

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[63]"S. S.", "Beginnings--Genesis 1:1," Christian Observer and Presbyterian Witness, Vol. 48, n. 3 (January 20, 1869), 1.

[64]"Geology--The Days of Creation," Christian Observer and Presbyterian Witness, Vol. 48, n. 7 (February 17, 1869), 2.

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geology, but from the Bible."[65]

First, the presumption is against the Bible teaching such a doctrine. "Revelation was not given to gratify curiosity, but to lead us to God. . . . The fact that God created all things in 8,460 minutes, if it be a fact, is not a religious fact. . . . the Bible does not waste its valuable space to assert what is of no religious interest to man." Second, it is the pagan imitations which try to explain the modes of creation: "If the Bible describes the manner or the length of creation, it resembles in this respect the inventions of Satan." Third, "God is not generally in . . . haste. . . . God works slowly." Fourth, "God uniformly works through means, through second causes," as is seen even in the world's destruction in the flood. Fifth, the argument from analogy with regard to the Sabbath is illogical: "God whom no labor fatigues, and whose years fail not, worked, one hundred and forty-four hours, therefore, man, who soon tires, is to work for sixty years." It is possible for "a plain unpoetic passage" (such as Exodus 20:8-11) to use the same word in two different senses in the same passage. And, the writer even appealed to the fact that the Sabbath was on the seventh day to attempt to make his point:

> How God resting on Saturday is an evidence that we should rest Sunday, is left to be explained by the adherents of the traditionary interpretation.

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[65]"X* * *", "Biblical Account of Creation," Christian Observer and Presbyterian Witness, Vol. 48, n. 7 (February 17, 1869), 2.

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> Only four alternatives are open to them. Either the Sabbath has not been changed, or a part of the decalogue, spoken by God's own voice and written on tables of stone has been repealed, or God reasons nonsensically, or else the days of the last part of the fourth commandment are not our ordinary days.[66]

"X* * *" continued his article the next week by arguing, sixthly, that Genesis seems to indicate that "the work of creation was progressive and successive." Seventh, the Apostle's refuting of scoffers in II Peter 3:3-8 militates against regarding the days of Creation as being anything other than long periods. Eighth, Hebrews 1:2 and 11:3 teach that Jesus created the "ages." Ninth, Job 38:7 proclaims that the stars and angels sang and shouted for joy at the Creation: ". . . either some creature existed before 'the beginning'; or else the 'morning stars,' and 'the sons of God' sang and shouted before they were made; or else the phrase 'in the beginning' does not indicate a short and instantaneous period." Tenth, the traditional exegesis of Genesis must be overruled by these other Biblical considerations. He concluded by saying, "Every line, almost every word, of the Mosaic narrative is opposed to the belief that God created the world in one hundred and forty-four hours."[67]

The debate continued the same week as H. S. H. wrote, "I am a strict constructionist, and hold that the Bible has one

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[66]Ibid.

[67]"X* * *," "Nursery Geology vs. the Bible. Biblical Account of Creation--Continued from our last," Christian Observer and Presbyterian Witness, Vol. 48, n. 8 (February 24, 1869), 2.

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meaning, the simplest and most obvious; such as would be conveyed by the same language in any other book." He cautioned against trying to make Creation into a series of "beginnings." "Matter was made out of nothing. Otherwise, it existed from all eternity, which destroys creation and God himself, because what existed from all eternity, existed of necessity, self-existent, independent, infinite; and this would be God, or matter would be God, and would exist everywhere, or in other words, the universe would be all matter, or a . . . solid universe, infinite in expansion, without any space." H. S. H. stated, "To say that the materials and primordial elements of the heavens and earth pre-existed before the Mosaic account or narrative of creation, and that God commenced moulding and arranging them at this period, is simply to destroy His creative power, and pervert His own declaration that He did create them." The author also took "S. S." to task for his belief in "a spirit of Elohim" rather than the Holy Spirit.[68]

This article gives evidence of a fear similar to the English Protestant concern of two centuries before, viz., of avoiding a materialistic view of the universe. Fascinatingly, this discussion of geology also led H. S. H. to postulate regarding the "astral systems." All of them were created ex nihilo by God to demonstrate His power and glory, and in

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[68]H. S. H., "'Beginnings'--Genesis 1:1," Christian Observer and Presbyterian Witness, Vol. 48, n. 8 (February 24, 1869), 1.

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accordance with His "incomprehensible fixed purpose, both in creation and moral government and the diffusion and perpetuation of happiness among all the rational intelligences of innumerable worlds, of which there are, by fair and just compensation, two thousand and four hundred millions revolving around eighty millions of suns."[69]

The next week, "G--g" argued that just as geography was "wisely extending its field beyond the domain of pure physics, to the political, the industrial, the magnetical, the metereological, and the philosophical in its various forms," so should geology "extend its field of study and description." The work of creation proceeded by progressive stages, reflected in the geologic ages.[70]

"S. S." next wrote for the next week's Christian Observer. He admitted that all the sciences, except pure Mathematics, "have many mere fancies and vain speculations," and that includes Geology. "But because men in their hearts have hated God, and have magnified their fancies above his sure Record, shall we therefore condemn Geology? . . . Shall we discard the use of our eyes, because they have sometimes deceived us?"[71]

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[69]Ibid.

[70]"G--g," "The Geological Status of the Christian," Christian Observer and Presbyterian Witness, Vol. 48, n. 9 (March 3, 1869), 1.

[71]"S. S.", "'Geology or God:--Which?'", Christian Observer and Presbyterian Witness, Vol. 48, n. 10 (March 10, 1869), 1.

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The next week's edition contained several articles on the subject. "N. R." essentially accused two other correspondents with "striving to revive the old cosmogony of paganism"; and answered all of the contentions by "X* * *". He stated that "creation is instantaneous" and that "[t]o argue from Providence to Creation is a great blunder--the premise and conclusion have nothing in common"; and he challenged "X* * *" "to produce the evidence that the Lord used second causes in creation."[72]

"S. S." ripped into "N. R." for doubting that there were many "beginnings," and claimed that it was incredulous to foster the view that God would have miraculously dried up the ground in a short space of time so that a mist would have been necessary in order to water the earth. He again stated his belief in God working ordinarily by means, and concluded that, although God has been resting from His creation, He will "recommence His work of creation" on the "eighth day," after the Millennium.[73]

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[72]"N. R.", "'Nursery Geology'", Christian Observer and Presbyterian Witness, Vol. 48, n. 11 (March 17, 1869), 1-2.

[73]"S. S.", "Thoughts on Geology," Christian Observer and Presbyterian Witness, Vol. 48, n. 11 (March 17, 1869), 1. He asserted that this doctrine of a re-creation after the Millennium was taught by the Council of Nice in the fourth century. See also "S. S.", "The Beginning and the End of Time," Christian Observer and Presbyterian Witness, Vol. 48, n. 12 (March 24, 1869), 1, in which he attacked H. S. H.'s position that time would come to an end: "If ages are not expressive of time, and of its continuance, what can be? How can you have ages and ages of ages without time."

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Perhaps the best summary of the various positions can be found in an editorial on March 17, 1869. Pleading that ignorance characterized much of the knowledge on the subject, the editor suggested that "N. R." was illogical in referring to "S. S." and "X* * *" as not Presbyterian.

> All agree that anything that contradicts the Bible account is necessarily false. But they differ in their understanding of that account. "X* * *", as a biblical student, sees difficulties in the way of accepting the popular notion that creation occupied only six days of twenty-four hours each. He thinks that the Bible plainly teaches that the day in which God worked in building the material universe was a longer and more glorious period, than the few hours of day-light that exhaust the energies [of] finite man. He regards the divine day spoken of before man had an existence as immensely greater than the solar day.--"S. S."--an able minister and a devout Christian--has been for many years a student of science, and has endeavored to show that science, no less than the Bible, demands that the term day in the Mosaic account of the creation should be understood in the general sense in which it is often used, and not as a specific period of twenty-four hours. In his judgment, God and Geology both declare that the supernatural day before the creation of the sun and moon was a different, and a longer period than twenty-four hours. "N. R." defends the old and popular view--that the day spoken of in the first chapter of Genesis is twenty-four hours--as being the plain meaning of the Scriptures. The views of all are worthy of consideration. Each is sustained by some of the ablest and most evangelical biblical students.--Their discussions are suggestive to thought--and will lead the reader to examine more critically for himself the teachings of the Bible.[74]

An 1870 article tried to connect history, geology, and

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[74]"Correspondents on Geology," Christian Observer and Presbyterian Witness, Vol. 48, n. 11 (March 17, 1869), 2. See also the letter from "X* * *," "Days of Creation," Christian Observer and Presbyterian Witness, Vol. 48, n. 14 (April 7, 1869), 2.

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astronomy to prove that the creation of the world occurred approximately 4,000 years before the coming of Christ. It admitted that "there may have been many revolutions of the apsides before Adam was created and present order of things was established."

> And if the universe continues to exist, many more may occur in an eternity to come; but all this does not militate against the high probability that about the time that darkness was on the face of the deep, the sun was in perigree at the vernal equinox, and that the system was in equilibus, and a new order of things began.[75]

An 1876 article in the Southern Presbyterian Review catalogued many noteworthy changes that had occurred in the geography of various lands in a relatively short period of time; and then concluded: "how rash are the men of science who heedlessly infer from the changes which they observe in the physical geography of the valleys of the Somme and the Neuse, that the relics which are contemporary with the beginnings of those changes are necessarily of immense antiquity."[76]

In the 1880's, the Christian Observer was again a means of debate. H. H. Hawes reminded his readers that geology is only a "very imperfectly developed science," and that, unlike man, God would not have to take a long time to create the universe. He

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[75]"R", "Geology and Chronology," Christian Observer and Free Christian Commonwealth, Vol. 49, n. 48 (November 30, 1870), Literary and Miscellany, 1.

[76]"Geographical Revolutions," SPR, Vol. XXVII, n. 4 (October 1876), 760-91.

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displayed the common Southern Presbyterian Sabbatarian concern by contending that making the six days indefinite would undercut the Sabbath.[77]

W. H. Barry, a medical doctor, took exception to Hawes' article; and "R." maintained that the Sabbath was better explained by means of periods of time rather than literal days.[78]

Hawes responded by noting the difference between the sun's creation (asah indicating its creation out of pre-existent light) and creation (barah which is used on several of the days), and again expressed his Sabbatarian concern.[79]

O. S. P. responded to Hawes one week later. He noted that there is a measure of indefiniteness to the word "day" and that the days of prophecy denote much longer periods. He appealed to II Peter 3:8 ("a day with the Lord is as a thousand years, and a thousand years as a day"), contended that the Sabbath of creation is not a twenty-four hour day, and pointed out that not all the days of creation were solar days. He finished by saying that the "surprising correspondence between the successive works of the six days

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[77]H. H. Hawes, "Geology and Genesis," Christian Observer, Vol. 59, n. 28 (July 14, 1880), 1.

[78]W. H. Barry, "Geology and Genesis," Christian Observer, Vol. 59, n. 30 (July 28, 1880), 1; "R.", "Geology and Genesis," Christian Observer, Vol. 59, n. 31 (August 4, 1880), 1.

[79]H. H. Hawes, "Geology and Genesis," Christian Observer, Vol. 59, n. 32 (August 11, 1880), 1-2.

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and the order in which, according to geological researches, animated beings would seem to have made their first appearance on the earth, creates a strong presumption that the periods of geology and the days of Moses are identical."[80]

Hawes followed with the warning that "those who incline to geology so zealously" should not be "too 'touchy.'" After all, "[t]heir utterances are not inspired, and their conclusions have often proved false. This should beget modesty."[81]

The next year, Rev. J. T. Hendrick maintained that geology "is strictly an inductive science," being "based upon facts alone." As such, it adopts Bacon's and Newton's view, "that nothing is to be admitted that is not proven by facts, that whatever is established by the induction of facts, must be received, however many objections may be brought up against it." Geology may prove that the earth is ten millions of years old, and yet this does not contradict the Bible.[82]

Hendrick attacked such atheistic ideas as the theory of eternal succession, the development theory, and the notions of "fate" and "chance."[83] He also made reference to eschatology

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[80]O. S. P., "The Days of Creation," Christian Observer, Vol. 59, n. 33 (August 18, 1880), 1.

[81]H. H. Hawes, "'Geology and Genesis,'" Christian Observer, Vol. 59, n. 35 (September 1, 1880), 2.

[82]J. T. Hendrick, "The Bible and Geology," Christian Observer, Vol. 60, n. 26 (June 29, 1881), 1-2.

[83]J. T. Hendrick, "Geology and Atheism," Christian Observer, Vol. 60, n. 27 (July 6, 1881), 1-2.

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by stating, "All the facts in geology go to show that a change is to take place by fire, and our earth be elevated, refined and purified." Further, astronomy was said to confirm this, as shown by disappearing stars that nova and then burn out.[84]

Rev. Hugh A. Brown believed that geology had abundant data "proving the very great age of our globe." Using a "phenomenological" approach (as Copernicus), he stated that "Moses described things as he saw them in his vision, in the order of their appearance. It was not the aim of inspiration to give a scientific account of creation, but to reveal its course just so far, and in such a way, as to show God's creative energy and intelligent will and purpose, in the production of the Kosmos." The very fact that Moses did not put the sun and moon in his account until the fourth day points to the divine inspiration of his account.[85]

A different perspective was found two years later in an anonymous article. The author referred to the brooding of the Spirit of God over "the vast mass of chaotic material" and "imparting fertility and vitality in preparation for the creative work which was about to begin." We cannot know the length of this period before the first day, since the inspired record does not tell us. Creation was definitely the work of the Trinity, with each Person of the Godhead having a special

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[84]J. T. Hendrick, "'Our Earth and Its Higher State'", Christian Observer, Vol. 60, n. 28 (July 13, 1881), 1-2.

[85]Hugh A. Brown, "'The Bible and Geology,'" Christian Observer, Vol. 60, n. 38 (September 21, 1881), 2.

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role to play. Exegetically, the author insisted that the six days of creation must be regular days, not indefinite periods of time. Indeed, it is irrelevant to "make interpretaitons of the creation depend upon natural science," "because the creation lies outside the limits of empirical and speculative investigation. And, as a work of omnipotence, it belongs rather to the category of the miraculous and mysterious, and is to be received by faith." Far better to study the word of God for an understanding of creation, than to depend on the young science of geology, which was still in a state of "fermentation."[86]

Rev. H. B. Pratt argued for a long period of creation, because otherwise too many events--creation of the cosmos and the angels, the fall of Satan and his cohorts, the building of heaven and hell, the fitting of the earth for man, the formation of Adam and Eve from the dust of the ground--would have to be crowded into just one week. Further, from what point on the spherical globe could "the evening and the morning" of the first day be computed, if it were a regular day? He appealed to the fact that the folks in the Mississippi Delta know that it would take more than three days to dry what had been a totally flooded earth, and that, after the Noahic flood, "God allowed the earth seven months to dry

[86]"The First Day of Creation. The Preparation," Christian Observer, Vol. 62, n. 17 (April 25, 1883), 1-2.

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in."[87]

Rev. J. H. Martin was willing to grant the geologist's claims to "long periods, successive creations and destructions of vegetable and animal forms, in the space between the beginning and the first day's work mentioned by Moses." But after that, creation was performed by God "in the course of six literal days, measured by the diurnal revolution of the earth on its axis."[88]

But even Martin's concession was not enough to satisfy Rev. Henry R. Raymond, Jr., who posited that there were two fundamental flaws in Martin's articles. First, from Genesis 1:2, Moses confined his attention to the earth, as is evident from the fact that there is no break in the narrative between the first verse and the rest of the chapter. Raymond cited the Hebrew text and scientific objections to the view that geology can be fit in before day one of creation.[89]

Second, Raymond postulated that the "night" of Genesis 1 indicated darkness, implying inactive cosmic matter, while the "day" indicated light, pointing to the result of activity in cosmic matter. "It was the beginning and appearing of a new

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[87]H. B. Pratt, "The Age-Day Hypothesis," Christian Observer, Vol. 62, n. 23 (June 6, 1883), 1. He also argued that the last day of judgment would be longer than twenty-four hours, so why not the days of creation?

[88]J. H. Martin, "The Six Days' Creation," Christian Observer, Vol. 63, n. 17 (April 23, 1884), 1-2; continued the next week, Vol. 63, n. 18 (April 30, 1884), 1.

[89]Henry R. Raymond, Jr., "More Creation," Christian Observer, Vol. 63, n. 21 (May 21, 1884), 1-2.

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glory in each creative age that was marked by the 'great antithetical distinction,' evening and morning, and not any astronomical measurement." Also, because there was no organization to earth on the first day, and the first three days had no sun, moon, or stars to fix the "days, seasons, and years," therefore the Bible leaves the duration of these days "indefinite."

Raymond then offered this Tableau, which he himself admitted does not make all of creation's days correspond with geological periods:

> Introduction--Matter created, its state, gas indefinitely diffused.
>
> First Day--Matter is active, gravity, chemical action, concentration of diffused matter into one or more nebulae, appearing as luminous spots in the dark space of heaven.
>
> Second Day--Division in matter. Primitive neubla divides into smaller nebulous masses. The visible, lower, starry world is formed.
>
> Third Day--Concentration in matter. The nebulous masses concentrate into stars. Our sun becomes a nebulous star. Formation of the mineral mass of the earth by chemical combination of the solid crust, the ocean and atmosphere. The earth self-luminous--a star. Land appears. Azoic rocks. First infusorial plants and protophytes.
>
> Fourth Day--Chemical actions subside. The earth loses its photosphere; sun and moon become visible. First succession of day and night, of seasons and years. Differences of climate begin. Archaean rocks. Protophytes. Protozoans.
>
> Fifth Day--In the order of their rank, plants and animals successively appear--marine animals, fishes, reptiles and birds. First great display of land plants, coal beds. Paleozoic and mesozoic ages.

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> Sixth Day--Predominance of mammals; the highest animals. The beasts of the earth, Carniverous. The cattle, Herbivorous animals (According to Gesenius, the creeping animals of this day are not mammals, but the smaller mammalia, rats, mice, ect.) Tertiary age. Creation of man. Quarternary age.
>
> Seventh Day--Sabbath--no material creation. Introduction of the moral world. Age of man.[90]

In the Southern Presbyterian Review in 1885, there appeared an article which espoused an admittedly old-fashioned view as to the "six days." And yet, in excoriating the fanciful exegesis and mystical positions of Arnold Guyot, John Miller not only held to six literal days, but also to the belief that there were many creations over million of years, with the latest being recorded in Genesis 1.[91]

With the demise of the Review, the Presbyterian Quarterly took its place as the church's premier intellectual organ. A couple of articles soon appeared regarding geology.

George D. Armstrong wrote that one must distinguish between sacred and secular history, including the distinction between the history of beginnings as recorded in the Bible and that recorded in the rocks. Armstrong was even willing to say that the Biblical account of the fifth day of creation does not mandate that "God first created these sea-creatures and

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[90]Henry R. Raymond, Jr., "More Creation," Christian Observer, Vol. 63, n. 22 (May 28, 1884), 9-10. See also J. A. Mecklin, "The Sabbath of Creation. A Hypothesis," Christian Observer, Vol. 63, n. 19 (May 7, 1884), 1, which did try to relate geological periods to the Bible.

[91]John Miller, "'The Six Days,'" Southern Presbyterian Review, Vol. XXXVI, n. 1 (January 1885), 108-16.

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flyers on this day," but merely that "on this fifth day there was a wonderful development of this portion of the animal kingdom." This pastor and scientist bought into the nebular theory of the universe, and stated that this was compatible with the Genesis account. But true to his anti-evolutionary views, he steadfastly maintained that the story of Adam belonged not merely to a sacred history of creation, and therefore it had to be literally true.[92]

D. E. Frierson had no problem with a long period of ages prior to the events recorded in Genesis, but he objected to making the creation into a merely natural process. Not only would such an understanding undercut the significance of the divine Sabbath, but it would also demand "that the whole Bible be understood as a natural development of history and of religious thought; that religious thought and the soul itself are simply more sublimated evolutions springing from the inexorable trend of nature."[93]

One final article may be mentioned in this regard. Professor James A. Lyon of the Southwestern Presbyterian University in Clarksville, Tennessee, argued against long geologic ages. He cited the recession of Niagra Falls as

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[92]Geo. D. Armstrong, "The Pentateuchal Story of Creation," Presbyterian Quarterly, Vol. II, n. 6 (October 1888), 345-68.

[93]D. E. Frierson, "The Famous Six Days," Presbyterian Quarterly, Vol. IV (January 1890), 48-55.

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evidence that it was probably cut in the last 6,000 years.[94]

Several things are evident from this extensive material. One, geology remained a greatly controverted topic for discussion. Two, most Southern Presbyterian writers on the subject willingly accepted a belief in the great antiquity of the earth. Three, their acceptance of this view was because of the seeming facts of geology, the rejection of which, they felt, would be unscientific and would subject them and the church to ridicule and scorn. Four, the methodology of trying to reconcile Genesis and geology varied from the theory that there were many creations or beginnings before the Genesis account, to the theory that much time elapsed between the first two verses of Genesis, to the thesis that "day" really meant "age." Five, the widespread acceptance of the world's great age did not lead most of these churchmen to accept evolution. Six, they utilized their geologic positions for apologetic purposes, both in trying to defend the faith and in reaching out evangelistically.

3. Catastrophism vs. Gradualism

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[94]Prof. James A. Lyon, "The Antiquity of the Earth and of Man," Christian Observer, Vol. 71, n. 51 (December 21, 1892), 1-2. See also George D. Armstrong, "Criticisms and Reviews," rev. of The Story of the Earth and Man by Sir J. W. Dawson, Presbyterian Quarterly, Vol. I (1887-88), 563-66; George D. Armstrong, "Criticisms and Reviews," rev. of The Geological History of Plants by Sir J. William Dawson, Presbyterian Quarterly, Vol. II (1888), 334-35; "Light on the Age of Niagra," Christian Observer, Vol. 86, n. 44 (October 26, 1898), 1-2.

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Part of the challenge of geology was its commitment to uniformitarianism, that is, the perspective that the same physical laws which are observable today have applied consistently in the past. That perspective was coupled with a belief that change occurred only gradually, and was the result of natural laws.

The difficulty with that position for Christian geologists was with regard to the flood. Obviously, the deluge in Noah's time was an instance of catastrophic change--especially if it was a universal flood. Beyond the matter of such a topsy-turvy occurrence, there was the question of how such a cataclysm came about--was it the result of natural laws at work, or was it the direct result of divine and miraculous intervention?

An article in the Christian Observer pointed to a contemporary earthquake leading to the formation of another island in the Azores. The author wrote, "It seems to remove all difficulties from the problem how the waters of the flood in Noah's day, could be made to cover the highest mountains of the inhabited world. It is delightful to see God giving us just such explanation of his workings as this, in order that our faith may not be put to too severe a test."[95]

So, although this writer would evidently not give up the miraculous side, he still felt that faith could be

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[95]"The Flood," Christian Observer, Vol. 59, n. 29 (July 21, 1880), 4.

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strengthened by considering the reasonableness of secondary causes.

The universality of the flood was a matter under discussion. J. P. Briscoe stated that even though man had been on earth only 1,656 years, mankind could still have been very widespread. Geologists tell us that ears of corn and seashells are found on the tops of mountains far inland. "God is not limited in power or means; he could cover the whole world with water as easily as a part."[96]

Briscoe, who was himself responding to a couple of articles,[97] found himself responded to a couple of weeks later. M. W. Venable contended that the fossils in the rocks could not be a result of the flood: "an exhaustive study of these remains, shows that there were vast numbers of animals once existing which have no specific representatives in the present day." He was concerned that, if it was said that these species changed as a result of "climate, food, or physical surroundings," then not only do we run into Evolutionism, but we also postulate that such modifications took place in the relatively short time of four thousand years--which is to "concede more than the most rabid Evolutionists ask of claim." Venable concluded that philologists could work on clearing up dubious interpretations

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[96]J. P. Briscoe, "The Universality of the Flood," Christian Observer, Vol. 62, n. 2 (January 10, 1883), 1.

[97]See Christian Observer, Vol. 61, n. 42 and n. 43 (October 18 and 25, 1882).

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of Scripture, and physical scientists could keep on recording the facts revealed by their research. Both "are travelling converging roads which will meet in God's own time, and illustrate a beautiful harmony in all his Word, both written and unwritten."[98]

An article a couple of months later took exception to the attacks on Moses' record. The authors of such criticisms exclude the supernatural and the miraculous. And, after all, geology and geography are not very old sciences. Why should we therefore accept this new (and always changing) "science" instead of adhering to God's Holy Word?[99]

Rev. T. P. W. Magruder played the same kind of tune with an article arguing for the universality of the flood. ". . .[W]hy may not the remains of these primeval navigators have been converted into cobblestones, during the ante-diluvian period? inasmuch as great and marvellous changes, since the creation, have undoubtedly been effected both by second causes and by miraculous interposition, operating to an extent as yet undiscernable."[100]

One of the more extensive contributions on the subject of the flood was by the conservative, George D. Armstrong. He

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[98]M. W. Venable, "The Answer of the Rocks," Christian Observer, Vol. 62, n. 4 (January 24, 1883), 4.

[99]"'Moses and His Divinely Inspired Record,'" Christian Observer, Vol. 62, n. 10 (March 7, 1883), 1.

[100]T. P. W. Magruder, "The Universality of the Deluge," Christian Observer, Vol. 62, n. 15 (April 11, 1883), 1-2.

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began by comparing the Genesis account with that of the Chaldeans, and concluded that the Mosaic account: (1) gave credible dimensions of the Ark, in contrast with incredible dimensions ("more than half a mile long by nearly a quarter of a mile broad . . . . A vessel of such size would break by its own length"); (2) embodies a moral lesson, which the Chaldean account does not; (3) is mono-theistic in contrast to poly-theism. Dealing with the Mosaic understanding of the flood, Armstrong stated that the deluge occurred four to five thousand years ago; that it was not necessarily universal in the sense of covering every spot of land but that it was universal in that every human being drowned except those in the Ark; that the Ark rested on Mount Ararat (Armenia), from which part of the world the oldest known civilizations have come; that the ante-diluvian human race probably was in various degrees of civilization or savagery; and that the flood likely occurred through a combination of seismic activity (sinking the land) and downpours. Modern science testifies to the fact of a recent, catastrophic flood. For example, many of the rivers of Eurasia (the Volga, Oural, Sihon, Lour, and the Amoo) turn inward rather than going into the ocean. Anthropology indicated the existence of two different races (neolithic in contrast with the earlier palaeolithic), and the universality of the flood tradition confirmed the historicity of the event. Many able geologists contend for a great flood in order to account for the

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destruction of the mammoth and other beasts, as well as the condition in which their remains were found. Furthermore, the uniformtarianism of Lyell and others has pretty much been discounted, as many scientists are now accepting that man appeared fairly recently on the earth. In his conclusion, Armstrong compared the three types of account of the flood--Biblical, human traditional, and geological--and ended with the statement: "In this, as in other instances which might be cited, science, after having antagonized the Mosaic history for a time, has quietly drifted around into an almost perfect harmony with it."[101]

Two review articles in 1895 considered Sir J. William Dawson's The Meeting Place of Geology and History. In both of them, there was favorable mention made of Dawson's noting of the geological and historical evidence for the universal deluge.[102]

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[101]Geo. D. Armstrong, "The Deluge," Presbyterian Quarterly, Vol. V (1891), 209-28.

[102]"The Meeting Place of Geology and History," Christian Observer, Vol. 82, n. 33 (April 17, 1895), 2; James A. Lyon, "Dawson's 'Meeting Place of Geology and History,'" Presbyterian Quarterly, Vol. IX (1895), 339-40. See also "Geological Speculations," Christian Observer, Vol. XLVI, n. 10 (March 7, 1867), 3, a brief article with favorable mention of Professor Agassiz's views regarding the results of the ice age on North America. For other articles on the flood, see "Was the Flood Universal?", Christian Observer, Vol. 61, n. 52 (December 27, 1882), 1, and Vol. 62, n. 1 (January 3, 1883), 1; and "Prehistoric Nippur and the Deluge," Christian Observer, Vol. 84, n. 44 (October 28, 1896), 3.

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4. Practical Applications

Southern Presbyterians were interested in geology not only for clues which it may give regarding the earth's past, but also for very practical reasons in terms of technology and industry.

The premier geologist among Presbyterians in Dixie was William Henry Ruffner. A pastor who had to quit the pastorate for health reasons, Dr. Ruffner also served as Superintendent of Public Instruction for the Commonwealth of Virginia.

A letter in 1895 detailed his expertise in the subject. After writing of his interest in education and his willingness to be a candidate for United States Commissioner of Education, Anne H. Ruffner wrote of his true interest:

> But it was of Dr. Ruffner's geological work that I meant especially to write. So little of his work has been published that few know of its extent.
>
> Natural Science has been favorite study since boyhood and for nearly 40 years he has devoted much time to the study of geology.
>
> He has been a professional geologist only since 1882, but long before that his love of the Science had led him to work out a geological section across Virginia, extending from Hampton Roads to the Ohio River.
>
> While Supt. Pub. Instr. he visited 94 of the 100 counties of Virginia, and it was his habit as he travelled (often by private conveyance) to study the geography and geology of the country through which he was passing, and to deliver at his Teachers Institutes lectures on the local geology. This was not only with a view of interesting the people in this science but especially to encourage the development of the resources of our State.
>
> In these lectures he made a number of important suggestions, many of which have since been carried out,--as for instance the establishment of a great Soda Factory at Saltville.

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> He has probably done more geological field work in Virginia than any more man of his day.
>
> During his professional career, besides examining & reporting on many large properties in Va. & West Va., he extended his labors into Tennessee, North & South Carolina, Georgia, Alabama and Mississippi, doing a large amount of work in the coal and iron regions of Alabama, from which very important results followed.
>
> He was also sent twice to Washington Territory, now the State of Washington, to report on extensive mineral regions involving the investment of many millions of dollars. For these services he received liberal compensation.[103]

As that epistle noted, Ruffner was often sought out as a consultant on geological matters.[104] Sometimes his correspondence dealt with what could allegedly be gleaned from geology with regard to distant history,[105] but most often it

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[103]Anne H. Ruffner, letter to Judge S. Bassett French, April 24, 1895, Montreat archives, file Ruffner correspondence. See also S. F. Rixey, letter to Dr. William H. Ruffner, July 5, 1890, Montreat archives, file Ruffner correspondence. Rixey was a young man from Culpeper, Virginia, desirous of being Ruffner's assistant so that he could make "some branch of geological or mining work [his] business." See also G. W. C. (?) Lee, letter to W. H. Ruffner, March 15, 1889, Montreat archives, file Ruffner correspondence, in which this professor at Washington & Lee University expressed the faculty's "sincere gratitude" for Ruffner's "valuable contribution--especially illustrative of the geology of Virginia--to the Geological Cabinet of the University" and for his having "given much time and attention to the proper arranging of the collection."

[104]See also the expert testimony he gave in a court case: Montreat archives, Ruffner file, Land--Clifton Forge Mining Company, 1894.

[105]See, for example, Joseph C. Southall, letter to Mr. Ruffner, July 5, 1877, in which he wrote, "I feel quite lifted by your warm commendation of the first sheets of 'The Epoch of the Mammoth,' as I have the highest confidence in your judgment." Also, G. Frederick Wright, letter to W. F.[sic] Ruffner, July 2, 1889, in which he asked regarding the effect of the glacial age on geological formations. Southall was in Virginia's Department of Public Instruction, and Wright was a

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dealt with practical matters. A letter in early 1861, which touched on the sectional dispute ("I am afraid secession is gaining ground in this county. The news of the firing into the 'Star of the West' at Charleston will set the whole country on fire, North & South"), agreed for the most part with Ruffner's criticisms of the author's geological survey.[106]

That author was recipient of correspondence over twenty years later from an official of the United States Geological Survey in Washington, D. C. Apparently responding to I. L. Campbell, W. C. Kerr wrote,

> I also endorse all you say about Dr. Ruffner, of whom I have a very high opinion. And when the time comes for geol. work in the Appalachian Division,--in 1884, if I shall be in a position to influence appointments in the Va. field, I shall be very glad to find that the help of such men as yourself and Dr. R. can be had.[107]

Various letters dealt with coal fields and railroads. Besides several instances of personal correspondence,[108]

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professor of New Testament Greek and editor of Bibliotheca Sacra, writing from Oberlin, Ohio. Both of these letters are in Montreat archives, file Ruffner correspondence.

[106]I. L. Campbell, letter to William H. Ruffner, January 12, 1861, Montreat archives, file Ruffner correspondence. The letter discussed various features of a map which Campbell had made based on his surveys.

[107]W. C. Kerr, letter to I. L. Campbell, March 6, 1883, Montreat archives, file Ruffner correspondence. Campbell was a professor at the University of Virginia.

[108]For example, see George (?) Fontaine, letter to William H. Ruffner, December 16, 1882; L. (?) Suzueruy, letters to William H. Ruffner, September 7, 1882, September 11, 1882, and November 13, 1883; Montreat archives, file Ruffner

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there were letters from state officials and companies.

For example, Eugene A. Smith of the State Geological Survey at the University of Alabama wrote Dr. Ruffner that his failure to put in his pamphlet that he had copied a map from government material might easily get him (Smith) in trouble with the Census Office.[109] Smith also had expressed appreciation to Ruffner for his work, and wrote, "I shall be very glad to get from you whatever notes you may have concerning our coal fields and to pay you for them."[110] Indeed, Smith wrote:

> Please accept my thanks for the copy of the Physical Survey of the Ga. Pac. R. R.
> This is so far ahead of similar pamphlets that it is a genuine pleasure to read it.
> I hope you and Prof. Campbell may soon be engaged in another enterprise of the same sort in Alabama.[111]

Another example is a series of letters from John W. Johnson, President of the Georgia Pacific Railroad. This

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correspondence. Fontaine was a professor at the University of Virginia, and Suzueruy lived in Columbus, Ohio. From the same file, see also James D. Dana (of the American Journal of Science and Arts), letter to William H. Ruffner, February 11, 1882, declining an invitation to investigate the geology of Virginia and Georgia.

[109]Eugene A. Smith, letter to W. H. Ruffner, December 6, 1883, Montreat archives, file Ruffner correspondence.

[110]Eugene A. Smith, letter to W. H. Ruffner, September 26, 1883, Montreat archives, file Ruffner correspondence.

[111]Eugene A. Smith, letter to W. H. Ruffner, September 21, 1883, Montreat archives, file Ruffner corresopndence. Smith also noted that he needed a copy of a report which he had lent to Ruffner the previous year, as the legislature had made additional appropriations and there were several survey parties in the field.

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line, headquartered in Birmingham, Alabama, had a great deal of interest in the development of coal fields, and Johnson consulted with Ruffner regarding the viability of such enterprise.[112]

Professor I. C. White of West Virginia wrote to Ruffner regarding the Pittsburgh and Upper Freeport coals near his home town of Morganton.[113] And a long series of letters from Thomas Seddon, President of Sloss Iron & Steel Company of Birmingham, asked Ruffner's advice concerning the locations of iron veins, the presence of water (or lack thereof), and the quality of the ore itself.[114]

Ruffner himself described the various legal squabbles and drilling problems regarding some oil land in which he had an interest. Included in that discussion was the coincidence of the discovery of oil at Titusville, Pennsylvania.[115]

5. Summary

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[112]John W. Johnson, letters to W. H. Ruffner, March 21 and June 5, 1884, Montreat archives, file Ruffner correspondence.

[113]I. C. White, letter to Wm. H. Ruffner, February 24, 1887, Montreat archives, file Ruffner correspondence.

[114]Thomas Seddon, letters to W. H. Ruffner, November 11, December 2 and 31, 1889, February 8, 1890, May 2 and 7, 1891, October 14, 1892, February 5 and 20, 1895, Montreat archives, file Ruffner correspondence. See also Samuel Thomas, letter to Dr. W. H. Ruffner, October 29, 1883, found in Montreat archives, file Ruffner correspondence. Thomas was with The Thomas Iron Company in Hokendauqua, Pennsylvania.

[115]See Ruffner file, Land--Big Paint Creek Oil Rights, 1859-1900 scattered, Montreat archives.

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Geology played an important part in the Southern Presbyterian philosophy of science--whether considered from the perspectives of creation, long-age, catastrophism vs. gradualism, or the practical application of geological knowledge. The extensive debates carried on in the church papers demonstrate the intensity and importance of the controversy.

Three references can perhaps summarize the situation in Southern Presbyterianism in the late nineteenth century. A reviewer of a geology book stated, "Our knowledge of its contents is too imperfect to enable us to form a just estimate of its merits. None but a well read Geologist can appreciate an elaborate work of this kind."[116] Ruffner, on his journey to the Pacific Northwest, described for his wife the geological sights and spectacular scenery. On a later trip to Chicago, he commented, "Geologists have many questions . . . concerning these lakes and prairies."[117]

Beauty, wonder, and uncertainty which led to controversy--such was the Southern Presbyterian situation with regard to geology.[118]

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[116]Rev. of The Student's Elements of Geology by Sir Charles Lyell, Christian Observer, Vol. 50, n. 32 (August 9, 1871), Literary & Miscellany, 2.

[117]William H. Ruffner, letters to his wife, November 24, 1887, and September 30, 1891, Montreat archives, file Ruffner correspondence.

[118]See "Genesis vs. Geology," Christian Observer and Free Christian Commonwealth, Vol. 49, n. 33 (August 17, 1870). The article spoke of Prof. Silliman challenging Dr. Taylor of New

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D. OTHER SCIENTIFIC INTERESTS

1. Geography

Closely related to geology was the science of geography, and we have already noted above some of the explicit connections. But geography was also of interest to Southern Presbyterians for its own sake.

There are several review articles which emphasized the importance of geography. An article in the Southern Presbyterian Review claimed that "[f]ew studies could be so practically useful in our schools as Physical Geography. Few books would make a more valuable addition to the libraries of our farmers, merchants, and editors, than this work of Commodore Maury's." The reviewer went on to speak of geography's "attractiveness": "that it is based upon the results of scientific investigation in so many departments, that its study necessarily involves some rudimentary instruction in other sciences" and it therefore "opens the mind and excites the interest of the student in som eminent a

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Haven, "How did these once living animals get into this position, except as the rock gradually formed about them in one of those long early periods?" Taylor replied, "Nonsense, nonsense, do you think that God, when He made the rocks, couldn't have stirred in the things just as easy as a cook stirs raisins in a pudding or cake?" The article reported that Silliman was so disgusted that he walked out and didn't say a word to Taylor for three weeks.

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degree, that he is not likely to rest satisfied with a partial knowledge of the great truths unfolded to him with the view of making this special study clear."[119]

A review in the Christian Observer noted that the present age was one of progress, and that there had probably been more change in geography than in any other "elementary branch" of science. Not only must one be aware of geo-political lines and bodies of water, but also of such things as "trade winds and sea currents, of the regions of volcanoes, and the distribution of the races of man." The bottom of the ocean and isothermal lines also were being studied as part of this science which was still "in its infancy."[120] A generation later, the same magazine carried several brief articles regarding the search for the North Pole.[121]

Two back-to-back articles described the voyage of a Royal Naval vessel and a trip across Persia by caravan. The former stated that the book's author both entertained and instructed

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[119]"Critical Notices," rev. of Commodore Maury, Physical Geography, Southern Presbyterian Review, Vol. XXV, n. 1 (January 1874), 135-36.

[120]"Recent Publications," rev. of S. S. Cornell, Cornell's Physical Geography . . . ., Christian Observer and Free Christian Commonwealth, Vol. 49, n. 45 (November 9, 1870), Literary & Miscellaneous.

[121]"Finding the North Pole" and "Has the North Pole Been Found," Christian Observer, Vol. 84, n. 8 (February 19, 1896), 2, and n. 9 (February 26, 1896), 14, dealt with Dr. Fridtjel Nansen's expedition. "Another Search for the North Pole," Christian Observer, Vol. 85, n. 33 (August 18, 1897), 21, spoke of Lt. Peary being given five years' leave by the U. S. Navy to discover the very top of the world.

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in his description of the journey of the vessel. The latter took note of the political and religious situations in Russia and Persia--including the suppression of Christianity--and said, "The volume is stored with precise information, and abounds in careful statistics, which may be studied right now, when the Russo-Turkish war is directing the eyes of the world to portions of the region which Mr. Arnold traversed."[122]

Of particular concern to Southern Presbyterians in this regard was the land of the Bible. A review of a book on the geography of the "Holy Land" brought forth the advice, "we agree with Mr. Spurgeon in applying to this unique work the words of our Saviour concerning a sword--he that hath not a copy, let him sell his garment and buy one."[123] Other articles set forth the importance of knowing the Bible lands geography.[124] And Richard M. Hodge, an ordained minister who

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[122]"Critical Notices," rev. of The Cruise of Her Majesty's Ship, "The Challenger" by W. J. Spry, R. N.; and rev. of Through Persia by Caravan by Arthur Arnold; both in Southern Presbyterian Review, Vol. XXVIII, n. 3 (July 1877), 609-13. For other articles of interest, see rev. of Manual of Geography: A Complete Treatise on Mathematical, Civil and Physical Geography by M. F. Maury, Christian Observer, Vol. 50, n. 11 (March 15, 1871), Literary & Miscellany, 2; and "Recent Publications," rev. of Tropical Africa by Henry Drummond, Presbyterian Quarterly, Vol. III (1889), 318.

[123]W. W. Moore, "Criticisms and Reviews," rev. of The Land and the Book . . . by William M. Thomson, Presbyterian Quarterly, Vol. I (1887-88), 200-04.

[124]See "The Study of Geography. And the Geography of Bible Lands," Christian Observer, Vol. 73, n. 45 (1894), 2-3; and Herbert T. Bacon, "Bible Distances," Christian Observer, Vol. 74, n. 14 (1895), 3.

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was Superintendent of the Bible Institute, Nashville, Tennessee, wrote a book that combined geography and chronology in the study of the life of Christ.[125]

Geography was also put to other uses. The lead article in an issue of the Southern Presbyterian Review, by W. H. Darnall, noted that "the achievements of science and the indomitable perseverance of the age" have surmounted all obstacles regarding finding the source and the outlet of the two great African rivers; and then used the observations of Samuel White Baker to assault the notion of Negro suffrage at that time, even though the blackman is improveable.[126] And the Christian Observer reproduced an article from the New Orleans Times-Democrat which tried to draw conclusions between geography and crime: "It will be seen that it is possible to make a criminal map of Europe, showing that certain sections produce murder, others burglary, or suicide, much as they produce fruit, or wheat, or cotton."[127]

2. Astronomy

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[125]Richard M. Hodge, Historical Atlas and Chronology of the Life of Jesus Christ: A Text Book and Companion to a Harmony of the Gospels (Wytheville, Va.: D. A. St. Clair Press, 1899).

[126]Rev. W. H. Darnall, "The Sources of the Nile," Southern Presbyterian Review, Vol. XVIII, n. 4 (November 1867), 451-72.

[127]"Geographical Centres of Crime," Christian Observer, Vol. 73, n. 17 (1894), 22.

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The heavens have always held a fascination for man, and Southern Presbyterians in the late nineteenth century were not exempt from that phenomenon.

Prof. Edward S. Holden, Director of Lick Observatory in California, wrote an article for the Christian Observer on the new attempts to find the actual dimension of stars. Scientists had already determined the masses of some stars, the chemical constitutions of very many of them, and their motions. But new experiments were being tried to discover their actual size by "measurement of interference bands produced by the light of a distant object." Holden also inserted a parenthetical warning to readers of articles on popular science not to accept "the conjectures of the clever writer as if they were admitted and accepted results." Although conjecture is necessary for the advancement of science, "the line between conjecture and conclusion should be sharply drawn and explicitly stated."[128]

Another article discussed the planet Venus, including its various phases, its eclipsing of the sun, and its rising and setting.[129] Other articles talked about the rings of Saturn,

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[128]Edward S. Holden, "The Scientific Stars. Their Actual Dimensions Now Ascertainable.--The Latest Important Discovery in Astronomy," Christian Observer, Vol. 73, n. 4 (January 24, 1894), 18.

[129]"The Planet Venus," Christian Observer, Vol. 61, n. 12 (March 22, 1882), 6.

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and the (alleged) discovery of another planet.[130]

The old Ptolemaic notion of the Firmanent was ridiculed. The early translators of Scripture were "ignorant of the true science of Astronomy," and so judged of "things by their appearance," supposing the heavens to be "solid and firm." The article continued, "How deceptive are appearances! That which seemed to be firm, is of all things one of the farthest from being so."[131]

But astronomy was viewed as significant not only for its own sake, but also for what it could reveal regarding man and the universe. For example, a Southern Presbyterian minister made favorable reference to Kepler and his devotion to the stars ("'The stars are the handwriting of God; I love to read what he has written'"), and then noted that those who teach wisely and successfully are compared in Scripture to the stars.[132]

The discovery, via spectographic analysis, of double suns rapidly revolving around each other brought forth the comment

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[130]"Saturn's Famous Rings," an article from the St. Louis Republic, Christian Observer, Vol. 73, n. 27 (July 4, 1894), 22; and "A New Planet," Christian Observer, Vol. 86, n. 43 (October 19, 1898), 1-2. This latter article counselled the reader to be greatly humble, since he does not know what new discoveries may change our view of the universe.

[131]"The Expansion or Firmanent," Christian Observer and Presbyterian Witness, vol. 48, n. 7 (February 17, 1869), 1.

[132]William Sterling Lacy, "Reward of the Useful Teacher. An Ordination Sermon," in William Sterling Lacy: Memorial, Addresses, Sermons (Richmond, Va.: Presbyterian Committee of Publication, 1900), 62-65.

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that we should be overwhelmed at the power of the Creator. This should be a lesson in humility: "When men are tempted to parade their own knowledge, to assert that they know this, and they know that, we feel tempted to ask, Did they know that Mizar, of the Great Bear, was a double star?" Therefore, we should "walk with humility before our mighty God."[133]

A review article of a book claimed that the author "constantly leads us up 'through nature to nature's God.'" After quoting from the German poet Richter, the notice closed with these words: "We are reminded by this eloquent extract of the dying words of our Thornwell. With eyes closed and consciousness apparently gone, he cried: 'Wonderful! beautiful! nothing but space! expanse, expanse, expanse!'"[134]

That same review contended that there are probably other worlds that are inhabited, "not of course by creatures like men, but yet by reasonable creatures, who know and worship and serve God."[135] A similar point, about the existence of other worlds (though not necessarily of other intelligent life), is found in an article that employed the destruction of other planets far larger than the earth as evidence that "this world is ultimately to be destroyed by fire":

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[133]"Unseen Stars in the Heavens," Christian Observer, Vol. 70, n. 48 (December 2, 1891), 4.

[134]"Critical Notices," rev. of The Expanse of Heaven: A series of Essays on the Wonders of the Firmanent by R. A. Proctor, Southern Presbyterian Review, Vol. XXV, n. 4 (October 1874), 556-58.

[135]Ibid., 557.

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> Tycho Brahe gives an interesting account of a brilliant star of the larger size, which, on account of its singular radiance, had become the special object of his daily observation for several months, during which the star gradually became paler until its final disappearance. La Place states that one of the vanished fixed stars of the northern hemisphere afforded indubitable evidence of having been consumed by fire. At first the star was dazzling white, next of glowing red and yellow lustre, and finally became a pale and ashen color. The burning of the star lasted sixteen months, when the sunny visitor, to which perhaps a whole series of planets may have owed allegiance, finally departed and became invisible forever.[136]

Several articles set forth various lessons to be gleaned from the heavens. J. H. M. drew these conclusions: 1. "Men are perpetually instructed, counselled, and exhorted by the heavenly bodies to acknowledge and worship God"; 2. "The works of God, both celestial and terrestrial, set us an example of exact and constant obedience to the divine will"; 3. "The greatness, extent, splendor and purity of the heavens are calculated to make us feel our own littleness, insignificance, vileness, and pollution, and the nothingness of all earthly things"; 4. "We learn from a survey of the stellar universe, the inconceivable worth of the soul. . . . All the glories of the sky lose their lustre and appear of the small value, in comparison with the soul"; 5. "From the loftiness, magnitude and extent of the heavens, we learn the infinite condescension and love of God as displayed in the work of redemption," as Christ the Creator endured the shame and death of the cross;

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[136]"Planets Destroyed," Christian Observer, Vol. XLV, n. 30 (July 26, 1866), 4.

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6. "The heavens invite us to look upward, and seek a home above. . . . Above yon starry dome is the high and holy place where God reigns, where Jesus sits enthroned in his mediatorial glory, where saints and angels dwell."[137]

Another article two decades later spoke of the lessons one could get from Venus. Among others, they are: a confirmation of science; proof of Deity: "If the heavenly bodies are whirled in their orbits with such perfect precision and symmetry--no clash nor collision--there must be an almighty hand which propels and preserves them"; man's greatness and also his littleness; avoidance of disproportioned zeal (think on the more momentous things of Scripture); ability to cope with the disappointments of life; the transitoriness of human glory; and turning the attention upwards.[138]

A final article to be noted was a review of a book which attempted "to 'locate' heaven." The author's conclusion "is that there is no insuperable argument against heaven being within the bounds of the astral universe."[139]

Many of the same issues that confronted theologians in

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[137]J. H. M., "The Starry Heavens," Christian Observer and Presbyterian Witness, Vol. 48, nos. 47 and 48 (November 22 and 29, 1866), 1.

[138]"Observer," "The Transit of Venus," Christian Observer, Vol. 61, n. 51 (December 20, 1882), 2.

[139]"Recent Publications," rev. of Jermain G. Porter, Our Celestial Home: An Astronomer's View of Heaven, Presbyterian Quarterly, Vol. III (1889), 638.

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the time of the Reformation, as views expanded from the closed world to the infinite universe, confronted Southern Presbyterians in the nineteenth century. Added to those concerns, however, were considerations regarding the age of the creation, and even the possibility of intelligent life on other planets.[140]

3. Biology

Much of the interest in biology revolved around the theory of evolution--a topic which we will discuss at length later.

But there was also interest in biology for its own sake, including the study of zoology. A prime example of this is the drawings by William Henry Ruffner of various seashells.[141]

The other primary biological interest had to do with race and racial distinctions. Of critical importance, because of the teaching of Scripture, was the question of the unity of the human race.

Polygenesis was a threat, of course, to the Biblical teachings regarding original sin and salvation, including the

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[140]See also rev. of Other Worlds than Ours; The Plurality of Worlds Studied under the Light of Recent Researches, Christian Observer (Literary & Miscellaneous), Vol. 50, n. 6 (February 8, 1871), 2.

[141]Found in Montreat archives, file Ruffner--Geology, Miscellaneous Notes, Various Dates.

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imputation of Adam's sin to all mankind and the imputation of Christ's righteousness to His elect. It also flatly contradicted the plain assertions of the Bible that all men sprang from one set of parents.

One author wrote that modern science lends credence to the Bible's testimony that all men are made of one blood, for the microscope has demonstrated that "the particles of human blood, of whatever race, complexion and color, are different from those of any other animal; and in all cases are precisely alike--this has been tested over and over again." The author also stated that some nations of men are better adapted to one clime and some are better adapted to another.[142] Another writer appealed to the variations in color and inequalities in animals and vegetables as illustrative of the fact that people of different races, with "variations of color and other physical and mental inequalities," could have sprung from the same pair of the white race.[143]

A more elaborate argument can be found in an article by Rev. J. T. Hendrick, who argued this way. One, why can't there be diversity within the family of man, when such diversity is seen among the animals of the same family? Two,

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[142]E. F. R., "Design of the Creator," Christian Observer and Presbyterian Witness, Vol. 47, n. 17 (April 23, 1868), 1. The author also observed, "The Bible everywhere represents it as the object of the Creator in making the earth, that it shall be filled with men."

[143]"Scriptural Genealogy of the Negroes," Christian Observer and Presbyterian Witness, Vol. 47, n. 39 (September 24, 1868), 1.

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races can degenerate or experience degradation (and vice versa). Three, there is a great variety of shades of color of skin (even among people of the same race). Four, there is a constancy of bones and teeth no matter what the race. Five, hybridity shows that the races are of the same species. Six, Hendrick appealed to the mental and moral character of the race as a whole.[144]

An anonymous satire skewered modern philosophers who had "discovered" that "the negro was created before man, with the beasts, and is simply a soul-less beast!"

> Philosophers, and others who I sometimes suspect, know no more than we who know nothing, and are ever writing about the human family. They prove, if their arguments are worth anything, and who can refute the philosopher?--that there are thirty species, seven, five, and two, the black and the white. I know not what they will prove next, as this is the age of progress and Solomons are multiplying.--I wait patiently for further developments, and for well-established theories which will last six months.
>
> . . . Most of us for many years preached the gospel to them [the negroes] as faithfully as we did to the whites, and we then thought successfully, and we will again when they consent to hear and receive the old gospel of Jesus Christ. Now they prefer a mongrel religion--I know not what to call it, which is not the gospel of Jesus Christ, and is more African than heavenly, and seems only to encourage crime, especially in the transgression of the ten commandments. The general opinion is that their preachers are their worst men.
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> . . . What a discovery [that the negro is not a human]! Now the church and our country is free from all responsibility and anxiety, and the negro from any sense of guilt--any remorse of conscience

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[144]J. T. Hendrick, "The Unity of the Race. Objections Answered," Christian Observer, Vol. 60, n. 31 (August 3, 1881), 1-2.

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or fear of eternity.[145]

Also in the late 1860's, "X***" contended that all people naturally have no capacity for religion, since all alike are dead in trespasses and sins. Not only has the negro's permanent inferiority not been proven; in point of fact, the Anglo-Saxon race, with a thousand years of exposure to revelation, has been "as stiff-necked a people as the Jews of old."[146]

But other voices were heard which, even while believing in monogenesis, argued for negro inferiority. One article stated,

> We hope Dr. Guthrie does not distress himself too much on account of his own capillary cells not being filled with the black pigment he considers necessary to perfect physical development. . . . If Dr. Guthrie came from a black Adam, . . . we cannot acknowledge him as our brother, for we believe that our great progenitors, Adam and Eve, were white and ruddy, and beautiful according to our ideas of beauty.[147]

Another article averred that the same Providence that dictated the different colorations in the races also ordained "corresponding inequalities in the volume of their brain and mental faculties." Neither man-made laws nor skill can

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[145]"The Last Humbug," Christian Observer and Presbyterian Witness, Vol. 47, n. 14 (April 2, 1868), 2.

[146]"X***," "Religious Capacity of the Negro," Christian Observer and Presbyterian Witness, Vol. 48, n. 9 (March 3, 1869), 1.

[147]"Negro-Worship," Christian Observer and Presbyterian Witness, Vol. XLV, n. 7 (February 15, 1866), 4.

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eradicate these permanent mental inequalities.[148]

Racial controversy generated the question of the color of Adam, the first man. "L." denied the proposition that the negro and the white man could not have descended from the same pair. The lapdog and the bloodhound descended from the pair on Noah's ark, but no one thinks that one can be changed into the other or that either was the original type of canine. Similarly, the Caucasian race has ascended from the original pair of humans, the negro race represents a degeneration, and Adam was neither Caucasian nor African. This author opined that mankind before the flood probably was closer to the yellow Chinese than to either the white or black race.[149]

Since all men came from Adam, there had to be some accounting for the races. In a series of articles, "L--e." concluded that Noah, like Adam, was probably red, and that all the racial colors are variations from that.[150] He wrote that different appearances (races) probably accompanied the

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[148][H. McD.], "The Negro and the White Race. The Natural and Irremedial Inferiority of the Former," Christian Observer and Presbyterian Witness, Vol. 47, n. 44 (October 29, 1868), 1.

[149]"L.", "Was Adam a White Man?", Christian Observer and Presbyterian Witness, Vol. 48, n. 31 (August 4, 1869), 1. Particularly interesting is the fact that the author appealed to Darwin's Origin of Species to justify the proposition that "the original type [could] in time be lost, and the first form [could] no longer continue to exist."

[150]"L--e.", "Where the Ark Rested," Christian Observer (Literary & Miscellany), Vol. 50, n. 3 (January 18, 1871), 1.

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confusion of tongues.[151] Finally, he stated that the three great races probably came from the three sons of Noah.[152]

Southern Presbyterians paid special attention to the Anglo-Saxons. "L." waxed eloquent over this race: "So well suited seem the Ten Commandments to this people, that one is almost tempted to look upon Moses as an Anglo-Saxon." Moreover, the Anglo-Saxon and Hebrew races have much in common: both are Sabbath-keepers, both enjoy great prosperity and rule, and both look to Moses as the great Law-giver. Besides keeping the Sabbath day holy, the Anglo-Saxon also is a Protestant in the core of his heart in being a puller down of idols.[153]

One of the Converse family, which ran the Christian Observer weekly, speculated on the feasibility of an Anglo-Saxon confederation, drawing together in love the English-speaking nations of the world.[154]

The matter of race broadly considered played a factor in an article during the war that the South fought for its

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[151]"L--e.", "Noah's Descendents," Christian Observer and Free Christian Commonwealth, Vol. 50, n. 4 (January 25, 1871), 2.

[152]"L--e.", "The Dispersion from Babel," Christian Observer (Literary & Miscellany), Vol. 50, n. 5 (February 1, 1871), 1.

[153]"L.", "The Anglo-Saxon Race," Christian Observer and Presbyterian Witness, Vol. 48, n. 7 (February 17, 1869), 1.

[154]James B. Converse, "A Steamship Reverie," A Summer Vacation; Sketches and Thoughts Abroad, in the Summer of 1877 (Louisville, Ky.: Converse & Co., 1878), 192-201.

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independence. F. A. Ross quoted Acts 17:26, and wrote: "All the races of men, then, are of one species. And the varieties they exhibit are the results of that great act of God, when he confounded the language at Babel, and scattered the people from thence abroad upon the face of the earth." Ross maintained the superiority of one of Noah's sons over the other two, and then made the point that "The North and South are now in war waged by this Puritan stock against the Cavalier and the Scotch-Irish part of what was the United States." The author drew a contrast between these two races. Scotch-Irish recognize authority, while Puritans, "both in religion and politics," are "ultra-liberty." But, the Puritan style of liberty leads to anarchy and then to despotism.[155]

Other discussions included a review of a book on the origin of the Aryan race; whether North American Indians could have crossed from Asia, in winter or by boat; a new race in Egypt; and the Chinese people.[156]

Evident is the fact that race was of great interest among

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[155]F. A. Ross, "This is a War of Races," Christian Observer and Presbyterian Witness, Vol. XLII, n. 28 (July 9, 1863), 1.

[156]Francis R. Beattie, "Criticisms and Reviews," Rev. of "The Origin of the Aryans: An Account of the Prehistoric Ethnology and Civilization of Europe," by Isaac Taylor, Presbyterian Quarterly, Vol. VI (1892), 153-56; "The Origin of the American Races," Christian Observer, Vol. 71, n. 44 (November 2, 1892), 4; "A New Race in Egypt," Christian Observer, Vol. 74, n. 21 (May 22, 1895), 18, and n. 28 (July 10, 1895), 3; "The Chinese Problem," Christian Observer and Free Christian Commonwealth, Vol. 49, n. 32 (August 10, 1870), 2.

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Southern Presbyterians, and that this biological question had tremendous implications with regard to ethics, worship and doctrine, the Southern cause, and the veracity of the Bible.

4. Medicine

Closely related to the field of biology is that of medicine. In Southern Presbyterian journals, there was a variety of articles regarding medical practice and advances.[157] In addition, at least a couple of pamphlets appeared from the pen of Samuel Spahr Laws.[158]

The relationship between medicine and religion was of prime interest. In a review of a book by a surgeon of the Provisional Army of the Confederate States, the reviewer

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[157]For example, "The Serum Cure for Diptheria," Christian Observer, Vol. 74, n. 6 (February 6, 1895), 23; "The Liver. The Unusual Attention which this Organ is now Attracting from the American People. Its Delicate Structure and Susceptibility to Injury from Wounds or Disease," Christian Observer, Vol. 60, n. 38 (September 21, 1881), 7; "The Bicycle as Seen from the Physician's Standpoint," Christian Observer, Vol. 84, n. 1 (January 1, 1896), 21; and Dudley S. Reynolds, M. D., "Recent Advances In the Standard of Medical Education," Christian Observer, Vol. 86, n. 34 (August 17, 1898), 15. Dr. Reynolds wrote: "If there is to be any short and easy method of entering the medical profession, the people must suffer accordingly."

[158]Samuel Spahr Laws, A Thesis on the Dual Constitution of Man, or Neuro-Psychology (New York: S. Angell, 1875), an inaugural thesis from Bellevue Hospital Medical College and republished from Archives of Electrology and Neurology, November 1875; and Life and Labors of Louis Pasteur (Columbia, Mo.: Herald Publishing House, 1886), originally read as a paper before the American Medical Association meeting at St. Louis, Missouri, May 1886.

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asserted:

> There are points where the active sphere of the minister of the gospel and that of the physician come in contact--in the hovels of the poor and the abodes of wealth, where there is disease, sorrow, and mortal suffering. The Master himself was physician to soul and body too, and ministered to both, but with unfailing remedies. And the human frame, in its complicated structure and exquisite sensibilities, the constant study of the medical practitioner, gives forth its testimony to the being and attributes of Him that made it. And if the undevout astronomer is mad, may not a similar madness be bound up in the heart of the undevout physician also? But there are points of contact between all the professions.[159]

It is worthy of note that during this period, Southern Presbyterians sent their first medical missionaries.[160]

Not only was there a general relationship between spiritual and physical considerations, but medical studies were put to use for the cause of the faith. One article quoted Dr. J. W. Draper, a physiologist, regarding man's

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[159]"Critical Notices," Rev. of Medical and Surgical Memoirs: Containing Investigations on the Geographical Distribution, Causes, Nature, Relations and Treatment of Various Diseases, 1855-1876 by Joseph Jones, Southern Presbyterian Review, Vol. XXVII, n. 3 (July 1876), 628-30. The article quoted from Dr. Jones "that, 'in his present state, man resembles the ruins of a majestic temple, whose columns, though marred and broken, still retain enough of beauty and symmetry to remind us of its former grandeur; the inscription upon the wall of the innermost chamber, although covered with the decay and damp of ages, still points to a hand divine.'" See also an article which reproduced a sermon by John Leyburn of Baltimore, which pointed out religious drawbacks and religious responsibilities to being a physician, and which pointed to the Great Physician, Jesus Christ: "Religion and the Physician. The Medical Students," Christian Observer, Vol. 61, n. 12 (March 22, 1882), 4.

[160]Very recent research on this topic has been conducted by Mrs. Paul J. (Sophie) Crane, 1203 Riverside Road, Old Hickory, TN 37138.

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physical need for the Sabbath.[161]

5. Anthropology

The study of man in his relationship to society was a relatively new science in the late nineteenth century. This branch of endeavor was, therefore, of interest to the scientific thinkers among the Southern Presbyterians.

One writer referred to the "skilful naturalist" who

> can take the fragment of a tooth of an extinct species of animal, and from it delineate an outline of its whole skeleton. Having done this, he can then determine its habits when it lived; what kind of food was necessary for its maintenance, the smaller animals on which it preyed; and, from the determination of these points, infer with some approximation to the truth, what kind of vegetable food these smaller animals lived on; and thus draw a tolerably accurate picture of the forests in which they roamed; and thence infer the character of the climate, the nature of the soil, the mean temperature, and many other characteristics of the geological period in which the animal existed. Thus, waving the magic wand of science over the cross section of a fossil tooth or bone, "the antiquary of a new order," as Cuvier calls him, causes the fauna and the flora of a buried epoch to rise up before the imagination in all their original perfection.

The author went on to say, "The brief records of the history of the peoples who lived before the flood preserved in the writings of Moses, are not unlike those fossil remains which geologists have exhumed from the buried deposits of past ages." Among the valid inferences which may be drawn (and

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[161]"Physiology and the Sabbath," Christian Observer, Vol. 59, n. 15 (April 14, 1880), 2.

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which "may become as really the objects of belief as the revealed facts which connote them") is the position that Adam and Eve lived in some kind of house or tent.[162]

The writer further speculated that the Lord's discrimination between acceptable worship (offered by Abel) and non-acceptable worship (offered by Cain) was demonstrated in the midst of many of their respective followers. Even though there is no warrant from the Mosaic account for such dramatic incidents; "but if . . . they are consistent with the substance of the narrative, and serve to represent, as it were, pictorially the collision of two great theories of the plan of salvation, the realism of the representation may be justified on the ground of the vividness which it imparts to the concise statement of the annalist."[163]

A more scientific and critical approach to anthropology was taken by Francis R. Beattie, in an article entitled, "Primeval Man." Beattie's purpose was to discuss problems raised regarding "man's primitive status and endowments."

> . . . [I]f it be made out that man at first a rude, untutored savage, it will be easy to establish his great antiquity, and it would not seem so hopeless a task to prove his genetic connection with some lower animal. But if it be shown that primitive savagism is not the true view to take of the earliest periods of human history, then it becomes exceedingly difficult to render even plausible some scientific theories concerning these other topics already mentioned.

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[162]"Cain: A Speculation," Southern Presbyterian Review, Vol. XXIX, n. 3 (July 1878), 475.

[163]Ibid., 486f.

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Beattie began by noting that the general picture which the Bible gives of the first men is that of people with "a good degree of intelligence" who "were capable of religious communion with God." Illustrative of this view were the technological and cultural achievements of men, from Cain and Abel to the tower of Babel and the city built by Nimrod.

This theologian then considered various theories which sought to establish man's primitive savagism. The first was evolution, which needs to "maintain primeval savagism to have been man's first estate." Beattie dismissed the theory of evolution in short order, and concluded that evolution was totally inadequate to explain how intelligence developed from animal instinct. The second was a pre-Adamite hypothesis--that is, the view that there were other human races originating from before the creation of Adam. Beattie argued against this view on the basis of clear Scriptural teaching, as well as the fact that the streams of mankind "seem to converge towards one common source."

Third, he dealt with various "forms of reasoning" which are used to try to prove man's great antiquity and his primitive condition: two matters often connected. Beattie argued against these reasonings by noting that it begs the question to assume that archaeological relics from Europe indicate that they were associated with the first men or that the primitive art found there did not represent a degeneration from the original men. Also, the doctrine of autochthony

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(that is, the position that "the races now found on the different continents are indigenous to their several localities, and that no general migration has ever taken place") would have to be proved before this evidence would have any weight.

Further, there are assumptions regarding archaeological ages which have yet to be proven.

Beattie argued that, no matter view of the origin of mythology is taken, mythology itself points to primitve man having both a spiritual element within him and an interest in religion. The fact of belief in a golden age in the distant past hints at Eden. Human progress, which is "mere natural development," is the result of the uplift of Christianity, which goes against the natural degradation of the race. Scientifically, one must account for all the facts, and most modern historical, sociological, and ethical works are entirely defective in not considering the place of moral evil.

It is gratuitous to assume that "modern savages represent the first man." "If race-progress, as the result of Christianity, has taken place, modern men may, in certain respects, be in advance of primitive men." Finally, there are various other considerations which argue against primitive savagism. For example, "if men were at first in this low stage of development, the time is not long enough to produce the degree of civilization found in the early centres of human

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activity."[164]

Various book reviews, some rather lengthy, dealt with the subject of anthropology.[165] One review even considered a book which posited that the North Pole was the cradle of the human race![166]

W. L. Nourse looked at man's essentially spiritual being, both retrospectively and prospectively. In the first instance, man was formed in a perfect world; secondly, man was formed in the person of Christ Jesus; third, man was newly created and growing in fitness for a perfect life; fourth, there was perfect man, with perfect attainments, within a new heaven and a new earth. All of these were the results of the Divine Spirit.[167]

6. Archaeology

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[164]Francis R. Beattie, "Primeval Man," Presbyterian Quarterly, Vol. IX, n. 33 (July 1895), 351-71.

[165]For example, James F. Latimer, "Criticisms and Reviews," Rev. of "Sacred History from the Creation to the Giving of the Law" by Edward P. Humphrey, Presbyterian Quarterly, Vol. III, n. 1 (1889), 141-45; and S. S. Laws, "Criticisms and Reviews," Rev. of Relics of Primeval Life by Sir J. William Dawson, Presbyterian Quarterly, Vol. XII (1898), 265-73.

[166]W. W. Moore, "Criticisms and Reviews," Rev. of Paradise Found: The Cradle of the Human Race at the North Pole by William F. Warren, Presbyterian Quarterly, Vol. II, n. 1 (1888), 160-64.

[167]W. L. Nourse, "Ideal Man, The Product of the Divine Spirit," Presbyterian Quarterly, Vol. IV (1890), 523.

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As people of "the Book," Southern Presbyterians were naturally interested in archaeology. To that end, articles appeared on various archaeological evidence concerning events, people and places dealt with in the Bible. For example, there are articles on the Hittites, a tablet found in ancient Israel, tablets found in Babylon, thermal springs in the Middle East, the origin of civilization, and the destruction of Sodom.[168]

Several articles reflected an apologetic concern. A two-part article by A. H. Sayce, Professor of Oriental Languages at Oxford University in England, looked at the evidence of archaeological research. He criticized the "Higher Criticism" approach to the Scripture as being unscientific (since those engaged in such criticism carry on their work in isolation from practical acquaintance with the Orient), and made the point that, while the critic had been busy at work to destroy the records of the past, the archaeologist was actively building them up again. Indeed, the world of Abraham and Moses was one of great literature output, one "in which the historian could find materials as plentiful and trustworthy as

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[168]"Who Were the Hittites? Their Relations to the Pelasgi" and "The Tablet Found at Lachish," both in Christian Observer, Vol. 84, n. 24 (June 10, 1896), 3; "The Character of the Tablets, Lately Discovered in Babylon," Christian Observer, Vol. 84, n. 22 (May 27, 1896), 3; "Hot Springs in Edom. Referred to in Genesis" and "The Origin of Civilization," both in Christian Observer, Vol. 86, n. 18 (May 4, 1898), 3; and "The Destruction of Sodom," Christian Observer, Vol. 85, n. 21 (May 26, 1897), 3.

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those that are contained in the modern newspaper."[169] Sayce wrote, "The assertion that these books [the sacred books of Israel] are the fabrications of an age long subsequent to the events they profess to record, and that the events themselves are legendary and mythical, the Oriental archaeologist returns an emphatic No."[170]

A lengthy series on Higher Criticism had one article devoted to a discussion of the devastating undermining of radical criticism by archaeology. The author cited the existence of tablets and momuments, the confirmation of historical events narrated in the Bible, the legislation and ritual from the Mosaic era, and the evidence for "a comparatively high degree of literary and intellectual attainment."[171]

But while archaeology was viewed mostly as an ally, a

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[169]A. H. Sayce, "Evidence from Archaeological Evidence," Christian Observer, Vol. 73, n. 24 (June 13, 1894), 4.

[170]A. H. Sayce, "Evidence from Archaeological Research," Christian Observer, Vol. 73, n. 25 (June 20, 1894), 4-5. See also "Theories versus Facts Touching Egyptian Literature," Christian Observer, Vol. 73, n. 38 (September 19, 1894), 3, where some of the exact phrasing occurs.

[171]F. R. B., "The Higher Criticism. The Evidence of Archaeology," Christian Observer, Vol. 73, n. 36 (September 5, 1894), 2-3. See another editorial, "The Tablets Found in Ante-Diluvian Nippur," Christian Observer, Vol. 84, n. 41 (October 7, 1896), 3: in this article, the author cautioned against accepting too quickly the conclusions of an expert after only three years of research on the newly-discovered tablets; he also asked how it would be possible for the professor to read the tablets so readily if they were really 5,000 years older than other writings, since language tends to change rapidly.

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speculative form of it could also be a threat. An article from the 1870's questioned the validity of "pre-historic archaeology." Actually a lengthy review of James C. Southall's The Epoch of the Mammoth, and the Apparition of Man upon the Earth, this document argued that truth should be not be pursued vehemently for its own sake in the abstract, but should be viewed in relation to its utility. From this perspective, those who wish to destroy the Christian faith were engaged not in philosophy, but in madness. The writer challenged the critics who questioned the Scriptural chronology, as those who would give themselves to speculation rather than to genuine observation. "Fancy takes the place of facts, and conjecture is substituted for reasoning, until chronology is lost in a wild succession of disordered dreams." The reviewer pointed out that archaeology has nowhere demonstrated that man was once in a primitive state and that civilization sprang out of barbarism. Further, archaeologists have assumed uniformity without warrant, and have employed "a false premise in reference to their association in age with the relics of extinct animals" when it is impossible to know when these animals became extinct. One might expect in a chronological system an "exactitude of dates"--the lack of such precision turns pre-historic archaeology into "a chaotic mess." Moreover, geology and Genesis (interpreted according to the modern viewpcint) go quite well together (even while Darwinism contradicts the findings of geology). Since the

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"sciences of observation," which were unknown to the ancients, comport well with the Bible, and point to the inspiration of that Book, it is to be expected that a "collateral science" (archaeology) would further confirm the truth of Scripture.[172]

7. Sociology

Auguste Comte, founder of the Positivist school of thought, was perhaps the progenitor of sociology as a science. In his four volume work, System of Positive Polity, this Frenchman attacked Christianity, suggesting that it needed to be replaced by Positivism. Even though inheritance was to be respected, and even though he eschewed communism, Comte still believed that the revolution of 1848 was a step on the way toward the "normal state."

Comte was blatant in his anti-Christian stance and in his advocacy of Humanity as the new god. He posited that sociology, while building on each "preparatory science," was to be the systematizer of all principles. "In this way we shall successfully avoid the crudities of Materialism, without

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[172]"The Failures and Fallacies of Pre-Historic Archaeology," Southern Presbyterian Review, Vol. XXIX (October 1878), 672-98. For a later discussion of man's antiquity, and the bearing of Assyriology on the question, see "How Old is Man?", Christian Observer, Vol. 84, n. 43 (October 21, 1896), 3.

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any tendency to the unrealities of Spiritualism."[173]

One of the premier architects of sociology was Herbert Spencer. This Englishman was committed to, among other things, "functional justifications of religion, the dissolution of logic into psychology, the rejection of absolute standards of truth, operationalist definitions, [and] the elevation of practice over theory."[174] All of these were inimical to Calvinistic thought.

With regard to religion in particular, Spencer went on the attack against Christian beliefs. He wrote that "each system of dogmatic theology, with the sentiments that gather round it, becomes an impediment in the way of Social Science."[175]

Spencer was also an evolutionist, and one who applied his evolutionary thinking to all areas of life. In his own word, "there are not several kinds of Evolution having certain traits in common, but one Evolution going on everywhere after the same manner."[176]

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[173]Auguste Comte, System of Positive Polity (July 1851; rpt. New York: Lenox Hill Pub. & Dist. Co., 1973), Vol. I, 47-62, 125, 300-06, 383-84.

[174]J. D. Y. Peel, ed., in "Introduction," Herbert Spencer on Social Evolution (Chicago/London: The University of Chicago Press, 1972), xl.

[175]Herbert Spencer, The Study of Sociology (New York: D. Appleton and Company, 1873, rpt. 1906), 268.

[176]Spencer, Social Evolution, 72. See also Herbert Spencer, The Factors of Organic Evolution (New York: D. Appleton and Company, 1887), 1. For an influential American who greatly fell under Spencer's spell, see William Graham

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Lester Frank Ward wrote positively of Auguste Comte, and helped to promote in this country the ideals of Herbert Spencer's synthetic philosophy. Ward held that chemical laws underlie biological phenemona, and that there is a great principle of evolution for the cosmos, for life, and for the mind. He then applied evolutionary theory to society.[177]

While Spencer's evolutionary principles led to a laissez-faire construction of civil polity, others used sociology for the promotion of socialism. As one Southern Presbyterian stated in 1878, "We are advocates of the theory that there is a progressive order in nature, and a historical development in the unfoldings of Providence. What we dispute is that these movements are due to an evolution of natural force." He also traced Communism from the infidelity of Hobbes' Leviathan, to the horrors of the French Revolution, to the Red Republican orgies of 1848.[178]

Sumner, The Challenge of Facts and Other Essays, Albert Galloway Keller, ed. (New York: Yale University Press, 1914; rpt. New York: AMS Press, 1971); see also Sumner's The Forgotten Man's Almanac (New Haven: Yale University Press, 1943; rpt. Westport, Ct.: Greenwood Press, 1971) and Sumner Today: Selected Essays of William Graham Sumner with Comments by American Leaders, Maurice R. Davie, ed. (New Haven: Yale University Press, 1940; rpt. Westport, Ct.: Greenwood Press, 1971).

[177]Lester F. Ward, Dynamic Sociology, or Applied Social Science as Based Upon Statical Sociology and the Less Complex Sciences (New York: D. Appleton and Company, 1897), 2 vols.

[178]"Social Science Under a Christian Aspect," Rev. of Principia of Basis of Social Science: Being a Survey of the Subject from the Moral and Theological, yet Liberal and Progressive Standpoint by R. J. Wright, Southern Presbyterian Review, Vol. XXIX, n. 1 (January 1878), 88, 103.

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Two decades after this article, another author also dealt with this "science" which was still in its "embryonic stage." James A. Quarles thought that sociology should be most properly "a fundamental, generic science, confined to those social facts and laws which are basic in their character, and which pertain alike to all the special social sciences."

This gentleman from Lexington, Virginia, in contrast to merely biological or economic theories of sociology, would adhere to a third school of thought which "has as its distinctive doctrine the recognition of Providence as the author of all social laws and the superintendent of their workings." "Christian Sociology would affiliate with psychical and providential theories, and would add to them such social truths as are matters of scriptural revelation."

Quarles' first major point was the Origin of Society, in which he affirmed the Divine authorship of society and that the first society was the family.

Regarding the Basis of Society, Quarles was willing to concede "that the Bible nowhere explicitly says that Adam is the one father of the race of man"; while also maintaining that "the Scriptures clearly and repeatedly teach that the race has a common origin in God." All races are substantially alike, and "[s]o far as the higher nature of man is concerned, Christianity affirms that this unity consists in his <u>likeness to God</u>." The fact of man's Fall into sin made necessary the existence of the state and of the church (at least in some of

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its aspects). In treating of the fact of redemption in Christ, Quarles seemed to hint at a universal atonement, although he was not explicit on that point.

For the Ethics of Society, Quarles first noted the Golden Rule as a principle in conflict with evolutionary principles. He then spoke of the New Commandment ("Jesus commands and demands that the force of gravitation which binds men into a loving harmony shall be no less strong than his own unspeakable love to us"); the Law of Property (in contrast to Communism); the Law of Work ("Labor is the law of being"); the Law of Obedience (mandating obedience to the three social institutions of Divine authority--family, state, and church); and the Social Sphere of Woman (governmental subordination, social privacy, and social respect: "Taken from man's heart, designed for his help and companionship; physically and politically weaker, socially equal, morally superior; one with him in love and life and destiny, she joins her sweetness and purity with his strength and mastership in the common prayer, 'Our Father'").

Finally, regarding the Destiny of Society, Quarles disputed the views of Buddha, Schopenhauer, and Herbert Spencer, and claimed "Christianity is, it must be, optimistic." Accordingly, there is material progress, intellectual progress ("Mathematics will be enlarged, the sciences outgrow their crudities and be adjusted to each other, and philosophy will no longer seem the vagary of a

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disordered brain, but will solve her problems so as to command universal belief"), and spiritual progress.

> He that rides upon the white horse goes forth conquering and to conquer. He shall see of the travail of his soul, and shall be satisfied. Darkness may seem now to cover the earth, and thick darkness the people. Human ignorance, error, superstitution, depravity, wretchedness, may appear beyond the power of remedy. But the night is not wholly dark, and has not been for centuries. There are glintings of light on the mountains; the hills have seen the early coming of the day; and the valleys shall yet be bathed in the glory of the Sun of righteousness. Then, from hill to valley, and from valley on to hill; from land to sea, and from sea borne on to land; as the light encircles the world, earth's ransomed millions shall lift the prayer, "Our Father, which art in heaven, hallowed be thy name."[179]

Southern Presbyterians were somewhat leary of sociology, because of its connections both with evolutionary theory and with Communism. But towards the end of the nineteenth century, there may have been some movement towards an effort at "Christianizing" this new science, as evident in the article by Quarles.[180]

8. Psychology

The science of theology focuses on the question, "What is

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[179]James A. Quarles, "Christian Sociology," Presbyterian Quarterly, Vol. X (1896), 46-62.

[180]See also F. B. Sanborn, letter to William H. Ruffner, November 29, 1881, informing him that he was re-elected as on the vice-presidents of the American Social Science Association; letter found in Ruffner correspondence file, Montreat, North Carolina.

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God?", a question to which Presbyterians could give a ready answer. The science of psychology deals with the question, "What is man?", and particularly with the mind and the "soulish" side of man.[181] As Christians, Southern Presbyterians were not content to study man solely from a phenomenological perspective. As always, the Word of God taught certain truths that affected one's research.

Going contrary to this Protestant perspective were many secular thinkers, who were also dealing with the psyche. Herbert Spencer wrote that if evolution is true, then "Mind can be understood only by observing how Mind is evolved." The clear implication is that, if the nervous systems became complex gradually, "then, necessarily, the involved forms of consciousness which are the correlates of these complex structures and functions must have arised by degrees."[182]

One of the early articles that dealt with a psychological matter consisted of a lengthy review of three books on the conscience. Its author, in contrast to various writers, argued "that conscience is an original and simple faculty." He also maintained that the conscience was indestructible and that it "is the same faculty which affords impulse and

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[181]"Psuche," the Greek word from which we derive "psychology," means "soul."

[182]Herbert Spencer, The Principles of Psychology (1873; 3rd edition, New York: D. Appleton and Company, 1896), 291-92.

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guidance to the blessed life of heaven."[183]

Samuel M. Smith examined the "very intimate connection and interaction of mind and body." Physiological psychology, then, "endeavors to bring the physical phenomena of the nervous system and the psychical phenomena (states of consciousness) face to face, to look at them as they stand thus related to each other, and, as far as possible, to unite them in terms of uniform character under law."[184]

In 1891, there were two review articles in tandem in the Presbyterian Quarterly. J. A. Quarles criticized the work of a Cumberland Presbyterian theologian, including his peculiar views that "consciousness is not a cognitive faculty" and that "consciousness and conscience are identical."[185] J. B. Shearer of Davidson College critiqued another book in which the author, though trying to oppose "'sensualistic' and materialistic schools," surrendered "too much of the truth . . . to make it possible to save the citadel." Shearer argued that he gave "undue prominence to physical causality without and within the censorium or organism," and minimized "the

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[183]"What is Conscience?", Southern Presbyterian Review, Vol. XVIII, n. 4 (October 1867), 416-17, 432.

[184]Samuel M. Smith, "Criticisms and Reviews," Rev. of Elements of Physiological Psychology: A Treatise of the Activities and Nature of the Mind; From the Physical and Experimental Point of View by George T. Ladd, Presbyterian Quarterly, Vol. II (1888), 156.

[185]J. A. Quarles, "Criticisms and Reviews," Rev. of Studies in Psychology by S. G. Burney, Presbyterian Quarterly, Vol. V (1891), 295-99.

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active causality of the spirit." From a theological perspective, it would be doubtful "if the spirit, suddenly separated from the body, could use any of the faculties of memory, perception, or elaboration. How much better is the older view, that the personal spirit is the paramount energy in man, an active causality in its apparent passivities, using the bodily organs with their delicate mechanism and sensibilities for their own purposes." Shearer appealed to the fact that this view would certainly be closer to both "common sense" and the Biblical data.[186]

The question of the will engaged veteran theologian John Lafayette Girardeau in his 1891 book, The Will in its Theological Relations.[187] At least one reviewer attacked his positions.

Henry Alexander White of Washington & Lee University criticized Girardeau's conception of the will as a separate division (along with intellect, feeling, and conscience) of the mental powers. He also maintained that Girardeau's definitions are self-contradictory (including, that Girardeau allegedly could not see any distinction between ability and liberty). White stated that "Girardeau's theory of a self-

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[186]J. B. Shearer, "Criticisms and Reviews," Rev. of Hand-Book of Psychology. Senses and Intellect by James Baldwin, Presbyterian Quarterly, Vol. V (1891), 299ff.

[187]John L. Girardeau, The Will in its Theological Relations (Columbia, S. C.: W. J. Duffle; New York: The Baker & Taylor Co., 1891).

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determined will is not even a working hypothesis--for he fails to explain it." Finally, "Girardeau's theory, applied to the fall of Adam, fails to quadrate with the facts in the case."[188]

The last book by Robert L. Dabney was his posthumous Practical Philosophy. This volume dealt with the psychology of the feelings, the will, and the conscience, along with social ethics. Much of his concern was with the relation between the appetencies and moral conduct.[189]

At least two reviewers critiqued his work. R. A. Webb, who was J. L. Girardeau's son-in-law and professor at Southwestern Presbyterian University in Clarksville, Tennessee, praised Dabney's writing, including especially his refutation of sensualistic philosophy; but he also stated his belief, in contrast to Dabney's view that the emotional act is dependent upon the mental, that intellection and emotion are coordinate.[190]

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[188]Henry Alexander White, "Criticisms and Reviews," Rev. of John L. Girardeau, The Will in its Theological Relations, Presbyterian Quarterly, Vol. VI (1892), 285-97. For another discussion of man's will (from a Northern Presbyterian perspective), see William H. Hodge, "A New Exposition of the Will," Presbyterian Quarterly, Vol. XIV (1900), 404-41.

[189]R. L. Dabney, The Practical Philosophy; being the Philosophy of the Feelings, of the Will, and of the Conscience, with the Ascertainment of Particular Rights and Duties, ed. by S. B. Ervin (Mexico, Mo.: Crescent Book House, 1897).

[190]R. A. Webb, "Criticisms and Reviews," Rev. of The Practical Philosophy . . . by R. L. Dabney, Presbyterian Quarterly, Vol. XII (1898), 98-108.

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James A. Quarles was more harsh, though still greatly appreciative of the book which he had been using as a textbook. Quarles criticized Dabney for having the same deficient views as those of Hamilton, in omitting "the powers of expression, conception, and invention." "Dr. Dabney also omits instinct as one of the powers of the intellect and puts it among the feelings." He also criticized the late professor for "plac[ing] the sensations of sight, hearing, etc., among the sensibilities," rather than perceiving that "sensation, as distinct from perception, is purely physical." Quarles' most significant criticism was that Dabney, though quoting Scripture, had not argued his case in a distinctly Christian way. Rather, Dabney had discussed the topic on the basis of "natural reason," with the Bible being employed merely "to confirm the facts or conclusions of rational inquiry." Everything stated appears to the "natural man." Indeed, "[t]he body of the volume could have been written by a heathen, and would contain every truth that it now holds; a few Christian illustrations and confirmations have been added."[191]

We could bring forward other writings on this topic,[192]

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[191]James A. Quarles, "Criticisms and Reviews," Rev. of The Practical Philosophy . . . by R. L. Dabney, Presbyterian Quarterly, Vol. XIII (1899), 738-45.

[192]For example, see Henry M. Smith, "What is Conscience?" [a discussion of books by Sir James Mackintosh, William Whewell, and James McCosh], Southern Presbyterian Review, Vol. XVIII (October 1867), 405-32; "Recent Publications," Rev. of Rudimentary Psychology for Schools and Colleges by G. M.

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but what we have already discussed demonstrates both great interest in psychology (especially in the decade of the '90's) and controversy. Southern Presbyterians were wrestling with the nature of man in an increasingly mechanistic age, as well as in a time when communistic and socialistic schemes threatened traditional views of liberty. Why do men act the way they do? Can one appeal to another's intellect and rationality in order to discuss ethics? Questions such as these underlay the search for answers--a search that had to interact with the new science of psychology as well as conform to the teachings of Holy Scripture.

9. Logic

Logic was obviously of critical importance for Christian thinkers--especially Presbyterians, who historically are noted for their rigorous theological systems.

One of the few articles during this period which dealt with logic as a particular science was that by L. G. Barbour.

Steele, Presbyterian Quarterly, Vol. IV (1890), 646; Henry E. Shepherd, "Criticisms and Reviews," Rev. of The Science of Thought by Max Muller, Presbyterian Quarterly, Vol. I (1887-88), 569-71; R. L. Dabney, "Criticisms and Reviews," Rev. of The Power of Thought: What it Is, and What it Does by John W. Sterrett, Presbyterian Quarterly, Vol. XI (1897), 567-70; and James A. Quarles, "Criticisms and Reviews," Rev. of Theory of Thought and Knowledge and Metaphysics by Borden P. Bowne, Presbyterian Quarterly, Vol. XIII (1899), 178-79. See especially R. L. Dabney's review of James McCosh's The Emotions, in "The Emotions," Southern Presbyterian Review, Vol. XXXV, n. 3 (July 1884), 369-400.

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"Logic, and the Laws of Thought" was an extensive review article of three books on logic.

Barbour stated that the logician must consider man's limitations. One, "[w]e know substances only by means of their properties." Two, "[w]e are limited in time." Three, "[w]e are limited in space." Four, [a]nother curious limitation is found in our connection with matter. . . . How disembodied spirits communicate with one another, we know not, but surely the process must be less complex." Five, "there is the narrow purview of the intellect. . . . We do not hold all our knowledge perpetually before us as the Infinite One does."

Barbour, curiously enough, took the side of Aristotelian logic and the syllogism, against William Hamilton's contention that "'An extension of any science through Logic is absolutely impossible; for by conforming to logical canons we acquire no knowledge, receive nothing new, but are only enabled to render what is already obtained more intelligible by analysis and arrangement. Logic is only the negative condition of truth.'"

The author posited that ratiocination can be divided into three parts: from particulars to particulars; from particulars to generals, or induction; and from generals to particulars, or deduction. His desire was to look at the first of these, as being much overlooked, and yet able to shed much light on the other two.[193]

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[193]L. G. Barbour, "Logic, and the Laws of Thought," Southern Presbyterian Review, Vol. XXIII, n. 4 (October 1872), 519-39. Barbour ended his article by saying, "the logician

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10. Mathematics

Very little was written by Southern Presbyterians on what may be regarded as pure mathematics. The only article we observed appeared in 1896, written by James B. Converse, Superintendent of the Tennessee Sabbath Reform Bureau. This minister from Morristown posited that since there could be an unChristian multiplication table (where, for example, 2X3 might equal 8), there could be a Christian multiplication table, also. Converse appealed to Christ's kingship, and stated: "An unChristian multiplication table . . . would debase and sear the consciences of mankind. Why should arithematic be excluded from the dominion of Christ? Is he not Head over all things?"[194]

11. Agriculture

Perhaps nothing better illustrates the Southern Presbyterian interest in agriculture than the presence of a regular column devoted to the subject in the Christian

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will readily excuse a little badinage in this article, if it shall have cajoled into reading it, those who deem Logic so very dry and unentertaining a subject."

[194]James B. Converse, "A Christian Multiplication Table," Christian Observer, Vol. 84, n. 27 (July 1, 1896), 10.

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Observer magazine starting in the 1860's.[195] One of these was on "The Cultivation of Hops."[196] Another gave advice on making blackberry wine.[197]

One of the more fascinating articles was on "snake farming":

> Several pet snakes glide about the house. They are absolutely harmless, the poison sac having been removed from their mouths, and their fangs clipped with their pinchers.
>
> The reptiles have no equals as mice exterminators, and in the summer not only keep the place free from bugs and flies, but from human intruders.[198]

So popular was this feature that after the magazine discontinued the column for a short while, a letter to the editor which asked for the column's reinstatement prompted the

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[195]Among the topics considered in the Christian Observer and Presbyterian Witness were the following: "The Rose," Vol. XLV, n. 15 (April 12, 1866), 4; "How to Feed Poultry," Vol. XLV, n. 16 (April 19, 1866), 4; "The Cholera," Vol. XLV, n. 17 (April 26, 1866), 3; "The Sweet Potato in Mississippi," Vol. XLV, n. 24 (June 14, 1866), 4; "Meteoric Shower Predicted," Vol. XLV, n. 38 (September 20, 1866), 4; "The Great Meteoric Shower," Vol. XLV, n. 45 (November 8, 1866), 3. See also N. T. Lupton's advice on the manufacture of sugar from the Chinese sugar cane: "The Chinese Sugar Cane," Vol. XLIII, n. 38 (October 6, 1864), 1.

[196]"The Cultivation of Hops. A New Era in Profitable Agriculture," Vol. XLVI, n. 45 (November 7, 1867), 4.

[197]"To Make Blackberry Wine," Christian Observer and Presbyterian Witness, Vol. XLI, n. 34 (August 21, 1862), 1.

[198]"Snake Farming," Christian Observer, Vol. 66, n. 28 (July 13, 1887), 7. See also C. Foster Williams' article two weeks later, "'Snake Farming,'" in which he tried to correct certain misinformation regarding snakes hatching from eggs: Vol. 66, n. 30 (July 27, 1887), 6.

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publication to do so.[199]

Noted geologist William Henry Ruffner kept copious notes in diary fashion regarding his agricultural activities in the 1860's. For instance, he entered on February 4, 1867, the following:

> After the melting of the snow, which had covered the ground continuously for 6 weeks and is just disappearing, the turnips & beets, as well as salsify and parsnips, appear fresh-topped as well as sound, altho' the ground was deeply frozen all the time.
> Corn left in shock has kept well.
> Wheat looks remarkably fine.[200]

Two months later, he detailed in a diagram where he had planted various plants. Also in April, he kept track of fifteen hot beds and frames in which he had started plants and their progress over time. The record continues, for April 20:

> Commenced planting corn. Salsify been up for several days.
> Commenced having lettuce and cabbage. Those of the first plantings, wh. survived sum [sic] scarcely larger than when I planted them Mar 26--whilst those left longer in Hot Bed are correspondingly larger.
> The Onion sets put our Ap. 3 are doing finely. Hoed them today.

[April 22]

> Finished planting early potatoes.
> Planted E. Mohawk Beans 1 gal.

[April 23]

> 3 rows (1/2 pint Ext. Early Dw. Sugar Corn below

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[199]"The Culture of Grapes," Christian Observer and Presbyterian Witness, Vol. XLVI, n. 26 (June 27, 1867), 2.

[200]William Henry Ruffner, file: Agriculture, Notebook, 1867-68, the archives at Montreat, North Carolina.

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> the beans, wh. are next the E. Potatoes
> Set our Tom. plants . . . between hills of Sugar Corn (above) from the Hot Bed. 2. Manure in hill.[201]

Ruffner also kept track of the effect of the weather and a variety of fertilizers on his plants.[202]

Ruffner's interest in agriculture spilled over into politics, as seen in a letter from Thomas Pollard, Commissioner of the Department of Agriculture for the Commonwealth of Virginia. Dr. Pollard was writing regarding the proposal before the state legislature to kill the Department of Agriculture:

> I know you have a good deal of influence among the members of the Legislature, and I beg you to use it in behalf of my Dept. when you can do so with propriety, and without giving yourself unnecessary trouble.
> It occurs to me if you would write an article for the Whig or Dispatch, laying particular stress on the value of Analysis of Fertilizer to the Farmer, it would have a good effect in defence [sic] of the Dept. The Fertilizing Co's are anxious to destroy the Dept. and it might be well to make a point of this. . . .
> One Co. in Richmond (that of our friend) has reduced the price of its brand from $50 to $40, Since the introduction of Analysis. This Brand analyzed badly, and hence I presume the reduction. Other co's have also made reductions. . . .[203]

12. Meteorology

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[201] Ibid.

[202] Ibid.; see also Ruffner file, Agriculture and Geology, Notebook, 1875(?).

[203] Thomas Pollard, letter to W. H. Ruffner, January 10, 1879, Ruffner file, Correspondence, Montreat archives.

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The involvement by William Ruffner in agriculture led quite naturally to his being involved with meteorology. A letter from Joseph Henry of the Smithsonian Institution to Ruffner confirms this connection:

> Your letter to the Department of Agriculture has been referred to us, and we write to inform you that we shall be much gratified to receive your record of the thermometer since March and to enter your name on our list of regular observers.
>
> Accompanying this we send a rain guage, blanks and directions and hope soon to hear from you.[204]

Seventeen days later, Henry wrote again to Ruffner:

> We shall be glad to receive your observations, and may be able to make with the instruments you how have or may be able to improvise.
>
> The error of your thermometer may be tested by immersing the bulb in melting snow, or pounded ice--in a room the temperature of which is above the freezing point. The indication of the instrument when placed this position should be 32*. Any deviation from this will prove your thermometer to be inaccurate as to its indications of the temperature. The error must also be noted in the register, that the necessary correction may be made when the observations are being discussed.
>
> Accompanying this we send the Rain-guage to which you refer.[205]

The correspondence continued six days later, as the Smithsonian official wrote:

> The only person we can recommend from whom standard instruments can be procured is James Green, 179 Grand Street, N. Y. who has for many years been the maker of the Meteorological Instruments for this Institution.
>
> I am aware of the difficulty of procuring an instrument properly graduated throughout the whole of the scale. I know it is not enough even to

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[204]Joseph Henry, letter to W. H. Ruffner, December 4, 1868, Ruffner file, Correspondence, Montreat archives.

[205]Joseph Henry, letter to W. H. Ruffner, December 21, 1868, Ruffner file, Correspondence, Montreat archives.

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> determine the freexing and boiling points of the scale but that it is also necessary to determine the inequality of the tube. But these are manipulations which can only be effected by the skill of the practical instrument maker, and even when he has made an instrument with all the precautions, including that, even, of the effect of the variations of pressure of the atmosphere, the instrument may not retain its accuracy. Changes continue to take place, in some cases, for many months, in the size of the bulb, owing to a crystaline arrangement of the glass--which is probably hastened by the number and rapidity of changes of temperature.
>
> The only practicable way, therefore, of readily obtaining an accurate thermometer is to compare it throughout the whole scale with an old instrument, the errors of which have been accurately determined. Even in this comparison, precautions are to be observed, particularly when the thermometers are not of the same size.
>
> The rain-guage sent you is one of the simplest forms, as best adapted to ordinary observers--is of little expense and of easy transportation thro' the mail. The average result of the observations in the course of a year, if accurately noted, will differ very little from that of a guage giving more refined measurements. We shall make in the reduction for the year, the small correction due to the displacement of the water by the insertion of the scale.
>
> The directions were wrapped 'round the gauge [sic], and were, probably, removed with the cover. Another copy will be sent you, in this letter.[206]

Correspondence the next year expressed Joseph Henry's pleasure with Ruffner's work:

> It gives us pleasure in reply to your letter of May 3d, addressed to the Agricultural Department, to state that your observations have been regularly received at this Institution. We trust they will be continued and a copy of them transmitted to us each month.
>
> The Barometric observations are particularly desirable, and if you have no blank forms containing a column for their entry, please let us

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[206]Joseph Henry, letter to W. H. Ruffner, December 27, 1868, Ruffner file, Correspondence, Montreat archives.

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> know and a number will be sent to your address.
>
> We have just finished the reduction and discussion of all the observations made in this country for the last twenty years, in connection with rain-fall, and trust soon to have the results in shape for distribution among our observers.
>
> The Computers of the Institution are now engaged in discussing the observations on temperature which have been made by the Smithsonian and Army observers, and would be pleased to receive any records you may have in connection with this subject, that you have not already sent us copies of. It will give us pleasure to receive and grant any request that you may have to make for publication in connection with meteorology, so far as we may have copies on hand for distribution.[207]

From these letters, it is evident that Ruffner's observations were highly regarded, and that he exercised his usual care with regard to scientific matters.

Meteorology was even enlisted for political purposes. In an article entitled, "Climate and Energy," the author stated,

> The ablest statesmen and soldiers of the Union have always been from the Southern States. Every great measure of American public policy, with one or two exceptions, has come from Southern statesmen. That is one reason why they ought to be restored to the public councils. The nation can never flourish without them.[208]

13. Mechanics and Technology

William Henry Ruffner, already mentioned for his interest in geology, agriculture, and metereology, also dabbled in mechanics. Extant drawings show various designs he made of

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[207]Joseph Henry, letter to W. H. Ruffner, June 4, 1869, Ruffner file, Correspondence, Montreat archives.

[208]"Climate and Energy," Christian Observer (Literary & Miscellany), Vol. 50, n. 14 (April 5, 1871), 4.

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several different machines, including bicycles and wheels.[209]

Numerous articles appear in the Christian Observer showing continued fascination with all sorts of devices and inventions. One of the more interesting articles in this magazine was a review article, which stated that the elements of mechanics were enabling man "to obey the command given by God to our first father, Adam, to subdue the earth." The publication celebrated the rapid advancement of this science, "which has done more than any other cause to make the nineteenth century the child of bustle and confusion of old land marks of society."[210]

14. Electricity

The newly-harnessed power of electricity brought some attention in Southern Presbyterianism. A couple of articles in the Christian Observer in an 1892 issue spoke of the benefits of the electric headlight on railroads locomotives, and of other benefits to civilization of the electric light.[211]

The same magazine celebrated a new invention by a Mr.

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[209]See Ruffner file: Mechanical, Notes and Drawings, Undated, in the archives at Montreat, North Carolina.

[210]Rev. of Elementary Treatise on Mechanics . . . by William G. Peck, Christian Observer (Literary & Miscellaneous), Vol. 50, n. 14 (April 5, 1871), 2.

[211]"The Electric Headlight" and "Electric Notes," Christian Observer, Vol. 71, n. 2 (January 13, 1892), 7.

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Tesla which was able to generate a million alternations of current per second. The article called upon Christians to consider God's infinitity and incomprehensiblity in His harnessing this marvellous power of electricity for the benefit of the earth, "and all so quietly and beautifully done that we have hardly made a note of it."[212]

15. Military Science

The last type of science which we will consider here is that of military science. The Southern Presbyterian Church being born during a time of all-out war, this particular science held a peculiar fascination for these churchmen.

The best-known treatment of military matters by a Southern Presbyterian is Robert L. Dabney's biography of Stonewall Jackson.[213] Dabney, who was a personal friend of Jackson and served for awhile as his assistant, detailed the soldier's exploits in the Mexican-American War and the more recent conflict. Interspersed with the accounts of battle and battle-maps were evidences of Jackson's piety and humble reliance upon the Sovereign God for whatever victories were

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[212]"A Marvellous Unseen Force. The Latest Electrical Discovery," Christian Observer, Vol. 71, n. 12 (March 23, 1892), 4.

[213]R. L. Dabney, Life and Campaigns of Lieut.-General Thomas J. Jackson, (Stonewall Jackson.) (New York: Blelock & Co., 1866; rpt. Harrisonburg, Va.: Sprinkle Publications, 1983).

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won and whatever mercies were experienced.

E. EDUCATION

1. Philosophy of Education

Presbyterians have always been known for giving great attention to higher education.[214] Although there have been debates as to whether or not the Church per se, or groups of individuals voluntarily banded together for this particular purpose, should engage in this enterprise, there has never been any question as to the importance of an educated ministry or laity.

James A. Lyon was the Mississippi pastor of Judge Perkins, who established a professorship of natural theology at Columbia Theological Seminary--a professorship that would later be embroiled in the evolution controversy. Lyon represented the side which advocated ecclesiastically-controlled liberal education. Concerned that the place of prominence once enjoyed by Presbyterians was being lost, he wrote, "We are falling behind the rapid progress of knowledge. Science does not stand still, but marches forward with giant strides." The Church may employ any instruments--whether

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[214]For some interesting comments on agricultural schools and on education in general, see James McCosh, letters to William H. Ruffner, January 6, 1875 and November 20, 1873, file Ruffner correspondence, Montreat archives.

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astronomy, geology, or natural science--in its great work of evangelization.[215]

The debate of whether the institutional Church could legitimately engage in liberal arts education centered around the proposal to establish a Southern Presbyterian university. An article in the Christian Observer gave its negative opinion on the question: the church's mission is "to evangelize, not to civilize the world."[216]

The Mississippi Lyon roared back with not only an article in the Southern Presbyterian Review,[217] but with a short article intended for the various popular papers of the church. In it, he contended that it was seriously erroneous to leave the minds of the church's youth to those not under the direct ecclesiastical supervision and control.[218]

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[215]James A. Lyon, "The Southern Presbyterian University," Southern Presbyterian Review, Vol. XX, n. 2 (April 1869), 154-55, 168.

[216]"A Southern Presbyterian University," Christian Observer and Presbyterian Witness, Vol. 47, n. 13 (March 26, 1868), 2.

[217]See footnote 230.

[218]James A. Lyon, "The Presbyterian University," Christian Observer and Free Christian Commonwealth, Vol. 48, n. 34 (August 25, 1869), 1. Other articles on this topic include: "The University Plan," Christian Observer and Free Christian Commonwealth, Vol. 48, n. 38 (September 22, 1869), 2; [Synod of Mississippi], "Memorial to the Assembly on the Subject of a Presbyterian University," Christian Observer and Free Christian Commonwealth, Vol. 48, n. 52 (December 29, 1869), 1; and "Nehemiah," "The Memorial on a University," Christian Observer and Free Christian Commonwealth, Vol. 49, n. 18 (May 4, 1870), 1. See also "R.", "Education of Children. Who Are the Parties Primarily Responsible and Authorised to Educate?", Christian Observer and Free Christian Commonwealth, Vol. 48,

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No matter what position one took on Church-sponsored educational enterprises, there was no debate on the importance of the Christian faith for education. J. A. Quarles gave expression to this idea in an 1871 article, in which he argued that "many of the sciences have a direct bearing upon religion." This was true of history, metaphysical philosophy, and the natural sciences.[219] No Southern Presbyterian would have disagreed.

2. Books, Curriculum, and Equipment

Efforts to establish a Southern Presbyterian university ultimately failed.[220] However, concern for quality education was manifest in the several colleges maintained in various parts of the Southern Church.

The premier Presbyterian school in the South was Davidson College in North Carolina. A perusal of its catalogues for the period 1861 to 1900 reveals an intense interest in math and science. Particular areas of inquiry included the following: chemistry, natural philosophy (physics), astronomy and meteorology, and geology and mineralogy. Physical

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n. 37 (September 15, 1869), 1.

[219]J. A. Quarles, "Education and Christianity," Southern Presbyterian Review, Vol. XXII, n. 4 (October 1871), 476-78.

[220]See Ernest Trice Thompson, Presbyterians in the South, Vol. II (Richmond, Va.: John Knox Press, 1973), 352-65, for a discussion of the controversy over higher education.

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geography, using Maury's book was added by 1884-85.

At first, there was only one course of study, but in 1870-71, two tracks were possible: the standard classical course (which took four years to complete), and the scientific course, leading to the B. S. degree (which took three years). The classical course still emphasized the study of math and science, especially in the first two years of college. By 1884-85, the B. S. degree required the standard four years of study.[221]

Emphasis was placed upon the experimental method of discovery. The catalogue for 1875-76 stated:

> The laws of Chemistry are taught fully and thoroughly, and the Elements, with their more important compounds--organic and inorganic--are exhibited, discussed, and experimented upon. Great attention is paid to the drill of this [beginning] class, and a constant effort is made by illustration, experiment, examination, and the working of problems to make the Students familiar with the principles of the science.

Regarding mineralogy, it was said,

> Specimens to illustrate all the minerals treated of in the lectures are kept on the table, and the class is drilled upon them till the students are able to sight or by simple tests to identify similar specimens wherever found. A practical familiarity with minerals is the end kept constantly in view.

With regard to natural philosophy and astronomy,

> [The sophomore class] begins with the fundamental properties of matter, and its relations to force and motion. During the first term, all the leading principles of Mechanics are illustrated by varied experiments, familiar lectures, and the

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[221]Davidson College, Catalogue (1884-85), 18.

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> solution of practical problems, until the class is made acquainted with the subject, as far as this can be done without the aid of advanced Mathematics.
>
> During the second term, an experimental course in General Physics is pursued in a similar manner, in which the specific properties of liquids and gases, and the phenomena of light, heat, electricity, and magnetism, are fully illustrated and explained.[222]

There was a great desire to keep abreast of all the latest developments in the scientific world. Much pride was taken in the equipment:

> The Apparatus for illustrating the facts and laws of Natural Philosophy was well selected and will constantly receive such additions as Science demands.
>
> The spaciousness of the Laboratory and the plan for its appointments warrant an expectation that the facilities for practical instruction in Analytical and Industrial Chemistry which are offered by the Professor in that department will meet the needs of many students.
>
> The large and admirable Cabinets of Minerals, Shells, and Fossils which were collected by Prof. Brumby, of the College of South Carolina and of the University of Alabama, have been purchased and arranged for exhibition and examination so as to be easily accesible [sic] to students. It is believed that the facilities for studying the Mineralogy and Geology of our country which are now found at Davidson College, and which are steadily increasing, have never been equalled in North Carolina, and but seldom, if ever, surpassed in our Southern States.[223]

The larger questions were not ignored. Dr. J. B. Shearer's Biblical Instruction included, among other topics, the Issues of Science. A Medical Student could take preparatory courses on "Anatomy, Physiology, and Materia

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[222]Davidson College, Catalogue (1875-76), 31-33.

[223]Davidson College, Catalogue (1870-71), 16.

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Medica." By taking this course of study while at the college, the student could overcome the "known materialistic tendencies" of scientific and medical studies by having this study done in the context of taking Bible courses.[224]

King College was founded in Bristol, Tennessee, in 1867. From the start, there were only four courses of study: Latin, Greek, Mathematics, and Science. Beginning with the Sophomore year, science had these particular subjects covered: Sophomore--Physiology and Hygeine, Composition and Rhetoric; Junior--Geology, Chemistry and Natural Philosophy; Senior--Astronomy, Mental and Moral Science, Natural Theology and evidences of Christianity.[225]

By the turn of the century, King had divided its scientific studies into two departments--Metaphysics and Physical Science. Metaphysics included Psychology, Moral Science, History of Philosophy, Political Economy, Logic, Christian Evidences, and Metaphysics proper. The aim was not so much to store a student's mind with facts as to help him to "philosophize." With regard to physical science,

> The method of instruction in this department is

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[224]Davidson College, Catalogue (1890-91), 34, 36. See also First Semi-Centenary Celebration of Davidson College. Addresses, Historical and Commemorative, Delivered at the Annual Commencement, Wednesday, June 13, 1887 (Raleigh, N. C.: E. M. Uzzell, 1888), 82ff, where the conservative effect of religious colleges against (especially scientific) skepticism is applauded.

[225]King College, First Annual Catalogue of the Officers and Students of King College (Bristol, Tennessee: n. n., 1870), 9-10.

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> by rigid examination on the text-book; solving problems involving the principles studied; and lectures by the professor on subjects not sufficiently amplified in the text-book. It is attempted to make the student thoroughly familiar with the underlying principles of these sciences.
>
> King College keeps fully abreast of the movement to do deserved honor to the Physical Sciences. Their rapid growth in recent years gives the promise that a more extended course of usefulness awaits them. It is expected that we shall have enlarged facilities for prosecuting these studies next year. A good cabinet of minerals has been secured, and we hope to refit and refurnish our Laboratory, and thus be able to give far greater advantages than heretofore.[226]

What appears to be a greater interest at King than at Davidson on the theoretical may be due to lack of sufficient facilities at the former at that time.

3. Non-Ecclesiastical Schools

There was also involvement by Southern Presbyterians at public universities and colleges, including as science professors. The most well-known in this regard was James Woodrow, who began his teaching career at Oglethorpe and then taught at South Carolina College (headed in antebellum times by James Henley Thornwell, the noted Southern Presbyterian churchman and theologian).

During his time at what is now the University of South Carolina, Woodrow wrote reports regarding his classes. For instance, he noted that for botany he was using Gray's School

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[226]King College, Annual Catalogue, Thirty-Second Session, 1900-1901 (Pulaski, Va.: B. D. Smith & Brothers, 1900).

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and Field Book of Botany as the text. For geology, LeConte's Elements of Geology was serving his purpose.[227] On another occasion, he reported that Orton's Comparative Zoology was the text for the zoology class; and that in both geology and zoology classes, the students were making good use of illustrations from the (specimen) cabinet and the library. Further, although three-fourths of the students were "unusually diligent and successful," he regretted to say that the same could not be said about the rest.[228]

A year later (1884), he stated that he had not spent all of the $500.00 appropriated by the Board of Trustees for the purchasing of equipment, and was wondering if the balance was still at his disposal. He also wrote about his being given the assignment of teaching physics.[229] Later that year, he noted that he had been instructing in the fields of astronomy (20 students), zoology (12 students), and physics (23 students), with the students' attendance being "remarkably regular, and their attention to duty praiseworthy."[230]

F. SUMMARY

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[227]James Woodrow, letter to Prof. J. M. McBryde, February 6, 1883, Woodrow file, South Caroliniana Library.

[228]James Woodrow, letter to Prof. J. M. McBryde, May 5, 1883, Woodrow file, South Caroliniana Library.

[229]James Woodrow, letter to President J. M. McBryde, April 29, 1884, Woodrow file, South Caroliniana Library.

[230]James Woodrow, letter to Dr. J. M. McBryde, November 18, 1884, Woodrow file, South Caroliniana Library.

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What has been presented at length is substantial evidence of the interest and involvement in scientific matters by Southern Presbyterians in the latter portion of the nineteenth century. We shall next consider the broader issues of science in relation to faith and to the Christian faith in particular.

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external attacks. Accordingly, we shall next consider the broader issues of science in relation to faith and to the Christian faith in particular.

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II. PHILOSOPHICAL QUESTIONS

A. METAPHYSICS

1. What is Reality?

The consideration of what is real is evidently of concern to all people, and most definitely to Southern Presbyterians in the late nineteenth century. What is real and how we can know it were of great importance to these Calvinists, especially in an age of science when that very science was being turned against them and challenging their faith.

The importance of metaphysics to the Church was evident in an editorial that appeared in the Christian Observer in 1866. The editor expressed caution about the preponderance of columns dealing with the subject, but then justified these discussions as being most helpful in the formation of clear intellectual and spiritual concepts.[1]

In 1876, two article appeared dealing with Herbert Spencer's First Principles in the Southern Presbyterian

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[1]"Metaphysical Discussions," Christian Observer and Presbyterian Witness, Vol. XLV, n. 27 (July 5, 1866), 2. See also such articles as "Metaphysicians," Christian Observer and Presbyterian Witness, Vol. XLV, n. 21 (May 24, 1866), 2; "Positivism So-Called," Christian Observer (Literary & Miscellaneous), Vol. 49, n. 49 (December 7, 1870), 1; and W. J. Wright, rev. of Metaphysik by Herman Lotze, and Samuel M. Smith, rev. of First and Fundamental Truths. Being a Treatise on Metaphysics by James McCosh, both found in "Criticisms and Reviews," Presbyterian Quarterly, Vol. III (1889), 452-62, 470-72.

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Review. In the first, the author declaimed the use of "positive" to describe the thinking of self-proclaimed "Positivists" such as Comte and Herbert Spencer. The article concluded that while the Bible and the Christian faith rest upon a sure and solid foundation that cannot be successfully stormed, the "doctrine of the unknowable, and, by consequence, the entire system of the Positivists of every school, is . . . built upon the sand."[2]

The subsequent article noted that its purpose was "the simple one of showing how vain and how profane is the effort that has been made in these our days to erect 'an altar to the unknown God.'" Even though our knowledge of God cannot be complete, it can still be valid.[3]

The first issue of the Presbyterian Quarterly carried a review of James McCosh's Realistic Philosophy. McCosh was the President of Princeton College, and a Scotsman who defended the theory of evolution. The reviewer hailed McCosh's "disproof of the common but unwarranted assertion, that Metaphysics is not a progressive science"; and cited the following as evidence: one, the use of the inductive along with the deductive method; two, "a decided advance in the enunciation and development of the original Laws of Thought

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[2]"The Metaphysical Postulate of Herbert Spencer's First Principles," Southern Presbyterian Review, Vol. XXVII, n. 3 (July 1876), 437, 439.

[3]"The Modern Doctrine of the Unknowable," Southern Presbyterian Review, Vol. XXVII, n. 3 (October 1876), 695.

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and Belief in relation to the processes of the understanding, and of the original Laws of Morality in relation to the processes of the moral nature"; three, following the Scottish school, "the tendency of philosophical thought has been marked in the direction of adopting the . . . theory of the Immediate Knowledge [rather than Representative Perception] of the external world"; four, "notable progress in the evolution of the doctrine of Presentative and Representative Knowledge"; five, "progress in fixing the certainty of principles and doctrines, arising from the conflict of opinions, somewhat analogous to that which, in theology, has resulted from controversies in the Church"; six, "progress in the matters of the Duality of Consciousness as affirming matter and spirit--to use the exquistive language of Hamilton--in the synthesis of knowledge and the antithesis of existence, and of its testimony to the certainty of Objective Reality."

The review praised McCosh's advancing the Scottish philosophy by characterizing that "[t]he transcendent facts of God's existence, of the infinity of space and duration, and of immortality, which the thinking faculty cannot grasp," "not only as beliefs, but knowledges." However, he did take McCosh to task for "needlessly confusing the subject by making . . . some experimental knowledge always precede faith." He also objected to the Scotsman's unwillingness to distinguish, in contrast to the Scottish school in general, between immediate and mediate knowledge of "things in their reality": according

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to McCosh, we know things "at once in their integrity."[4]

2. "Realism" as a Via Media

One of the most significant books issued by a Southern Presbyterian in the nineteenth century was Robert L. Dabney's The Sensualistic Philosophy of the Nineteenth Century. This volume was a sustained attack on "Sensualism," which

> finds all its rudiments in sensation. It not only denies to the spirit of man all innate ideas, but all innate powers of originating ideas, save those given us from our senses. It consequently attempts to account for every general and abstract judgment, as an empirical result of our sensations, and consistently denies the validity of any a priori ideas. Such was the philosophy which was dominant in France at the close of the eighteenth century; and which, untaught by the frightful results obtained there, is now striving again to establish its dominion among us toward the end of the nineteenth century.

Dabney stated the main point in his introduction as being "my emphatic protest against the assumption, now so common among the Sensualistic school, that no metaphysic is valid." Lord Bacon did not attempt to "establish physical laws," but to "settle those principles for reasoning from facts of experience." He sought "true metaphysics."

Dabney attacked Hobbes, Locke, Condillac, Helvetius, and St. Lambert. Hobbes "enables us to see the whole development of Sensualism epitomized on one man." Hobbes' metaphysics,

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[4]J. L. G., "Criticisms and Reviews," Rev. of James McCosh, Realistic Philosophy, Presbyterian Quarterly, Vol. I, n. 1 (1887-88), 180-81, 184f.

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consistently, must

> include a denial of spirit, of God, of all a priori judgments, of the reason and abstract ideas, of all moral distinctions, of free agency, and of civil liberty. It leaves man, in reality, only sense-perceptions, appetites, and associations thereof, presenting them in apparent modifications of memory and experience. The sole plausibility of Hobbes' description of human nature arises from one artifice, that he has availed himself tacitly of the great fact of man's depravity to construct a sort of saturnine travesty of his practical principles and actions.
>
> In a word, it is simply man's sin which gives a color of plausibility to Hobbes' analysis. How false that analysis is, appears in this: that sin is the disease and blemish of that nature which he pretends to describe. He has given us a spiritual physiology founded exclusively upon the dissection of specimens tainted with moral disease.

Locke was criticized for his famous tabula rasa. For one thing, "[t]he mind is not a tablet, written or unwritten by nature; it is an intelligent agent. It is not a surface, but a spiritual monad." For another, "Locke heedlessly confounds the occasion of the genesis of ideas with the cause. . . . The question, whence the forms of thought and the ideas seem to be original, must be decided by wholly another process than Locke's; by faithful analysis, not by a mere concurrence of experiences."

Still criticizing Locke, Dabney wrote: ". . . a moment's thought prepares us to find that a Sensualistic philosophy cannot admit a correct theory of morals. Virtue and vice are not sensible qualities; we do not discriminate them by touch, smell, the palate, the eyes, or the ears." In Sensualism, morality is determined on the basis of what gives pain or

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pleasure (which are themselves a priori notions).

Contra Condillac, the Calvinist contended that "a formal act does not constitute morality." Rather, sense cannot be cognizant of the subjective motivation.

Dabney wrote: "To sum up the whole in one word, the theory which begins by denying to man his spiritual attributes, naturally ends in making him an animal."

> One thing is certain: the mental and moral sciences cannot be formulated by imposing upon them the "Positivist" method; for this is to annihilate them, by destroying everything characteristic of that rational spirit which is their subject. . . . We must not arrogantly begin with hypotheses as to the sources of the things we examine; nor resolve that nature shall be forced, whether or no, upon the Procrustean bed of our simplifications. We must begin by the faithful and painstaking inspection of the facts of consciousness, and learn from the qualities of these facts by a true induction, what nature shall choose to disclose to us of her methods.

John Mill's psychology was taken to task for not mentioning either the soul or God. "He undertakes to construct a complete science of the human mind and will, of two elements: sensations and association. . . . A sensation is, with him, 'a point of consciousness.' Such 'points of consciousness compose our sentient being.'"

Dabney maintained his polemic against much of the physical sciences. The sensuous nature of man lends itself to overlooking the spiritual side of life, and the first cause. This tendency toward anti-theistic Naturalism found its greatest protagonist in Auguste Comte, who sought to "repudiate as worthless all human beliefs which cannot be

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established by exact experimental and physical methods."

Dabney took on the "Evolution Theory." He noted, "[a] sound philosophy infers the existence of an infinite, personal God, by three processes of logic. Each is an a posteriori process, and either would be by itself conclusive." One, an event cannot arise without cause (ex nihilo nihil). Two, the phenomena we experience "express contrivance. Hence there must have been a contriver." Three, our (sense of) obligation "implies an Obliger."

Evolutionary theory, as in Thomas Huxley and Professor Tyndal, tried to get rid of the need for a Creator by supplying "that original and rudimental animal source, which Darwin required to work with. Huxley's contribution to this work is, to attempt to identify animal with vegetable life," by "finding the origin of all vegetable and animal life in a substance . . . call[ed] 'protoplasm,' which is his 'physical basis of life.'" "Yet, he [Huxley] himself admitted that no chemist had ever produced any vitalized matter, without generation from a vital germ." Dabney skewered Tyndal and Huxley because, after obliterating all distinction between mind and matter, they run into insurmountable problems. Their solution is to spiritualize matter, and thus "leap from a stark materialism, to a species of idealism."

As Dabney noted, according to Tyndal,

> There is, indeed, no foothold for religion in man's rational nature; but his emotions impel him to religion. And emotions are one essential side of human nature, and a very useful and noble side.

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> Hence, the demand which man's emotive system makes for a religion is not to be despised. The result seems to be this: that provided a man knows that he knows nothing on earth about any God, he may feel as affectionately disposed towards God as he pleases, and Professor Tyndal will not despise him! But if he ever pretends to see any reason for his feelings, he is not to be tolerated.
>
> If one has feeling under any other condition [than a proper object believingly seen in the intelligence], it is blind; and unless it has a merely animal function to fulfill, it is a morbid affection of the soul, and needs to be rebuked. Hence, if we are told that our religion can be a matter of feeling alone, and not of reason, it is the same as telling us to have no religion.

Dabney next attacked the Aristotle of Evolutionism, Herbert Spencer, for his adherence to "material force" as the single power by which to construct a philosophy.

The Virginian also wrote against physiological materialism, which uses the Sensualistic method "to recognize no other mind than nerve-matter." He discussed the three parts of the brain, and quoted from leading physiologists to the effect that "'cerebral action accompanies all mental action; that is absolutely all that physiology has rendered probable. It has not demonstrated nor rendered probable the position that cerebral changes precede and produce mental states.'"[5]

We shall have opportunity to return to this important

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[5]Robert L. Dabney, The Sensualistic Philosophy of the Nineteenth Century (New York: Anson D. F. Randolph & Company, 1875), 1, 3-5, 7, 13, 14, 16-17, 22, 37, 50-53, 93, 107, 113-14, 131, 135-36. Dabney also attacked positivism for its atheism and materialism and for its denial of the supernatural (99-106).

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book in consideration of various other matters, but enough has been said so far to demonstrate Dabney's basic position regarding reality. He was committed--along with the rest of Southern Presbyterianism--to a view that recognized the existence of both physical and spiritual reality.[6] Connecting with roots in Scottish Common Sense Realism, these Calvinists thus denied both idealism and materialism.[7]

3. What is Truth?

But beyond the general agreement on the nature of reality, there was great disagreement regarding epistemology. How can one discern truth, and especially scientific truth?

An exchange of articles between James Woodrow and Robert L. Dabney helps to illustrate the dispute. In the first of

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[6]For reviews of Dabney's work, see "Dabney's Sensualistic Philosophy of the Nineteenth Century," Southern Presbyterian Review, Vol. XXVII (July 1876), 486-511; and James McCosh, "Dabney's Refutation of the Sensualistic Philosophy.--But What Next?", Presbyterian Quarterly, Vol. II (1888), 275-82. McCosh reviewed an enlarged edition of the original work. The Scotsman from Princeton expressed his desire for a genuine American philosophy, which would be opposed to both sensualism and idealism. For a review of one of McCosh's books, see "Critical Notices," rev. of The Scottish Philosophy, Biographical Expository, and Critical, from Hutcheson to Hamilton, Southern Presbyterian Review, Vol. XXVII, n. 1 (January 1876), 167-69.

[7]For a critique of idealism, see R. L. Dabney, "Idealistic Monism," Presbyterian Quarterly, Vol. IX (1895), 1-35. See also his review of Metaphysics: A Lecture by S. S. Laws, in "Critical Notices," Southern Presbyterian Review, Vol. XXXI, n. 2 (April 1880), 360-61.

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these articles,[8] Woodrow undertook to attack Dabney's views on science as being not only untrue but also dangerous, since people might be misled into believing that he represented the genuine Christian position. Woodrow set forth the proposition that, whether the science is that of theology (dealing with special revelation) or natural science, such as geology (dealing with natural revelation), "the science in both cases is the work of the human mind" and therefore not infallible. Further, the right use of reason is requisite in whatever science one is dealing in order to come to the truth.

The South Carolinian next attacked Dabney's alleged confusion of contemporary science with the vain and deceitful philosophy against which the Apostle Paul warned in the book of Colossians, as well as Dabney's unwarranted stereotyping of all scientists as being infidel. Woodrow maintained that the proper role of the scientist was the same as that of the Biblical exegete, namely, to read out of the material that which is present rather than to read into the material whatever preconceived notions he may have.

Woodrow posited that "natural science is neither atheistic nor Christian in itself," which "may be seen . . . from the fact that the results reached are not in the slightest degree affected by the religious views or character of its students."

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[8]James Woodrow, "An Examination of Certain Recent Assaults on Physical Science," Southern Presbyterian Review, Vol. XXIV, n. 3 (July 1873), 327-77.

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He especially ripped into Dabney's view that the intervention of a Creator disallows speculation concerning the formation of rocks and their fossils. Woodrow rhetorically asked, "Now, does this admission that effects have been produced in . . . unusual ways [such as in miracles] vitiate all inductive science, which is certainly based upon the belief in the uniformity of the laws of nature?" The professor stated, "If we adopt Dr. Dabney's principle, we are at once landed in absolute and complete scepticism--we cannot know anything whatever with certainty; we are condemned to perpetual universal doubt."

Woodrow also excoriated his antagonist, with regard to his reasonings as to the situation in the Garden of Eden, for violating "two fundamental requirements of science": guessing at his cause, and guessing at the facts to be explained.[9]

The Old Dominion's professor was not intent on picking a fight. His biographer has pointed out that Dabney developed his thoughts on physical science quite independently of the controversy with Woodrow. He penned a letter to Woodrow before the publishing of the above-mentioned article. Further, he was loathe even to respond publicly when he felt that the dispute was becoming personal. But long-time friend C. R. Vaughan impressed upon Dabney the need to answer what

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[9]Ibid., 329, 331, 333ff, 346, 354, 359, 361, 366, 368f.

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was apparent rationalism.[10]

The Southern gentleman from Virginia responded with his own article which was published the next quarter in the Review.[11] After defending himself with regard to his memorial presented to the General Assembly in 1869 concerning theological education, Dabney proceeded to answer various criticisms of his position as set forth by Woodrow. The first was that he disallowed and rejected "all physical science whatever." He responded that he had no quarrel with science per se, but only with anti-Christian science--a point he had underscored not only in his written and spoken material, but also in the very title of the sermon he had delivered in Lynchburg. He was particularly concerned with "physical speculations" which were combined with "'sensualistic' philosophy."

Dabney then made reference to a letter he had penned to Woodrow two months before the publication of the original article, in the hope of clarifying his own views; but to no avail. In that epistle, Dabney's primary concern was his "humble attempt to fix the 'metes and bounds' of physical a posteriori reasonings when they inosculate with the divine

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[10]Thomas Cary Johnson, The Life and Letters of Robert Lewis Dabney (Richmond, Va.: Presbyterian Committee of Publication, 1903; rpt. London: The Banner of Truth Trust, 1977), 339ff.

[11]Robert L. Dabney, "The Caution Against Anti-Christian Science Criticised by Dr. Woodrow," Southern Presbyterian Review, Vol. XXIV, n. 4 (October 1873), 539-86.

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science." He continued:

> I offer my humble mite, by proving that, to the theistic reasoner, (I have no debate here with atheists,) the proposition cannot hold universally true that an analogous naturalness of properties in a structure proves an analogous natural origin. I do not care to put it in any stronger form than the above.

Dabney defended his view that geology, natural history, and ethnology "'always have some tendency to become anti-theological'"; even though some may resist that partial drift. He gave as reasons for such tendency, the following: 1. physical science tends to look for second causes as much as possible, and less to the great First Cause; 2. geology and kindred pursuits, somewhat in contrast with other human sciences, tend to look towards the origin of all things. Somewhat contradictory of Woodrow's contention for neutrality, natural science "ought not to be silent" regarding the power of God, but rather, like Bacon, Newton, and Commodore Matthew Maury, develop "the natural, teleiological argument for the being, wisdom, and goodness of a personal God." Contra Woodrow's belief that the problem is only in the student, Dabney insisted that this anti-theistic tendency is intrinsic in both the student (because of his total depravity) and the study.

The second criticism he answered was his teaching universal skepticism with regard to all knowledge except that of the Bible and mathematics. Dabney drew a distinction between the infallible Scriptures and fallible science, and

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pointed out that physicists should manifest humility in light of their constantly changing science. He noted that there was a universally accepted distinction between "exact" and "inexact" sciences, without there being any necessary advocacy of universal skepticism. Further, there is a great difference between theology, which deals with propositional truth, and geology, which must attempt to read "phenomenal, material susbstances."

> If, then, the "science of theology" is as human and uninspired as the science of geology; and if . . . the meaning of the Bible is practically the Bible; the ground upon which we are invited in the gospel to repose our immortal, irreparable interests, is as fallible as geology. How fallible this is, we may learn from its perpetual retractions and amendments of its own positions, and from the differences of its professors. Is the basis of a Christian's faith no better? Is this the creed taught to the future pastors of the Church by Dr. Woodrow? As was remarked at the outset, when we predicted such results in the distant future, from the attempt to teach fallible science in a theological chair, we still courteously excepted Dr. Woodrow from all applications of this caution. The reader can judge whether my critic has not deprived himself, in this point, of the benefit of this exception, and verified my prophecy two generations earlier than I myself claimed.

The third critique to which Dabney responded was that of "the outspoken charge of culpable ignorance." He claimed he would have passed by these charges in silence, were it not for the important principles involved. "For I presume," he wrote, "the Presbyterian public is very little interested in the negative of that question: 'Is Dr. Dabney an ignoramus,' the affirmative of which Dr. Woodrow finds so much interest in

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arguing."

The author cited Bacon in affirming that natural science, in contradiction to the views of Woodrow, does have a religious relationship. He also fended off various thrusts that Woodrow had aimed at him in terms of gross ignorance of geology.

The fourth vindication of his views had to do with his primary position that

> The structures of nature around us cannot present, by their traits of naturalness, a universally demonstrative proof of a natural, as against a supernatural origin, upon any sound, theistic theory. Because, supposing a Creator, originiating any structures and organisms supernaturally, he also must have conferred on his first things equal traits of naturalness. Hence, should it be found that this Creator has uttered his testimony to the supernatural origin of any of them, that testimony fairly supersedes all natural arguments a posteriori from natural analogies to a natural origin.

He bolstered his argument by appealing to the notions of propagation and species:

> A given species denotes just that aggregate of properties which every individual thereof derives by its natural propagation. Hence it is certain that the first organism (supernaturally produced) possessed every essential quality natural to its species; otherwise it could not have been a parent of species.

Dabney appealed analogically to a courtroom scene, in which a prosecution's case based on "circumstantial evidence" could not hold up if the defense could suggest another theoretically possible hypothesis. The "competent and credible witness" of the Bible serves to acquit divine origin

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from the accusations of infidel science.

After skewering geologists for their circular reasoning with regard to the age of rocks and fossils, and pointing out that a naturalistic origin of species leads inevitably to eternal regression, Dabney noted that he had not taken a position as to whether the Westminster Assembly interpretation regarding a pre-Adamite earth was the true one. However, if it came to be clear that the formulation of the Westminster Confession of Faith (i.e., of creation in six twenty-four periods) was true, only from his position could he retain belief in the Bible, while Woodrow could not do so from his.[12]

The South Carolinian responded the next year with another long article.[13] He began by declaring that although many isolated bits of knowledge about various sciences may have been known for a long time, these fields of endeavor only recently could be called "sciences." He further stated that much of the attack on science was reflective of an attack on learning itself, fostered by a misunderstanding of Biblical texts; and that, although Roman Catholicism's opposition to learning had led to much infidelity in those countries where papal authority was dominant, Protestants themselves did not have a great record in this regard.

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[12]Ibid., 539-45, 547, 551ff, 558-72, 575-77, 581, 583-85.

[13]James Woodrow, "A Further Examination of Certain Recent Assaults on Physical Science," Southern Presbyterian Review, Vol. XXV, n. 2 (April 1874), 246-91.

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Woodrow stated that, in contrast to what he held Dabney to believe, there is a difference between natural science and physics, on the one hand, and natural theology and metaphysics, on the other.

Woodrow then came to the heart of the dispute:

> Here, then, is where we agree and where we differ: We agree in believing that which above is called "the only point cared for": we differ as to its application--Dr. Dabney insisting that the "absence of the supernatural" must be proved before the law of uniformity may be applied; we insisting that the presence of the supernatural must be proved before we are debarred from applying it. We maintain that the former principle leads inevitably to universal scepticism, and that the latter leads inevitably to the knowledge of truth.

While conceding, therefore, that Dabney's point was true, Woodrow maintained that it was irrelevant for natural science:

> For we are entitled to assume that all natural structures have been produced by God's ordinary laws until the contrary is proved in any particular case. And the burden of proof always rests on those who maintain the supernatural origin. When such origin has been proved in any case, it is thereby put beyond the range of physical science.

Woodrow also dissented from Dabney's view concerning the "queen of sciences," regarding his antagonist as having overlooked the distinction between the Bible and theology. We can learn salvation directly from the Sacred Scriptures, "all without waiting for the relations between these precious truths to be pointed out by the uninspired science of Theology"; and he quoted extensively from the systematic theology of Charles Hodge, professor at Princeton Theological Seminary, to illustrate the point.

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He also quoted from the venerated James Henley Thornwell, in drawing a distinction between a natural and a supernatural apprehension of religious truth.

Woodrow believed that the present suspicion, by good and intelligent men such as Dabney, towards geology and natural science, was because of a failure "to perceive the purely hermeneutical character of natural science." Referring to Lord Bacon, Woodrow described physical science as "interpreter of nature."[14]

There are other writings on the nature of truth,[15] but this exchange between two seminary professors sufficiently highlights the crucial differences. Both professed allegiance to Baconian inductivism, but the subtle differences amounted

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[14]Ibid., 247ff, 259, 266, 272, 279-86.

[15]For example, see Leander Ker, "Truth," Southern Presbyterian Review, Vol. XVIII, n. 4 (November 1867), 483-500. Ker began with three propositions: "[a]ll truth is from God"; "whatever God has made in creation and uttered in revelation, is truth"; and "as all truth is contained in the works and word of God, it divides itself into two grand and general divisions, moral and physical" (484). He developed a postmillennial-type view of the effects of truth on life in general (485ff); and posited that truth, which is unchanging, is stored in both nature and Scripture, waiting to be discovered (494). See also "'Unthinkable' Propositions and Original Sin," Southern Presbyterian Review, vol. XXVI, n. 2 (April 1875), 298-315, in which the author stated that there was no excuse to reject original sin just because we cannot fully explain it, and drew an analogy with Newton, who demonstrated that gravitation was an action between two distant bodies but did not explain it until he came up with his notion of a subtle, elastic ether (308-11); and James Lewis Hope, "The Search for Truth," Christian Observer, Vol. 82, n. 29 (March 20, 1895), 15: this inaugural address at Washington and Lee University stated that the search for truth was "paramount" in a university.

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to a huge gap between competing positions. Basically, Woodrow allowed for an area of "neutral" knowledge, while Dabney adhered to a view that, because all truth is God's truth, even physical science (not just metaphysics) points inevitably to the Creator.[16]

4. What is Life?

Relatively little was written by Southern Presbyterians regarding the nature of life. One article which dealt with the subject appeared towards the end of the century.

Writing from Greensboro, Alabama, J. M. P. Otts affirmed that life causes organization and not vice versa, and that

> life begins in a protoplasmic mass, and is manifested in a vital organism which it weaves around itself. From this we see that life is more than existence; it is a vitalizing and organizing power in an existence that lives. When life departs out of the vital organism its substance becomes a mass of dead matter.

This minister felt compelled to draw the conclusion that there are different kinds of life: vegetable or plant life; animal life; and rational life. The psychical side of man defines his life as being above the merely physical life of animals. "Consciousness," according to Otts, "is to mind what

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[16]What we are suggesting here runs somewhat counter to the contention by James O. Farmer, Jr., in The Metaphysical Confederacy: James Henley Thornwell and the Synthesis of Southern Values (Macon, Ga.: Mercer University Press, 1986), 120-21, in which he stated that Woodrow was the "more faithful disciple" of the Baconian-Scottish school of thought.

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space is to matter. Mind without consciousness of its own existence is as inconceivable as matter without extension in space." While this was not a novel doctrine, its importance has been underestimated. Only "absolute annihiliation can destroy the self-consciousness of mind." Modern sensational philosophy, epitomized by Locke, of necessity denies "this law of mental existence"; but all who hold to the immateriality of mind (such as Kant and Sir William Hamilton) stand by it.

Otts explored the mysterious relationship between physical and psychical life, and dealt with the nature of immortality. He concluded by pointing out that man can live simultaneously in three realms of life: animal, mental, and spiritual.[17]

5. Causality

What is the nature of causation? Is there a necessary "cause/effect" relationship? Such questions not only occupied Southern Presbyterian discussions but were critical to their understanding of reality.

One of the more lengthy articles on the subject of cause was penned by J. A. Quarles in 1874, and consisted, among other things, of a review of James McCosh's Christianity and Positivism: A Series of Lectures to the Times, on Natural

[17]J. M. P. Otts, "Life and Immortality," Presbyterian Quarterly, Vol. X (1896), 193-201.

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Theology and Apologetics. This Missouri minister began by positing that all men fall into one of these categories: Atheist, Polytheist, Pantheist, Deist, or Theist. He maintained that Theism is "the scientific designation of the Christian concept of God," and that the God of the Polytheist, the Pantheist, and the Deist "is to us no God at all." It therefore followed that "the God of the Theist is the cause of all things, the efficient cause of all things, the first efficient cause of all things, depravity alone excepted."

After pointing out that our conception of God properly comes only through revelation (rather than through innate knowledge), Quarles dealt with various various arguments that have been advanced by Theists as proofs for God's existence. He dismissed the argument from common consent as worthless, and the ontological argument as too abstract.

But the cosmological argument was of obvious interest, since its first premise is that of causality--"a universally admitted principle, though its basis is one of the disputed points of metaphysics." Curiously enough, the author argued that finite mind could not create, because, for one thing, "geology teaches us that finite mind is one of the latest beings to appear on the earth." He also urged, as part of this cosmological argument, that geology "gives us an authentic history of the material cosmos," and that the very development of the universe, as it leads to "its pyramidal point," implies that the lines do indeed converge at a

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definite point in the past.

After answering various objections (such as the relationship between an infinite cause and a finite effect), Quarles considered two corrolaries: the teleological argument (that of design, thus showing an intelligent Cause) and the eudaimonological argument (demonstrating that a benevolent Mind created the universe). The man from St. Louis then looked at the ethical argument (God as Moral Governor and Final Judge), before going on to His being the providential Governor of the cosmos--a point with which McCosh was particularly concerned in his book of lectures. Under discussion in this section were such notions as epistemology, and critiques of Positivism and Materialism. Quarles concluded his piece by writing:

> So it is true that we know nothing but power. All existence, material and physical, finite and infinite, manifests itself to us as such. In view of these facts, is it a foolish conjecture that possibly all finite substances, material and spiritual, find their unity in the higher sphere of force? The summum genus of finite, created being, then, would be force; its two proximate, subaltern genera, mind-force and matter-force. Over all, as issuing from him, dependent on him, is the infinite, spiritual, perfect Force; the First Cause, from whom proceed and to whom point all secondary and final causes.[18]

This article demonstrates several things. One is the relationship between causality as a metaphysical phenomenon and as an apologetic concern. Another is both the primacy of

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[18]J. A. Quarles, "Cause--First and Final," Southern Presbyterian Review, Vol. XXV, n. 1 (January 1874), 86-132.

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the mental and spiritual over the material, as well as their interface.

A series of three 1883 articles from the Southern Presbyterian Review, which also appears in the collected writings of Robert L. Dabney,[19] helps us to understand further the importance of the notion of causation. This series was actually grouped under the general title, "Inductive Logic Discussed," and the first article asked, "What is Inductive Demonstration?"

Dabney noted that, for Aristotle, it was not the material, efficient, or final cause, but the formal cause that was the subject of inquiry in the physical sciences. The real induction, for which Bacon (and others) sought, was "the detection, among all the resembling and differing instances, of the universal law of cause."

The worst legacy of Hume was his distinguishing between physical and efficient cause. On the contrary, Dabney maintained that without the ability to draw inductively conclusions based on observation regarding the efficient cause, induction would never rise "above the probabilities of mere enumerated sequences, whose worthlessness to science Bacon has so well exposed." And, we base our inductivistic approach upon a universal law of causation--a law which cannot

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[19]Robert L. Dabney, Discussions, Vol. III: Philosophical, ed. by C. R. Vaughan (Richmond: Presbyterian Committee of Publication, 1892; rpt. Harrisonburg, Va.: Sprinkle Publications; and Vallecito, Calif.: Ross House Books, 1980).

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be found empirically, but is intuitive.[20]

The second article, "The Nature of Physical Causes and Their Induction," continued discussion of that most difficult of questions in this matter: "How does the inference seemingly made from the some, or the many, to the all, become valid for the all?" He answered by noting that, in ordinary life, probabilities are not worthless; and that we utilize a "practical sagacity" through self-education in guarding against "erroneous classifications." But he gave a more compelling answer to this question when he stated that inductive logic could mainly be used "to enable us to anticipate nature." By determining the exact cause, under the same conditions, we will be able to predict the effect(s).

After maintaining once again that there had to be an a priori commitment to the notion of cause and effect,[21] Dabney laid out the methods of induction. The first is the "Method of Agreement." If A+B+C, A+D+E, and A+F+G all produce X, then A is the cause of X. The converse process may also be helpful: if effects denominated X+Y+Z, X+W+V, etc., may be observed to agree only in that A as an antecedent is constant, then X is the result of A. However, this process can be deceivingly simple, and may not always produce a perfect demonstration. For one thing, we may not always know all the antecedents, so the true cause may remain long hidden. For

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[20]Ibid., 354, 366ff.

[21]Ibid., 390ff.

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another, the same effect may be produced at different times by different causes. For yet another, two or more causes may combine to produce a given effect.

The second method is the "Method of Difference." If A+B+C produce X+Y+Z, and B+C produce Y+Z, then A must be the cause of X. However, there is limitation with this method, in that A may be only one cause of X. "Few cautions are more important than this, which reminds the inductive reasoner, that while like causes give like effects, life effects do not prove like causes."

The third method is a combination of the first two. If a series of antecedents agree in the omission of A and also do not result in X, then it is probable that A is the cause of X.

The fourth method is that of residues. If A+B+C produces X+Y+Z, and A by itself always results in X and B by itself always results in Y, then it may safely be concluded that C is the cause of Z.

The final method is that of the inference from corresponding variations. If A has been observed as an antecedent of X, and variations in A produce corresponding variations in X, then it is probable that A is the cause of X--a probability that increases the more instances of correspondence that can be demonstrated, and particularly if the correspondence is in terms of numerical ratios.

But certainty is the desired goal. Verification can be sought first of all through the application of more than one

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method of induction: if the result is the same, then "the probable evidence mounts up towards certainty with a multiplying ratio." But in many cases, experimenting backwards obtains the most complete verification.

Dabney concluded this article by postulating that induction is syllogism.

> Induction and deduction are not two forms of reasoning, but one and the same. The demonstrative induction is but that species of syllogism which, getting its minor premise from observed sequences of fact, gets its major premise from the intuition of cause.[22]

In the third article in this series, "The Metaphysical and Theological Applications of Induction and Analogy," Dabney posited that neither Hamilton nor Mill had the full truth. Hamilton was correct in denying Mill's assertion that the certainty of inductive logic rests in the uniformities of nature, but wrong in asserting that inductive logic has only probable force. Dabney steered a course that held to the certainty of inductivism, but grounded that belief in inductivism in intuitive knowledge.

Hume had taken aim at theology and sought to destroy the cosmological and teleological arguments for the existence of God; but in the process he undermined the sciences.

> When they [the inductive sciences] were prosecuted by the Boyles, Newtons, and the illustrious company of Christian physicists, whose metaphysic was that of Cudworth, Clarke, and Butler, they gave the world those splendid and solid results which constitute the wonders of

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[22]Ibid., 376, 384-85, 389ff, 396ff, 400-11.

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> modern civilization. But when the votaries of the inductive sciences, like Dr. Huxley, have embraced the empiricism of Hume, Comte, and Mill, they stagger and grope, and give the world, in place of true science, the vain hypotheses of evolutionism and materialism. In asserting the true nature of induction we have been pleading the cause of science, no less than that of theology.

The doctrine of Final Causes was the particular focus of the empiricists' hostility. Final cause is where theology, philosophy, and the inductive logic meet. Not only is final cause a necessary doctrine from the standpoint of Theism, but it is necessary for inductive demonstration, for, without it, there cannot be valid belief in the uniformity of nature. Indeed, without a belief in God, there can be no rational belief in the law of cause and effect.

> . . . [W]hile the Creator did fashion the human reason so as to be intuitively necessitated to believe in cause, that he might be consistent in doing so he also gave it the evidence of his own causation and intelligent design in all his works. The two judgments are complementary to each other; the suppression of the latter would leave the other inconsistent. God's constancy to his own ends is the only explanation of that stability, which he has necessitated us to expect in the laws of the second causes by which he designs to effectuate those ends. Or else, the alternative explanation must be, that the causal ties in physical sequences are eternal and necessary, essentially immanent in the very being of the material bodies acting and acted on, and this is fatalism. Let the Huxleys and Comtes, then, choose between this absolute fatalism and the doctrine of final causes. They have no other alternative.

After discussing the nature of true analogy, Dabney noted that induction must be modest as a science. Just as in a criminal trial, circumstantial evidence can be overturned by an eye-witness, and even a hypothesis that gives a different

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construct to the evidence destroys a prosecution's case. Even so, one must be careful not to assert something to be the cause of an effect if there might be another explanation.

The article concluded with various examples of the inductive argument applied to cases. These included discussion of the equivalency and transformation of energy, the laws of refraction revealed by the spectroscope, the mode of formation of strata and mineral deposits, and the evolution theory. Regarding evolution, Dabney pointed out numerous internal inconsistencies with the theory. He also applied the analogical argument to show that the fact, or even the possibility of a Creator, whose testimony is adduced in the self-attesting Christian Scriptures, is sufficient to discredit evolutionism.[23]

The final application was with regard to a social and moral matter, viz., the use of statistics to bolster the claim for universal public education.[24] We shall have opportunity to return later to this argument.

Also in the book of Dabney's collected writings was an address read (in absentia) three years later (1886) to the Victoria Institute of London, on the topic of "Final Cause."[25] After defending the notion that final cause was

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[23]Ibid., 412-26, 434ff, 448-51.

[24]Ibid., 453-55.

[25]Ibid., 476-96. This material also appeared as the final chapter in Dabney's Sensualistic Philosophy, 395-412.

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not contradictory of the thoughts of Descartes and Bacon, the Southerner attacked the anti-theistic science of evolutionism for its denial of final cause. Using the example of the eye, Dabney demonstrated that the chances of even a single eye just happening to come together are infitessimally small; and that the chances of two eyes just happening to evolve would involve multiplying the two fractions of probability. Rather, it is obvious that there must have been foresight behind the occurrence of the eye, which intelligence is final cause.

His opponents (evolutionists, materialists, agnostics) might suggest that man's mind could have no effect on physical reality. But their very monism obviated the radical disjuncture that they would try to maintain between mind and matter.

The professor noted some of the absurdities of the evolutionary model, including the fact that an instinctive conatus could not be present in animals which did not possess the organ already and that blind chance would not produce such regularity and completeness. But the most devastating blow to evolution in this regard has to do with the supposed evolution of organs which develop apart from the influence of environment and function. Similarly, the organs of reproduction prove fatal to evolution, since totally different organs in the male and the female of a species prove that they could not have just evolved, but that final cause must have been at work.

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Dabney asserted that common sense and most schools of philosophy agreed in a belief in final cause; that every inductive science necessarily utilizes the notion of a function for every new organ discovered; and that belief in final cause is a necessary corrolary to belief in causation. He concluded:

> Nature is uniform, neither chaotic nor fatalistic, because she is directed by a Mind, because intelligence directs her unintelligent physical causes to preconceived, rational purposes. Her uniformities are but the expressions of these purposes, which are stable, because they are the volitions of an infinite, immutable Mind, "whose purposes shall stand, and who doeth all his good pleasure," because all his volitions are guided from the first by absolute knowledge and wisdom, perfect rectitude, and full benevolence. Nature is stable, only because the counsels of the God who uses her for his ends are stable.
>
> None but theists can consistently use induction.[26]

Dabney's analysis in this book did not go without criticism. For example, W. J. Wright of Fulton, Missouri, disagreed with his obliteration of the distinction between induction and deduction. But Wright also had nothing but words of praise for the article on "Final Causes."[27]

Other treatments of causality could also be reviewed,[28]

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[26]Ibid., 476-78, 481-84, 486-91. Also found in the volume are the favorable responses from members of the Victoria Institute.

[27]See W. J. Wright, "Criticisms and Reviews," rev. of Dabney's Discussions, Presbyterian Quarterly, Vol. VII (1893), 299-307.

[28]For example, see James A. Waddell, "A Re-Examination of Sir William Hamilton's Theory of Causality," Southern Presbyterian Review, Vol. XVIII (September 1867), 286-301; J. Waddell, "Critical Discussion of Causality," Southern

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but enough has been written to demonstrate the key significance of this theme. The notion of causation was important for the Southern Presbyterian view of science, for without a predictable relationship between cause and effect, the world became irrational and experiment meaningless. But causation was also necessary for theology, not only in terms of scientific methodology, but also for the proofs for the existence of God. We now turn therefore to the subject of apologetics.

B. APOLOGETICS

1. Methods of Apologetics

Francis R. Beattie was a Canadian called to be the successor of James Woodrow in his professorship at Columbia Theological Seminary. In Beattie's inaugural address, given in May 1890 upon the occasion of his installation, the professor noted that the chair which he now occupied had an enlarged scope in that it now encompassed not merely the relations of science to revelation, but all of the arena of

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Presbyterian Review, Vol. XXXI, n. 3 (July 1880), 414-33; and John L. Girardeau, "Criticisms and Reviews," rev. of Robert Watts, The Reign of Causality, Presbyterian Quarterly, Vol. II (1888), 145-48. See also Robert Watts, "A Short Method with the Antitheistic Scientists," Presbyterian Quarterly, Vol. II (1888), 388-94. Watts was at Assembly's College, Belfast, and this article was a speech he delivered to the Fourth General Council of the Alliance of the Reformed Churches holding the Presbyterian System in London, July 5, 1888.

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Christian apologetics. He then demonstrated the need for apologetics, in that man's sinful heart would always mandate a defense against attack.

Beattie explained that apologetics as a technical term "denotes the systematic defence [sic] of a person, or the scientific pleading of a cause. As applied to matters of religion, Christian apologetics is the science of the defence [sic] and vindication of Christianity, or of the pleading of the cause of theistic belief, of the Bible, of Christ, and of Christianity."

The author lamented the fact that, although there were several fine apologies, there was then no systematic apologetics that covered the whole scope of defending the Christian faith. He then offered this "descriptive definition":

> Apologetics is that branch of theological science which presents a reasoned defence and vindication of the essential truth, the supernatural origin, the divine authority, and the inherent sufficiency of the Christian system of doctrine, worship, morals, and redemption as the only adequate religion for mankind, together with the systematic refutation of all antagonistic systems.

Beattie dealt with the three-fold office of apologetics. The first is that of <u>defence</u>. Whether with regard to philosophy, history, or "the weapons of science, falsely so called, found in the field or formed in the laboratory, . . . the apologete must be prepared to drive back the foe, capture his weapons, and turn them into armor for the defence of

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Christian faith."

The second office is the vindication of the Christian faith, which is the positive side of apologetics. The third office is that of refutation, in which the apologist attacks and refutes every kind of atheistic and anti-Christian theories:

> Atheism need not long engage his attention, for while there are many practical atheists, there are but few who venture to maintain a reasoned atheism. As the devils believe and tremble, so bad men can scarcely help doing the same thing. Then materialism in its manifold forms, and pantheism in its several subtile phases must be put to flight, while the united forces of positivism and agnosticism, of pessimism and secularism, must be defeated by the weapons of refutation. At the same time, false ethical systems and erroneous scientific theories must be disarmed, while rival systems of religion and non-religious social theories must be brought to terms of unconditional surrender.

Beattie stated that the Christian apologist must not regard the Christian system as just another of several religious systems, each with partial truth. Rather, the uniqueness and Divine origin of Christianity must be trumpeted: "the apologete must be prepared to justify the bold claim that Christianity is in all respects inherently sufficient to be an adequate religion for man, even sinful man."

This Canadian then set forth the three-section domain of Christian apologetics: fundamental or philosophical apologetics (theism versus anti-theism), historical or evidential apologetics (supernatural versus anti-supernatural

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views of the Bible and the Christian faith), and polemical or irencial apologetics (the relationship between scientific research and the special revelation of Scripture).

Regarding the first section, the apologist must consider a crucial question, viz., that of "the reality of human knowledge and the office of faith in matters of religion." A true theory of knowledge is absolutely essential to the apologetic enterprise. So also is a genuine psychology which rejects "all purely empirical theories of human knowledge," whether sensationalism or idealism. Further, "faith and knowledge are supplementary to each in every sphere, but especially in that of religion"; and they proceed on parallel tracks, both of them toward certainty.

Theism was defined as "the doctrine which affirms the existence and continued operation of one infinite personal God, and presents this affirmation as the only adequate solution of the origin and constitution of the universe." With regard to the question of the origin of theistic belief, Beattie warned about the delicate task of steering between pantheism and a primitive atheism which required revelation for a God-consciousness; and he distinguished between the way men in Christian countries now come to believe in God and the way that Adam came to believe. "The native theistic belief of the human soul . . . constitutes an abiding witness within, to the actual existence of God without the soul; and in the last analysis this belief may be regarded as God's testimony in the

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psychological sphere, to the reality of his being in the ontological realm."

Concerning the ontology of theism, the apologist should follow a wise middle course between those who object to Kantian criticism and those who follow Kant. The defender of the faith should not try to prove God's existence "by a strict deductive or demonstrative mode of reasoning," and yet he should assert that "the theistic proofs are of real logical value in establishing the objective validity of the native belief in God."

Finding the traditional division between a priori and a posteriori to be only somewhat useful, Beattie classified the theistic proofs this way: psychical, causal, moral, historical, and religious. "As these many strands of proof are bound together in one they form a strong cable, which the force of unbelief cannot break, nor the logic of atheism ever hope to untwine or destroy."

Having done the positive side of his task, the apologete must now engage in that negative job of tearing down the citadels of unbelief, in this order: dogmatic atheism, positivism, modern agnosticism (both its theory of knowledge and its anti-theism), materialism (semi-materialism, psychological materialism, and pure or scientific materialism), deism, and pantheism (including the Hindoo, Eleatic, Spinozistic and Hegelian versions). "Then, finally, the scattering hosts of pesimism, secularism and socialism are

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to be warded off, while the flying mercenaries of spiritualism, who love good pay and do their fighting in the dark, are to be driven away by the weapons of truth."

Turning to the second section of the field--historical or evidential apologetics--Beattie did not eschew the study of comparative religions. The science of religions could be useful in demonstrating that the primitive belief in the world's cultures was that of monotheism; that such belief evolved over time in various religions into polytheism; and that only Judeo-Christianity gives evidence of not steadily deteriorating.

The defense of the faith at this point entails dealing with the supernatural, with revelation and with inspiration. The apologete will also defend the notion of miracle against objections, including from the scientific perspective (built upon false views of the uniformity of nature). He will also assert the historical character and nature of Jesus Christ, and the manifestaiton of the supernatural in the spiritual kingdom of the church.

In the third section of the field--the relation between physical research and Christianity--the apologist will be guided by a confidence that there is no contradiction between natural and special revelation and that any apparent contradiction implies a problem with his perception. Indeed, he must assume a harmony between science and religion.

Matter and force are the two foci of discussion in the

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field of Physics. Biology wrestles with the nature and the origin of life; and the apologete, before having to change his Scriptural exegesis, may wait patiently until the advocates of the theory of descent have proven their case. Anthropology deals with "questions of man's antiquity and his primitive state." Geology raises the issues of cosmogony and geogony of Genesis. Finally, the matter of Creation and Evolution must be addressed directly.

Beattie closed with a discussion of the spirit in which the apologetic enterprise must be conducted: confidence and candor, earnestness and reverence, avoiding all bigotry and prejudice, practicality, and loyalty to the denominational doctrinal standards. Apropos to the final point, he made reference to James Henley Thornwell and quoted H. B. Smith's Apologetics to the effect that only Calvinism is a sufficiently consistent Christian orthodoxy to defend the faith and to rout the enemies.[29]

Three years prior to this address, Beattie had penned a book on apologetics, in which he developed some of these same themes. This volume tried to present a balanced position with regard to the theistic proofs, arguing that several of them had value, but that none could demonstrate God's existence with strict mathematical certainty. However, the author was content to show "that Theism is a rational belief, and that

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[29]This address was printed as an article, "Christian Apologetics," in Presbyterian Quarterly, Vol. IV, n. 14 (July 1890), 337-69.

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its denial is at least unreasonable." He also contended that once the intuitive knowledge of God is admitted, we can know more about Him by reason; and the more we know about Him, the more clear is it "that many false theories which claim to be theistic must be rejected." Beattie concluded by positing that the foundation on which revelation and redemption rest "is at once a rational theology and a theistic cosmology."[30]

Beattie's work represents mature thought on apologetic methodology, and that by someone who came into the Southern Presbyterian Church somewhat late in the period under discussion. But these writings are not the less valuable for that; rather, they give evidence of a cross-pollination of thought, and they also touch upon themes that were already current among Southern Presbyterians.

J. A. Waddell had written an extensive article on methodology in 1872. He began by noting the difficulty of using finite language to describe accurately the infinite, and that that difficulty has blunted what otherwise would be compelling proofs.

But even though it may be difficult to demonstrate, with strict logic, the existence of the Deity, Waddell thought it is by no means impossible; and he proceeded to enumerate several points. The first three of these "great facts" were "our own existence as temporal beings, the prior existence of

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[30]The Methods of Theism (Brantford, Ont.: Watt & Shenston, 1887), 134-38.

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something eternal, and the dependence of the temporal upon the eternal."

Other points adduced in favor of his argument included the self-existence and independence of the Divine; His being the sufficient cause of all things; the evidence of His thoughtful design, including in the creation of man's mind; the fact that the Supreme Intelligence created all intelligence and personality in the universe; and that the First Cause is "alone in its eternity and independence." Waddell ended this piece by noting that many illustrious scientists, in contrast to the contemporary scientism, had accepted the "truth of religion"; and the vast majority of contemporary thinkers had "conceded the validity of the law of causation." "Religion has no cause to tremble for its own safety, so long as the priniciples of all scientific truth are identical with those upon which her rational defence depends."[31]

A year later, an article appeared which argued against many of the traditional methods for proving God's existence. After showing that the standard philosophical "proofs" really do not prove anything, the author undertook to prove God's existence by an appeal to His evident design in nature's works and in man's mental and moral constitution.

For all of Socrates' wisdom and insight, he could gain

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[31]J. A. Waddell, "Method of the Argument for the Existence of God," Southern Presbyterian Review, Vol. XXIII, n. 4 (October 1872), 554-84.

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but an impartial view of the Almighty; and, the philosopher sometimes would speak of more than one God. But a more complete, Scriptural apologetic would "behold a manifestation of the Deity in the works of nature and in the soul of man." The author concluded by quoting from the venerable Thornwell:

> ". . . Nothing is insignificant, nothing is dumb. The heavens declare his glory. The firmanent showeth his handiwork. The day elicits from the countless multitude of beings revealed by its light a tribute to his praise; and the night, with its array of planets, suns, and adamantine spheres wheeling unshaken through the void immense, utters a sound which is audible to every ear and intelligible to every heart. Science, when it has conducted us to God, ceases to speculate and begins to adore. All the illustrations which it has gathered in the fields it has explored are converted into hymns, and the climax of its inquiries is a sublime doxology."[32]

Yet another article six years later began with the notion that no one "by searching, can find out God." The article contended that an infinite God of truth who could be known logically would never create "sham mammals" who had no true existence. The author wrote that the unlearned can come to a saving knowledge without scholastic theology, and that the revelation of Scripture can solve problems which the unaided reason cannot. Further, the Protestant approach to revelation, which is not afraid of inquiry and which does not mandate that only a special priesthood interpret the Bible, is

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[32]"Proofs of Divine Existence Furnished by Natural Religion," Southern Presbyterian Review, Vol. XXIV, n. 3 (July 1873), 417-32.

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the worthy example.[33]

From the foregoing material, one can see some of the concerns of Southern Presbyterians regarding the methods to be used in defending the faith. These Calvinists recognized man's total depravity (and thus his total native inability to respond to God) as a block to grasping spiritual truths. But these same churchmen also increasingly understood the difficulties of the traditional apologetic methodology; and at least some of them accordingly not only questioned the standard methodologies but also wondered about their effectiveness. These pastors and professors rejected not only an approach that would undermine the foundation of the Christian faith,[34] but one which tried to found the defense of the faith on a neutral basis.

2. Dealing with Skepticism

In the 1850's, Auguste Comte issued a strong challenge to all transcendent religions. His "catechism" was intended to

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[33]"Non-Scholastic Theology," Southern Presbyterian Review, Vol. XXX, n. 2 (April 1879), 258-75.

[34]For example, see two review articles in the Presbyterian Quarterly of Alexander Alamain Bruce's Apologetics; or, Christianity Defensively Stated: Frances R. Beattie, "Criticisms and Reviews," Vol. VII (1893), 614-22; and E. Daniel, "Criticisms and Reviews," Vol. XII (1898), 274-81.

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foster his own humanistic, positivistic religion.[35]

"Positivism" was popularized in America by such skeptics as Lester F. Ward. This Smithsonian scientist founded the National Liberal Reform League during the Reconstruction period, and wrote--under a pseudonym--a Positivist primer.[36]

In that primer, Ward directly attacked the God of Scripture, and hence the doctrine of First Cause. He affirmed a belief in "a relative God, . . . a demonstrable God--an imperfect God," viz., Humanity. Further, he maintained that creation was more like a circle than a straight line, and that matter is indestructible.[37]

Another threat to the Church and her teachings was Robert Green Ingersoll. This skeptic, well-known for his lectures as well as his writings, blasphemed in many ways. He wrote: "Inspiration is only necessary to give authority to that which is repugnant to human reason. Only that which never happened needs to be substantiated by miracles. The universe is natural."[38] He poked fun at the doctrine of the Atonement

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[35]Auguste Comte, The Catechism of Positive Religion, trans. Richard Congreve (3rd ed.; 1891; rpt. Clifton, N. J.: Augustus M. Kelley, 1973).

[36]Bert James Loewenberg, "Darwinism Comes to America, 1859-1900," Mississippi Valley Historical Review, Vol. XXVIII, n. 3 (December 1941), 339-68.

[37]C. G. David [pseud.], A Positivist Primer: Being Familiar Conversations on the Religion of Humanity (New York: David Wesley & Co., 1871), 7-8.

[38]Robert G. Ingersoll, The Christian Religion. An Enquiry by Colonel R. G. Ingersoll (Imprinted for B. E. and W. L. S., 1881), 101-02.

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and mocked the Christian faith.[39]

He posited that creation ex nihilo is impossible; that the universe is infinite, made by an infinite, material god; and that the idea of First Cause was not true. In writing of Humboldt, he stated that the universe is governed by law, and that the "glory of science is, that it is freeing the soul--breaking the mental manacles--getting the brain out of bondage--giving courage to thought--filling the world with mercy, justice, and joy."[40]

Ingersoll also observed that the "last scientific congress in America was opened with prayer," and commented, "Think of a science that depends upon the efficacy of words addressed to the unknown and unknowable!" Indeed, Comte himself was mistaken in trying to reform the Church: the only adequate reform is the Church's destruction.[41]

Herbert Spencer asserted that the opponents of evolution, who based their opposition on the notion that that theory was inadequately supported by facts, had forgotten that the doctrine of special creation has the support of no facts at all. It is virtually inconceivable that there really were

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[39]Robert G. Ingersoll, What Must I Do to Be Saved? A Discourse by Col. Robt. G. Ingersoll, Minister in America of the Gospel of Freethought (N. p.: n. n., 1881).

[40]Robert G. Ingersoll, The Gods and Other Lectures (Washington, D. C.: C. P. Farrell, 1879), 45-46, 48-49, 93ff, 112.

[41]Robert G. Ingersoll, Complete Lectures of Col. R. G. Ingersoll (Chicago, Ill.: Regan Publishing Corporation, n.d.), 258-59.

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tens of millions of special creations. Men believe in special creations only because they were catechized so to believe, not because they can find evidence of such in nature.[42]

Spencer's First Principles had already maintained the necessity for a unified philosophy--a world-and-life view, if you will--in the employ of humanism. He laid down three primary truths--The Indestructibility of Matter, the Continuity of Motion, and the Persistance of Force--and posited that evolution and dissolution are part of the rhythm of motion of the forces of the universe. Further, evolution was seen as true not only for separate existences, but for the whole of the cosmos (with all its facets being organically related). Evolution describes, therefore, a "single metamorphosis."[43]

As Allan Nevins noted, skepticism was able to get a wide hearing in America. Herbert Spencer's works sold twenty thousand copies here, while the first edition had barely been distributed in England. Many copies of the books of Mill, Darwin, Comte, and others were bought and their ideas disseminated by means of "all the leading magazines, reviews and books of a thoughtful nature." All of Huxley's addresses appeared in one issue of the New York Tribune on September 22,

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[42]Herbert Spencer, "The Development Hypothesis," Essays: Scientific, Political, and Speculative (London and Edinburgh: Williams and Norgate, 1883), Vol. I, 381-87.

[43]Herbert Spencer, First Principles (1864; rpt. New York: A. L. Burt Company, 1880), 466-73.

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1876, reaching one hundred thousand circulation.[44]

Accordingly, many articles in the popular church press attacked various skeptical assaults on the faith. For example, the Christian Observer in 1865 pointed to the (miraculous) facts upon which Christianity is founded. Not only were the facts of the faith well-attested in an age of great learning, but infidels in that day as well as in contemporary times would resort to "reason" in order to disbelieve the resurrection of Christ.[45]

An 1870 article in the same publication took "liberal Christianity" to task, for its rejection of some of the cardinal tenets of the faith.[46] A two-part series a generation later marshalled the evidence for Christianity from nature.[47]

Numerous articles appeared in the more scholarly journals as well. A review piece noted the corrupting influence of infidelity, both in the first place by prominent men of science or Biblical scholarship, and secondarily by means of

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[44]Allan Nevins, The Emergence of Modern America, 1865-1878 (New York: The Macmillan Company, 1927), Vol. VIII of A History of American Life, 289.

[45]"Religion Founded on Facts," Christian Observer and Presbyterian Witness, Vol. 44, n. 31 (December 14, 1865), 1.

[46]"Christianity Eliminated," Christian Observer and Free Christian Commonwealth, Vol. 49, n. 4 (January 26, 1870), 2.

[47]Sir William Dawson, "Christian Evidence. The Evidence from Nature," Christian Observer, Vol. 73, n. 36 (September 5, 1894), 5; and Vol. 73, n. 37 (September 12, 1894), 5.

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textbooks and teachers in places of learning.[48]

A more extensive article two years later went on the offensive against agnostics. Henry C. Alexander began with an ad hominen attack on Comte, who had gone crazy, and went on to speak of the relation between positivism and agnosticism. He distinguished between those things which were peculiar to Comte's system and those points of his system which are common to all who call themselves agnostics. The three points of the latter list are Hume's causality doctrine, Hume's experience doctrine, and Hume's belief in the futility of looking for ultimate efficient and final causes. The author maintained that the basic doctrine of these three was that of experience: i.e., that as soon as this view was allowed, the others would follow logically.

After criticizing the Comteian positivistic (hence agnostic) view of science (that it can deal only with phenomena, not laws), the author took a general view of agnosticism. First, agnosticism can only partially follow from its own premises, as based on Hamilton's view of the incogitable. Agnosticism has three forms: 1. that of affirming God's existence but denying His knowableness; 2. that of denying either God's existence or His nature; 3. that which calls into question not only the nature but the

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[48]B. M. S., "Critical Notices," rev. of A Blow at the Root of Modern Infidelity and Scepticism; or, Huxleyism Analysed and Criticised by Thomas Morrow, Southern Presbyterian Review, Vol. XXX, n. 1 (January 1879), 196-200.

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existence of a great first cause. In any case, agnosticism cannot be consistently maintained, and theism is just as likely as pantheism or atheism.

Second, the premises of agnosticism "are untenable and false, and its general conclusion unwarrantable and monstrous." Because Hume's system leads inevitably to the impossibility of all human knowledge, this skepticism must be false.[49]

In the same issue of the Review, L. G. Barbour wrote of "Cosmic Vapor." His basic point was that we are left with a choice between God and Chance; and that Cosmic Vapor was being set forth "as the rival claimant instead of Chance."

Barbour discussed modern discoveries regarding the heaven's nebulae. While allowing that God may have used the slow process of making "globular masses out of the luminous gases in space," the author maintained that current knowledge justified nothing more than conjecture.

But even if the cosmos came from cosmic vapor, the question of the origin of this chaos will not go away. Barbour also appealed to the orderliness of creation as evidence that it could not have come about by chance. The Creator's hand in sustaining the universe is also seen:

> If the abstraction of the coal from the surcharged atmosphere was necessary to enable the mammalia to breathe the air, and we return it to the atmosphere by household fires, factories,

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[49]Henry C. Alexander, "Agnosticism," Southern Presbyterian Review, Vol. XXXII, n. 3 (July 1881), 399-422.

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> mills, and locomotives, shall we not endanger the purity of the atmosphere? This is partly a quantitive question. As to the qualitative aspect, the tendency must be toward the deterioriation of our atmosphere unless vegetation be stimulated so as again to withdraw the poisonous element. Now this may be accomplished by a general increase of the world's population, and the cultivation of larger areas of earth's surface. So well has the All-wise Creator,--or else the blind god--adjusted matters for us.

Barbour also poked fun at the Materialists, especially for their belief that matter has primacy over spirit (for example, that the brain produces the mind).[50]

Herbert H. Hawes wrote a seventy page treatise on "doubts." This pastor from Staunton, Virginia, tried to answer those who would cast doubts on the truth of Christianity, including most especially the supernatural.[51]

An 1890 article by Dabney took on the views of Ingersoll. The veteran Southern Presbyterian, while dismayed by the recent examples of infidelity, also welcomed them in that they demonstrated that once one rejected the gospel, there was only a slippery slope between that position and a full-blown atheism.

Dabney ridiculed Ingersoll's lack of knowledge of the Bible and his attacks based on that ignorance; as well as his rejecting Christianity because of the purported subsequent

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[50]L. G. Barbour, "Cosmic Vapor," Southern Presbyterian Review, Vol. XXXII, n. 3 (July 1881), 511-39.

[51]Herbert H. Hawes, Doubts (Richmond, Va.: Whittet & Shepperson, 1889). See the review of this book by H. C. Alexander in "Criticisms and Reviews," Presbyterian Quarterly, Vol. IV (1890), 316-19.

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loss of intellectual freedom. The author also scored the skeptic's disbelief in a system of rewards and punishments.

But theodicy was Dabney's main concern. He shifted the burden of proof to the atheists, who cannot demonstrate that the Almighty does not have a reason for His actions. There is mystery in science and indeed in every field of human knowledge; "if the agnostic's method of procedure against theism were proper, he ought to reject every science known to man and announce himself an absolute ignoramus."[52]

Three years later, another venerable Southern Presbyterian defended Christianity in his discussion of the relation between natural religion and the gospel. In comparing natural and revealed religion with regard to the doctrine of the immortality of the soul, Girardeau attacked materialists and pantheists. Regarding the materialists, the South Carolinian noted that Herbert Spencer was the champion of these modern agnostics; and that he had contradicted himself by positing a "central force as 'an infinite and eternal energy'"--since obviously infinity and eternity are beyond the realm of scientific observation. Further, the perpetual circumgyrating of the whole mass of the cosmos, which is driven by the soul, is evidence of the soul's immortality. With regard to pantheists, the theologian pointed out that the soul's personality is the fatal

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[52]R. L. Dabney, "The Latest Infidelity. A Reply to Ingersoll's Positions," Presbyterian Quarterly, Vol. IV, n. 1 (January 1890), 1-35.

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contradiction to that system.[53]

At the very turn of the century, two articles dealt with skepticism. James A. Quarles dissected materialism and agnosticism. This Lexington, Virginia, writer noted that the latter, in its modern-day expression, had its origin in Kant, who made a radical disjuncture between the noumenal and phenomenal.[54] Thornton C. Whaling, another minister writing from Lexington, went on the offensive against "certain apostles of the scientific spirit, who commit the fallacy of mistaking their kind of science for omniscience, and who tell us that beyond the boundaries of the natural or physical sciences there is no certain human knowledge." He excoriated Herbert Spencer for his unwarranted dogmatism, his misrepresentation, and his condescension. This teaching elder also gave samples of the writings of "fools" such as Matthew Arnold (who attacked the doctrine of predestination), Leslie Steven (who claimed that man invented God), Thornstein Veblen (who stated that those who have faith can be divided into four classes: Southern negroes, the lower class of foreigners, the rural population, and women). Whaling viewed their condescension as misplaced, for at least three reasons: one,

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[53]John L. Girardeau, "Natural Religion and the Gospel," Presbyterian Quarterly, Vol. VII, n. 3 (July 1893), 331-52. It is interesting to note that Girardeau regarded the Aristotelian notion of the soul losing its personality upon the dissolution of its relation to the body as being the strongest pantheistic argument in this matter.

[54]James A. Quarles, "Two Current False Philosophies," Presbyterian Quarterly, Vol. XIV (1900), 197-211.

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their lack of knowledge of theological science; two, because exercised toward those who are experts in theology; and three, because the methods of theological science are the same with those of other sciences.[55]

Other articles could be cited,[56] but enough has been written to demonstrate that Southern Presbyterians were concerned in general with the threat of skepticism. They also were intent to defend the faith with respect to particular points, such as creation, providence, and miracles, to which matters we now turn.

3. Creation

The doctrine of creation obviously is bound up with other

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[55]Thornton C. Whaling, "The Condescension of Some Apostles of Modern Culture," Presbyterian Quarterly, Vol. XIV (1900), 442-53.

[56]For example, see "The Modern Doctrine of the Unknowable," Southern Presbyterian Review, Vol. XXVII, n. 4 (October 1876), 662-96; "The Negative Tendencies of the Age," Southern Presbyterian Review, Vol. XXVIII, n. 3 (July 1877), 504-34; "Critical Notices," rev. of Recent Advances in Physical Science by P. G. Tait, Southern Presbyterian Review, Vol. XXVIII, n. 3 (July 1877), 601-03; James F. Latimer, "Criticisms and Reviews," rev. of History of the Christian Religion from the Reformation to Kant by Bernhard Punjer, Presbyterian Quarterly, Vol. II (1888), 326-29; George D. Armstrong, "Criticisms and Reviews," rev. of Christianity and Agnosticism by Henry Wace, Thomas H. Huxley, et al., Presbyterian Quarterly, Vol. IV (1890), 320-22; R. A. Webb, rev. of The Religion of Science by Paul Carus; and Francis R. Beattie, rev. of Agnosticism and Religion by Jacob Gould Schurman, in "Criticisms and Reviews," Presbyterian Quarterly, Vol. XI (1897), 108-10; D. J. Brimm, "Criticisms and Reviews," rev. of Homilies of Science by Paul Carus, Presbyterian Quarterly, Vol. XII (1898), 471-72.

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concerns, such as the the idea of causation and the controversy over evolution. However, it can be considered on its own merits as well.

Apart from articles that might approach creation from the standpoint of poetry,[57] there were two major topics of discussion regarding creation. The first had to do with meeting the skepticism of a materialistic age.

In 1867, W. H. Darnall posited that the necessity of Creation is set forth in the facts that God is essentially a Creator, always active, omnipresent and omnipotent. Darnall wrote that Creation has a three-fold character: material; material and spiritual combined (as in man); and spiritual (as in angels). Addressing why Creation should have this character, he stated that the material universe was necessary to establish God's omnipresence (nothing can escape His presence or power); that the material and spiritual creation was necessary to establish God's omnipotence and wisdom; and the spiritual was necessary to demonstrate God's infinity. Darnall remarked that "the work of creation" was "God's magnificient temple of the universe."[58]

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[57]For example, see "Creation--A Poem," Christian Observer and Presbyterian Witness, Vol. 45, n. 22 (May 31, 1866), 1; billed as a "literary notice," this article displayed the 104th Psalm.

[58]W. H. Darnall, "The Creation," Southern Presbyterian Review, Vol. XVIII, n. 4 (November 1867), 473-82. See also R. A. Webb, "Criticisms and Reviews," rev. of Creation: God in Time and Space by Randolph S. Foster, Presbyterian Quarterly, Vol. X (1896), 247-50.

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"S. S." approached the apologetic issue from the standpoint of the creation of light. Dealing with matters such as, could light exist and yet be invisible?, how could light be visible when there is no atmosphere?, the existence of light for many ages (as evidenced by the light coming from stars many light-years distant), and what is light?, the author concluded, "I am not writing of fictions, nor fancies, but of facts, of which science has revealed a little--facts of which science is beginning to lift the veil."[59]

George D. Armstrong also dealt with the increasing infidelity of his day. He set forth the following points as belonging to the doctrine of creation: 1. it was immediate; 2. it is not a single act of Divine power, but a continuous work over a long period of time; 3. it involved species capable of reproducing like species; 4. the various plants and animals came forth in multitudes; 5. God was the efficient cause of creation; and 6. His intelligent purpose governed His work of creation. Armstrong then expressed his objections to evolution, as violating this basic understanding of creation.[60]

The second major topic had to do with meeting the challenge of false religions--a challenge that was

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[59]"S. S.", "Creation of Light--Gen. 1:3," Christian Observer and Presbyterian Witness, vol. 48, n. 9 (March 3, 1869), 1.

[60]George D. Armstrong, "Creation as a Doctrine of Science," Presbyterian Quarterly, Vol. I (1887-88), 106-28.

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increasingly being felt in the 1890's. A. H. Huizinga of New Paltz, New York, contributed an article comparing the Babylonian and Hebrew accounts of creation. He presented three startling contrasts between one, in the Babylonian version, "the primordial mass of waters was itself, apparently, uncreated"; two, in the Babylonian account, creation came about through conflict between the chief of the gods (Marduk) and the chaos of waters (Tiamat); three, "[t]he Babylonian conception is crude, absure and repulsive" and "unworthy to be compared with the true idea of God."[61]

The major battle with regard to creation was fought over evolution. However, it is still significant that even the concept of creation was a matter of concern and discussion for these Calvinists from Dixie.

4. Providence

As subscribers to the Westminster Standards, Southern Presbyterians knew that "God executeth his decrees in the works of creation and providence"; and that "God's works of providence are, his most holy, wise, and powerful preserving and governing all his creatures, and all their actions."[62] But in a skeptical age, the doctrine of providence had to be

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[61]A. H. Huizingga, "Babylonian versus Hebrew Account of Creation," Presbyterian Quarterly, Vol. VI (1892), 385-98.

[62]Westminster Shorter Catechism, Q/A 8 and 11.

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defended against those who would use science to scoff at such belief.

One of the issues confronted by an article was how does prayer fit in--is it consistent with natural law? The author argued inductively regarding the universality of prayer, and urged, "[e]ven granting, then, that the world is simply governed by general laws, we are obliged to admit that the propensity to pray is the result of these themselves." He wrote: ". . . some of the most illustrious expounders of scientific laws have been distinguished by habits of devotion. It will hardly be maintained with seriousness, that the prayers of such men as Newton, Locke, Bacon, Leibnitz, Pascal, and Hamilton originated in their ignorance." Further, "[p]rayer, therefore, is not inconsistent with the laws by which the world is governed, unless it be supposed that law is dashed against law, and nature engaged in destroying itself."

Secondly, natural law (or physical law) "is but the fixed and uniform mode in which power works to the production of results." Third, the author stated that we infer divine personality from our own; and the power that lies back of law is a personal God. Fourth, prayer is a natural part of God's plan whereby He governs all things. Fifth, God reveals Himself as a father, saviour, and a friend; and Christ's mediatorial kingship extends to both providence and redemption.

The author lamented the fact that this temptation of

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denying providence would be making inroads into the Church. He opined that the reason for this temptation had to do with not recognizing divine sovereignty, wisdom, and mercy in administrating His promises--that is, in not understanding that there may be limits to certain statements of Scripture. We must always pray, "Thy will be done!", rather than always expecting to receive a blessing according to our own schemes.[63]

Another piece set forth the proposition that prayer is answerable without violating nature. This article did not attempt to raise the question as to whether prayer was effectual, but merely whether science could properly object to the possibility of prayer being answered. The author maintained that although nature is uniform in its laws and exhibits a grand harmony, yet it is "ever varying in the distribution of its forces, and therefore, even in its most fixed and established order, always changing." Indeed, every birth of a new individual introduces a new potency.

Three major points were presented. First, the presumption is in favor of theology, since Religion is more competent as a witness than Science in such matters of dispute: ". . . if he [the Christian] should assert that provision has been made in nature for the entrance of prayer as an efficient factor; and still further, that facts have

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[63]"Prayer Consistent with the Uniform Operation of Natural Law," Southern Presbyterian Review, Vol. XXI, n. 1 (January 1870), 1-23.

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come under his observation, and in connexion with his personal experience, which attest it, how can the scientist flatly contradict it?" Secondly, nature may be constituted so as to allow answers to prayer, without its general order being compromised in the least. Even as there is physical force in the world, why there may not be the force of prayer? One possibility is that there is the constant occurrence of the miraculous. Or, another possibility is that God in His sovereignty so ordained the universe that prayers can be answered while still preserving "the order of nature and the uniformity of its operations." Third, the presence and actions of angels can also be viewed as natural (rather than supernatural) and therefore not a violation of nature as they respond to Divine commands in response to prayer.[64]

A third article addressed the question of providence even more directly. Beginning with quotations from Professor Huxley, George D. Armstrong pointed out the scientist had taken account only of mechanical forces, but not of will-power which often controls the mechanical. In making his point, Armstrong noted man's agency in the world which has had a profound impact--whether one considers maps and geography, or commerce and industry. "Man's works all bear the marks of the directing mind of man." Even the lower animals, utilizing instinct rather than creative intelligence, exercise will-

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[64]"Prayer Answerable Without Any Violation of Nature," Southern Presbyterian Review, Vol. XXIX, n. 2 (April 1878), 273-98.

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power in affecting creation.

But the agency of God is most definitely seen. For one thing, from the earliest times, thoughtful men universally have believed in God's providence. For another, all Christians everywhere have believed this teaching. Third, the fact that a narrow company of scientists will not affirm this doctrine is indicative of their failure to take no account of the operation of will-power and their assigning to mechanical power all cause and effect. Fourth, we are everywhere confronted with the truth of an Almighty efficient cause of creation--and is it reasonable to assume that the Creator would not be involved with His universe?

God's agency is unlimited, and it is the highest agency at work in the world. Armstrong concluded, "Should Professor Huxley ever turn away from the contemplation of mere matter and mechanical force, and 'lift up his eyes unto heaven,' I doubt not 'his understanding would return unto him,' and Nebuchadnezzar's faith in Divine Providence would become his faith."[65]

This doctrine of providence, so vital to the Calvinistic

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[65]George D. Armstrong, "Providence as a Doctrine of Science," Presbyterian Quarterly, Vol. VII (1893), 206-22. For an antebellum treatment of this doctrine, see Armstrong's The Summer of the Pestilence: A History of the Ravages of the Yellow Fever in Norfolk, Virginia, A.D. 1855 (2nd edition, Philadelphia, Pa.: J. B. Lippincott & Co., 1856). This volume poignantly recounts his personal difficulties during a plague in Norfolk--including pastoral struggles (should he stay with his flock, or leave?) and trials (he lost at least four of seven member of his family).

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(and Christian) faith, received attention from these Southern churchmen, as they defended the notion that a sovereign God Who has foreordained whatsover comes to pass is behind the natural laws that govern the universe[66]--so much so that He may use those fixed laws in order to defeat men's best-laid plans when they do not put Him first.[67] But there are times when He intervenes more directly into the affairs of men--which fact now leads us to look at these Calvinists' view(s) of miracles.

5. Miracles

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[66]See J. H. K., "Ought We to Pray for Rain?", Christian Observer and Free Christian Commonwealth, Vol. 48, n. 35 (September 1, 1869), 1.

[67]For an interesting appeal to this notion, see "Echo," "First Fruits vs. Phosphates," Christian Observer and Presbyterian Witness, Vol. 48, n. 5 (February 3, 1869), 2, in which the author argued that if Presbyterians would not support the Committee on Sustenance with their first fruits but spent that money instead on super-fertilizers, they would only be "imposing upon Him, the necessity of so ordering the thaws and winds of winter, or summoning the other enemies of the crop as to defeat the end for which the phosphate was purchased, in order to protect His Word from neglect." See also J. H. Brookes, Mystery of Suffering (4th edition, New York/Chicago/Toronto: Fleming H. Revell, 1893), for a treatment of the relationship between natural law and providence. And, also see [John L. Girardeau], "On the Earthquake Aug. 31, 1886" (handwritten manuscript), Evolution and Woodrow Case folder, Blackburn Papers, Reformed Theological Seminary, Jackson, Mississippi, in which the author, in giving an outline for sermons after this great occurence, made appeal to the imminence of eternity, the need of preparation to meet God, the power of the Mediator, natural laws, earthquakes as signs, the tower in Siloam (Luke 11), and thanksgiving for mercy.

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There were at least three different issues which Southern Presbyterians faced with regard to the miraculous. One, what is the nature of a miracle? Two, how can we defend the fact of particular miracles against the contemporary skepticism? Three, how can we put miracles to good use?

The question of the nature of miracles was problematic. In an age of science, one did not want to be unscientific. On the other hand, one did not want to deny the extraordinary supernatural power manifested in certain events.

This issue was dealt with even during the war years. The Christian Observer opined:

> There is no waste of profusion of miraculous powers in the wonders wrought by angels, prophets, and apostles, in confirmation of the truth which they taught. The Scriptures teach that God governs both the natural and moral world by general laws, and that his superintending providence directs all events, even to the falling of a sparrow. . . .
>
> A miracle is a sign or prodigy above these general laws--called the laws of nature. It is sometimes defined as a prodigy contrary to the laws of nature; because it appears so to us. These laws seem to us to be suspended for a time by the miracle. But our knowledge of nature is too imperfect to justify the assumption that her laws are violated or suspended by the intervention of miracles. They are wonderful prodigies in harmony perhaps with a higher law, not revealed to us.[68]

Almost a decade and a half later, another article noted that in "ordinary thought" a miracle "is that which is either contrary to natural law, or above and beyond its scope." It is not an accident, but is "a positive obtrusion of a novel

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[68]"The Burning Bush," Christian Observer and Presbyterian Witness, Vol. XLIII, n. 11 (March 17, 1864), 1.

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power, producing abnormal results." It is "supernatural, though not unnatural"--that is, miracles do not produce monstrosities. Miracles are called "Powers" and "Signs," the latter indicating the "ethical relations between the miracle-worker and the subject of the miracle."

Miracles cannot be considered as abnormal, since none violates any law. "The restoration of sight to the blind was a restoration of the natural powers to the visual organs." Even raising the dead is an affirmation of the law of life, which shall be totally put into effect at the resurrection at Christ's second coming.

The article castigated the Roman Catholic version of miracles, pointing out that all the alleged miracles of the Apocrypha are "monstrous in conception." "The transformation of human intelligences into brutes, for example, would be an utter violation of all the laws that regulate human existence." The "false histories" of these spurious Gospels "are in themselves miracles of absurdity and profaneness."[69]

The decade of the 1880's also witnessed the defense of this Christian doctrine. R. R. Howison wrote that there was no conflict between true Science and true Religion regarding miracles, especially when one realizes the truth of the personality of God--a God Who can intervene in the normal course of events because of a "crisis":

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[69]"Philosophy and Miracles," Southern Presbyterian Review, Vol. XXIX, n. 4 (October 1878), 699.

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> Such a crisis would be presented when, in the wise and benevolent ordering of God, it became fit and proper to introduce new beings like angels or men, or a new species of living organism; or to sweep away an effete and hopeless generation in order to start the race of man on a new departure; or to authenticate a new revelation; or to introduce the Son of God to the world with appropriate majesty, even when He came in the likeness of sinful flesh and for sin: all these would be crises calling for immediate personal intervention of God in the ordinary course of Nature, at such times and places as His infinite wisdom might elect.

Howison concluded that miracles are facts, more well-attested than "any other facts that have even occurred in this world."[70]

H. C. Alexander panned three works of the Free Church of Scotland theologian, A. B. Bruce. Alexander reacted favorably to the Scotsman's discussion of concentric circles of law, and stated that there is no transcendent system of physical laws superior to the physical laws with which we are familiar. Further, he noted that the distinction between a miracle and special providence is that in the latter God uses the law of nature while in the former He supersedes it.[71]

In a lengthy article, John Lafayette Girardeau picked up the theme that a miracle, by definition, goes against nature.

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[70]R. R. Howison, "The Pseudo-Scientific View of Miracles," Presbyterian Quarterly, Vol. I (1887-88), 346-47, 349.

[71]H. C. Alexander, "Criticisms and Reviews," rev. of The Miraculous Element in the Gospels, The Parbolic Teaching of Christ. A Systematic and Critical Study of the Parables of our Lord, and The Humiliation of Christ, In its Physical, Ethical and Official Aspects by Alexander Balmain Bruce, Presbyterian Quarterly, Vol. I (1887-88), 557-58.

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The South Carolinian began by stating that justice demanded that the same Moral Ruler who provided redemption would also authenticate it, not so much on the basis of "deductions from speculative premises" as on the basis of "phenomenal facts easily apprehended by consciousness, or immediate and necessary inferences from those facts, and therefore of equal validity with the original data themselves." "While the revelation itself is to be proved, its proofs ought to be as nearly as possible autopistic."

These proofs must be not only clear, but striking--both because of the danger of deception and that faith and eternal hopes may be built on an unassailable foundation. As a matter of fact, it is impossible to overestimate the importance of miracles: destroy them, and Christianity is overthrown.

Girardeau defined a miracle this way: "a wonderful event, contravening the known course of nature, and accompanying the teaching of a person claiming to be commissioned by God, or a revelation professing to be divine, and intended to promote human holiness." The author then responded to various objections that have been urged against this view of miracle.

The first objection was that God would then contradict Himself, in acting contrary to the laws which He had established. Girardeau noted that there are many forces in nature which counteract one another. If this argument had any weight, it would mean that God contradicts a physical law mediately (rather than immediately, as in a miracle); and that

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God is more inconsistent in His normal providence dealings than in His miracles. The Huguenot also appealed to the difference between moral and positive laws--a distinction he utilized in his treatise on musical instrumentation in public worship--to show that, Scripturally, God has abrogated some of His positive instructions (such as those He had given to Moses).

This first objection also was based on a faulty assumption regarding God's unchangeability. The same God Who created all things ex nihilo at a certain point, could also annihilate all things and thus obliterate all physical laws. Girardeau also answered this premier objection by arguing that even one instance of the contravention of known physical laws would be sufficient to demonstrate the validity of the definition; that the material system is subservient to the moral and therefore may be altered to serve God's higher purposes; and that the miraculous is necessary to introduce the work of redemption into the world that has been made disharmonious by sin.

A second objection was that miracles are conformed to higher, unknown laws. Of course, such an appeal is irrelevant, since these laws would be beyond the ken of mere mortals; and there is no evidence for said laws.

A third objection is that miracles are the result of a new antecedent, not contraventions or violations of nature's laws. But again, this argument breaks down, since God's

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intervention would be attested by Him, and since no one would expect, according to the known laws of nature, this type of intervention. Further, to make divine power just one of the powers of nature causes all sorts of problems. For instance, this position would engender a confusion between the natural and the supernatural, so that "[a]ll is natural" and "[g]race is nature." And, to posit that there is a Christic force operating uniformly throughout nature, would contradict the freedom of God's sovereign grace in salvation.

A fourth objection is that "a miracle is not contra-natural, because one law is extraordinarily introduced as counteracting another law, and nothing is more common in nature than such a fact." In response, Girardeau pointed out that the objection self-destructs if the reference to extraordinary introduction means extra-naturally introduced. He also wrote that the question is not "whether in a miracle a known law of nature is counteracted, but it is, whether the counteraction of a known law is accomplished in the absence of any natural cause."

A fifth possible objection is the statement that a miracle cannot be greater than the creative power, and the supposition that "successive orders of beings are brought into existence, not by an unbroken process of evolution through the transmutation of species, but by periodically recurring acts of creative power originating new species." These "successive exertions of creative power would be natural" and "would form

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a part of the course of nature." But even if this supposition were true, it would not contradict the proferred definition, for Biblical miracles (such as the resurrections of Lazarus and of Jesus) "cannot by any ingenuity be referred to the operation of any known law; on the contrary, they sharply cross the line of known law."

Girardeau completed his article by showing how miracles affect various infidel systems. The fact of miracles demonstrates the falsity of Atheism, as an extra-mundane Being breaks into the universe. Pantheism, Atheistic Evolution, and Materialism are commonly contradicted by the presence of miracles, which go against the natural processes which are purportedly "enforced by a law of blind, immanent necessity." The Theistic Evolutionist, who believes "that God evolves the world by an unbroken process of mediate creation," is contradicted by the miracle; for "[n]o mediate creation consequently could be miraculous." The Christian Evolutionist must have trouble adjusting the miracle to his theory: "the general resurrection of the dead absolutely contradicts it, for it will involve the revival of an extinct species from their dust, not will it be the transmutation of one species into a new and different one, but the persistance of the very same species." Finally, miracles fatally wound Agnosticism, for they prove the personal will and attributes of "a God who

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may be known and worshipped, loved and obeyed."[72]

The next year, another Southern Presbyterian minister dealt with the topic, "what is a miracle?" James Murray contended that one must first determine the parameters of the natural in order to ascertain that the supernatural has broken into the world. He accordingly defined the natural as being essentially the same as that which is created.

Skeptical science says that nature's laws must always, inflexibly, apply. But the uniformity of nature does not imply that her laws cannot be superseded.

In this context, Murray respectfully disagreed with the Duke of Argyll for his having conceded too much to the infidels in a too great dependence upon the uniformitarianism of law. The English apologist's view of miracle was that of an event that was "only an extraordinary natural phenomenon; unusual indeed, and therefore wonderful, yet proceeding from the will of God in precisely the same way that all other operations of nature proceed from it."

Murray then considered three of Christ's most noteworthy miracles. His walking on the water did not violate or suspend any law of nature: gravity still was at work. But Jesus overcame gravity not by normal means as mere mortals might use (as in boats or ships), but by supernatural means. And, the power He used was not merely superhuman (as that which an

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[72]John L. Girardeau, "The Contra-Natural Character of the Miracle," Presbyterian Quarterly, Vol. II (July 1888), 177-207.

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angel possesses), but transcendent and reflective of God's will acting immediately.

Jesus's feeding of the five thousand men and additional women and children did not do violence to the laws of nature. But the fact that "death seems to have become a generator, and that upon a startling scale, as is the case in the miracle of the loaves and fishes," shows that "some force [had] been called in superior to any which mere nature is capable of supplying."[73]

The resurrection of Lazarus cannot rationally be regarded as being natural in origin. "No one can believe that the mere pulsation of a voice upon the ear of a dead man could restore him to life."

Murray concluded by saying that a miracle is not of or against nature, but rather above nature. More completely, he stated:

> The sole author of a miracle is God working upon material furnished by nature and producing an effect which nature cannot produce; not, however, in the use of instrumentalities, either ordinary or extraordinary, but wholly without means and by the direct forthputting of almighty power, yet so as that no violence is done to nature, and so as that the miracle at once adjusts itself to the surrounding order, and thenceforth becomes a part of it.[74]

On the surface, there may appear to be disagreement

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[73]Murray also said that this miracle was similar to the creation of Eve from Adam.

[74]James Murray, "What is a Miracle?", Presbyterian Quarterly, Vol. III, n. 1 (1889), 29-53.

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between Murray and Girardeau. A more close examination of their statements would seem to reveal that they basically were in harmony in that both emphasized the supernatural character of miracle.

Maintaining the doctrine of miracle was one thing, however. Defending the validity of particular miracles was another.

Thomas H. Skinner served as protagonist for the truth of Christ's resurrection. His being raised from the dead is necessary, of course, for salvation; but His resurrection, if true, also "once and for all" disproves the notion that miracles are impossible. More than that, this miracle is crucial for the whole Biblical system of redemption, so that "the failure to sustain this will cause the entire arch of divine revelation to fall to pieces."

Skinner pointed out that Jesus' resurrection means much more than any "mere revivification," for He is the first fruits of them that slept, the first begotten from the dead, the first born from the dead. Further, he stated that his "argument is apologetic and not dogmatic," as a miracle is intended as a sign for those who do not believe.

This apologetic used a two-prong approach, utilizing the testimony of the witnesses and the foregoing Scriptures. Regarding the former, the disciples who were with Jesus for three years undoubtedly knew that He came back from the grave. The question is not, therefore, how such a miracle could

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occur, but that it did so, as attested by "the normal evidence, of the senses, within their own proper domain," which evidence "is ordinarily infallible." "The correction of mistakes is easy, and on most matters, on matters such as that now before us, there are no mistakes to be corrected."

But does not the testimony of the extraordinary properties of Jesus' resurrected body discredit these witnesses and call into question their competency? This is where prophetic confirmation comes in, for His resurrection had been predicted in Scripture thousands of years before its occurrence.

In contrast to the Rev. Dr. A. A. Hodge of Princeton and the Rev. Dr. Warfield of Allegheny Seminaries, Skinner maintained that the doctrine of inspiration is necessary apologetically. Without the divine prophetic witness, "the testimony of the witnesses loses its force."

> Either without the other fails. Only in the combination of the two is the fact established. And as in the incarnation, in regeneration, and in revelation, so in this fact of the resurrection of Christ, the divine and human are correlated and essential to the argument. It is as impossible to prove the divinity of the historic Christ without the incarnation as it is to prove the resurrection of the divine Christ without inspiration.

The senses of the witnesses could attest that a risen Christ has a real, physical body with extraordinary abilities. The inspired Scripture testifies of the divine nature of Him

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and thus gives credence to these unusual characteristics.[75]

Francis L. Ferguson dealt with the Saviour's miracles. The author noted that the doctrines of Christ's deity and of miracles are both essential to the Christian faith. And, especially in light of then current attacks on supernaturalism, many apologists were understanding that the Lord's divinity was of primary and foundational importance.

Ferguson castigated those theologians who "too long indulged the two and two make four spirit" and who acquiesced in modern science's notion that "a fact ceases to be a fact because it cannot be made to fit into a certain angle." Among the facts that one does not have to demonstrate in this "geometrical fashion" are man's origin and nature, and the attributes and claims of the God-man. Concerning the latter, it is clear that we must not accept or reject His deity solely on the basis of His miracles, but must rather consider His life--and that inductively--as a whole as revealed in the Gospels.

Ferguson made some comments regarding the immanence of God's will in the world being matched by its immanence in revelation. He also commented favorably on Spinoza, saying that he had been unfairly criticized by people such as Charles Hodge. Indeed, there is a "natural basis" for the doctrine of the incarnation.

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[75]Thomas H. Skinner, "The Argument for the Resurrection of Jesus Christ," Southern Presbyterian Review, Vol. XXXII, n. 3 (July 1881), 441-68.

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> The difference between Christ and Gautama is in this: Gautama aspires, Christ realizes. The differences between Buddhism and Christianity, which are great and numerous, are the result of environment. The central thought, incarnation, is as true in Buddhism as in Christianity. It is true everywhere; as we say, it is an independent and universal truth. But whether it will be realized, and where it will be realized, are questions entirely of environment. . . . And since all false things are witnesses to the true, he can only be thankful that providential circumstances are bent on differentiating the proper process from the abnormal.

Ferguson emphasized environment so much that he claimed that the "Scriptures can neither be demolished nor established apart from the people amongst they originated."

Ferguson urged that the fact of the Saviour's deity mandates His miracles. "No divine Christ, no miracles; no miracles, no divine Christ."

This author also took the position that law (including physical law) is inviolable. Indeed, he believed that "the anti-law theory of miracles" was impossible in modern thought; was unnecessary; belonged to a past age; and "makes God a blunderer in his own universe."

> At the last, the theory is a denial that God is God, and that Christ is God; it imposes on the divine the weakness which attaches to the human. At one time in the world's history it was the only possible representation of miracles. One cannot say that it was then false; but it is now inadequate, and it is unnecessary.[76]

Ferguson's approach to miracles seems to be unique among Southern Presbyterians, with his favorable views of Spinoza

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[76]Francis L. Ferguson, "Christ and His Miracles," Presbyterian Quarterly, Vol. IV (October 1890), 497-519.

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and the study of comparative religion and with his position that a miracle is not anti-law. However, he was in accord with the majority with his belief that the miracles of Christ and his deity are not separable ideas.

In the last decade of our period, a rather remarkable article appeared in the Christian Observer in which the author, taking a "common sense journey," sought for new explanations of (alleged) miracles. J. M. P. Otts, who wrote a book on the land of Palestine,[77] questioned whether the sun standing still (as recorded in the book of Joshua) might not be the result of extraordinary providence rather than a miracle. Instead of suspending universal laws (and causing the halting of the movements of all heavenly bodies), perhaps God caused the sun to be "darkened" in order to help His people win the victory at Aijalon. Otts affirmed that a miracle is the result of divine supernatural power, but also asserted "what may be called the parsimony of God in the manifestation of his supernatural power." He did "not believe that God ever wrought an unnecessary miracle, or ever expended an unnecessary amount of power in working a necessary miracle." The incident in Joshua "was a miracle in the divine use and adaptation of natural means for the accomplishment of

[77]J. M. P. Otts, The Fifth Gospel; The Land Where Jesus Lived (New York: Fleming H. Revell, 1892).

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a divine purpose."[78]

Samuel J. Baird responded a fortnight later. First, he wondered why any miracle should be regarded as "difficult" for God; and that the traditional view of the miracle under consideration "only implied the arrest of the earth's diurnal revolution on its axis, and with it that of the dependent moon." Secondly, regarding the "parsimony of God," Baird wrote that that concept was incongruous with the nature of a miracle, which manifested the infinite power of God. He also queried, "How can the story, if miraculous, be at once natural and comprehensible, and how is it more credible by virtue being, not an 'absolute' miracle, but only a 'providential' one?" Third, he attacked Otts' thesis directly. He pointed out that the sun had already risen; that Otts' suggestion that "in the midst of heaven" should be rendered "on the horizon of heaven" is nowhere attested in the Bible; that the word for "stayed" (referring to the moon) has to mean the negative of movement; that this was thrice stated (including in the book of Jasher); that "there was no other day like that"; and that nighttime would have allowed the already-routed Amorites to escape.[79]

Otts replied a month later. He argued that conceding

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[78]J. M. P. Otts, "A Common Sense Journey Through Palestine," Christian Observer, Vol. 69, n. 45 (November 5, 1890), 1.

[79]Samuel J. Baird, "Joshua's Miracle. Dr. Otts; Common Sense Interpretation of it.", Christian Observer, Vol. 69, n. 47 (November 19, 1890), 3.

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"that the language was accommodated to the prevalent astronomical error of the age, and was not meant to state a fact, but to describe an appearance," was to concede that the miracle was not, in reality, what it purports to be, but was in part a mere appearance, an illusion of the senses. If it was, in part, only an appearance, why may it not have been wholly so? Grant this much, and the interpretation becomes easy; for, then it would not be necessary to suppose that either the sun, the moon or the earth actually stood still, but that there was a miraculous light in the heavens that made this appearance over the region in which the battle was raging.[80]

The next year, Otts argued that the destruction of Sodom and Gomorrah was "the immediate product of natural agencies" ("slime pits"--that is, petroleum wells--being located along a fault line, with inflammable gas and petroleum escaping from a fissure and igniting). Yet this event was still miraculous "because the exact time of its occurrence was appointed and ordered in divine wisdom and might."

> This is the common-sense explanation that neither discredits the Bible nor diminishes in one iota its great moral lesson or apologetic force. It was a natural occurrence, miraculously foretold, and divinely used for a high and holy spiritual

[80]J. M. P. Otts, "Joshua's Miracle. A Few Words in Reply to Dr. Baird," Christian Observer, Vol. 69, n. 52 (December 24, 1890), 1-2.

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end.[81]

Otts represented a unique effort not to deny the supernatural (including the clear revelation of Scripture) and not to be unscientific. He tried to bring these two motifs together by appealing to "common sense"--an approach taken by some (though by no means all) Southern Presbyterians in this age of science.

The third major issue regarding miracles concerned their use. John L. Girardeau followed up the previously-mentioned article with one on this topic. He posited that, because of the supernatural character of a miracle, a miracle has great apologetic value: "as God cannot be a party to a fraud, or sanction imposture, the commission or revelation accompanied by such an event is proved to be divine."

Girardeau believed that the evidence for the divine origin of the Scriptures is built upon the miraculous--that is, that which is not only "wonderful and supernatural, but also what is contra-natural." He considered three different types of evidence: the external, the internal, and the experimental.

The external evidences were divided into prophecy, miracles of external fact, and the effects which come from the spread of the Christian faith. The universal "law of limitation upon the mental powers, which renders impossible

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[81]J. M. P. Otts, "A Common-Sense Journey Through Palestine," Christian Observer, Vol. 70, n. 18 (May 6, 1891), 1.

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their knowledge of future events conditioned upon the free acts of the will," demonstrates that prophecy has to be miraculous. Girardeau looked at two miracles--the axe floating in Elisha's day and the raising of Lazarus--to illustrate miracles of external fact: "works wrought in the phenomenal sphere and appealing to the bodily senses." The miraculous associated with the propagation of Christianity includes the success of this infantile system against a formidable array of hostile forces; the tremendous lack of human strength; the improbability that a religion of the cross and self-denial would survive; the unlikelihood that preaching could be the means of success; that Christianity has had great success in overcoming these obstacles; and that the church has had a continuous existence through all the ups and downs of history.

The internal evidence is derived from the contents of Scripture. The first piece of this evidence is the Scriptures' "organic unity"--a miraculous unity which was kept through many centuries of writing by a variety of human authors. Secondly, the content itself of the Bible shows its supernatural origin, not only because of its prophetic nature, but also its evangelical nature which man would not and could not have dreamed up. Third, the Bible's conception of holiness is also contra-natural; none of the other religions of the world sets forth the divine perfections and the totally-other character of God.

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The experimental evidence revolves around the life-transforming power of Christianity. The individual believer especially is affected by this type of miracle; but it also has apologetic value for others as well.

Girardeau noted that it was disputed whether miracles of external fact continue today; but that, apart from that question, there is a continuous display of the miraculous before all generations of men. He concluded by contending that if Christianity cannot be shown to be true, then "nothing can be proved true."[82]

L. G. Barbour proposed to show that the Gospel of John was written with an apologetic thrust which utilized the miraculous. Although man's senses have been affected by sin, yet an appeal to the senses can be very effective. The miracles of which John wrote were wisely selected; and it was important for them to stand the test of time by being such that they could not be accounted for, in any age, apart from supernatural intervention.

Barbour first discussed Jesus walking on the water. Whether gravity--which is a universal force--was suspended or whether gravity's force was counteracted, a miracle was effected.

Regarding the changing the water into wine at Cana, Barbour noted that chemistry cannot cause such a

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[82]John L. Girardeau, "The Miracle, The Principle of Unity in the Evidences of a Divine Revelation," Presbyterian Quarterly, Vol. II (1888), 369-87.

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transformation. Further, the amount of liquid being transformed and the circumstances of the occasion prove that no trickery could be involved.

When Christ fed the five thousand with the loaves and fishes supplied by the young lad, He

> either created bread and fish, or . . . made them from elements already existing. Before the mystery of creation ex nihilo the peasant and the philosopher alike are dumb. But as to making by synthesis, the philosopher does know how very hard a thing it is. . . .

It is clear that an unlettered Jew in the first century, without any scientific equipment, could not, apart from supernatural powers, accomplish on a large scale what the late nineteenth century scientists cannot do in even a small way.

While taking to task the contemporary faith healers, Barbour averred that the healings of the nobleman's son, the infirm man, and the man born blind demonstrate the miraculous. Similarly, no one has been able to explain how Lazarus could have been raised from the dead without a miracle.

Barbour concluded by appealing to the resurrection of Jesus, and the impeccable nature of John's testimony. This disciple was in a position to know first-hand the miracles which Jesus performed, and there was no reason for him to fabricate these accounts, and no reason to doubt their veracity.[83]

Southern Presbyterians viewed miracles as being very

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[83]L. G. Barbour, "St. John's Argument from Miracles," Presbyterian Quarterly, Vol. V (1891), 1-32.

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important for a Christian apologetic. Far from being unscientific, belief in the miraculous was undergirded in a scientific age which affirmed universal physical laws.[84] A miracle not only represented the freedom of God sovereignly to break into the normal course of the world, but often was an attestation of His revelation--whether that be the Word of God written, or the Word made flesh.

6. Religion and Science

While much of our previous discussion revolves around the interaction between religion and science, there are some writings from this period which addressed directly the relationship between these two areas. Some articles approached this topic positively, emphasizing that which religion and science have in common.

One of the themes of this perspective was that of men of science who were also men of faith. Dr. James Hope of London was remembered at his death for being not only a gifted

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[84]See Francis R. Beattie, "Criticisms and Reviews," rev. of Natural Religion by F. Max Muller, Presbyterian Quarterly, Vol. VI (1892), 618-24. Beattie wrote: "It may be seriously questioned whether a strictly scientific treatment of religion can coolly ignore the miraculous, or assume the negative position in regard to the supernatural claims of Christianity. A sound scientific method must surely take note of all the facts in the case, no matter what the problem may be. It is a fact that the Christian system involves the miracle, and claims to be supernatural in its nature. This fact must either be admitted or refuted; it cannot be simply ignored" (619).

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physician and "an impassioned lover of science," but also with a deep faith in Christ.[85] Upon the death of Sir David Brewster of Scotland, it was said that he was looking forward to heaven and "the revelation of all the marvels and mysteries of creation and science."[86] James P. C. Southall, in a letter to William H. Ruffner, described his late father's piety and interest in all matters of life, including science. Southall wrote:

> He said to me about a year ago . . ., "It has amazed me to see how often the views I took twenty years ago (when I was comparatively ignorant), and which were derided at the time, have come to be accepted scientific truths.
>
> "Two things," he exclaimed, quoting Kant's celebrated utterance, "fill me with awe, the starry heavens above and the moral law within!" The weight of all this unintelligible world overpowered him. Amid the discoveries of Modern Science and the glimpses we get of Infinite Wisdom, a certain force of character is requisite to preserve us from bewilderment.[87]

Towards the turn of the century, a significant article took an extensive look at many of the scientists who have professed faith in God. Along with an impressive list of names of believing men of science sprinkled throughout the document was the statement that the Protestant Reformation was

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[85]"The Man of Science and Faith," Christian Observer and Presbyterian Witness, Vol. 46, n. 30 (July 25, 1867), 1.

[86]"A Christian Philosopher," Christian Observer and Presbyterian Witness, Vol. 47, n. 29 (July 16, 1868), 1.

[87]James P. C. Southall, letter to William H. Ruffner, October 6, 1897, file Ruffner correspondence, Montreat, North Carolina.

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not "merely ecclesiastical, religious and theological," but was also "a renaissance, a new breathing of life." Indeed,

> science is Christian; not that there is a direct connection between Christian dogma in its totality and the systems of physics and of astronomy; but . . . Monotheism has fortified and directed the reason and . . . it was by the preaching of the Gospel that Monotheism was established in the world.[88]

There were other positive thrusts to this relationship. Eugene P. Mickel suggested that "Religion is a science" and is "the queen among them all," since it teaches of the Lord and eternity. As a science, religion deals with facts and with that which can be known rather than supposed or imagined.[89]

Science could help us better understand Scriptural truths. For instance, the blood and water that gushed from Jesus' side when the Roman soldier pierced Him could come about only because of the bursting of a ventricle of the heart. Modern medical research thus demonstrates how He died of a broken heart, literally.[90] Or, nature can provide us with illustrations of the fitness of things--lessons which can then be applied to Sabbath keeping and the fitness for heaven

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[88]????, "Physical Science, Theistic and Christian," Presbyterian Quarterly, Vol. XIV (1900), 613-36.

[89]Eugene P. Mickel, "The Science, The Art, The Life," Christian Observer, Vol. 85, n. 27 (July 7, 1897), 5-6.

[90]"The Broken Heart of Christ," Christian Observer and Free Christian Commonwealth, Vol. 48, n. 34 (August 25, 1869), 1.

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of those who honor the Fourth Commandment.[91]

Natural theology also plays a role here. R. A. Webb discussed another author's view of Christianity and natural physical science.[92]

Francis R. Beattie's 1890 lectures at First Presbyterian Church in Birmingham got the attention of that Alabama city's Age-Herald. Speaking on "Man's Priemeval Condition," the apologist stated that early man had great mental capacity, but was not greatly capable in modern arts and sciences.[93]

In the midst of the evolution controversy, Theodore Schumann attempted to use history to remind his readers of an improper relationship between the Church and her scientists. He concluded that the reason why Galileo submitted at last to the Vatican was because the Roman Church had not allowed "his character to develop independently" and "had broken the elasticity of his spirit from childhood."[94]

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[91]"The Fitness of Things. Physical, Intellectual and Moral," Christian Observer and Free Christian Commonwealth, Vol. 48, n. 50 (December 15, 1869), 1.

[92]R. A. Webb, "Criticisms and Reviews," rev. of The Credentials of Science the Warrant of Faith by Josiah Parsons Cooke, Presbyterian Quarterly, Vol. II (1888), 494-96. See also "G.", "Natural Theology," Christian Observer and Presbyterian Witness, Vol. XLV, n. 47 (November 22, 1866), 1.

[93]Quoted in "Science and Religion," Christian Observer, Vol. 78, n. 29 (July 23, 1890), 4.

[94]Theodore Schumann, "Galileo Galilei," Southern Presbyterian Review, Vol. XXXI, n. 3 (July 1880), 488-502. See also "The Astronomy of Job," Christian Observer (Literary & Miscellaneous), Vol. 49, n. 35 (August 31, 1870), 1. According to this article, a correct rendering of Job 38:12-14

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But it was more than just the positive side, and more than just the Church's fumbling, of the relationship between religion and science that captured the attention. Increasingly, the hostility between religion and science, especially on the latter's part, was being discussed.

Several articles in the Christian Observer in 1871 illustrate the new emphasis. One said, "But these scientists [Darwin, Huxley, and Tyndall] do not admit that any information has come from God on the subject."[95] Another stated, "We would not speak disparagingly of scientific inquirers, who are trying to elucidate any of the processes, or phenomena in the natural world; but if they offer us nothing but conjectures, or crude opinions for science, they should not hope that the public can feel much interest in their discoveries or writings."[96] And found in yet another are these words: "Science is but revenging many a wrong on the theologians by the arrogance with which he sweeps their most cherished beliefs aside as delusions, or as fables which suited the childhood of the world." The author stated that both scientists and theologians must view themselves as being

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would have exonerated Galileo's understanding of the heavenly movements. The article lamented the lack of knowledge of the Hebrew language.

[95]"The Origin of Man. Darwin, Huxley and Tyndall," Christian Observer and Free Christian Commonwealth, Vol. 50, n. 32 (August 9, 1871), 1.

[96]"An Association of Scientists," Christian Observer (Literary & Miscellaneous), Vol. 50, n. 37 (September 13, 1871), 1.

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in that same army of those who are the seekers of truth.[97]

A review that same year of a book by Thomas H. Huxley was cognizant of the Devil's use of natural science to oppose the Christian faith. The reviewer attacked Huxley for his sneers against the Bible, but cautioned against throwing away the investigation of the physical world, which is also a revelation from God. In point of fact, the Christian should be in the forefront of those exploring nature.[98]

In 1874, W. S. Bean, a minister from Washington, Georgia, took note of the conflict. He wrote that the contemporary Christian apologist must maintain that Christianity is built upon certain foundational truths "implanted in the constitution of man and harmonizing with the most patent facts of life"; and that these truths "lie equally at the basis of every human system of philosophy, of religion, or of science." The modern unbelief was bent on attacking this foundation; finding it impossible to deny its existence, it was trying to show how this foundation came to be. Bean concluded by stating that in faith are found the most mighty powers--forces which hold man's character together; and that "the deepest wants of the human soul will be answered, not by the voices of

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[97]"Once A Month," "Dogmatism of Scientists," Christian Observer (Literary & Miscellaneous), Vol. 50, n. 39 (September 27, 1871), 1.

[98]Rev. of Lay Sermons, Addresses and Reviews by Thomas H. Huxley, Christian Observer (Literary & Miscellaneous), Vol. 50, n. 6 (February 8, 1871), 2.

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nature alone, but by the word of God."[99]

Four years later, a review of a book by a Princeton College professor wrestled with the harmony between science and religion. According to the review, Professor Shields did not present a formulated philosophical system which shall be the final philosophy; but that he did attain the genuine basis, "that there is indubitable truth in both Religion and Science, and therefore the reconciliation of these apparent antagonisms is both desirable and possible."

The author noted that apologetics was not as settled an area as doctrinal theology; and that multitudes (including Mormons, Swedenborgians, and Spiritists) have been deluded into not accepting the Scriptures of the Old and New Testaments as the authentic revelation from God. It will require the millennium for the final philosophy to unite science and religion. In the meantime, there is no antagonism between religion and true science. Indeed, there is a difference between worship and socializing (including engaging in harmless amusements), but it is "not antagonism that distinguishes one state of mind from the other, but opposite sides of the same golden medal."

Science deals with things that are seen, faith with things that are unseen. In the golden period of Jesus' rule,

> the Final Philosophy, when it is formulated, will not consist of compromises. Science will not

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[99]W. S. Bean, "The Outlook of Modern Science," Southern Presbyterian Review, Vol. XXV, n. 3 (July 1874), 331-38.

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> relinquish one solitary fact that is contained in her treasuries; and Revelation will not modify one jot or tittle of its claims. In the last days, the haughtiest crest that is worn by any creature in the wide universe, will be borne by the man whose wisdom culminated in the prayer, "God expiate me, the sinner."[100]

One of the more fascinating literary examples in this regard was a collection of short stories. The Rev. Robert Hoskins Crozier, who wrote various fictional pieces in defense of doctrines, penned a book to demonstrate that there is no conflict between Science and the Bible.

> To make the discussion as interesting as possible, it is mingled with the incidents of a story, which we assure the reader is founded on facts. The Author flatters himself that, by taking a common-sense view of the subject, he has made Evolution intelligible to all classes of readers. This volume, like its predecessor, is not intended for learned scientists, but for those who have not the time to take up exhaustive works on scientific subjects; also, for those who are devoted to light literature. It is believed that this story will prove as interesting to the average Novel reader as any of those trashy tales whose only object is to enable the idler to kill time.[101]

Southern Presbyterians thus considered the relation between religion and science as of great importance. As they proceeded through the nineteenth century, there was an increasing awareness of hostility from certain scientific quarters. Yet there remained an optimistic belief in the

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[100]"The Final Philosophy," rev. of The Final Philosophy; or, System of Perfectible Knowledge issuing from the Harmony of Science and Religion by Charles Woodruf Shields, Southern Presbyterian Review, Vol. XXIX, n. 1 (January 1878), 162-68.

[101]R. H. Crozier, Araphel; or, The Falling Stars of 1833: A Story of Evolution (Richmond, Va.: Presbyterian Publishing Co., 1884), vi.

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ultimate reconciliation of these two areas, which were viewed as different aspects of God's one world and as reflecting different sides of God's one truth and revelation.[102]

7. The Challenge of "Christian Science"

The rise of various cults and the interest in the occult in the nineteenth century was of great concern to the Christian Church. One of the movements that seemingly posed a particular threat was that of the new "scientific religions," including Christian Science.

A few reviews of books dealing with the faith-healers can be found in the late 1880's and early 1890's.[103] However, it

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[102]For a somewhat different twist, see "Critical Notices," rev. of The Warfare of Science by Andrew Dickson White, Southern Presbyterian Review, Vol. XXVIII, n. 3 (July 1877), 595-601. The reviewer pointed out that many of the great scientific discoveries had been opposed not by the clergy but by men of science. He also took aim at those who would equate Romanism with Christianity--especially since it was Protestantism which procured the very liberty of conscience which allows contemporary infidelity to come to expression. For another article, see Francis R. Beattie, "Criticisms and Reviews," rev. of Religion and Science as Allies; or, Similarities of Physical and Religous Knowledge by James Thompson Bixby and The Scientific Spirit of the Age by Frances Power Cobbe, Presbyterian Quarterly, Vol. IV (1890), 322-25.

[103]For example, "Recent Publications," rev. of The Missing Sense, and the Hidden Things which it Might Reveal: Spiritual Philosophy treated on a Rational Basis by C. W. Wooldridge, Presbyterian Quarterly, Vol. II (1888), 175; "Recent Publications," rev. of Ruth, the Christian Scientist; or, The New Hygeia by John Chester and Trophimus; or, a Discussion of the Faith-cure Theory by William Gribbon, Presbyterian Quarterly, Vol. IV (1890), 333; "Recent Publications," rev. of The Fallacy of "Christian Science" by Edward P. Therune, Presbyterian Quarterly, Vol. IV (1890), 642-43; "Recent

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was not until the very end of the nineteenth century that several substantial writings on the phenomenon were published by Southern Presbyterians.

The premier author in this regard was William P. McCorkle, who fired his opening salvo in 1898.[104] This Graham, North Carolina, pastor preferred to call Mary Baker Eddy's religion "Christian Scientism," since it contained neither Christianity nor Science. However, this "most curious phenomena of this very progressive and scientific age" was well adapted for the contemporary people who wanted to be faddish--and the world's current fad was the worship of science.

> Birdlime for birds is hardly as good a device for trapping the unwary as is this new ism, when it is brought to the ears of those who know little either of science or of religion. It appeals most blandly to the "scientific" mind. Everything in the whole system is "scientific," and to the unthinking and the credulous it seems to savor of patient study, of unwearied research, and of exact methods. It proffers to those who have been vexed with the long-talked of contradictions between Genesis and Geology the latest and most "scientific" expositions of Bible history and doctrine. Its cures, conversions, spiritual victories over sin and temptation, and its manifold wonders, which challenge comparison with the miracles of Christ and his apostles, are "demonstrations." . . . Its theology is "Metaphysics," and the schools of its prophets are called "Metaphysical" or "Christian Science"

Publications," rev. of The New Interpretation; or the Scriptures Viewed in the Light of Christian Science by George B. Day and Faith Healing, a Defence; or The Lord Thy Healer by R. L. Marsh, Presbyterian Quarterly, Vol. V (1891), 476.

[104]William P. McCorkle, "The New Scientific Religion," Presbyterian Quarterly, Vol. XII (1898), 344-77.

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> academies, institutes, etc. . . . "Christian Science" professes to be "Practical." It comes loaded with present blessings for all men and women who would enter into "freedom through the truth." Where is the "mortal mind" which would not like to learn the secret of unfailing health, and be informed of the latest revelations of science? This, too, is an age of doubt. This new creed proposes to give a satisfactory solution of all the questions started by the materialistic science of Darwin, Huxley, and Tyndal; and professes to vindicate grandly the spiritual origin and nature of Man.
>
> In short, Christian Science, so-called, is the very latest phase of "advanced thought," the newest fad in rationalistic religion.

After pointing out the dubious beginnings of Eddy's religion, McCorkle unloaded on her hatred of straight lines. "Having such a prejudice against straight lines, it is but natural that she should indulge in circular demonstrations." Indeed, he quoted the poet--"A woman's reason is a woman's reason--I think him so, because I think him so"--and said that this was "a remark which is abundantly justified by the reasoning of some women, and most assuredly by the reasoning of such feminine thinkers as Mrs. Eddy."

McCorkle posited that Bishop Berkeley's idealism was the foundation of Mary Baker Eddy's theological system. "Her system of mind-healing is a deduction from one general principle, 'the Allness of God and the nothingness of matter.'"

The strength of "this new medico-religious quackery" was the fact that the mind can have something to do with one's health. The weakness was the assertion that all illnesses come from one's mental state. McCorkle poked fun at the

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inconsistencies of Christian Science, including Eddy's continued dependence on surgical proceedures and food.

> We cannot doubt . . . that Mrs. Eddy, though herself so near perfection as to heal by the mere "aroma" of her thought, still continues to indulge the "belief" of the necessity of food, and to regale herself with the good things of this world. And to this most illogical concession to the "materialistic spirit of our times," we are disposed to attribute her well-preserved physique at the ripe age of seventy-five or thereabouts, and also the further fact that her sect is gaining ground.

McCorkle described Christian Science as being "a mixture of Pantheism, Unitarianism, Universalism, Rationalism, and Theosophy." But Mrs. Eddy, in trying to follow Pythagoras, "made her doctrine more 'scientific.'" McCorkle also demonstrated that she taught Pantheism, and contradicted numerous teachings of evangelical Christianity.[105]

In another article in the same year,[106] this Tar Heel whetted his polemical as well as his apologetic sword by referring to Mary Baker Eddy as Pope Mary. Further, he noted that she taught that it "is not 'scientific' to believe that God discriminates between the objects of his mercy. If he saves one soul, he must save all." Of course, Eddy's views would make prayer of no effect. Her own version of the Lord's Prayer--"a 'scientific' prayer"--is not a prayer at all but an un-Christian creed.

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[105]Ibid., 345-51, 358-62, 366, 368ff.

[106]William P. McCorkle, "A New Mariolatry," Presbyterian Quarterly, Vol. XII (1898), 510-41.

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> Christian Science is a science which is not based upon facts, but upon irrational assumptions; a religion which reduces God to an abstraction, and makes rational worship an impossibility; a Christianity which, after dishonoring Christ by every possible denial of his word, presents him to us a Savior who disappeared eighteen hundred years ago, never more to reappear among men. It is, in fine, a philosophy without reason, a theology without a God, a faith without a hope, a religion without worship, and a Christianity without Christ.[107]

McCorkle's next article took on Mary Baker Eddy and Madame Blavatsky. He traced the origin of their systems to hints of heresy described in the New Testament. The word which the Apostle Paul used for "science" was "gnosis," and the purported "science" or "wisdom" of the Gnostics was at work in these two women's religions. The last ten pages of the article were dedicated to demonstrating the connections between ancient Gnosticism and the modern versions of this nemesis, including: Pantheism; creation consisting of emanations from God; evil arising because of "an eternal antagonism between matter and spirit"; the presence of the demi-urge in the material universe; redemption being "the liberation of the spirit from the chains of sinful matter"; Christ being viewed as a phantom; belief in re-incarnation; rejection of worship; and magic and occultism.[108]

As a result of his studies, McCorkle wrote a book,

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[107]Ibid., 537-541.

[108]William P. McCorkle, "An Old Enemy with Two New Faces," Presbyterian Quarterly, Vol. XIII (1899), 281-97.

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published in 1899 by the Southern Presbyterian Church.[109] He also evaluated another book on the subject.[110]

William Hallock Johnson engaged Christian Science in battle in an article at the very turn of the century. Johnson noted a few facts which might explain why this cult was enjoying such popularity. One, diseases are often self-healing, and often the recovery is quite rapid; the cure has nothing to do with the efforts of faith-healers. Two, mental attitude can have a salutary effect on a patient. Three, many diseases are psychosomatic. Four, through hypnotic suggestion a person can have a powerful effect upon another. Five, the public was reacting against the medical profession depending too much upon drugs. Finally, there was a craving for religious novelty.

Referring to the religion's metaphysics, the statements of which are "proven" by means of the (mathematical) rule of inversion, this gentleman from Danville, Kentucky, wrote: "We are tempted to add that, as there is no Christian Science in sense (only error as we shall see), there is no sense in Christian Science." Like McCorkle, Johnson skewered Mary

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[109]William P. McCorkle, Christian Science, or the False Christ of 1866: An Examination of the Origin, Animus, Claims, Philosophical Absurdities, Medical Fallacies and Doctrinal Contents of the New Gospel of Mental Healing (Richmond, Va.: Presbyterian Committee of Publication, 1899). This volume was reviewed by W. W. Brimm in "Criticisms and Reviews," Presbyterian Quarterly, Vol. XIV (1900), 311-12.

[110]William P. McCorkle, "Criticisms and Reviews," rev. of Christian Science and Its Problems by J. H. Bates, Presbyterian Quarterly, Vol. XIII (1899), 377-78.

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Baker Eddy's inability to do away with the need for food, and even made reference to an advertisement she had placed in the Christian Science Monitor for spoons, engraved with a special motto to be read at meals, available for purchase from her organization. Johnson commented: "To the student of philosophy, 'wearied (as Mr. Balfour says we are) with centuries of metaphysics,' there is about Mrs. Eddy's teachings a naivete as unique as it is refreshing."

Johnson disputed that Christian Science's roots could be traced to Bishop Berkeley. Instead, Hindu mysticism, with its illusionary perspective, was more the progenitor than any Western philosophy.

The Kentuckian showed that the theories of Mary Baker Eddy, if true, would mean that the wrong opinions of a majority could cause death. Further, her ideas regarding disease are the same as those of savage tribes--that illness is caused by "occultic spiritual agencies and not by material causes, and that it is to be cured by some sort of incantation or exorcism, crude or refined, and not by a change in the material conditions."

After pointing to the notorious failure rate of Christian Science to effect cures, Johnson closed with these words: "If the most exaggerated claims of Christian Science be true, and it should prove to be the panacea for all manner of diseases, it may be doubted whether the blessings of universal health would compensate for the impairment of the reasoning powers

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and the loss of the sense of humor which its general adoption would involve."[111]

The answers given by a Bostonian woman and her followers as to the relationship between science and religion obviously were quite foreign to the Southern Presbyterians. They responded vigorously, with ridicule, to this system which they understood as a threat not only to their metaphysical outlook but to the entire Christian faith. Granted that Christian Science was a fast-growing cult. Nevertheless, the fact that it attracted attention among these Dixie Calvinists is proof of how important a genuine science was to them, and how willing they were to fight bizarre, pseudo-scientific views which ranged into the occult.[112]

8. Reason, Faith, and Revelation

Even in the antebellum period, Southern Presbyterians were concerned with reason, faith, and revelation. In 1858,

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[111]William Hallock Johnson, "The Philosophy of Christian Science," Presbyterian Quarterly, Vol. XIV (1900), 184-96.

[112]See also Benjamin B. Warfield, Counterfeit Miracles (1918; rpt. London: The Banner of Truth Trust, 1972). As already noted, Warfield was a Princeton theologian from a Southern heritage. This book contained his Thomas Smyth Lectures for 1917-1918, delivered at Columbia (S. C.) Theological Seminary, October 4-10, 1917, on these topics: "The Cessation of the Charismata," "Patristic and Mediaeval Marvels," "Roman Catholic Miracles," "Irvingite Gifts," "Faith-Healing," and "Mind-Cure." The book ends with Warfield making fun of the inability of Mary Baker Eddy's science to pull a tooth and of her having to resort to a dentist (228-30).

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George D. Armstrong, a pastor in Norfolk with scientific interests, wrote that Christianity does not rest upon faith in the skeptical sense in which Hume intended it--that is, as credulity; and that it does use reason "in the sense of the proper and diligent use of the understanding, upon subjects fairly presented, and falling legitimately within its province." Armstrong maintained that the proof for the faith is experimental or practical, as lived out in the daily lives of many common men.[113]

In 1865, an article alleged that "Reason and Faith are twins," they are "coevals, and coeval with the nature of man," they "were designed to dwell in the heart together," and "are, and ever were, and ever must be inseparable."[114] The same basic point was made in the 1890's:

> . . . faith does not stultify the reason, nor does God ask us to accept, or believe that which reason tells us is an absurdity. We know that two and two make four here on earth, and we also know, that they will make four in heaven, and to believe otherwise, would be to believe an absurdity.[115]

W. J. Wright offered an article on "the speculative view of faith." He noted that reason cannot comprehend itself and

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[113]George D. Armstrong, The Theology of Christian Experience, Designed as an Exposition of the 'Common Faith' of the Church of God (New York: C. Scribner, 1858), 108ff.

[114]"Faith Not Opposed to Reason," Christian Observer and Presbyterian Witness, Vol. XLIV, n. 6 (February 9, 1865), 2.

[115]Paul F. Brown, "Faith and Reason," Christian Observer, Vol. 70, n. 45 (November 11, 1891), 1. See also Francis Ridley Havergal's poem, "Faith vs. Reason," which appeared in the Christian Observer, Vol. 81, n. 21 (January 24, 1894).

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cannot have the last word, while faith "comprehends its own instruments--the very ground of its existence--much that reason cannot demonstrate. But it must not attempt to embrace contradictories." Indeed, "whatever is not rational is not of faith, and where there is no ground for faith there is no faith." This professor from Westminster College in Missouri wrote:

> The speculative view of faith must lead to the feeling of obligation, because faith cannot be conceived otherwise than as rational, and, as such, finds itself in rational acts. Self-surrender and renunciation of worldly ideals are not the all of a life of faith. They are rather the preliminary and necessary volitions, and, as such, constitute the pre-conditions of such a life. Now, if faith is rational, its ground, as has already been pointed out, must be rational also. That is to say, the faith which determines the ground of obligation is in turn determined by it. This is a circle, but not a vicious circle. It is an ultimate psychological fact in the constitution of our nature. . . .

He concluded by stating that reason can have purpose only if it gives unity to itself and to objects of its knowledge, but that that cannot be apart from God. We must reject Hume's empirical knowledge as a vain substitute for "the idea of the First Cause as the primitive impulse of consciousness, as the only secure datum of knowledge and refuge of faith."[116]

In 1862, the Christian Observer referred to an essay by J. Randolph Tucker, Attorney General of Virginia in which he demonstrated the falsity and absurdity of the philosophical

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[116]W. J. Wright, "The Speculative View of Faith," Presbyterian Quarterly, Vol. XI (1897), 142-60.

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systems being promulgated by Hume and Comte. In defending the Baconian methodology, the Commonwealth's chief lawyer showed that the opponents were illogical in their rejecting the claims of Scripture, as well in their acceptance of the eternal laws of nature without a first cause.[117]

Southern Presbyterians obviously desired not to repudiate reason, but they also wanted to avoid rationalism. After all, it was a sovereign God Who had communicated His revelation, and no one should question His authority or Word.

A prime example of this position is found in a two-part series of articles in 1863. The author pointed out that rationalism denies the possibility of every external revelation; and stated that "[i]f rationalism admits that facts of history may be substantiated by testimony, as it must do in attempting to defend itself against the charge of universal scepticism, we may easily prove that it involves itself in contradictions from which it cannot escape." He buttressed this last point by the following argumentation. One, Scripture is attested to by the fact of Divine Omnipotence, for God can certainly communicate with His creatures. Two, human reason rejects Biblical content because it does not like it, not because it is not historically attested. Three, to reject religious doctrine because reason cannot attest it, is to reject every scientific fact "which we

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[117]"The Bible, or Atheism," Christian Observer and Presbyterian Witness, Vol. XLI, n. 31 (July 31, 1862), 2.

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are unable to substantiate for ourselves." Four, the impossibility of external revelation implies that internal revelation is both complete and infallible; but, men contradict themselves.[118]

The companion article asserted that rationalism "assumes that man is able to construct a philosophy of the Deity." "The most cherished tenet of his creed contrains the rationalist to profess his ability to sound the depths of the Divine nature." Towards the end of this article, the author wrote: "Instead of discarding evidence, and appealing to reason as a judge, we must reject the supreme authority of reason, and submit to the dictation of evidence." He concluded that rationalism had grown because of the "natural tendency in the human heart to run into infidelity" and the "pride of intellect with which our nature is cursed."[119]

This theme of humility is one which permeates much of the writing on this topic. One author, after noting that the inspired writers of Scripture were in the business of stating facts (which were proved by the attesting miracles), put it this way:

> Mystery is written on the face of creation. It is not for man to know or even conjecture by <u>what process</u> the sun, moon, and stars, and the earth, with the precious gems of mineral wealth it

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[118]"Rationalism False and Unreasonable," <u>Southern Presbyterian Review</u>, Vol. XVI, n. 2 (October, 1863), 175, 184-90.

[119]"Rationalism False and Unreasonable," <u>Southern Presbyterian Review</u>, Vol. XVI, n. 3 (April 1864), 237, 250-51.

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> embosoms, the rich and various products on its surface, were originally created and formed from nothing! The mode of their production is a mystery no less profound and incomprehensible than the miracles and doctrines of the Bible. The workmanship of the Divine hand may be as distinctly seen in the Word of God as in the wonderful display of His wisdom and power in His works.[120]

Another article, after pointing out that there are many inscrutabilities in nature, appealed to Lord Bacon's inductivism as the proper methodology for study of both nature and the Bible. The author stated that Reason is appropriately used to satisfy us that, according to internal and external evidences, the Scriptures are the very Word of God. Then, "the true province of Reason, is not to sit in judgment on the truths revealed, but humbly and diligently to examine and see what God has spoken to us in His Word." He added that we should expect the mysterious in the Bible: "A Revelation without mystery could hardly have come from the God of nature, which is so full of mystery."[121]

One of the big concerns was the proof that the Bible is the actual Word of God. An 1867 article set forth four independent lines of argument to prove this proposition and that the Bible is therefore true in all its statements.

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[120]"The Mysteries of Religion," Christian Observer and Presbyterian Witness, Vol. XLII, n. 40 (October 1, 1863), 1.

[121]"Reason and Revelation," Christian Observer and Presbyterian Witness, Vol. XLVI, n. 21 (May 23, 1867), 1. See also "The First Revelation," Christian Observer and Presbyterian Witness, Vol. XLIV, n. 6 (February 9, 1865), 1, which exulted in the glories of creation as God's first revelation.

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First, its teachings on God's character and morality are "clearly above any human productions." Second, no profane writings can approach it in adapting to the needs of the soul. Third, only infinite knowledge could have produced its prophecies. Fourth, miracles and signs have attested to its veracity.[122]

In his inaugural address as Perkins Professor of Natural Science in Connection with Revelation and Christian Apologetics, Samuel Spahr Laws was concerned with proving the truthfulness of the inspired oracles.[123] His major thesis was "that the leading valid conclusions of modern science and philosophy have been anticipated by the writers of the sacred Scriptures."[124]

This teaching elder, who was also trained as a medical doctor, singled out eight topics of science. Regarding the first one, Laws reported that even "the most extreme scientists have become the devout advocates of this scouted

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[122]"Kamets," "Divine Authority of the Bible," Christian Observer and Presbyterian Witness, Vol. XLVI, n. 18 (May 2, 1867), 1; two additional articles under the same title may be found in n. 20 (May 16, 1867), 1, and n. 21 (May 23, 1867), 1.

[123]S. S. Laws, "Inspired Anticipations of Some Conclusions of Modern Science and Philosophy," Presbyterian Quarterly, Vol. IX (1895), 68-99. This address was originally delivered at Columbia Theological Seminary, May 10, 1894; and repeated at a baccalaureate ceremony at Davidson College, June 10, 1894.

[124]Ibid., 70. This line is quoted in "Columbia Theological Seminary," Christian Observer, Vol. 74, n. 39 (September 25, 1895), 13.

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doctrine of the unity of the origin of the human race."[125] Secondly, science has accepted man's dual nature (body and soul), as evidenced even by Oliver Wendell Holmes' statements. Third, such proceedures as transfusions have shown that the life is in the blood. Fourth, the Biblical account of creation, including the fact that light appeared on the first day while the heavenly bodies (sun, moon, and stars) appeared on the fourth day, is consonant with the supposition that the primordial atoms were in a state of heat which would produce light.

Fifth, the end of the world predicted by the Bible has been declared a certainty by science, because of the law of thermodymanics which states that everything is running down. Laws said:

> Let me assure the reader that in calling his attention to this bounding and cheerless outlook of the sciences into the future, I have no thought of dampening the zeal or discouraging the enterprising and laudable ambition of the hopeful youth of either sex. After all, ten millions of years are "a right smart time," and a great deal can be done in it if we are diligent.

Nature is "not self-sufficient but dependent, so that the automatic restoration of nature from a catastrophe into which it may run from the waste of energy is 'impossible' to the existing constitution of things."

Sixth, Laws spoke of the always-elusive aether.

> Here, then, we have an inconceivably subtle substance which pervades our bodies, our houses,

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[125]Laws, op. cit., 70-71.

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> all material objects, as light shines through glass or the atmosphere. The atoms of all ponderable matter are separated by this homogeneous cosmic aether that fills all space, so that there is no known nor knowable space empty of it.

The Bible's interest is predominantly with the invisible world of spirits. "It may be that the invisible universe of aether is only an intermediary between the gross universe of our bodily senses and the universe of spirits, good and bad, which 'walk the earth both when we awake and when we sleep.'" The Perkins Professor admitted that much of this discussion was "conjecture" and the anticipations by Scripture "filmy"; however, "they are quite as substantial as are the present gropings of science, and open up suggested extensions of ethereal science into the domains of ethereal theology quite unexplored and as yet undreamed of in the laboratory." He rejected any refined pantheistic materialism in this regard, but concluded the point by saying that the "recognition of aether, as the stuff or original element from which ordinary matter was formed . . . gives promise of simplifying our biblical theology and of elucidating especially the doctrines of the ministry of spirits of creation and of the resurrection."

The seventh and eighth points had to do with the relation between psychology and Bible doctrine. The modern understanding of the nervous system as permeating the entire body is analagous to the Holy Spirit dwelling and animating both Christ and His mystical body, the Church. And, the

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modern notion of the subconscious makes sense to those who acknowledge that regeneration often occurs prior to a person's knowing the reality of this new life.

Professor Laws then handled the relationship between philosophy and science. Although two different branches of knowledge, they are intimately related:

> The bonds of union between the natural science of matter and of mind and between science and philosophy are indissoluble. Therefore, if the light of anticipation shines from the pages of the sacred writers on the maturest and most advanced conclusions of the sciences of the present, a like illumination might rationally and soberly be expected to fall on the salient problems of philosophy.

The five leading topics he discussed were mind, matter, God, duty, and immortality. He noted that the evidence proved that the Scriptures had to come from a superhuman intelligence--a fact "too palpable for rational denial." A second corollary is that the Bible's teachings have to be as lasting as human intelligence and as truth itself.[126]

James Hall Brookes, a premillennialist preacher, took on those who would question the veracity of Scripture. Writing of inspiration, Brookes noted that the Bible was alone of books in a pre-modern world that did not make scientific errors. For instance, the Bible speaks of the earth as a globe and of hanging upon nothing, and does not "fall into the error of the Koran, which regards the mountains as created 'to prevent the earth from moving, as if with anchors and

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[126]Ibid., 70-99.

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cables.'" In contrast, Jesus, in Luke 17:34-36, alluded to His parousia and anticipated modern astronomy by describing His second coming "as occurring when it will be night at one part of the earth, early morning at another, and a more advanced hour of the day at another." This author also maintained that the Bible is its own witness, and that God has often used this book to humble the proud skeptic.[127]

The problem of having to deal with skepticism led another minister, Herbert H. Hawes, to write in the late 1880's a book on "doubts." His major thesis was that the presence of doubts in the disciples helped to authenticate their later testimony. Hawes stated that the question was "not of the things to be ascertained by scientific anaylsis and 'testing in the crucibles.'" Rather, it was quite simple: was Christ's resurrection a fact? Even an unlearned man could, with only common sense and honesty of intention, testify truthfully about what has transpired; and this was what the disciples did.[128]

H. B. Pratt noted that "'science' is not always

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[127]James H. Brookes, Is the Bible True? (St. Louis, Mo.: Chas. B. Cox, 3rd ed., n.d. [2nd ed. was published in 1877]), 30ff, 172-73. See also Arthur T. Pierson, "The Seven Seals of God in the Bible," Christian Observer, Vol. 74, n. 36 (September 4, 1895), 5. Pierson, writing from Philadelphia, Pennsylvania, likewise made the point that the Bible, written in a pre-scientific age, is free from "the scientific errors and blunders that make all other sacred books ridiculous."

[128]Herbert H. Hawes, Doubts (Richmond, Va.: Whittet & Shepperson, 1889), 14ff. For a review of Hawes' book, see H. C. Alexander, "Criticisms and Reviews," Presbyterian Quarterly, Vol. IV (1890), 316-19.

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antagonistic to the word of God."[129] Indeed, both nature and the Bible carry "the same voiceless, yet imperative, authority--the same demand of implicit obedience as the result of implicit faith."[130] But how did the Apostle Paul meet the "scientific" errorists of his day (Acts 17)? "Simply with the truth as laid down in the Bible."[131] George D. Armstrong, himself both a scientist and a pastor, was clear: "where there is a conflict between a truth or doctrine clearly taught in Scripture, and the generally accepted conclusions of science, sound logic requires that we accept the former, and reject the latter. God cannot err; science may err, in the present, as it often has in the past."[132] As another writer put it: "The question is not whether the Bible can be reconciled with current philosophy and science, but can science reconcile herself with the word of God? If not, our duty is plain--we

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[129]H. B. Pratt, "Science and the World to Come," Christian Observer, Vol. 62, n. 25 (June 20, 1883), 2. Also, T. W. Tobin, "Religion and Science," Christian Observer, Vol. 60, n. 5 (February 2, 1881), 1: "There is no conflict between God's word and the teachings of science. They are both God's truth, and there can be disagreement between them."

[130]F. R. Goulding, "Nature and the Bible," Christian Observer, Vol. 59, n. 46 (November 17, 1880), 1-2.

[131]"L." "Paul and the Scientists," Christian Observer, Vol. 63, n. 12 (March 19, 1884), 1. The same message is found in C. W. Lane, "Paul and the Scientists," Christian Observer, Vol. 63, n. 21 (May 21, 1884), 1.

[132]George D. Armstrong, "The Word of God versus 'The Bible of Modern Scientific Theology,'" Presbyterian Quarterly, Vol. II (1888), 58.

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reject the whole thing."[133]

Other writings could be explored in depth,[134] but enough material has been adduced to conclude that Southern Presbyterians were interested in maintaining a basic and radical belief in the Bible as the Word of God; and in adhering to that view despite whatever attacks may come from science or rationalism. These Calvinists also wanted to maintain the teachings of the Bible against mere hypotheses of science: "Gentlemen, before you attempt to strain Biblical interpretation to any scientific basis, settle that scientific basis among yourselves."[135]

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[133]Paul F. Brown, "Bible and Science," Christian Observer, Vol. 63, n. 36 (September 3, 1884), 6.

[134]For example, see "Contradictions of Scripture," Christian Observer and Free Christian Commonwealth, Vol. 48, n. 30 (July 28, 1869), 2; "God and the Bible," Southern Presbyterian Review, Vol. XXVII, n. 4 (October 1876), 697-718; T. W. Hooper, "The Unchangeable Word," Presbyterian Quarterly, Vol. II (1888), 208-16; John L. Girardeau, "Criticisms and Reviews," rev. of Supernatural Revelation: An Essay concerning the Basis of the Christian Faith by C. M. Mead, Presbyterian Quarterly, Vol. IV (1890), 302-08; J. A. Quarles, "The Apocryphal Scriptures," Presbyterian Quarterly, Vol. IV (1890), 370-88; H. C. Alexander, "Criticisms and Reviews," rev. of The Unknown God; or, Inspiration Among Pre-Christian Races by C. Loring Brace, Presbyterian Quarterly, Vol. V (1891), 118-23; "Our Book Table," rev. of Is Moses Scientific? First Chapter of Genesis Tested by Latest Discoveries of Science by P. E. Kipp, Christian Observer, Vol. 73, n. 26 (June 27, 1894); and W. A. Alexander, "Criticisms and Reviews," rev. of The Origin of the Pentateuch in the Light of Ancient Monuments by Henry Alexander White, Presbyterian Quarterly, Vol. X (1895), 490-96.

[135]William Adams, "The Bible and the Scientists," Christian Observer, Vol. 63, n. 34 (August 20, 1884), 5. See also "Fitting Scripture to Science," Christian Observer, Vol. 63, n. 30 (July 23, 1884), 4. These two articles appeared in the midst of the evolution controversy surrounding James

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But the question of revelation and reason does not stop once the Bible is established to one's satisfaction as genuine. There remains the matter of interpreting the Scriptures and of determining to what extent science and reason may shed light on the text.

In dealing with the question of whether the Apostle Paul read Horace, an 1860's author contended that "[i]nspiration does set aside the use of natural powers, and cultivated talent; but the peculiar genius of each writer appears individualized just as much as in any other kind of writing. And whether Paul was conversant with the rhetoric of Horace or not, he had studied the art somehow." The author's proof for this last statement was that Paul often condensed "a great deal in a few words."[136]

As might be expected, the findings of archaeology were of prime significance in this regard. The cuneiform inscriptions bear a powerful testimony to the trustworthiness of Scripture.[137] W. W. Moore commended C. F. Keil's work on Biblical archaeology as a much-needed "scientific hand-book"

Woodrow. See also "Must the Bible Bow to Science?", Christian Observer, Vol. 84, n. 38 (September 18, 1896), 2.

[136]E. F. R., "Did the apostle Paul Read Horace?", Christian Observer and Presbyterian Witness, Vol. XLV, n. 24 (June 24, 1866), 1.

[137]"The Cuneiform Inscriptions and Biblical History in the Old Testament," Southern Presbyterian Review, Vol. XXIX, n. 3 (July 1878), 490-522.

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on the subject.[138] A decade later, Moore wrote of the fact that extra-Biblical sources discovered by archaeology underlined the truthfulness and reliability of the Scriptures.[139] Parke P. Flournoy of Bethesda, Maryland, drew new information about Darius the Mede from Babylonian tablets.[140]

An 1881 article set forth this perspective: "The harmony between the Bible and science is perfect, because God cannot deny himself. Truth is eternal, and cannot be in conflict with itself."[141] A decade earlier, the same magazine expressed the same sentiment: "As men advance in knowledge and grow in grace, they see there is no good ground for opposition to any cardinal doctrine of the Bible. So knowledge of God's word and works removes any apparent discrepancies. Perfect

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[138]W. W. Moore, "Criticisms and Reviews," rev. of Manual of Biblical Archaeology by Carl Freidrich Keil, Presbyterian Quarterly, Vol. II (1888), 158-60.

[139]W. W. Moore, "The Period of the Israelitish Sojourn in Egypt in the Light of Archaeological Research," Presbyterian Quarterly, Vol. XIII (1899), 24-43.

[140]Parke P. Flournoy, "Who Was 'Darius, the Median'?--New Light from Babylonian Tablets," Presbyterian Quarterly, Vol. XIV (1900), 602-12.

[141]J. T. Hendrick, "Atheism--Religion and Science," Christian Observer, Vol. 60, n. 24 (June 15, 1881), 1-2. See also "The Bible and Science," Christian Observer and Presbyterian Witness, Vol. XLI, n. 11 (March 13, 1862), 41, which quotes extensively to the same effect from the speech by Lieut. Maury, the famed geographer, at the laying of the corner-stone of the University of the South, an Episcopal school in Sewanee, Tennessee.

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knowledge would remove every one."[142]

H. M. White added his thoughts to the discussion. He noted that the Church had always been interested in education and had endowed many of this country's early institutions of higher learning; that the Church was the conservatory of literature; that the Scriptures are a powerful stimulus to the mind and that translations of the Bible has reformed languages; that the Church has been the patron of literature and science; and that revelation and learning are natural allies.[143]

But assertion of the essential harmony between the Bible and science does not solve all the problems. The same author just cited wrestled with that difficulty in noting that the Westminster Confession of Faith appeals to the Scripture texts in the original languages as the final authority and that even the best translation has a merely human component. Indeed, ". . . in the translation of all the sciences, and in the translation of any passage of the word of God that refers to any science, there is much that is not divine, and, therefore, much that is erroneous."[144]

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[142]"S. S.", "Harmony of the Bible and Science. The Bible Its Own Interpreter," Christian Observer and Free Christian Commonwealth, Vol. 50, n. 27 (July 5, 1871), 2.

[143]H. M. White, "The Vital Connexion between Revelation and Sound Learning," Southern Presbyterian Review, Vol. XXXIV, n. 3 (July 1883), 540-59.

[144]"S. S.", "The Bible Our Only Umpire," Christian Observer and Free Christian Commonwealth, Vol. 50, n. 17 (April 26, 1871), 2-3.

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R. T. Brumby's review of books by C. J. Ellicott and George B. Cheever elaborated upon the same point. Writing in the midst of the evolution controversy, this professor from Athens, Georgia, chided those who would turn people off to the Bible because of an ignorance of science and/or of the true meaning of Scripture. Brumby wrote that "in this scientific age, the importance of science to the Bible is not understood or appreciated." The contemporary need was for Christian scientists to carry on the fight. "When learned theologians, ignorant of science, attack such men as Darwin, Huxley, Tyndall, and Virchow, with theological arguments only, they remind us of a man endowed with mere muscular power, assailing with a club a skilful fencer, fully equipped for the conflict."

Brumby exegeted four Scripture texts which had been used to deprecate scientific endeavor, and concluded that there was no injunction, explicit or implicit, against researching the physical universe and ascertaining its laws. He asserted that the fact that the Bible never condemns exploration the material creation, and yet does condemn "divination, sorcery, enchantment, astrology, and necromancy" (all of which deceive the nations), is evidence of its divine origin. The author appealed to Scripture and to the Westminster Confession of Faith to the effect that they foster the study of science.[145]

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[145]R. T. Brumby, "Relations of Science to the Bible," Southern Presbyterian Review, Vol. XXV, n. 1 (January 1874), 1-31.

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Thus it is seen that contemporary debates about science affected how Southern Presbyterians interpreted the Bible. Many of them were willing to admit to a "human" element in the traditional interpretation of the Scriptures, and to use reason to look not only at the Word of God written but also to draw conclusions from nature. This approach was obviously bound up in the brewing debate regarding evolution.[146]

But despite this controversy, they were unanimous in their affirmation that the Bible is the very Word of God. Unlike many contemporaries, they were unwilling to concede any ground to the rationalists of Germany regarding the text of Scripture.[147]

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[146]L. G. Barbour gave an historical perspective, and championed the Protestant theological method, in "Anselm," Presbyterian Quarterly, Vol. X (1895), 397-423.

[147]For other articles dealing with revelation, faith, and reason, see: Fred. A. Ross, "Foundation of Right," Christian Observer and Presbyterian Witness, Vol. XLV, n. 27 (July 5, 1866), 1; F. A. R., "Revelation, Addressed to the Heart. . . .," Christian Observer and Presbyterian Witness, Vol. 48, n. 19, 20, 21 (May 12, 19, 26, 1869), 1; "H.", "Truth--Its Use and Value" and "Truth--Its Use and Worth," Christian Observer and Free Christian Commonwealth, Vol. 49, n. 10 and 11 (March 9 and 16, 1870); "Making Science" and "The Astronomy of Job," Christian Observer and Free Christian Commonwealth (Literary and Miscellaneous), Vol. 49, n. 35 (August 31, 1870), 1; and "Recent Publications," rev. of The Gospel in Nature. A Series of Popular Discourses on Scripture Truths Derived from Facts in Nature by Henry C. McCook, Presbyterian Quarterly, Vol. V (1891), 147. See also W. S. Plumer Bryan, "Some Recent Contributions to the Philosophy of Religion," Presbyterian Quarterly, Vol. X (1896), 157-70. Bryan was pastor of the Church of the Covenant in Chicago.

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9. Higher Criticism

Even in antebellum times, there was concern among the orthodox regarding the maintaining of belief in the integrity of Scripture. Three years before the beginning of hostilities at Fort Sumter, the venerable William J. Hoge, who would serve a long pastorate in Richmond, Virginia, defended the Gospel accounts of the healing of the blind from charges of contradiction.[148]

Illustrating the concern at the other end of our time period, Parke P. Flournoy wrote a book about the New Testament, with the introduction by Princeton's Benjamin B. Warfield.[149] Flournoy steadfastly held forth the traditional views.

One of the early defenses against rationalistic views came in 1869. The article noted the histories of manuscripts, including the fact that the King James Version was derived from documents from after the tenth century but that those were based on earlier ones, and apparently came to the conclusion that the long ending of the Gospel of Mark was not in the original. The author said that the minor discrepancies

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[148]William J. Hoge, Blind Bartimeus; of the Story of a Sightless Sinner and His Great Physician (New York: American Tract Society, 1858), 13-17.

[149]Parke P. Flournoy, New Light on The New Testament: An account of some interesting discoveries which bear important testimony as to the time when the gospels and other books of the New Testament were written (Philadelphia: Westminster Press, 1903).

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could be corrected "by retracing our steps to the text nearest the sacred writers themselves."[150]

Thus there was apparently no problem among these Southerners with "correcting" the text of the extant Scriptural manuscripts. An 1876 article dealt positively with Biblical criticism, saying:

> It investigates the history, classification, and authority of manuscripts in which the Bible existed, previous to the invention of printing; examines the versions, especially the ancient, and quotations of Scripture found in the early writings of Christians and others. It proposes certain laws, by which the corrupt readings, thus discovered, may be corrected. In the exercise of its legitimate functions, under wise laws, it is obviously a science of vast importance.

However, by the mid-1700's, various scholars who applied the principles of classical criticism to the Bible erred in two ways. First, "they often made corrections on conjectures." Secondly, they did not consider the tremendous responsibilities in dealing with the Biblical text. The author noted that many theological students, especially from the North, had imbibed of this critical spirit.[151]

In the 1880's, Robert L. Dabney attacked the whole German

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[150]G. C. C., "Some Efforts of the Rationalists," Christian Observer and Free Christian Commonwealth, Vol. 48, n. 47 (November 24, 1869), 1.

[151][Joseph M. Atkinson(?)], "The Professional Study of the Bible," Southern Presbyterian Review, Vol. XXVII, n. 2 (April 1876), 356-57. The article also spoke of the "science and art of interpretation" as a seminary course of study, and opined that science, whether physical or moral, is not made by man. Further, in "natural science, men may be misled to accept as facts things only apparently such; in moral science, all are of divine authentication" (363-64).

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university system for its deleterious affect on theology. After noting the semi-heathenish state of Germany, in which there was very little church attendance or genuine piety, he wrote of specific scholars of the "Tubingen school" such as Semler, Eichorn, and Baur, and other rationalists such as De Wette and Paulus. The Virginian's satire was evident as he told of a critic of the Tubingen school, who believed that "the fourth gospel was the work of John, but that it is wholly unreliable and false. His theory is, compared with the learned Ewald's, refreshing for its simplicity. It is that John did his own lying."

Dabney also skewered criticism's "admirable harmony" in not being able to come up with a consistent date for the "forgery of John." Schenkel and David Friedrich Strauss were likewise taken to task for their radical rationalistic views.[152]

R. C. Reed's attack on S. R. Driver's Introduction to the Literature of the Old Testament may be taken as typical of the Southern Presbyterian approach to higher criticism. Reed thought that the time had come to meet the higher critics in battle, as their poisonous views had now crossed into the English-speaking world.

Higher criticism aimed "to resolve the Bible into its

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[152]Robert L. Dabney, Discussions, C. R. Vaughan, ed. (Richmond, Va.: Whittet & Shepperson, 1890; rpt. Harrisonburg, Va.: Sprinkle Publications, 1982), Vol. I: Theological and Evangelical, 448-52.

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primitive constituent elements, to examine and weigh those elements, to test their value, to see how much alloy, if any, enters into their composition, and by this means to reach a rational and scientific estimate of the worth of the Bible as a whole." One of the prime assumptions is that the only laws found in the Bible had to be extant among the people of the time, rather than given by revelation.

The results of this "scholarship" include a general agnosticism regarding the authors of the Biblical books, and disputation of the genuineness and authenticity of all but a small fraction of the Old Testament. The tendency is to call into question the inspiration of the Scriptures, as evidenced by the leaders of the movement. "The higher criticism was born in infidelity, nurtured in rationalism, and it leaves the mark of its obnoxious parentage on all who embrace it." Should higher criticism win, its final effect would be the absolute destruction of the divine character of the Bible, for no Scriptural book would be free from its methodology and all parts of the Bible suffer when one part suffers. Further, it is the evolutionary philosophy that is behind higher criticism. Only those who cannot swallow belief in the supernatural have any use for the critics. Reed concluded by stating that "the higher criticism is the most dangerous enemy that the church of God has to confront in this

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generation."[153]

James H. Brookes used human testimony and the doctrinal content of the Bible to defend its veracity and trustworthiness. In castigating the critics, he said that, despite Higher Criticism's claims to be the "handmaid of the Bible," "small value can be attached to the services of a handmaid whose principal business is to find fault with the mistress, and to pick her character to pieces until the lowest scullion retails the gossip." This Missourian contended that "there is no neutral ground, which can be logically and consistently held, between inerrant inspiration and infidelity."[154]

Henry Carrington maintained belief in the plenary inspiration of the Bible. He professed himself unable to

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[153]R. C. Reed, "A Modern Jehu," Presbyterian Quarterly, Vol. VI (1892), 539-58. The title refers to Driver's "chariot wheels [cutting] . . . through the Old Testament Scriptures, turning up the yellow subsoil, and hurling fragments of rocks and roots and clay in every direction"--thus bringing to mind "the driving of Jehu, the son of Nimshi, 'for he driveth furiously'" (539). Also sounding the alarm in the same Southern Presbyterian publication the same year was a Princeton scholar: William Henry Greene, "The Anti-Biblical Higher Criticism," Presbyterian Quarterly, Vol. VI (1892), 341-59. See also the inaugural address by Edwin Cone Bissell at Chicago's McCormick Seminary: "Illogical Methods in Biblical Criticism," Presbyterian Quarterly, Vol. VII (1893), 485-504. For another critical critique of Driver's work, see Robert Watts, "Criticisms and Reviews," rev. of An Introduction to the Literature of the Old Testament by S. R. Driver, Presbyterian Quarterly, Vol. VI (1892), 597-611. Watts was at Assembly's College, Belfast, Ireland.

[154]James H. Brookes, God Spake all These Words (St. Louis, Mo.: Presbyterian Board of Publication, n.d.).

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comprehend those who could claim that the Bible's concepts were inspired while the words were fallible or even false.[155]

The most extensive defense against the Bible's critics came from Francis R. Beattie. A series of articles he had written for the Christian Observer during the 1890's were gathered together into a lengthy book.

In this volume's introduction, Professor W. W. Moore of Virginia noted that the science of Biblical Criticism is divided naturally into three categories: Lower Criticism (dealing with the accuracy of the text), Higher Criticism (the age and character of the books of the Bible), and Exegetical Criticism (the meaning of the statements of Scripture). Beattie's work was not an attack on Higher Criticism insofar as it was "properly defined as a searching examination of the form and the facts of Holy Scripture"; but was rather a refutation of those who would abuse Higher Criticism by turning it into an attack on the Bible.

After giving appropriate definitions and an overview of higher criticism, Beattie exposed the philosophical presuppositions of radical criticism. Among the themes considered were Hegelianism, pantheism, and evolutionism.

The radical criticism was pounded for its naturalistic (in contrast to a supernatural) view of religion. Beattie

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[155]Henry Carrington Alexander, "The Doctrine of Inspiration as Affected by the Essential Relation Between Thought and Language," Presbyterian Quarterly, Vol. VII (1893), 157-86.

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pointed out that naturalistic evolution, which informed the criticism, could not "explain the genesis and growth of the religion of Israel, and of Christianity, its goal and fruitage" because, indeed, natural evolution always tends toward degeneration. Various other inconsistencies with the radical position were also mentioned. Included were subjecting the Mosaic system to forced and unnatural divisions; the a-historical character of the criticisms; and the organic connection between the Old and New Testaments.

In his concluding remarks, Beattie protested the arrogance of the modern critics who pretended to know more about the days of long ago than did the people who lived then. He stated his belief that adherence to this radical criticism was not compatible with subscription vows to the confessional standards of the Presbyterian Church; and he remained optimistic regarding the ultimate outcome of orthodoxy's struggle with the current radical criticism.[156]

There was discussion throughout the late nineteenth century of the alleged errors of Scripture.[157] However, it

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[156]Francis R. Beattie, Radical Criticism: An Exposition and Examination of the Radical Critical Theory Concerning the Literature and Religious System of the Old Testament Scriptures (New York/Chicago/Toronto: Fleming H. Revell Co., 1894), 5ff, 87ff, 308ff, 315-23.

[157]For example, see J. B. A., "Critical Notices," rev. of An Examination of the Alleged Discrepancies of the Bible by John W. Haley, Southern Presbyterian Review, Vol. XXX, n. 1 (January 1879), 204-05; Benjamin B. Warfield, "Dr. Edwin A. Abbott on the Genuineness of Second Peter," Southern Presbyterian Review, Vol. XXXIV, n. 2 (April 1883), 390-445; L. J. Halsey, "The Old Moses or the New Mosaic," Christian

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is evident that there was much greater interest in the topic in the 1890's--due in large measure, no doubt, to the increased influence of the movement upon America and highlighted by the Charles A. Briggs trial in the Northern Presbyterian Church.[158]

Several things stand out in terms of the relationship of the Southern Presbyterian view of higher criticism and their philosophy of science. One, higher criticism was thought of as a science. Two, it was regarded as a legitimate endeavor, so as long as the truthfulness of the Bible was not called into question. And three, it appears that there was, in the

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Observer, Vol. 62, n. 24 (June 13, 1883), 1; G. R. Brackett, "Criticisms and Reviews," rev. of Moses and His Recent Critics by Talbot W. Chambers, Presbyterian Quarterly, Vol. IV (1890), 319-20; W. M. McPheeters, "Criticisms and Reviews," rev. of The Origin and Formation of the Hebrew Scriptures by Lorenzo Burge, Presbyterian Quarterly, Vol. V (1891), 130-31; "Recent Publications," rev. of The Case Against Professor Briggs, and Inspiration and Inerrancy. A History and a Defence by Henry Preserved Smith, Presbyterian Quarterly, Vol. VII (1893), 328-29; Benjamin B. Warfield, "The Latest Phase of Historical Rationalism," Presbyterian Quarterly, Vol. IX (1895), 36-67; and "Recent Publications," rev. of Eden Lost and Won. Studies of the Early History and Final Destiny of Man as Taught in Nature and Revelation by Sir J. William Dawson, Presbyterian Quarterly, Vol. X (1896), 538-39. Halsey argued for the Protestant doctrine of freedom of conscience against the new demands of scientific critics (even as the Church had to be freed from the chains of theologians). McPheeters employed satire to skewer Burge. See also "Demolishing Genesis," Christian Observer, Vol. 63, n. 25 (June 18, 1884), 4, in which Professor Briggs' notion of doing away with scientific accuracy in Genesis because of his finding it to be "poetry" is itself demolished.

[158]See Francis R. Beattie, "The Inauguration of Dr. C. A. Briggs at Union Seminary, New York," PQ, Vol. V (1891), 270-83, for the dim view taken of Briggs by Southern Presbyterianism.

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Southern Presbyterian Church, no one advocating the radical views of the German rationalists.

10. Overview

Nineteenth century Southern Presbyterians defended standard Christian beliefs, including the doctrine of the Triune God; creation, miracles, and providence; and the notion of causality and First Cause. They stood firm against both extremes of sensationalism and idealism, and sought the middle ground of realism. They were devoted to doing that which was rational, to reason, and to scientific methodology; but not at the expense of overturning God's revelation, which remained paramount.

It could be argued that it was Scottish realism that was the key tool used by the Southern Presbyterians to support a very traditional Calvinist idea, viz., that of the unity of truth. Common sense served as a foundationalism for much of the argument.[159]

Most significantly, these Calvinists increasingly sensed the inadequacy of the old apologetic, including much of

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[159]J. Ligon Duncan, III, telephone interview, February 6, 1992; see his "Common Sense and American Presbyterianism: An Evaluation of the Impact of Scottish Realism on Princeton and the South (with an Appendix on Protestant Scholasticism)," unpublished M. A. thesis in Historical Theology, Covenant Theological Seminary.

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natural theology.[160] It had been customary for the Church to regard the unbeliever as being in a state of neutrality, lacking only the proper information, the supply of which would result in his conversion. This view of man and his ability was reflective of the Roman Catholic doctrine of man's fall--that Adam was not totally corrupt, but had lost the donum superadditum; and that, as Thomas Aquinas taught, man's reason was still intact and basically untainted. To these believers in man's total depravity and inability, an apologetic that did not take seriously the effects of the fall was not only inconsistent, but deficient in combatting the contemporary (especially scientific) skepticism.

Those who could remember the "marauding Yankee hordes" could comprehend the fact of total war. Francis R. Beattie, one of the foremost apologetes (and a transplanted Canadian), illustrated the new emphasis on the nature of spiritual warfare. Whether being assaulted by a learned naturalism, false historical criticism, or "the weapons of science, falsely so called, found in the field or formed in the laboratory, then the apologete must be prepared to drive back the foe, capture his weapons, and turn them into armor for the

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[160]For a contemporary defense of natural theology, see L. G. Barbour, "Natural Theology," Southern Presbyterian Review, Vol. XXI, n. 4 (October 1870), 572-93. Barbour sought a balanced position, while contending that natural theology is valid since it involved natural revelation. He wrote approvingly of Paley's work (though pointing out some deficiencies in it); utilized the teleological argument; and touched on the relation of the human mind to the physical universe.

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defence of Christian faith." Beattie was realistic about the hatred and rage of those who oppose Christianity; and stated that, even when the Christian may seem to be losing, "he must simply stand still and see the salvation of God, and to his great surprise he may behold the horse and his proud rider cast into the sea." Further, apologetics must not be content with mere defense, but must vindicate the faith.[161]

Robert Lewis Dabney, in arguing for the idea of Final Cause, stated that the uniformity of nature is not because of chance or fatalism, but is due to the infinite Mind that directs her. "Nature is stable, only because the counsels of the God who uses her for his ends are stable." He then added the (concluding) thought: "None but theists can consistently use induction."[162]

A similar sentiment is found in an 1883 article by J. V. Logan. Sensationalistic science is unable to provide for verifying matters of spirituality and personality of both God and man. Logan went on to say that a "logical universe can never arise out of simple enumeration." Some intergrative factor must be furnished by the mind--otherwise, "the product of simple enumeration is a mere rope of sand."[163]

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[161]Francis R. Beattie, "Christian Apologetics," 344-45.

[162]Robert L. Dabney, Discussions, Vol. III, 490-91.

[163]J. V. Logan, "A Personal God the Postulate of Reason; Faith the Principle of Knowledge," Southern Presbyterian Review, Vol. XXXIV, n. 1 (January 1883), 174-75. See also "A Philosophy of Man Impossible Without Aid from Revelation," Southern Presbyterian Review, Vol. XXIX, n. 4 (October 1878),

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Even as early as 1870, the Christian Observer, in dealing with positivism, quoted Lord Macaulay to the effect that

> in the way of solving questions of natural theology by pure reason, modern philosophers are in no better position than were the ancients, and that any savage can propose questions which the wisdom of a Locke or a Clarke, without the help of revelation, cannot answer.[164]

Alonzo Rice Cocke wrestled with the relative value of the external (as compared with the internal) evidence of Scripture. He argued that both forms of evidence are "invaluable to the cause of truth." Nevertheless, not enough attention had been paid to the Bible's self-evidence. Indeed, reason dictates that if God had revealed Himself to man, "that revelation itself must carry evidence of its divine origin." Cocke also used the self-a'testing nature of Scripture to vindicate the Protestant faith against both skepticism and Romanism.

> Standing the vantage ground of correct internal evidence, we reassert the Protestant doctrine that faith cannot arise without evidence, but we show that the humblest peasant possesses an argument to establish the claims of the Bible against every assailant. The Bible is self-evidential, and upon this rock all their objections make shipwreck.[165]

Benjamin Morgan Palmer likewise handled the relationship

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[164]"Positivism So-Called," Christian Observer (Literary & Miscellaneous), Vol. 49, n. 49 (December 7, 1870), 1.

[165]A. R. Cocke, "The Self-Evidencing Light of the Bible," Southern Presbyterian Review, Vol. XXXVI, n. 1 (January 1885), 142-45.

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between the internal and external evidences for the faith. Neither argument can be separated from the other, but they can be distinguished. The external evidences "authenticate Christianity as a whole, and sweep away every cavil and doubt in the overwhelming presumption of its truth." On the other hand, the internal evidences "verify this conclusion by a detailed examination of its parts, and rivet the conviction through the combined impressions which have been made singly by each."

The long-time New Orleans pastor built a case for a three-fold assurance: of understanding, of faith, and of hope. The moral reasoning he employed was "probable," not in the sense of being contrasted to certainty, but in that it dealt with contingent rather than necessary truth. This is the type of evidence not only for the common affairs of life, but for history and the natural sciences. Even though there may be "doubt" in the pursuit of this endeavor, nevertheless those who entrust themselves to the influence of the evidence come to a steady assurance of the truth of Christianity. As a matter of fact, the enlightment of the Holy Spirit is requisite for the "'assurance of understanding.'" Only a total capitulation to the gospel's influence can be the ground of certainty.

After noting that apprehending the truth does not imply a full comprehension of it, Palmer listed several ways in which we can have a full assurance of the Christian faith.

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The first is that Divine testimony is the simple and sole ground upon which we receive Divine truth. This objectivity has a corresponding subjectivity in which the spiritual world is made real to us. Reason could yield only probabilities; faith makes certain.

The second basis for certainty regarding Christianity has to do with man's spiritual instincts, to which the gospel appeals and by which its claims come and are verified. For example, the existence of God is universally believed; this is because the fact of God's existence is presented "with self-evidencing power" to man who is made in God's image. For another example, there is an "indestructible persuasion" that God converses with His creatures. A third example is that of conscience, which bears testimony to the fact that the soul that sins shall die. A fourth is the persuasion that there is to be found mercy and love with God.

The third basis is that the most difficult truths of Scripture are so intimately bound with Christianity itself as to be verified in a most practical and substantive way. Among the instances here cited were conviction of sin and of redemption; the reality of communion with God in prayer; and the presence of hope. The fourth pillar is the Holy Spirit's direct influence, as He illuminates His inspired truth.[166]

In arguing for the miracle of Christ's resurrection,

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[166]B. M. Palmer, "The Ground of Certainty in Religious Belief," Presbyterian Quarterly, Vol. I (1887-88), 87-104.

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Thomas H. Skinner proclaimed the necessity of inspiration to give weight to the testimony of the witnesses. He closed his article by saying:

> Thus the resurrection of Christ as the incarnate Son of God is the key that opens the treasure-house of divine revelations and stamps the seal of inspiration upon the entire sacred record from Genesis to the Apocalypse, even as the inspired record of the revelations stamps infallibility on the testimony of the Evangelists and Apostles to the resurrection of Jesus. This is not reasoning in a circle, but it is the creation of a circle which is continent of our whole religion. It relegates all questions of criticism, philosophy, and science to their proper domain, and leaves us the Bible as the sure word of God, inspired, infallible, authoritative, binding on the human conscience and understanding and heart, which ministers can preach and their hearers believe, without hesitation or distraction, amid all manner of opposition, from whatsoever quarter that opposition may come.[167]

What emerges from nineteenth century Southern Presbyterianism is a picture of a maturing apologetic. It still used evidences, but it was becoming wary of philosophical arguments for the existence of God. And, increasingly the evidential argument was being placed in perspective.

In the twentieth century, out of the fundamentalist-modernist battles there was in conservative Presbyterianism in the North the perceived need for a radical critique of a hostile world's system. Employing insights gleaned from his native Netherlands, Cornelius Van Til, one of the age's

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[167]Thomas H. Skinner, "The Argument for the Resurrection of Jesus Christ," 463-68.

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premier apologists, refused to accept compromise with any world-and-life view that would not submit to God and His revelation. There was no neutral ground, on which Christianity and its critics could come with equal footing to fight their battles. No, all territory belongs to the risen Lord. Even the ability to reason is available to the unbeliever because of the existence of the transcendent Creator.[168]

In many ways, nineteenth century Southern Presbyterianism anticipated this presuppositionalism.[169] However, unlike Van Til, who sometimes made disparaging remarks about propositional truth, these Southerners were dedicated to the notion of reason--not in a rationalistic way, and certainly not in such a way as would contradict God's revelation. Nevertheless, their commitment to propositional truth would have put them, in some respects, in the camp of the late Gordon H. Clark, another twentieth century conservative

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[168]See Cornelius Van Til, The Defense of the Faith (Philadelphia, Pa.: Presbyterian and Reformed Publishing Co., 1975). Other writers in the Van Tillian line include: Greg L. Bahnsen, A Biblical Introduction to Apologetics (classroom syllabus, Reformed Theological Seminary, Jackson, Mississippi, 1976) and Richard Pratt, Every Thought Captive.

[169]We are not the first to suggest this independent development, though the present work is the most extensive demonstration of this point. See Morton H. Smith, Studies in Southern Presbyterian Theology (Amsterdam, the Netherlands: Jacob van Campen, 1962; rpt. Phillipsburg, NJ: Presbyterian and Reformed Publishing Company, 1987), 203-04; also see pp. 60; 117-18; 133-34. Dr. Smith does not appear willing, however, to go as far as we do in ascribing presuppositionalism to these nineteenth century Calvinists.

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Presbyterian theologian and philosopher, who, while sharing much in common with Van Til, despised his irrationality.

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III. THE CRITICAL CASE OF EVOLUTION

A. ORIGINAL DISCUSSIONS

Charles Darwin's publication, in 1859, of his Origin of Species set off a world-wide revolution. While evolutionary ideas had been promulgated before that time, this naturalist's particular brand captured the imagination of society. The Beagle's passenger graphically portrayed the struggle for existence and natural selection, along with the mutability of species. Regarding laws of variation, Darwin wrote that the "steady accumulation, through natural selection, of such [slight] differences [between parents and offspring], when beneficial to the individual, . . . gives rise to all the more important modifications of structure, by which the innumerable beings on the face of this earth are enabled to struggle with each other, and the best adapted to survive."[1]

Darwin's theory of evolution would stick a dagger in the heart of Protestant natural theology. His ideas threatened the traditional apologetic which included argument from design as well as the veracity of Scripture. They challenged the doctrines of the Church in such a way as not to allow for readily apparent adjustment between science and the Bible.

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[1]Charles Darwin, On the Origin of Species By Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life (London: John Murray, 1859; facsimile edition, New York: Harvard University Press, 1964; rpt. New York: Atheneum, 1967), 170, 480ff.

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The war years apparently prevented the infection of Dixie with the new Darwinian virus. But the post-bellum period witnessed a vigorous debate on the question of evolution.

The Southern experience in the early 1860's was largely matched in the North. Asa Gray, the Fisher Professor of Natural History at Harvard, had written on Darwin's theory as early as 1860; but not much more was heard on the subject from him until 1872.[2] On the other side, Louis Agassiz, the famous Swiss naturalist whose presence at Harvard had enhanced the reputation of American scholarship, was against the transmutation thesis. He appealed to the facts of embryology and paleontology, as well as basing his opposition on categories of classifications which do not change.[3] His biographer has posited that Agassiz was a genuine naturalist who was an observer, in contrast with a philosophical naturalist who indulges in dreams and isolates himself fropm society. The real facts of science, according to those of the Agassiz school, will discredit Darwinian speculation.[4]

One of the popularizers of evolutionary theory in this

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[2]See A. Hunter Dupree, "Introduction," in Asa Gray, Darwiniana: Essays and Reviews Pertaining to Darwinism, A. Hunter Dupree, ed. (Cambridge, Mass.: The Belknap Press of Harvard University Press, 1963), ix-xvi.

[3]L. Agassiz, Methods of Study in Natural History (Boston: Ticknor and Fields, 1863).

[4]Jules Marcou, Life, Letters, and Works of Louis Agassiz (New York: Macmillan and Co., 1896; rpt. Westmead, Farnborough, Hants.: Gregg International Publishers Limited, 1972), Vol. ii, 112-28.

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country was an Englishman. Herbert Spencer disclaimed materialism, while at the same time stating that he could not come to faith in a great unseen First Cause.[5]

The inititial discussions by Southern Presbyterians were largely critical of the evolutionary thesis. Many of the articles were derogatory.

One of the first issues germane to the question of evolution was that of the creation of the first man--for example, was he made as an adult? In 1866, the Christian Observer stated, "Adam appears to have started into life a full-grown man. He suffered none of the weaknesses and inconveniences of infancy."[6] Two years later, the same magazine carried an article that said that he was not created as a fully grown man, while also maintaining that he was preserved by God's grace until he went through the probationary period.[7]

More crucial was the question of man's uniqueness. Because of his capacity for religion and morality, man should not be classed with other animals; therefore we should reject

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[5]Herbert Spencer, "Mr. Martineau on Evolution," Recent Discussions in Science, Philosophy, and Morals (1871; 2nd edition, New York: D. Appleton and Company, 1878), 331-49.

[6]"N. S.", "Man in His Primeval State," Christian Observer and Presbyterian Witness, Vol. XLV, n. 17 (April 19, 1866), 1.

[7]"X* * *", "The Biography of Adam," Christian Observer and Presbyterian Witness, Vol. 47, n. 43 (October 22, 1868), 1.

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the hypothesis that man developed slowly from brutes.[8]

Darwin's The Descent of Man was published in 1871, and the rhetoric accordingly intensified in the early 1870's. One author wrote that "we cannot recognize the existence of any pre-historic man." It would be unphilosophical to ignore Genesis, "as if it were a legend written by an idle dreamer." Man did not spring by development from monkeys or lower animals, nor was he a savage barbarian. Evidences have established the believability of the history recorded in Scripture; and even in the most primitive accounts of man, there is discernable intelligence present within him.[9] Three weeks later, James McCosh was quoted to the effect that "'there were insuperable difficulties, even in a natural history point of view, in the theory that man sprang from the lower animals.'"[10]

A review of The Descent of Man pointed out that even though Darwin wanted to get away from a personal God, via a series of natural laws, laws still require an intelligent creator. The logical conclusions of Darwin's theory would be that a man who took "the life of a beef, a fish or any other animal on which he depends for food . . . would be slaying a

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[8]"Man's Position in Nature," Christian Observer and Presbyterian Witness, Vol. 47, n. 10 (March 5, 1868), 1-2.

[9]"A New Science," Christian Observer and Free Christian Commonwealth, Vol. 50, n. 3 (January 18, 1871), 1.

[10]"Origin of Man," Christian Observer (Literary & Miscellaneous), Vol. 50, n. 6 (February 8, 1871), 3.

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cousin more or less distantly removed" and thus guilty of "unnatural murder." The reviewer ridiculed men of science for their inability to lead to the truth even in their own fields of endeavor: "in attempting to lay down dogmas for which their training has unfitted them they prove that Festus had a good knowledge of human nature when he remarked the tendency of much knowledge tc make mad."[11]

A few weeks later, the same topic was again the subject of scornful comment. The nineteenth century savants are guilty of the same folly as seen in Romans 1, as they would seek to have us abandon the sacred book for "their crude and ridiculous speculations touching some unknown 'law of natural,' as a rational account to the origin of man!" It is irrational to believe that the "how" of creation can be fathomed by man. Any other hypothesis (than that which is found in Scripture) of the origin of man is worthy of no more credit "than a senseless myth, or the dream of a maniac."[12]

Still another review article--this time of a publication critical of Darwin--stated that his efforts were a "comical antic," but also very dangerous.[13] And yet another piece

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[11]Rev. of The Descent of Man and Selection in Relation to Sex by C. Darwin, Christian Observer (Literary & Miscellaneous), Vol. 50, n. 17 (April 26, 1871), 2.

[12]"The Descent of Man," Christian Observer and Free Christian Commonwealth, Vol. 50, n. 19 (May 10, 1871), 1.

[13]Rev. of The Edinburgh Review (July 1871, American edition), Christian Observer (Literary & Miscellaneous), Vol. 50, n. 37 (September 13, 1871), 2.

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said that the one who desires the truth will not seek some compromise between the Bible and science, as purportedly "at variance," but will seek to ascertain "the precise meaning of the Bible according to legitimate principles of interpretation." Any "seeming discrepancy" is due to "error of observation, induction or interpretation"; or because of not yet being able to discern, from the vantage of a higher plane, the reconciliation of realities that seem contradictory.[14]

Yet even in the 1870's there was an almost imperceptible shift by at least a few individuals away from the traditional position that the creation of man was instantaneous. Picking up on the already-entrenched view of an old earth that was fostered by geology, Prof. R. T. Brumby argued that God normally operates in a gradual manner.[15]

B. JAMES WOODROW

An ordained minister who was trained as a scientist, James Woodrow was one of the intellectual stars of the

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[14]"Was Adam the First Man?", Christian Observer (Literary & Miscellaneous), Vol. 50, n. 42 (October 18, 1871), 2. In the same issue, see "The Antiquity of Man," 1; and in the next week's issue (n. 43, October 25, 1871), "Was Adam the First Man?", 1-2, which copied an "ingenious" solution from the October Scribner's Monthly without necessarily endorsing the view.

[15]R. T. Brumby, "Gradualness Characteristic of All God's Operations," Southern Presbyterian Review, Vol. XXV, n. 4 (October 1874), 524-55.

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Southern Presbyterian Church. He studied under the renowned Louis Agassiz at Harvard University. He graduated summa cum laude (A. M. and Ph. D.) from Heidelberg University in 1856, and was immediately offered a full professorship there. However, his love for his own people and his church led him back to the South, where he continued to serve as professor of Natural Science at Oglethorpe University (1853-1861). During his stay in Europe, he met many of the world's most eminent scientists, including Virchow, Quatrefages, Tyndall, Huxley, and Lyell. From Scottish stock, and a product of the South, Woodrow sought, in many ways, to perpetuate his Covenanter heritage in a world that had become skeptical of the church and her ways.[16]

During the war with the North, Woodrow used his scientific knowledge as head of a chemical unit and prepared silver nitrate for the care of the wounded.[17] After the war, he counselled Presbyterian Confederates not to emigrate to Brazil, but to stay and help build up the church here.[18]

Woodrow was no stranger to controverted matters. He was editor of both the Southern Presbyterian and Southern

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[16]William Childs Robinson, Columbia Theological Seminary and the Southern Presbyterian Church: A Study in Church History, Presbyterian polity, Missionary Enterprise, and Religious Thought (Decatur, Ga.: Dennis Lindsey Printing Co., 1931), 170-71.

[17]Ernest Trice Thompson, Presbyterians in the South, Vol. II: 1861-1890 (Richmond, Va.: John Knox Press, 1973), 72.

[18]Ibid., 111; the reference is to his editorial in the Southern Presbyterian, August 16, 1866.

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Presbyterian Review, and in both capacities was in the midst of and often the spark of controversy. Edwin Cater, pastor of Oxford's College Church in North Mississippi Presbytery, even had his defense of himself against Woodrow's verbal assaults made against him on the floor of the General Assembly and in the press, published for his vindication.[19]

But it was the result of the establishment of a chair at Columbia Theological Seminary (then in the capital of South Carolina) that Woodrow was eventually to become embroiled in a great controversy that threatened the peace and purity of the Southern Presbyterian Church. In 1859, the same year in which Darwin's Origin of Species was published, Judge Perkins of Mississippi gave $50,000.00 to the seminary for the endowment of this new post.[20]

What was to become the "Perkins Professorship of Natural Science in its Relations to Revealed Religion," the first such chair in a theological institution is this country, was conceived in 1857 in Tombeckbee Presbytery--the home court of James A. Lyon, Perkins' pastor. Two years later, the Synod of Mississippi approved the overture from the presbytery and gave

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[19]Edwin Cater, The Appeal of Rev. Edwin Cater . . . To the candid judgment of the people of God against the assaults made upon him of the floor of the General Assembly at Huntsville, Ala., in May, 1871, and repeated in Newspapers, and in the Southern Presbyterian Review, for October, 1871 (College Hill [via Oxford], Miss.: Printed for Rev. Edwin Cater, 1871). The dispute had to do with alleged slander against Cater, after his having questioned several large expenditures by General Assembly committees; Woodrow was a treasurer.

[20]Robinson, op. cit., 168.

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its blessing to the idea.[21]

Dr. Lyon wrote that there were several factors which induced the Magnolia State synod to take this action. One, students in college and university were not able to devote sufficient study to the burgeoning field of the natural sciences; this meant that young pastors were not equipped to deal with skeptics who were conversant in science. Two, a genuine appreciation of science would keep young zealots from defending the Bible against supposed attacks by true science. Three, natural science is the systematic way of looking at nature, which is God's first revelation to man. Four, natural science can aid immensely in the study of Scripture.[22]

Ironically, it was Perkins' wish that his pastor, James A. Lyon, fill the position. However, the four controlling synods of Columbia Seminary were given the privilege of electing the various chairs in rotating order; and the Synod of Georgia chose one of its own, James Woodrow. He moved to Columbia in 1861 to begin his new work.[23]

In his inaugural speech at Columbia (actually given in 1860), Woodrow put forth his idea of his task, along with a request for approbation or constructive criticism. He stated that there were three possible ways to construe the harmony between revelation and natural science. First, natural

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[21]Ibid., 168-69.

[22]Ibid., 169.

[23]Ibid., 169-70.

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theology could be used to demonstrate the existence of God. Second, there could be shown an analogy between natural theology and revelation in ways other than natural theology. Third, there could be the effort to show the harmony where it has been denied or controverted.

The professor intended to concentrate his energies on this last area, as he would show that objections to the Bible arise either from a spurious science or from incorrect interpretations of the Scriptures. Some of the most prominent questions regarding the alleged antagonism between revelation and science were the following: the earth's age; the prevalence of death prior to Adam's fall; the extent of the flood; polygenesis; and the antiquity of man.

According to Woodrow, there must be full academic freedom to explore the relationship between revelation and natural science. He affirmed his belief in the Bible as the actual word of God and therefore unequivocally true.

Among the items he found as definitely true were the geological teachings regarding the earth's great age and gradualism. He found definitely false (or at least unproven) the undermining of the unity of the human race. One of the undecided issues was that of the nature and extent of Noah's flood.

He advanced the ideas that scientific findings should be tested apart from preconceptions; that Scriptural exegesis should not be tortured into fitting one's preconceptions; and

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that geography, astronomy, and other such knowledge might help in one's understanding of any given passage. He suggested that conflicts between science and religion were heightened because of people regarding the Bible as a scientific textbook, and because of their thinking that phenomenological language should be taken in a strict scientific sense--something which afflicts especially the less educated classes. Woodrow celebrated the free inquiry after truth. He concluded by appealing to the Triune God to assist him in his endeavor.[24]

We have already seen the debate between Woodrow and Dabney in relation to geology and to science in general. While the latter attacked the sensualistic evolutionary philosophy, the former was remaining silent with regard to evolution. Indeed, Woodrow maintained a position of "non-contradiction" rather than "harmony" between science and religion--a position that was evident as early as his inaugural address in 1860. By occupying such a prominent post, and one that was concerned with the very issues being raised by evolution, it was inevitable that Woodrow would become involved in the discussion.

C. CONTROVERSY IN THE CHURCH

[24]Ibid., 171-72.

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1. The Request for Information

James Woodrow had remained strangely silent in the publications for which he was responsible on the subject of evolution. His silence may have been due to his still wrestling with the subject; as well as due to his belief that the Bible itself was silent on the topic. Whatever the reason, his public muteness was beginning to cause consternation among folks in the church.[25]

In 1879, Dr. J. B. Mack, a newly-elected member of the Board of Directors of Columbia Theological Seminary, informed Woodrow of rumors concerning his teaching on creation and urged him to use the columns open to him in the Southern Presbyterian or the Southern Presbyterian Review to put these reports to flight. Woodrow replied that the only peculiar matter about his teaching on creation was his rejection of its being done in six literal days, but that the church already knew that; and "that he was too busy to notice the slanders of 'old Plumer.'"[26]

Because of financial difficulties, the seminary had to close temporarily in 1880. Dr. Mack was chairman of an alumni committee, and, as he set out to raise money for Columbia, he continued to encounter rumors regarding Dr. Woodrow. The board member therefore once more urged the professor to let

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[25]Thompson, op. cit., 457-59.

[26]Ibid., 459-60.

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his views be heard. Once again, Woodrow declined. He also did not accept the invitation to attend the 1881 meeting of the New Orleans Alumni Committee upon the occasion of the semicentennial of the seminary, to give an address on some topic related to his chair. His declination meant that only his department was not represented at this event.[27]

The Board was able to announce in the fall of 1882 the reopening of Columbia Seminary. The announcement was accompanied by a statement, rejoicing in the fact that this school was still dedicated to the Westminster Standards, and that it was a place where none of the professors surreptiously impugned plenary verbal inspiration nor secretly inculcated evolution and other entrapful errors. Woodrow believed that he had not taught contrary to this statement. He felt confirmed in this view when the Board sent this message to the General Assembly the next year (1883) along with this statement from him:

> The Bible teaches nothing as to God's method of creation, and therefore it is not teaching anything contradicting God's word to say that he may have formed the higher beings from the lower by successive differentiations; and as several series of facts, more or less independent of each other, seem to point this out as the method which he chose.[28]

Woodrow's words only increased the suspicions of Joseph Bingham Mack, the Board's secretary and financial agent. He

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[27]Ibid., 460.

[28]Ibid., 461.

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therefore got the Directors to adopt this resolution:

> WHEREAS this Seminary is the only one in our Southern Church that has the Chair of Natural Science in connection with Revelation: and
> WHEREAS during the Senior year the questions of the Unity of the Human Race and Evolution are fully examined; and
> WHEREAS Scepticism in the world is urging alleged discoveries in science to impugn the Word of God; therefore be it
> RESOLVED that the Board requests Professor Dr. James Woodrow to give fully his views as taught in this institution upon Evolution, as it regards the World, the lower Animals and Man in the October number of the Southern Presbyterian Review, or as soon thereafter as possible.

This was a request that Dr. Woodrow could hardly refuse. He accordingly considered the whole matter and prepared to give his views at seminary's Alumni Association meeting in the spring of 1884.[29]

2. Dr. Woodrow's Position

In this address, Professor James Woodrow indicated that he had moved from believing that evolution was probably not true, to believing that it probably was true. He began by reiterating his early adherence to non-contradiction rather than harmony as the proper relationship between science and the Bible; he held to this on the basis that truth is one. He gave as examples of this principle the relation between astronomy and Genesis 1:16, and that between geography and the

[29]Ibid., 461-62. It is interesting to note that the Board repeated the request the next year (1884); see Robinson, op. cit., 174.

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Biblical phrase "the four corners of the earth." Further, phenomenological language is not necessarily inaccurate. Such questions as the age of the earth; the flatness or roundness of the earth; is it at the center of the universe or on its edge; one creation or many; the extent of the Noahic flood; and the creation of species mediately or immediately, are of no consequence regarding religious and moral truth. Evolution refers only to method, not origin. Science should not deal with sources, and religion not with method or mode.

Woodrow alleged that the language of Genesis was not explicit and may admit of different interpretations. Even man's creation from "dust" does not tell which kind of dust (the serpent eats "dust"--i.e., flesh and blood). Therefore, the term refers only to pre-existing material. The soul of man was immediately created. And, "in the circumstantial account of the creation of the first woman there are what seem to me insurmountable obstacles in way of fully applying the doctrine of descent."

There are several reasons, according to Woodrow, for believing that evolution may be true. One, the solar system may have evolved from a homogeneous whole to the heterogeneous. Newton's belief in gravity is an example of adhering to an hypothesis even though there may be remaining questions. Two, the fossil record seemingly indicates that lower forms came first and with great similarities along the way. However, he admitted that there are gaps--a fact which

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he thought could be explained as being due to an incomplete record. Three, it is hard to explain the rudimentary organs on the basis of immediate creation. Four, "the changes through which an animal passes in its embryonic state are just such as the doctrine of descent requires." Five, the geographical distribution of animals may lend weight.

Woodrow remarked that the contemplation of these matters led him to praise God. He could more genuinely and fully appreciate God's creation, and "to join in saying, Thou art worthy, O Lord, to received glory and honor and power; for thou hast created all things, and for thy pleasure they are and were created."[30]

Dr. Mack later reported that, after this speech, several items of business were transacted, with no move being made to give the customary vote of thanks. In order to prevent such a discourtesy, Dr. Mack himself made the motion to thank him and to request the publication of the address. However, he made clear that he did this only for the sake of courtesy and that he did not regard this affirmative vote as an endorsement of Woodrow's views.[31]

There was no opposition voiced to the motion and it therefore passed. John L. Girardeau, destined to become one

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[30]James Woodrow, Evolution. An Address Delivered May 7th, 1884, Before the Alumni Association of the Columbia Theological Seminary (Columbia, S. C.: Presbyterian Publishing House, 1884), 4-30.

[31]J. B. Mack, "The Other Side," Christian Observer, Vol. 63, n. 29 (July 16, 1884), 5.

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of Woodrow's antagonists, reportedly said that he did not think the speech would stir much public discussion.[32]

But strife is exactly what ensued, much of it becoming bitter. This was certainly not the desire of Girardeau. Late that summer he visited with Woodrow at his house, expressed his appreciation for past kindnesses shown to him by Woodrow, and stated that he had not opposed in the classroom any of Woodrow's views except for his denial of creaton ex nihilo. Girardeau also gave his opinion that it was not expedient for Woodrow to teach his evolutionary beliefs in a theological seminary, and that the best course of action for him would be to withdraw voluntarily from the Perkins Chair. He said that Woodrow "was courteous, and expressed no annoyance at what I had said to him."[33] This was also not the intention of an antagonist such as R. L. Dabney. He wrote to G. B. Strickler that his extempore sermon at the Synod of Virginia meeting in Lynchburg in 1881 had not been directed at James Woodrow, who at that time was just as opposed to evolution as was Dabney. His concern then, as it had been in 1873, was to point out the rationalism: "I did my duty and exposed those positions; but most seemed to think it was but one of the 'Dabney crotchets';

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[32]Thompson, op. cit., 464.

[33]J[ohn] L. G[irardeau], "Interview with Dr. Woodrow, at his house, Aug. 10th, 1884" (unpublished manuscript), Evolution and Woodrow Case folder, Blackburn Papers, Reformed Theological Seminary, Jackson, Mississippi.

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nobody took the alarm."[34] And, as liberal E. T. Thompson, a twentieth century historian, himself admitted, the reason for the conflict was not Woodrow's unpopularity per se--though the way he was regarded throughout the church certainly aided the opposition--but rather was the genuine alarm at his views.[35]

3. Discussion in the Church Publications

Thompson believed that even the appearance of the July issue of the Southern Presbyterian Review at this very juncture would not have gotten the attention of the church as a whole, since that publication had limited circulation and was directed to the academic audience. However, the popular church press also got heavily involved, and this caused the pot to boil.[36]

One of Woodrow's contemporaries, and a member of the Board of Columbia Seminary during this time, was Thomas H. Law. He thought that the controversy was the result of "a lamentable misunderstanding of his views."[37]

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[34]Robert L. Dabney, letter to G. B. Strickler, September 26, 1884, cited in Thomas Cary Johnson, The Life and Letters of Robert Lewis Dabney (Richmond, Va.: Presbyterian Committee of Publication, 1903; rpt. London: The Banner of Truth Trust, 1977), 344-46.

[35]Thompson, loc. cit.

[36]Ibid., 465f.

[37]Thomas H. Law, "Personal Reminiscences," in Marion W. Woodrow, James Woodrow as Seen by His Friends (Columbia, S. C.: R. L. Bryan Co., 1909), 65.

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The same sentiment would be written privately to Woodrow. Emma M. Barnett shared with him her sympathy, and her revulsion at the "unfairness of the criticism," especially because of the "suppression of your own language." This "elect lady" of the Southern Church was "grieved . . . that the Northern Church should have occasion to comment upon a want of union among ourselves, with some little unchristian exultation." She also wrote that she wished that there could be some better term than "modified evolution" that could be used to express his views.[38]

On June 25, 1884, the Christian Observer rhetorically asked why Woodrow should get so upset regarding General Assembly's desire that his views be published.[39] Three weeks later appeared in the same publication a copy of Dr. Woodrow's editorial in the Southern Presbyterian, along with Dr. Mack's reply.[40]

In the very same issue were two editorials critical of Woodrow. One mentioned that he had been requested for a period of years to give his views on the subject and that now that he had acceeded to the pressure, it was evident that he

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[38]Emma M. Barnett, letter to James Woodrow, September 5, 1884, Woodrow file, South Caroliniana Library. She was apparently a personal friend of Woodrow and his family.

[39]"Columbia Seminary and Evolution," Christian Observer, Vol. 63, n. 26 (June 25, 1884), 4.

[40]James Woodrow, "Evolution in Columbia Seminary. Circumstances of the Publication of Dr. Woodrow's Address," and J. B. Mack, "The Other Side," Christian Observer, Vol. 63, n. 29 (July 16, 1884), 5.

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is teaching evolution. This editorial noted that eleven years prior, in criticizing Dabney's position on science, Woodrow had repudiated evolution. Further, especially in light of the Board of Directors' public statement, a seminary professor had no right to teach these views to his classes and refuse to give public notice of the change of his beliefs.[41]

The other editorial on the topic pointed out various errors of evolution as presented by Woodrow. First, it is an assault upon God's character to suggest that one should look for harmonies between science and the Bible. Second, it is not true that there are no contradictions between evolution and the Bible. Third, it is not true that there are good reasons for believing in evolution--something which both Woodrow and James McCosh had taught.[42]

Two weeks later, an anonymous writer was willing to give Woodrow the benefit of the doubt. Even though he disagreed with him, he was not prepared to state that these matters were contrary to the Scriptures. After all, Woodrow did not believe that evolution was contradicted by the Bible, and he was utilizing reason in his argument which he presented.[43]

But two other pieces took issue with that author. One

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[41]"The Address of Evolution. The Circumstances of Its Publication," Christian Observer, Vol. 63, n. 29 (July 16, 1884), 4.

[42]"Erroneous Phases of Evolution," Christian Observer, Vol. 63, n. 29 (July 16, 1884), 4.

[43]"Elihu," "Is It Heresy?", Christian Observer, Vol. 63, n. 31 (July 30, 1884), 5.

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stated that the doctrine "that the body of man was, or may have been, evolved from the body of a brute, is that which we hold contrary to the teachings of the Bible." Another said that man's creation was not "merely incidental." Against evolution may be adduced the fact that creation was "after his kind." Also, Genesis 5:3 and 11:26 cannot mean only "that Adam, according to some occult law of generation, was born of a gorilla or other brute." It cannot be simply that the soul of man is made in God's image: "Man is not represented in Scripture as a complex being consisting of a soul attached to a body of separate origin." If "dust" means "lower animals," what does Genesis 3:19 teach? Why couldn't many of the brutes give rise to man (and then what happens to the the unity of the race, the covenant of works, and the federal headship of Adam and of the Second Adam?). How did death come about other than through sin?[44]

Two relevant articles came in the next week's installment. The Honorable S. W. Williams wrote that Woodrow was unfortunate in seemingly admitting the beliefs of scientific evolutionists, including his citing of some of the examples which they use to maintain their unsubstantiated hypothesis. "In this view the misfortune for theology is, that so-called science will not permit it to formulate and limit its own evolution." Another writer postulated that God

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[44]"The True Question at Issue," and "Does Evolution Contradict the Bible?", Christian Observer, Vol. 63, n. 31 (July 30, 1884), 4.

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apparently was disapproving of the teaching of secular science in a theological seminary.[45]

A fortnight following, the paper editorialized, "Dr. Woodrow may well exclaim, 'Save me from my friends.' As understood and explained by them the tendencies of his teaching are mischievous."[46]

Meanwhile, Woodrow's own Southern Presbyterian was fighting back. Besides the editorials that attacked the various papers' attack of him, he set forth the positive side of his argument. He wrote that "as a doctrine of natural science, Evolution is merely descriptive of a process or method, and nothing more." There is a difference between immediate and mediate creation, and in the latter, we can inquire regarding the process. Belief in evolution should not be condemned "unless, indeed, it is very clear that the Scriptures do really contradict it."[47]

Still in August, the Observer dealt with Woodrow's defense. The most serious defect was Woodrow's view "that we are not to expect harmony between the Bible and science." Second, Woodrow manifested conflicting views of evolution

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[45]S. W. Williams, "Evolution," and R. W. S., "Should Science Be Taught There?", Christian Observer, Vol. 63, n. 32 (August 6, 1884), 4, 5.

[46]"Dr. Woodrow and His Defenders," Christian Observer, Vol. 63, n. 34 (August 20, 1884), 4.

[47]Southern Presbyterian (August 7, 1884), cited in Marion W. Woodrow, ed., James Woodrow as Seen by His Friends (Columbia, S.C.: R. L. Bryan Co., 1909), 656, 660.

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(apparently due to the church's opposition). Third, was it right for a professor covertly to teach as "true" that which he had previously denounced as an "anti-Christian error"?[48]

The first issue of September featured two articles. Rev. John S. Park alleged that Woodrow was teaching evolution as early as 1879. Rev. W. E. Boggs came to Woodrow's defense: in his Address, he had laid out the proper limits of physical science; and non-contradiction is the proper relation between science and Revelation.[49]

Boggs also argued on Woodrow's behalf for the next two editions.[50] But Rev. L. S. Handley queried, if evolution is a law, then why is it not still working?[51]

An editorial took exception to Woodrow's views. For one thing, God's truth is one; but the professor's formulation has the tendency of leading to infidelity. Secondly, Woodrow limited evolution to one human being. Third, Woodrow contradicted Scripture. Fourth, there is no direct evidence

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[48]"Dr. Woodrow's Defense," Christian Observer, Vol. 63, n. 35 (August 27, 1884), 4.

[49]John S. Park, "Prof. Woodrow on Evolution in 1879," and W. E. Boggs, "The Perkins Professor and Evolution," Christian Observer, Vol. 63, n. 36 (September 3, 1884), 4, 5.

[50]W. E. Boggs, "The Perkins Professor and Evolution," Christian Observer, Vol. 63, n. 37 and 38 (September 10 and 17, 1884), 6.

[51]L. S. Handley, "Is Evolution a Law?", Christian Observer, Vol. 63, n. 37 (September 10, 1884), 4.

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for evolution.[52]

Meanwhile, the Southern Presbyterian put the issue this way:

"Does the Bible certainly teach that the dust of which Adam's body was made was inorganic matter?" Woodrow's critics "are certain that it does so teach," while Woodrow "thinks that probably it does not."[53]

In mid-September, Rev. H. B. Pratt stated flatly that the seminary's Board was fully cognizant of the fact that no presbytery would send its ministerial candidates to a seminary that teaches evolution. Rev. D. O. Davies said that the worst part of the whole affair is that evolution was being taught in a seminary.[54] The same minister also had some "fun" with evolution.[55]

In the same issue, there was a poem that also poked fun at evolutionists:

> Once, in the by-gone ages, God surveyed
> The evoluted beasts on earth that strayed;
> Vast crowds, developed all without a break,
> From that one cell He had contrived to make!
>
> Among the monkey tribes, He saw an ape

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[52]"A Review of the Debate on Evolution," Christian Observer, Vol. 63, n. 37 (September 10, 1884), 4.

[53]Southern Presbyterian (September 4, 1884), cited in Woodrow, James Woodrow as Seen by His Friends, 679.

[54]H. B. Pratt, "Evolution and Candidates for the Ministry," and D. O. Davies, "The Columbia Trouble," Christian Observer, Vol. 63, n. 38 (September 17, 1884), 4, 6.

[55]D. O. Davies, "Some Fun in Evolution," Christian Observer, Vol. 63, n. 39 (September 24, 1884), 6.

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Of height uncommon, and of comely shape:
"Survival of the fittest be my plan,"
He said: "Die all its tribe! that ape be man!"

He called it Adam-red: the quondam beast
Had worn a ruddy coat--reddish, at least;
And 'twas but fitting that his manly name
Should give some intimation once he came.

"Now, that I've turned that beast into a man
I see," said God, "that I must change my plan:
The fittest female ape to gas has mainly gone,
And 'tis not good for man to be alone."

So from the sleepy Adam's rib, did God create
A woman pure and fair, to be his mate:
Though ranking 'neath the angels, yet at least
She never bore the nature of a beast.

Then God wrote down for Adam and his wife,
The story of their coming into life;
And, lest poor Eve should leave him in disgust,
He told them Adam was made out of dust!

'Tis true, God meant by dust, a full grown ape;
His language lacked the scientific shape.
This truth would have been quite beyond belief,
Had science not come in to our relief!

In fact, since science reads between the lines
Of Scripture, and the truth now shines,
There's ground for guessing that our mother tried,
By what she did, to commit suicide!

No doubt her woman's wit in some way must
Have learned the scientific sense of "dust."
And every hour her dread and fear increased
Of spending life with one who had been beast.

Not strange the frenzied woman dared to try
The fruit of which God said: "Who eats shall die!"
From this low tie must death provide escape
Lest future children ask, Was pa an ape?

And lest--for Eve knew not, the lonesome lass
That Adam's tribe had all been turned to gas--
Lest some fine day, Adam, to her chagrin,

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Should bring his grinning monkey parents in![56]

October 1st witnessed five articles on the subject.[57] The editorial on "Two Revolutionary Principles" warned against the course of action adopted by the Board of Directors of Columbia Seminary: not accepting the plain meaning of the Bible, and, in contradistinction from the principle which led to separation from the Northern Presbyterian Church, teaching what the Bible does not teach, viz., evolution. S. F. Tenney asked rhetorically what assurance does the church have that Woodrow would not go farther in his evolutionary views: "twenty years more of study, and riper years, may again modify his views, so that at that time he may be prepared to accept Evolution as applying to the soul, as well as the body."

October 8th had two articles, including one that was designed to show that all the contemporary claims by James Woodrow regarding the lack of harmony between the science and the Bible were unwarranted, given many instances when, over time, there was shown to be no discrepancy between these two

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[56]J. F. C., "Genesis. On the Evolutionists' Scheme," Christian Observer, Vol. 63, n. 39 (September 24, 1884), 6. For another example of this type of amusing satire at the expense of evolutionists, see "The Origin of Man. By a Sapient Philosopher," Christian Observer, Vol. 63, n. 41 (October 8, 1884), 6.

[57]"Two Revolutionary Principles," "Evolution Tends to Infidelity," "The Columbia Teaching on the Authority of Scripture," S. F. Tenney, "The Tendencies of Evolution," and James Lewis Howe, "Science and Religion," Christian Observer, Vol. 63, n. 40 (October 1, 1884), 4, 6.

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areas.[58] October 15th also had a couple. One of them quoted from letters showing the church's sentiments against the teaching of evolution. The other wanted to show the absurdity of Woodrow's position: "The highest order of organized dust among the lower animals, is the gorilla. Hence, by a fair and logical inference, the body of Adam probably evolved from a gorilla."[59] On October 22nd, an editorial offered "help" for Professor Woodrow: the Swedenborgians concur with his views.[60] Two more articles appeared the last week of October.[61]

An editorial on November 5th claimed that the evolution question was settled, in that the church, North and South, universally had condemned Woodrow's views.[62] The next week, an article noted that Tyndall, a chief agnostic scientist, had

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[58]"True Science Harmonizes with the Bible," and "The Origin of Man," Christian Observer, Vol. 63, n. 41 (October 8, 1884), 4, 6.

[59]"Public Opinion on the Evolution Question," and "Evolution an Absurdity," Christian Observer, Vol. 63, n. 42 (October 15, 1884), 4.

[60]"Help for the Evolutionists," Christian Observer, Vol. 63, n. 43 (October 22, 1884), 4.

[61]"The Exegesis of Evolution," and "Evolution Against Our Instincts," Christian Observer, Vol. 63, n. 44 (October 29, 1884), 5, 6.

[62]"The Evolution Question Settled," Christian Observer, Vol. 63, n. 45 (November 5, 1884), 4. From the same issue, see S. M. Gaines, "Our Science Test," 6. See also "Evolution in the Northern Church," Christian Observer, Vol. 63, n. 49 and 50 (December 3 and 10, 1884), 4.

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discarded the Perkins Professor's views also.[63] November also had two articles on the question of evolution in the Synod of Texas.[64] On December 17th, two pertinent articles made their way onto the editorial page.[65]

This present treatment cannot do more than give this sampling of the articles and editorials. Of the popular church press, the Southern Presbyterian remained loyal to its editor, James Woodrow. The St. Louis Presbyterian gave some support, but it had limited circulation and influence. The Christian Observer, the Central Presbyterian, the North Carolina Presbyterian, the Southwestern Presbyterian, and the Texas Presbyterian all took positions against Professor Woodrow.[66]

The debate continued in those papers for some time to come. But at this point we turn our attention to the official ecclesiastical struggle that resulted from Professor Woodrow's

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[63]J. T. H., "Tyndall Against Woodrow," Christian Observer, Vol. 63, n. 46 (November 12, 1884), 6.

[64]S. F. Tenney, "Evolution in Texas," Christian Observer, Vol. 63, n. 46 (November 12, 1884), 4; "Simpson," "Synod of Texas on Evolution," Christian Observer, Vol. 63, n. 47 (November 19, 1884), 5. Tenney stated that the Synod was firmly against evolution being taught in the seminaries.

[65]"Dr. Woodrow's Removal," and "Columbia Theological Seminary," Christian Observer, Vol. 63, n. 51 (December 17, 1884), 4.

[66]Thompson, op. cit., 466. For the Central Presbyterian, see especially July 9, 16, 23, August 6, and September 10, 17, 1884. For the Texas Presbyterian, see August 8, 1884. For the Southwestern Presbyterian, see July 17, and August 21, 28, 1884. Of course, these are merely tokens of the numerous articles written on this controversy.

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revelation of his belief in evolution.[67]

4. Ecclesiastical Cases and Decisions

Could Woodrow continue as a professor in one of the church's theological seminaries? The question was of prime importance, and had to be considered from at least a couple of angles.

One of the primary concerns, of course, was financial. Columbia Theological Seminary had already had to shut down temporarily just a few years before this controversy, because of lack of funds. If the church as whole did not have confidence in the institution, and if presbyteries would not send their candidates there, that would mean the end of the school.

But also of concern was the fact that the church seemingly was putting its imprimatur upon a professor and his teaching when his views were conspicuously out of accord with

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[67]For a very unofficial look at the whole controversy, see Mark Reynolds, Jr., letter to Lizzie [Miss Elizabeth Waties Anderson] (his fiancee), October 26, 1884, in which he reported listening to Prof. Alexander in college chapel, during the time of the Synod in Greenville, advocating Woodrow's views. Reynolds, who came from one of the prominent families of Columbia, stated that the general opinion at the college was that, despite Girardeau's efforts, Woodrow would be "sustained and allowed to proceed in the development of the theory unmolested." He also wrote, "But you will not care to hear any more on this subject[.] I dont [sic] suppose it gives a woman any more satisfaction to know she was evolved from an 'ape' or from a 'man's rib.'" This letter is in the Reynolds Family Papers, South Caroliniana Library.

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the sentiment of the vast majority of the church, if not with its confessional statements. And, there was also the problem that Woodrow had been charged with no heresy and admitted to no heterodoxy.

The Board of Columbia Seminary voted on September 17, 1884, by a count of 8 to 3, that it agreed with the professor on his statement of the relation between natural science and the Bible; and that, while not agreeing with his belief regarding the probable way in which Adam's body was created, there was nothing with his carefully-delineated views on evolution that was incompatible with the faith. The Board also at this time put on the record its sense of the wisdom of the synods in establishing the Perkins Professorship and "of the importance of such instruction as it afforded, that our ministry might be the better prepared to resist the objections of infidel scientists and defend the Scriptures against their insidious charges."[68]

However, the three dissenters issued a protest for the record:

> 1. Evolution is an unproved hypothesis, and the Seminary is not the place for such teachings.

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[68]Quoted in John L. Girardeau, The Substance of Two Speeches on the Teaching of Evolution in Columbia Theological Seminary. . . (Columbia, S. C.: William Sloane, 1885), quoted in R. A. Webb, "The Evolution Controversy," The Life Work of John L. Girardeau, D. D., LL.D., Late Professor in the Presbyterian Theological Seminary, Columbia, S. C., George A. Blackburn, ed. (Columbia, S. C.: The State Company, 1916), 235. The quote is from the Report of the Board of Directors of Columbia Theological Seminary to the Associated Synods, and is also found in Thompson.

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> 2. Belief in Evolution changes the interpretation of many passages of Scripture from that now received by the church.
>
> 3. The view that the body of Adam was evolved from lower animals, and not formed by a supernatural act of God is dangerous and hurtful.
>
> 4. The theory that Adam's body was formed by the natural law of evolution while Eve's was created by a supernatural act of God is contrary to our Confession of Faith as that Confession of Faith has been and is interpreted by our Church.
>
> 5. The advocacy of views which have been received neither the endorsement of the Board nor that of the Synods having control of the Seminary; which have not been established by science; which have no authority from the Word of God, which tend to unsettle the received interpretation of many passages of Scripture, and to destroy the confidence of the Church in her doctrinal standards; which have already produced so much evil, and which will injure our Seminary and may rend our church ought not to be allowed.[69]

Various presbyteries and synods had the matter come before them in the autumn of 1884. Standing almost alone was Bethel Presbytery of South Carolina, which, with many of Woodrow's friends in its membership, tabled denunciatory resolutions by a margin of 24 to 18. But the Presbytery of Atlanta voted unanimously in condemnation of the trustees' actions, along with Ouchita (Arkansas), Central Texas, and East Texas. New Orleans Presbytery, the bailiwick of Benjamin Morgan Palmer, expressed regret at having sent a candidate for the ministry to that seminary.[70]

Because they controlled a rival institution, the Synods

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[69]Ibid., 235-36.

[70]Thompson, op. cit., 470.

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of Virginia and North Carolina apparently felt they must refrain from commenting on Columbia Seminary. However, the synod in the Old Dominion expressed faith in its own Union Theological Seminary and the faculty thereof.[71]

The Synod of Kentucky condemned Woodrow's views as "being generally regarded as in its tendencies unfavorable to the cultivation of a devout faith in Scripture." Therefore, evolution should not be inculcated in the church's schools, "nor should any efforts be made by our Christian instructors to reconcile the teachings of the Word of God with such theories which have not yet received, and most probably never will receive, the acceptance of the scientific world."[72]

With only two dissenting votes, the Synod of Nashville requested that its presbyteries withdraw their ministerial candidates without delay unless the controlling synods forbad the teaching of evolution at Columbia. The resolution adopted mentioned that Woodrow had publicly stated that he was teaching evolution at the seminary, and that the majority of the Directors endorsed his views, "thus authorizing him to continue to teach this doctrine."[73]

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[71]Ibid., 470.

[72]Synod of Kentucky, Minutes of the Synod of Kentucky, at the Annual Meeting, Held in Hopkinsville, Kentucky, October 8, 1884 (Louisville, Ky.: The Courier-Journal Job Printing Co., 1884), 133.

[73]Synod of Nashville, The Minutes of the Synod of Nashville, at Its Session in the Presbyterian Church, in Pulaski, Tennessee, October 16-18, 1884 (Knoxville, Tenn.: S. B. Newman & Co., Steam Book and Job Printers, 1884), 17.

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With only one dissenter, the Synod of Memphis voted that, due to the "great interest pervading the lenght [sic] and breadth of the Southern Presbyterian Church, and the extensive diversity of Opinion developed in regard to it [evolution]," it should not be taught in any institution of learning under the church's authority, and that such instruction would not be permitted in any school under that synod's control. The court was concerned because "the doctrine of evolution in the form now agitating our Southern Presbyterian Church, is fraught with peril to the peace and prosperity of our church."[74]

By a vote of 42 to 8, the Synod of Mississippi adopted B. M. Palmer's paper against evolution. The document said that the theory was dangerous to the church's peace and unity. Further, the Synod stated that it could not "consent that an hypothesis, confessed by its advocates to be unverified, and which, therefore, cannot be dignified as Science, should assume to control the interpretation of the inspired Word." The eight in the minority protested that this action involved the church in going beyond its proper ecclesiastical sphere of action, and thus violated the doctrine of the spirituality of the church; and that no claim was made for evolution as controlling the interpretation of the Bible: "nor from the very nature of the case could such a claim be made for any

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[74]Synod of Memphis, Synod Minutes (handwritten manuscript), Vol. IV (1881-86), October 24, 1884, 114-15.

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purely scientific theory."[75]

The Synod of Arkansas spoke against the teaching of evolution as a probable truth in any of the church's schools, and especially in the theological seminaries.[76] The Synod of Texas, after noting that evolution was unproven and that it was against the received understanding of the doctrinal standards and that it undermined the faith, unanimously asked that its presbyteries withdraw its candidates from the seminary in question unless the teaching of evolution stopped.[77]

But the decisive actions would be taken in the four controlling synods--South Carolina, Georgia, Alabama, and South Georgia and Florida. The first of these courts witnessed the most fascinating debate, in October 1884, in Greenville. Lasting five days, this great debate was, according to a Congressman who witnessed it, had never been equaled on the floor of the United States Senate for "ability, dignity and force." Dr. J. S. Cozby, Dr. John B. Adger, Dr. C. R. Hemphill, Dr. J. L. Martin, Dr. G. R. Brackett, Dr. W. J. McKay, Hon. W. A. Clark, and Dr. James Woodrow were on one

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[75]Synod of Mississippi, Minutes of the Synod of Mississippi, at Its Annual Session, Held at Crystal Springs, Oct. 29 to Nov. 1, 1884 (Jackson, Miss.: Clarion Steam Printing Establishment, 1884), 8-10, 16-17.

[76]Synod of Arkansas, Minutes, Synod of Arkansas, 1879-92 volume (handwritten manuscript), November 1, 1884, 82.

[77]Synod of Texas, Minutes, Synod of Texas, 1872-89 volume (handwritten manuscript), November 1, 1884, 262.

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side. Representing the other were Dr. J. B. Mack, Dr. W. F. Junkin, Dr. W. T. Thompson, Dr. C. S. Wedder, Dr. H. E. Shepherd, Dr. H. B. Pratt, R. A. Webb, and Dr. John L. Girardeau.[78]

The Committee on the Theological Seminary brought in majority and minority reports. Three members wanted to sustain the Board of Directors. They reported that the evolution hypothesis is "purely scientific and extra-Scriptural" and that therefore "the Church, as such, is not called upon to make any deliverance concerning its truth or falsity." Secondly, in light of the deep interest in and fears surrounding the subject, it would be "expedient to say that the Church, being set for the defence [sic] of the Gospel and the promulgation of Scriptural doctrines, can never, without transcending her proper sphere, incorporate into her confessions of Faith any of the hypotheses, theories or systems of human science." Third, while the Perkins Professorship necessarily touches on the hypothesis of evolution in its relationship to the Bible, "nevertheless, neither this nor any other scientific hypothesis is or can be taught in our Theological Seminary as an article of Church faith." Therefore, there should be "no reason to interfere with the present order of our Theological Seminary as determined by the Board of Directors."

The other two on the committee contended that the issue

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[78]Webb, op. cit., 234.

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was not whether Dr. Woodrow had contradicted the Bible "in its highest and absolute sense," but whether his views were contrary to the Southern Presbyterian interpretation of the Bible. The minority recommended that the Board's action be reversed and that the teaching of evolution as being probably true be forbidden since it was "contrary to the interpretation of the Scriptures by our church and to her prevailing and recognized views."[79]

Though a member of the Synod of Georgia (and thus not a member of the Synod of South Carolina), Dr. Woodrow was given the privilege of the floor in order to set forth a defense of his views.[80] He began his apology by making reference to his long association with the Synod, especially in his capacity as professor at the Seminary.

Woodrow continued his professed allegiance to the "absolute truthfulness" of every "single word in the blessed Bible." He also contended that he had faithfully carried out the original mandate given him as the Perkins Professor, and that the Board had affirmed his position on the relationship between the Bible and natural science by a vote of 8 to 3.

Woodrow's defense next centered around his inaugural

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[79]Synod of South Carolina, Mintues of the Synod of South Carolina, at Its Annual Sessions at Greenville, S. C., October 22nd--28th, 1884 (Spartanburg, S. C.: T. J. Trimmier, Printer, Bookseller & Stationer, 1884), 11-12.

[80]This address, which was spread over a two-day period, appeared in print three months later. See "Professor Woodrow's Speech Before the Synod of South Carolina," Southern Presbyterian Review, Vol. XXXVI, n. 1 (January 1885), 1-65.

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address over two decades prior to this, when his stated goal was to demonstrate "entire harmony, or at least the entire absence of discord," between science and revelation. He admitted that he had learned over the past twenty-three years that he should have utilized only the latter phrase to describe the relationship, as his work since that time had been to show the lack of disharmony.

The professor averred that he had never taught physical science in the seminary, except to the extent that the church had authorized--that is, with regard to the connection between general and special revelation. Further, he stated that he had inculcated only one principle--that his students must submit to the Lord and His Word.

Interestingly, he next said that the purpose of the Perkins Professorship was "purely apologetic; it is purely defensive." But he also quoted from the original document establishing the chair, that it was being set up "to refute the objections of infidel naturalists."

Woodrow reminded the court that when he had taken the subscription vows requisite for being a seminary professor, the Board of Directors knew that he believed in the great antiquity of the earth. Therefore, he could not be charged with violating his subscription to the Confessional Standards, since those who administered the oath knew of his views in that regard.

The next line of argument focused on the spirituality of

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the Church, that doctrine that had been of especial importance to the Southern Presbyterians. Woodrow stated that the Church may not teach anything other than what Christ has commanded--i.e., the Bible. The Church may do many things in order to carry out the Great Commission, including the efficient preparation of preachers of the gospel. And, part of that training may include instruction in the physical sciences. Or, the Church may, as at Davidson College, teach the subjects of political economy and chemistry. But, once the Church has selected whom it judges to be competent instructors in these fields, it may not then oversee their work and judge whether they are teaching good politics or good science. In other words, the Church as the Church is not competent to go beyond the confines of Scripture and determine the validity of the findings made in general revelation.

It was noted that the resolution from the minority was framed from notes which John Lafayette Girardeau, Woodrow's colleague at Columbia, had supplied. Woodrow worked toward refuting the concept expressed in that report, that the question was not whether his views involve heresy. He first expressed remorse that such a statement would even be entered on the record, since it inevitably raised suspicions regarding his orthodoxy; and since, if he was going to be tried, he would have to face particular charges and have the privilege of a carefully-conducted trial.

The defense next took aim at the position of the minority

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report, that what was at stake was not whether his views contradicted the Scripture "in its highest and absolute sense," but whether they were out of accord with "the interpretations of the Bible by the Presbyterian Church in the United States." He ridiculed this notion as implying that there is a contradiction between what the Bible teaches and what the Presbyterian standards say. Further, such an approach, according to Woodrow, would cause many bright young people to lose faith in Christianity.

Against another of the resolutions of the minority, viz., that the Board's approval of Woodrow's views of the relationship between the Bible and natural science, Woodrow also fought back. He continued to maintain that "non-contradiction" is the proper relationship between them, and that Girardeau's insistence upon the term, "the harmony of non-contradiction," was merely an argument about words. But more to the point, Woodrow forthrightly argued, in contrast to the Medieval view, that the Bible does not teach natural science.

Contrary to the minority's assertion that he had inculcated evolution, Woodrow insisted he had not. Moreover, he had only taken a public stance on the subject after being asked to do so by the Board. With regard to the theory of evolution being an "unverified hypothesis" and therefore it should be rejected, the Church should be aware that that argument is a double-edged sword that could come back to haunt

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her; for just consider on how many doctrines Christians disagree. From a different angle, he could recall a delightful evening spent in the home of a Judge Ezekiel Pickens of Alabama some years ago, at which time the judge presented the case that "all that had been said with regard to the rotundity of the earth and the rotation of the earth upon its axis, was--to use the expression that has been here repeated so often--an unverified hypothesis."

What followed was a recitation of the leading schools in the country and their professors, nearly all of whom were evolutionists. The same was true of the naturalists abroad. Even those who could be brought in to testify for the traditional view have some strange baggage of their own. For example, Sir William Thomson, a Presbyterian elder, besides not being an expert in natural history, believed that life originated on earth by being transported by meteorites wandering through space and falling here. Louis Agassiz, a friend and mentor of Woodrow's, rejected evolution; but he also believed in polygenesis.

Denying that the Confessional Standards speak of the mode of man's creation--that is, of whether creation was mediate or immediate--, the professor stated that evolution addresses only the process: "a description of a mode according to which changes take place, not a description of the power which produces the changes." To say that "God made me" is not to say that God made each individual immediately; rather, we are

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all the product of natural generation. Woodrow could find no clear statement as to the mode of the creation of Adam's body, while he did see that how Eve's body was made is perspicuously set forth. Woodrow took note of the fact that his belief in "Creationism" as to the origin of each human soul--that is, the doctrine that the body is mediately created via the parents, while the soul is immediately created and implanted into each body--was the historic view of the Reformed Churches, with rare exception until recently: as a matter of fact, Girardeau himself being one of the exceptions by his belief in Traducianism. Furthermore, there is a great likeness between the First Adam and the Second Adam, in that in the Incarnation there is the mixture of mediate and immediate creation.

Woodrow preferred not to stand alone, but he said he was not afraid to do so. Using Luther-like rhetoric, he stated, "'With regard to the charges against me, if any man can prove that they are true by the word of God, I will repent and recant; but until then, here I stand, I cannot otherwise; God help me. Amen.' And so stand I." But he also castigated those synods who were crying the loudest against him, which allowed the teaching of evolution in their universities.

Addressing the issue that evolution implies that man had a beastly origin, Woodrow replied that "we need not be so proud," since man is an animal which shares many physiological characteristics with other animals (for example, a dog).

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> Again, as to our instincts being shocked: what is there in red clay that is so much more noble than the most highly organised form God had made up to the time of Adam? You have only the choice between red clay and the highest and best thing that was produced by the power of God up to the time of man's existence. And if your decision is to be controlled by your prejudices and your instincts and your feelings, let me ask you, Moderator, how do you like to think that the negro is your brother? Is your instinct shocked by that? Will you follow instincts in one case and not follow them in another?

After adjournment for the night, and replies to Woodrow's remarks the next day, Woodrow continued his speech that next night. He adduced the testimony of theologians in Reformed seminaries to the effect that evolution did not contradict the Bible. He then quoted at length from the 1633 decision of the Tribunal of the Supreme Inquisition against Galileo Galilei. Immediately upon this, he got into a debate with one of the members of the Synod who had alluded to Galileo's trial. Dr. Junkin explained that he was merely expressing his opinion that the Roman Church was justified in expecting that teachers in a school under Romish domination in Pisa would conform to dogma, in the same way that the Presbyterian Church should expect that teachers in schools under its dominion will not teach contrary to Church doctrine. Woodrow retorted that at least Galileo had the benefit of being tried in ecclesiastical courts according to the Church's laws.

Woodrow reiterated that the Church must confine her authoritative teaching to the gospel. Only when science contradicts Scripture must the Church deal with scientific

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matters. Replying to a question by Girardeau, his antagonist said that the a church court may determine only if a matter is Scriptural, not necessarily if it is true.

To the suggestion that evolution was of no use to comfort a dying man, Woodrow responded a dying man would receive no "comfort or consolation . . . from listening to the conjugation of a Hebrew verb at his bedside. . . . And so with a large part of the auxiliary instructions in every Seminary course."

Woodrow concluded by appealing once again for the Church not to be entangled with scientific questions, about which she has not the authority or competence to speak. Indeed, the Church has often in the past been wrong about such things as the inhabitability of the torrid zone, the sphericity of the earth, heliocentricity, and the age of the earth. Rather, the Church must not "place deadly stumbling blocks in the path of those who are seeking the way of life in the Holy Word." He proclaimed:

> For the sake of the intelligent ingenuous youth of the land, for the sake of the greater multitude who will look to them as their guides, that you may not drive to eternal death those whom you would fain win to eternal blessedness, I beseech you that you will not tell them in Christ's name that if they accept the teachings of God's works, they can have no share in the unspeakable blessings offered in God's word. By your love for the souls of your fellow-men, by your loyalty to the King and Lord of the Church and your desire to obey him by keeping within the limits which he has prescribed to you, as you would glorify him as his representatives by bringing souls into his kingdom, I beseech you as his representatives do not commit him to what he has not commanded, but preach the word, and the

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word alone.

The drama intensified as John Lafayette Girardeau took the floor. This colleague of Woodrow maintained that the question was not one of heresy per se, since he denied "no fundamental of the gospel scheme" and accepted all the teachings of the Bible.

He stated that all valid thought must be harmonious with itself; and that Woodrow's choice of terminology ("non-contradiction") was therefore misleading. Girardeau also noted that there can be no contradiction between "the Bible in its absolute sense as the very word of God, and science in its absolute sense as a true interpretation of the facts of nature."

The issue at stake was therefore not whether evolution contradicted the Bible in an absolute sense; for, according to the Huguenot, it would not be judicious for a church court to dogmatize regarding that. Rather, the question was with regard to Woodrow's hypothesis and the Bible as interpreted by the Southern Presbyterian Church--that is, "The Bible as it is to us." The church must not allow "a disproved assumption of science" to take precedence over a contradictory interpretation of Scripture by the church, for that "gives the advantage to science." Building on this issue, Girardeau laid down as a basic proposition the notion that no unproved scientific hypothesis should be taught in a theological seminary, the basic purpose of which is "to teach the church's

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interpretation of the word of God." Indeed, Woodrow himself admitted that evolution was only "probably true."

A professor, as an ordained teaching elder, had access to the church courts, which are the proper forum for proposing and debating changes to the ecclesiastical constitution. Girardeau repeated the basic premise:

> No Professor in a theological seminary . . . is at liberty in the classroom or in the chapel to inculcate views contrary to the Standards of the church or to oppose any element of those Standards. If he conscientiously holds views which are inconsistent with them, he ought to refrain from inculcating those views, or else retire from the institution.

The church courts should enforce this principle, if a man did not voluntarily adhere to it.

Girardeau's second proposition was that Woodrow's theory of evolution did actually go against the denomination's prevalent and recognized views. Girardeau therefore asked not that the Synod remove Woodrow, but rather disapprove the Board's action in sustaining Woodrow and to forbid the teaching of the theory of evolution, even as probably true. The South Carolinian warned that the Seminary would lose the support of the church if this course of action were not taken.[81]

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[81]Girardeau, Two Speeches on the Teaching of Evolution, in Webb, op. cit., 234-80. For an evaluation of Girardeau's oratorical skills, from one who was apparently not a Presbyterian, see Mark Reynolds, Jr., letter to Lizzie [Miss Elizabeth Waties Anderson], January 24, 1886, Reynolds Family Records, South Caroliniana Library. Reynolds wrote that he and Woodrow's son attended upon his preaching, and that "[h]e is an Eloquent & graceful speaker, whose logical mind always instructs and whose brilliant imagination never fails to throw

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Among those who defended Woodrow were C. R. Hemphill, fellow professor at Columbia, and J. B. Adger, both of whom attacked the notion of a theological seminary as a place that was to be free from controversy. The latter stated that a seminary was to be an institution where its participants could inquire into all truth. The former reminded the court that there were many ideas once accepted by the Christian world--such as creation in six literal twenty-four hour periods, a universal Noahic flood, and the inspiration of the Hebrew vowel points in the Scripture text--which were no longer necessarily adhered to.[82]

J. L. Martin, a physician and a pastor, vehemently said that Woodrow had given him the armor in order to fight the battle with scientific infidelity. Indeed, his class had enabled him to avoid a life of "infidelity and atheism and cheerless blank dispair."[83]

After several days of debate, the Synod rejected both the

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forth its gems." But for young Reynolds, "his theology is too severe--he believes that with God alone we are lost, stand no chance whatever, Except thro' a mediation--that the shedding of blood was an absolute necessity to satisfy the violation of the law & wash out sin." The correspondent expressed his opinion that "Dr. Woodrow is just as sincere a Christian as Dr. G. & reads his bible [sic] with the same faith, and open eye--he does not read his theology into his science either, and while the latter is more brilliant & beautiful as a speaker, Dr. W., with his quiet simpler ways, has a far greater reach of intellect & has thought more deeply on all subjects."

[82]Thompson, op. cit., 473.

[83]Ibid.

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majority and the minority reports by identical counts of 44 to 52. It then adopted, by a voted of 50 to 45, this resolution, from Charleston's W. T. Thompson: "That in the judgment of this Synod the teaching of Evolution in the Theological Seminary at Columbia, except in a purely expository manner, without intention of inculcating its truth is hereby disapproved." Unanimously adopted were resolutions expressing affection for James Woodrow as a person, appreciation of his character, and admiration for his abilities in both science and theology.[84] Thus the Synod tried to set the discussion on the high ground of the merits of the matter, rather than on the personalities involved.[85]

Majority and minority reports also came before the Synod of Georgia. The majority, recommending an overturning of Woodrow's evolutionary teaching, was approved, 60-21. Included in that report was the statement that the Synod "as one of the controlling Synods of that Seminary, directs the Board to take whatever steps may be necessary to prevent [the teaching of evolution]."[86] Aiding the prevailing side was Dr. G. B. Strickler of Atlanta, who would later become

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[84]Synod of South Carolina, op. cit., 20ff.

[85]Thompson, op. cit., 473-74.

[86]Synod of Georgia, Minutes of the Synod of Georgia, at Their Annual Sessions at Marietta, Georgia, OCt. 29th to Nov. 1st, 1884 (Atlanta, Ga.: Dodson's Printing Office, n. d.), 9-10, 12-13, 15. Dr. Woodrow and Elder F. R. Calhoun abstained from voting.

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Professor of Theology at Union Seminary in Virginia.[87]

A "solemn protest" was lodged against Synod's action, in that said action defeated the very purpose of the Perkins Professorship and that it violated the Constitution of the Seminary in two ways: both in usurping the authority of the Board in which control had been vested, and in condemning the Perkins Professor "as unfaithful and his teachings as unsound without according him the trial by the board provided for in the Constitution." A. W. Clisby, one of the members of the Seminary's Board of Directors who had protested the Synod's action, was asked at the very end of Synod's final session to resign, on a vote of 25 to 19. When he refused to do so, on conscientious reasons, the judicatory voted 30 to 14 to replace him with a trustee who represented the majority viewpoint.[88]

First Presbyterian Church of Selma had sent an overture to the Synod of Alabama, asking for that court to take steps to secure the abolition of the Perkins Professorship. Cited as reasons were the fact that the normal curriculum of a seminary would be sufficiently demanding in a three year course of study; the opinion that "[i]f it be deemed advisable that the relation of Natural Science to Revelation should be taught in a Theological Seminary, we hold that more reliable

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[87]Thompson, op. cit., 474.

[88]Synod of Georgia, op. cit., 17-18, 20-21. Interestingly, Clisby was one of the temporary (i. e., recording) clerks of Synod.

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and more scriptural [sic] views are apt to be given by those whose studies and habits of thought lead them to look at scientific theories from a scriptural [sic] standpoint, than by those who look at the Bible from the shifting standpoint of 'science, falsely so-called'"; that Woodrow had shifted his own position on the relation between science and revelation from that of harmony, thus contradicting the design of the Chair; and that great harm had been done to the Seminary and the Church at large.[89]

By a count of 41 to 19, the Synod of Alabama told its directors to ensure that evolution would not be taught at Columbia Seminary. The minority spread a protest on the record, which affirmed that "the Bible, as interpreted by our standards, is to be regarded as the only infallible rule of faith and practice" and that "any teachings on Science which are in conflict with God's Word, or dangerous in their tendency, are condemned, and should be avoided." The concern of the minority appears to be that discussion of controversial topics such as evolution were inherent in the purview of the Perkins Professorship. But these nineteen disapproved all teaching of evolution "except in a purely expository manner, showing what it is, and how it affects revelation." The Synod also replaced two men on Board who supported Woodrow, C. A.

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[89]Synod of Alabama, Minutes of the Forty-Ninth Session of the Synod of Alabama, Convened at Tuskaloosa, Oct. 29 to Nov. 3, 1884 (Columbus, Ga.: Thos. Gilbert, Stam-Power Printer and Book-Binder, 1884), 157-58.

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Stillman and R. A. Lapsley, with men who could be counted on to carry out the wishes of the court.[90]

The Synod of South Georgia and Florida had to contend with two minority reports regarding Columbia Seminary. The second one had a sole author, who submitted that the Church, if it adopted the majority report, either had to "dictate the findings and utterances of Science, or abdicate her just authority so far as the [Perkins] Chair is concerned." By a vote of 22 to 13, Synod approved the majority report which stated that evolution, which is "at best an unproved hypothesis," appears to be out of accord with "the received interpretation of Scripture" and that if consistently worked out "would seem to affect some of the fundamental doctrines of the Bible." Further, to allow the continuation of such teaching would put in jeopardy the continuation of the Seminary. The one representative on the Board from this synod was ordered to ensure that the will of the four controlling synods was implemented. As in other synods, a protest was made and also answered.[91]

Eight men on the Board had voted in favor of Woodrow. Five of those eight had terms which expired, and only one was re-elected. The Synod of Georgia expelled one of the others which had sustained the controversial professor. Thus the

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[90]Ibid., 169-71.

[91]Synod of South Georgia and Florida, Minutes (handwritten manuscript), 1881-1990 volume, November 28, 1884, 68-71, 77-78.

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majority of eight had become a minority of three. On December 10, 1884, the new Board asked for Woodrow's resignation. He declined to resign; and he also refused to appear before the Board to explain his declination. The Board thereupon voted to remove him from his chair. At this, two of the pro-Woodrow professors, W. E. Boggs (Church History) and C. R. Hemphill (Biblical Literature), though not adherents to the theory of evolution, themselves resigned.[92]

But here the plot thickens. Woodrow refused to vacate his post, for, as he told the 1885 meeting of the Synod of South Carolina, the Directors had mistakenly believed that he had stated that he would continue to teach evolution as probably true, and they also had not asked him whether or not he would obey the instructions of the Synod. According to Woodrow, the Board could not remove him from his chair because the four supporting synods had entered into a binding covenant to the effect that a professor could be only suspended pending the outcome of a trial. Therefore, this was an illegitimate effort to have him removed.[93]

Fast and furious was the response throughout the denomination and its press, as editorials and articles poured fuel on the fire. J. B. Adger accused J. B. Mack of masterminding the attack on Woodrow. At the same time, those opposed to the Perkins Professor could not fathom what

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[92]Thompson, op. cit., 475.

[93]Ibid.

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motivated him in his attempt to hang onto his job.[94]

Woodrow's (privately stated) reason was that he had been unjustly dealt with and that he had a right to his day in court. Accordingly, he asked his home presbytery, Augusta, to grant him a trial in order that he might clear his good name. Because that court declined to do so, Woodrow complained to the Synod of Georgia, which ordered the presbytery either to declare that there was no basis for judicial process or else to begin said process against him and proceed to trial.[95]

Meanwhile, the publications war continued. George D. Armstrong, Pastor of Norfolk's First Presbyterian Church, had published early in 1885 a couple of lectures he had given on the subject of evolution. He noted that changes in organic nature and changes which constitute growth do not lend support to the theory of Evolution.

Regarding changes which last beyond the life of the individual, Armstrong stated that there are several laws which limit the law of variation. One is "the law of degeneration through neglect or 'the law of reversion to type.'" Another is "a law of limitation confining these variations within the boundary lines of species, 'the law of the permanence of species.'" Concerning the latter, the author pointed out that even Darwin virtually conceded the fixity of species. Further, two issues presented difficulties in terms of

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[94]Ibid., 475-76.

[95]Ibid., 477-78.

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settling this question definitively; one, the "confounding of artificial and natural species"; two, "the fact that the boundary line of many comparatively unknown natural species of plants and animals has as yet been but provisionally determined."

This former Professor of Chemistry and Geology at Washington & Lee University defined evolution, broadly, as the "transformation by successive differentiations of the homogeneous into the heterogeneous." He noted that Tyndall, along with the vast majority of scientists, rejected spontaneous generation. Armstrong argued that the evolutionary theory would have to bridge a great gulf, that of the leap from animal to human in terms of intellect and morality--a gap almost as great as that between life and death.

This professor-turned-pastor stated that the creation "hypothesis" believed that creation was not a single act by God, but extended over a long period of time, the length of which could be ascertained by geology; and that the plants and animals were not created individually or in pairs, but in multitudes. He then set forth why he could not accept evolution as probably true--first by examining and refuting the arguments that evolutionists bring forth in support of their theory. First, rudimentary organs do not occur very often, and therefore their presence is not an important factor in determining the issue. Second, the facts of embryology are

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indicative of revolution, not evolution. Third, geographical distribution of plants and animals can easily be explained on the basis of creation and subsequent extinction of certain species in certain locales. Fourth, the strong argument regarding the gradual advance in the type of living creatures (as learned from studying the fossiliferous rock-strata of the earth) can be explained more simply on the basis of creation.

Turning to the objections to evolution, Armstrong noted, first, that many plant and animal species came into being cotemporaneously, not successively. Secondly, in many instances in the fossil record, the higher species appear first. Third, no transition forms--a great number of which would be necessary to sustain the evolutionary thesis--cannot be found.

But there were two major objections which evolution could not surmount. First, outside of man's intelligent intervention, there is no tendency in nature for plants and animals to exhibit permanent change. Evidence he adduced for this point included the fact that the stock-breeder has to maintain a highly improved species with special care; and the fact that there is no evidence of change over time, whether considering historical depictions from many thousands of years ago or the fossil record. Secondly, there is the law of the permanence of species. So settled is this principle that Darwin and other evolutionists try to explain it away by postulating that this law did not always obtain.

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Armstrong considered the relationship of the Bible to evolution. He rejected not only the atheistical constructions of evolution, but also Woodrow's hypothesis. Regarding that thesis, the Virginian regarded it as totally unscientific since it attributed woman's body to immediate creation; while woman is half of species Homo, and this would mean that man would have a "mongrel origin for a living body"--an idea which "is without precedent in even the wildest speculations of scientists." Woodrow's view would also be irreconcilable with the account of the creation of man as given in Genesis 2:7, since man was not a living soul until God breathed into him the breath of life. And, this strange theory would cause many to lose confidence in the veracity of the Bible.

In a limited range--that is, by excluding inorganic nature and the creation of man--the evolutionary thesis as a mode of creation could not, according to Armstrong, be ruled out of order as atheistical. However, he cited Acts 17:28, Matthew 6:26, and Psalm 147:9 as tending against such a position. Armstrong concluded by noting that Prussia had recently prohibited the teaching of evolution in the public schools, and by predicting that this theory would soon be antiquated: "the oft-repeated tragedy of science, the slaughter of a beautiful theory by ugly facts."[96]

While most of the periodicals supported the traditional

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[96]George D. Armstrong, Evolution. The Substance of Two Lectures (Norfolk, Va.: J. D. Ghiselin, 1885), 3-22.

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perspective, they remained open to opposing articles. But this was not the case with Woodrow's publications, the Southern Presbyterian and the Southern Presbyterian Review, which kept up a steady drumbeat in his defense.

For example, J. William Flinn's two articles on "Evolution and Theology" appeared in April and July 1885. In the first, this New Orleans pastor criticized the treatment which the church had afforded Woodrow, and predicted that the world, on the basis of the Southern Presbyterian handling of the matter, would conclude that Christianity is against culture and science, and against freedom of thought and investigation. In the second, this soon-to-be-elected professor at the University of South Carolina noted that a hundred men had protested the actions in the four controlling synods. All of these--many of them older statesmen but most of them younger, future leaders in the church--had essentially had a stigma (as heretics or at least apostates) attached to their names as a result of their position. But the burden of Flinn's writing was to convey the idea that there were virtually no scientists or textbook authors who rejected evolution; and that most evangelical communions, including those in the Reformed camp (such as the Northern Presbyterian Church, the Reformed Church of the Netherlands, and the major Presbyterian bodies of Scotland) tolerated belief in evolution

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as consistent with the Bible.[97]

Also in the July issue of the Review was J. B. Adger's "Calm and Candid Review." While not referring to Girardeau by any but his given name, Adger pilloried this John to whom, as he said, comparison had been made, in times past, to the golden-mouthed John of Constantinople or John of Patmos.

Adger attacked what he alleged would be the loss of private judgment, if Girardeau's construction were adopted. "'The Bible, the Bible alone (said Chillingworth) is the religion of Protestants'; but our friend says the religion of Southern Presbyterians, which must be taught by the teachers whom their Church accredits amongst us, is what that Church holds and what she dictates!"

Adger assailed the notion that theological professors are not as free as pastors to deal with unsettled matters in their respective posts. "In the General Assembly he [a seminary professor] may bawl as loudly as he likes out of his presbyterial mouth regarding any unverified hypothesis, but in the Seminary on no such question shall one whisper escape his professorial lips!"

This South Carolinian excoriated Girardeau's contention that theological seminaries should be purely dogmatic rather

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[97]J. William Flinn, "Evolution and Theology," Southern Presbyterian Review, Vol. XXXVI, n. 2 (April 1885), 270-71, n. 3 (July 1885), 507-89; cited in Thompson, op. cit., 477-78. These two articles by Flinn were also reprinted in a pamphlet, Evolution and Theology (Columbia, S. C.: Presbyterian Publishing House, 1885).

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than allowing for development and speculation.

> The idea is preposterous. It is not Protestant. No merely human idea is perfect. Our standards are not infallible and our Professors must not teach their students to regard them as infallible, for that is the surest way to make these young inquirers search to find errors in them.

Far from stifling free inquiry, seminaries should encourage it, since their purpose should not be teaching the accepted doctrines as such, but the teaching of the truth.

Adger maintained that when a Presbyterian professes that the church's doctrinal standards are "standard expositions of the teachings of Scripture in relation to both faith and practice," the faith is only "as regards salvation. Surely it will not do to say that our standards teach all on every subject that the Scriptures teach." The writer pointed out what he thought was hypocrisy on Girardeau's part, when he would not insist that the "six days" referred to in the confessional standards had to mean six literal days.

The author would not allow that the standards must mean that creation can be only immediate and not mediate. "Are we to deny what our Saviour said, that his Father worketh hitherto? Are we to hold that God is not now the Creator of every man that is born into the world?"

Regarding theological subscription, Adger averred:

> Surely the yoke he [Girardeau] constructs for himself and all his brethren is one we never agreed to wear. We never accepted the standards as other than a just summary of Scripture truth. We never have acknowledged our Church infallible or her Confession absolutely beyond the imperfection that belongs to everything human. We cannot consent to

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put it on the same level with the Bible.

The article also ridiculed Girardeau's assertion that the church's "prevailing and recognised views" should prevail in this instance; he did so on the basis of his allegation that this would result in the binding of Woodrow's conscience to the opinions of men, in much the same way that ecclesiastical authorities tried to bind the conscience of Luther. Further, Girardeau's constructions of Woodrow's positions were really caricatures: "unfriendly and unfair representations of an opponent's idea, unworthy of an honorable antagonist, not to say of a philosopher and a theologian."[98]

There would also be more direct exchange between Adger and Girardeau. The latter declined to answer the former in a secular newspaper.[99] But he did respond to an October 27, 1885, letter from Adger with a letter of his own. In it, he replied that he could not consent to having his historical address published in the Southern Presbyterian Review, since his work was placed in the hands of the Synod's committee. He felt that he had decided to resign his professorship before the Synod of South Carolina acted relative to Prof. Woodrow,

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[98]Jno. B. Adger, "A Calm and Candid Review of Some Speeches on Evolution," Southern Presbyterian Review, Vol. XXXVI, n. 3 (July 1885), 377-400. See also Eugene Daniel, "The Perkins Professor's Case Viewed in the Light of Law and Equity," Southern Presbyterian Review, Vol. XXXVI, n. 3 (July 1885), 423-65.

[99]"The Woodrow Case. Dr. Girardeau Declines to Answer Through the News and Courier," The News and Courier, October 2, 1885; Girardeau file, South Caroliniana Library.

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and that that body's action confirmed his decision.

> The developments of the future, growing out of the ultimate action of all the Synods controlling the Seminary, may affect my present attitude, I will not commit myself to determine. I am not my own master. But at present I cannot recede from the position I have taken.[100]

Girardeau's thinking at the time is perhaps best represented by a letter he wrote to R. A. Webb on September 14, 1885. After expression of some tender affections for this son-in-law, he stated that he thought that his critics actually believed that he had intended to posit "two divine senses of the Bible, one which God holds for himself and another and different one which he designs for the church." Not only was Girardeau "reluctant to bring out the field pieces of the newspapers against the formidable redoubt of the Quarterly," he was also "reluctant to strike Dr. Adger, as, in argument, I would be obliged to strike him. His misconceptions and misstatements render him liable him to a pitiless demolition. I shrink from subjecting him to it."

After noting the concern of the students of Columbia Seminary about the lack of professors--at that moment, Girardeau was the only faculty member!--he stated that, even if the school was forever closed, he would be consoled by the fact that at least evolution was not allowed to be taught

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[100]John L. Girardeau, letter to [John B.] Adger, October 29, 1885, mfm. Roll #160, South Caroliniana Library. The letter begins, "Dear Brother Adger," and ends, "With thanks for the kind expressions of your letter, I am, Dear Brother, Fraternally Y[ou]rs."

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there. He exulted that the minority report at the Synod meeting at Greenville the previous year had taken the Woodrow forces completely by surprise, as they had been prepared to defend against the charge of heresy. Indeed, a formal trial of Woodrow was impossible, because "formal process supposes the charge of 'offence' committed," and Woodrow had not yet committed a chargeable offense in that he had not at that time inculcated the doctrine of evolution.

Girardeau thought that if Woodrow had said plainly that he would not teach his evolutionary view at the Seminary, he would not have been removed from his post. However, his failure to give such assurance mandated that the Board protect the school against "future danger."

Girardeau concluded his epistle with these words:

> The fierce fight may rage on the question of approving the action of the Board ascertained upon review of their Records. That may then open the road for personal onsets. Mack and I are accused as the chief conspirators. We are in the same boat. May Jesus be on board with us!--I have not thought carefully over this subject during vacation. I have been delving into the geological strata and fossil remains of the Synod. I have had to turn historian! I fear the Centennial will have no showing for Evolution.[101]

The relationship between the Bible and confessional standards is often problematic. The appeals by Adger and others to the notions of sola Scriptura, the right of private judgment, and liberty of conscience apparently took their toll

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[101]John L. Girardeau, letter to [R. A.] Webb, September 14, 1885, mfm. Roll #160, South Caroliniana Library.

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as the four controlling synods prepared to meet in the autumn of 1885.

In contradiction to Woodrow's appeal to the Synod of South Carolina, Dr. Girardeau presented his position. He argued that a formal trial of his colleague was not only impracticable but also unnecessary, in light of Woodrow's published views; and that therefore no injustice had been done to him. The Board was faithfully carrying out its duties, in accordance with the wishes of the Associated Synods, to prevent the inculcation of evolutionary views at the Seminary. The trustees were under no obligation to ask Woodrow if he would comply with the will of the synods. Woodrow himself had opportunity to signal a change in his intentions; and, indeed, he had stated to the Synod of Georgia, after the meeting of the Greenville Synod, that he would teach his view.

Girardeau had the previous year stated that there was no question of heresy at stake. But at this time, he was of the opinion that an investigation of the orthodoxy of Woodrow's views would be warranted. He cited, among other things, Woodrow's savage temper; that there was no check to the exposition of evolution; and that even if he omitted the teaching of evolution he would be unworthy to hold the post for which he had been hired. Woodrow had been insisting on a formal trial, which was impossible. If he continued to insist on a formal trial, the Board could not grant that request, as the four synods had already prohibited the inculcation of

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evolutionary beliefs; and therefore the Board would have had to ask for his resignation. If, on the other hand, he now dropped this vehemently maintained demand, he would be seen as being insincere and a troubler of the peace of the church. The Board was justified in its action because "[t]heir request for resignation had the force of command"; "[t]heir authority was resisted and contemned by refusal"; "[i]n demanding formal trial Dr. W. had treated the authority of the Synods with contempt"; and "Dr. W. still held the position of Professor. He held the fort." Girardeau noted that Woodrow had been compared to Galileo, who has occupied "a glorious position." "Let Dr. W. enjoy his honors [of being thus compared]. But let not him or his friends say that in being honored he has been humiliated. It is said, The church has been humiliated--'I am ashamed of my church,' exclaims one. But how both parties can be humiliated is hard to perceive. The Church accepts the humiliation."[102]

How much of this address was actually heard on the floor of the court is difficult to determine, since it was apparently only partly delivered because of time constraints. The Synod, in any case, was not favorably impressed, and by a

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[102] [John L. Girardeau], "Dr. Woodrow's Appeal to the Synod of South Carolina, Oct. 1885" (handwritten manuscript); and an untitled handwritten manuscript, Evolution and Woodrow Case folder, Blackburn Papers, Reformed Theological Seminary, Jackson, Mississippi. In the same folder, see also "Evolution" (handwritten manuscript), apparently from the same time frame, in which Girardeau documented the various (unsuccessful) attempts by the Board to meet with the embattled professor and to have him speak freely.

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vote of 82 to 50, expressed disapprobation with the Board of Directors in requesting Woodrow's resignation; and, with almost as large a margin, voted that his removal from the Perkins chair was unconstitutional. Two of the members of the Board, J. B. Mack and Frierson, thereupon resigned and were replaced. The Synod of South Georgia and Florida, noting that the Board had not determined whether Woodrow would comply with the synod's will, took exception to the Board's action in removing the professor. The Synod of Georgia, however, voted in favor of the Board, as did the Synod of Alabama, since there was no other way to implement the explicit synodical directions.[103]

On December 16, 1885, the Directors recognized Woodrow as the lawful occupant of the Perkins chair, and asked if he was willing to abide by the synod's request not to continue teaching his theory of evolution as revealed in his recent address. After Woodrow replied that he would accede to the explicit desires of the synods by omitting evolution from the subjects he taught, the Board voted, 8 to 5, respectfully to request his resignation. The specific reasons noted were the agitation in the church and the necessity to further the best interests of Columbia Seminary. When Woodrow refused to give an immediate reply, a motion to remove him immediately lost,

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[103]Thompson, op. cit., 479. For Woodrow's letter to the Synod, see Synod of South Carolina, Minutes of the Synod of South Carolina, at Its Annual Sessions, Held at Chester, S. C., October 21-24, 1885 (Spartanburg, S. C.: Cofield, Petty & Co., Plain and Fancy Book and Job Printers, 1885), 8-10.

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6 to 7. Girardeau again offered his own resignation--which had been previously offered and prompted because of his involvement in the controversy--and it was accepted. For the record, it was noted that two seniors and six juniors would leave the Seminary rather than attend Woodrow's classes. Only eleven students would be left at the end of the term, with five of those seniors who would be graduating, leaving only six total for the next year.[104]

A few months later, Girardeau expressed his views in an unpublished manuscript, which may very well have been lecture notes. Among the difficulties he cited with Woodrow's hypothesis were the following. First, "[i]t lacks Unity," since "[i]t supposes two plans of Creation, one for the body, the other for the soul"; and since it places the emphasis on the material side "as the plan of Creation," rather than regarding the material as "subordinate and subservient to the spiritual." Second, Woodrow's construction would demand that Eve as well as Adam had evolved. Third, man's descent would be "out of harmony with the descent of all other animals," since man would not be descended on his mother's side from "an animal ancestry." Fourth, what ever happened to the other species of animals from which Adam became man? Fifth, Woodrow's thesis would mean that there were and, unless destroyed by catastrophe, are "extra-Adamite races of men, devoid of souls." Sixth, the law of hybridity--that is, "that

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[104]Ibid., 479-80.

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no species now existent can by crossing be transmuted into another species"--contradicts the evolution of man. Seventh, absent positive proof that Adam descended from animal parents, "there is no reason why we should not hold that Adam was as supernaturally and suddenly formed as Eve. The presumption is strongly in favor of that view, and must be rebutted by experimental evidence." Eighth, there is no Scriptural reason to believe that Adam was derived from animal parents. Ninth, Woodrow's supposition would mean that man's "animal origin would be half natural and half supernatural. Surely, it would require scientific evidence of the strongest character to support a supposition which, presumably, is so entirely unscientific." Tenth, part of the penalty for sin was that man would return to "dust"; but, if this means "organic dust," then that would mean that at man's death he would turn into a human body. Eleventh, with a reference to Calvin's commentary on Genesis 2, Girardeau pointed out that God rested from the labors of creation; but that, if Woodrow were correct, that would not be a proper understanding, for "[d]oes not evolution go on?" Finally, the evolutionary thesis necessarily would mandate that Adam was once an infant. But how could he have been cared for during infancy and childhood? How could it be that he would have had a human body while growing up but without a human soul? And what about Adam's human instincts vis a vis his animal ones? There are insurmountable problems

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no matter what construction is placed upon this.[105]

In April 1886, Augusta Presbytery, in accordance with Synod's directive, took up Woodrow's request for the clearing of his name. The presbytery exonerated him from any charge of heresy, and thus found no basis for proceeding to trial. However, William Adams, a member of presbytery, pressed charges against Woodrow: first, for inculcating doctrines in conflict with the Scriptures as interpreted by the Confession of Faith; and secondly, for inculcating dangerous doctrines which were designed toward unsettling the church's mind regarding the authority and accuracy of the Bible as the infallible rule of faith. Signing on with Adams was, among others, Girardeau. Augusta Presbytery would consider the charges at its next meeting--after the General Assembly.[106]

Meanwhile, eight presbyteries had sent up overtures on the subject of evolution to the 1886 Assembly. The bills and overtures committee had majority and minority reports. As chairman, Dr. George D. Armstrong presented the majority report, which stated:

> The Church remains at this time sincerely convinced that the Scriptures, as truly and authoritatively expounded in our "Confession of Faith and Catechisms," teach;--
>
> That Adam and Eve were created, body and soul, by immediate acts of Almighty power, thereby preserving a perfect race unity;--

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[105][John L. Girardeau], "Difficulties Opposing Dr. Woodrow's Hypothesis of Evolution" (handwritten manuscript), March 1886, mfm. Roll #160, South Caroliniana Library.

[106]Thompson, op. cit., 480.

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> That Adam's body was directly fashioned by Almighty God, without any natural human parentage of any kind, out of matter previously created from nothing;--
>
> And that any doctrine at variance therewith is a dangerous error, inasmuch as in the methods of interpreting Scriptures it must demand, and, in the consequence which by fair implication it will involve, it will lead to the denial of doctrines fundamental to the faith.

The Assembly took five days to debate the issue. Armstrong was a strong advocate for the majority recommendation, declaring that accepting evolution would undercut belief in the Bible's full inspiration and result necessarily in the abandoing of the doctrine in man's fall. Genesis 1 and 2 are actual history, the Garden of Eden a real place, with a real tree from which Adam actually took the fruit and ate and chewed it.[107]

The presbyteries had chosen their commissioners carefully, since there was general knowledge that this controversy would be the major theme of the Assembly. Augusta Presbytery sent Dr. Woodrow, so he could speak in his own defense. He stated that he accepted the first couple of chapters of Genesis as being absolutely historically accurate and that he believed in the full inspiration of the whole Bible; however, Genesis does not say how God created man's body, whether from organic or inorganic dust, whether instantaneously or via an evolutionary process. He pled that the Church is incompetent to determine scientific matters, and

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[107]Ibid., 481.

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that she inevitably makes the wrong choice whenever she intrudes upon this area. He also sounded the warning that for every person lost because of the intrusion of science into religious matters, thousands had been pushed into hell because of religious intrusion into matter of science.[108]

J. B. Strickler, future theology professor at Virginia's Union Seminary, replied that the Presbyterian General Assembly would lose the respect of the masses of people if it told them that man evolved from a monkey. The Assembly as a whole agreed, overwhelmingly, 137 to 13.[109]

Now the debate shifted to the question of control of the seminaries. They were directly under the authority of the various synods, so the question was whether the Assembly could put a hedge about them in terms of heresy or error. After three days of discussion, the highest court asserted that it had such a prerogative, as exercised through the synods. This theoretical expression took on concrete form when the Assembly later recommended, by a tally of 65 to 25, that the four synods in charge of Columbia Seminary dismiss James Woodrow. Twelve of those voting against this resolution made clear that they, too, believed that the embattled professor should go.[110]

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[108]Ibid., 481-82.

[109]Ibid., 482.

[110]Ibid. Apparently Girardeau's advice was sought on the question of Assembly control of the denomination's theological institutions. See John L. Girardeau, telegram to Rev. R. K.

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Woodrow and his cohorts vehemently protested against these actions. Writing anonymously, Woodrow himself, under the pseudonym of "Gillespie," represented this viewpoint. The pamphlet began with a statement that in only a quarter century the Southern Presbyterian Church had forgotten its noble heritage of not concluding any matters not strictly ecclesiastical; and that the latest Assembly had in fact injected the word "immediate" into the Biblical account of creation and assigned a meaning to the word "dust" which cannot be legitimately deduced from the Scriptural language. "Accordingly, the question is no longer as to the hypothesis of Evolution, whether true or false; it is whether our General Assembly can add to the word of God; can set up the church's opinion at this time as a new rule of faith which we must accept or be cut off; can overturn our whole system of appellate courts."

"Gillespie" took the Assembly to task for setting up this <u>in these</u> deliverance as binding upon the church and its members. Even large majorities can be wrong.

> And what did the Augusta Assembly accomplish by declaring what the church remains sincerely convinced of at this time? The Word is infallible--the church is and always has been and to the end will be very, <u>very fallible indeed</u>. It is of exceeding small importance to us, whether as Presbyterians or as Protestants, what our "church remains at this time sincerely convinced of" unless she is able to produce for the authority and ground

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Moseby, May 26, 1886, Evolution and Woodrow Case folder, Blackburn Papers, Reformed Theological Seminary, Jackson, Mississippi.

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of her conviction a "Thus saith the Lord."

While accepting the Westminster Standards as standard expositions of the Bible, the author refused to be bound to the church's interpretation of either the Word or the Confession of Faith and Catechisms. In this regard, Woodrow again inveighed against the notion of there being two senses of Scripture. He also contended that the Assembly itself admitted the weakness of its position by saying that this was the church's view "at this time."

Woodrow next attacked the Assembly's deliverance as being a travesty and a caricature of his views. He had never "denied that Adam's body resulted from 'a sudden, supernatural, constructive act of God'"; or "asserted that Adam's body was born of animal parents"; or "maintained that Adam's body was once an infant and grew to the stature of a man"; or "maintained that Adam's body preceded for years the formation of Eve's body." Woodrow hotly stated: "Surely the materials out of which God made the body of Adam cannot be called his parentage. Surely it is of small importance what materials the creator of Adam's body employed."

Regarding the assertion of General Assembly control over the theological seminaries, Woodrow was livid.

> Behold, now, what a step is here taken towards centralization in our church. . . . Surely this is the baldest, most unblushing, and most unequivocal claim to original jurisdiction over every minister and elder and deacon, and over every affair of the church! Our Augusta Assembly stoops down past the Synods to direct and supervise the Presbyteries and Synods and individual office-bearers, hitherto

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amenable only to these lower courts!

> . . . What stronger feat [than the expulsion of a professor] can this new power ever attempt? What is to be the next development of this centralization? And if all the Seminaries and other schools, and all schemes for religious work, and especially all office-bearers of the church, are under the supervisory jurisdiction of the Assembly, then, of course, it must look after all the pulpits, and all the pastorates, and all the religious presses and papers--those potent organs which have so much influence over the practice and doctrine of the Assembly's constitutencies. And here, then, in this nineteenth century, and in our Southern Presbyterian Assembly, is put forth something very much like the Jesuit's doctrine, that "the church" must dominate over every human interest.

Not only was this right of Assembly asserted as a theoretical matter, but it was then, several days later, exercised against him personally.

The Perkins Professor made a multitude of "Pertinent Points" in closing, including the observation that he was not guilty and that was why "[p]ersonal animosities and sectional jealousies" had employed illegal methods to try to get him. Regarding judicial process, he said that it was inconsistent to consider a man a heretic and then not follow through by not only turning him out of his teaching post but also by deposing him from office. Further, the General Assembly had interfered with due process "by assuming to prejudge a question that is now undergoing judicical investigation in one of our lower courts." The court "condemned and sentenced a minister whose trial is appointed to be held next August--hanging the accused

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first, and trying him afterwards."[111]

The printing presses were working to set forth the majority opinion as well, however. George D. Armstrong presented the gist of what he had spoken on the floor of the Assembly in his own pamphlet.

First addressing the constitutionality of the matter, Armstrong pointed out that since the matter could be considered judicially, it could be also be taken up in an in thesi manner. And, he quoted from the 1880 Assembly, which had adopted Dr. Woodrow's paper on such, to the effect that whether a judicial or an in thesi decision was in view, "'both not only deserve high consideration, but both must be submitted to, unless contrary to the Constitution and the Word.'"

The matter had come to the church's courts in three ways: before the four controlling synods regarding the occupancy of the Perkins chair; before Augusta Presbytery in terms of judicial process instituted against Dr. Woodrow; and before the Assembly by means of overture from various presbyteries scattered across the denomination. The overtures had come because the evolution question was creating such controversy

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[111]"Gillespie," A Defense of True Presbyterianism Against Two Deliverances of the Augusta Assembly, May, 1886 (n.p.: n.n., n.d.). George Gillespie was one of the Scotsman who participated in the Westminster Assembly who wrote, among other things, Aaron's Rod Blossoming (a defense of Presbyterian polity) and Against English-Popish Cermonies, Obtruded onto the Church of Scotland (a polemic advocating Purtian-style simplicity in worship, including the rejection of the use of organs).

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in the church; and, since they had been sent prior to the filing of charges against the professor, these entreaties should properly be considered first. There may be a moral effect to the decision reached by the Assembly; but, in any case, in thesi statements are to be preferred to judicial pronouncements, since judicial cases often come wrapped up with so many other matters that can obscure the precise doctrinal question.

Armstrong argued that this was an "ecclesiastical" matter, since the Confession of Faith and Catechisms addressed man's creation, and because evolution has such an atheistic tendency. Even though it is a scientific question, the Scriptures, incidentally, teach science, and so there is overlap of spheres. The Bible was not written in scientific language, but in common parlance. As for science, one must distinguish between a theory, which is a conjecture that agrees well "with all the known facts in the case"; and a hypothesis, in which the facts "agree but imperfectly." Scripture and Genetic Evolution both teach regarding the origin of mankind; but the latter is not properly science in terms of established facts, but in terms of a (speculative) hypothesis. "What we have to complain of in this our day, is not the church making deliverances on matters scientific, but certain scientists undertaking to make deliverances on matters 'ecclesiastical.'"

Armstrong next assailed Woodrow's attack on him for

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having remarked that "evolution is 'an hypothesis which postulates, the transformation of an oak, not immediately, but by successive variations, into a silk-worm, a silk-worm into a frog, and a frog into a man.'" The Virginian quoted from Huxley to demonstrate that he believed that all life was connected "by gradational forms"; and from Darwin to prove that he thought that man descended from a hairy (probably arboreal) quadruped, with tail and pointed ears, and that all the higher forms of life probably came from a marsupial, before that from a reptile-like or amphibian-like creature, and antecedent to that from a sea-squirt.

Armstrong stated that "organic dust must be vegetable or animal matter reduced to a dry powder." He saw no problem with accepting that, because (purportedly) many generations of plants and animals lived before man's creation, the earth could be filled with dead and decayed material from the flora and fauna.

> But organic dust is a dead thing, and therefore incapable of generating naturally a living progeny. Suppose I take the finest Jersey Cow in the country and reduce her to organic dust, i.e., let her die, and her partially decomposed body assume the form of a dry powder,--what will you give me for the improved calf which shall be the evolute of this organic dust?

Armstrong said that Woodrow's used the term "organic dust" to refer to "the living body of an animal, moist with blood and other fluids, and presenting no sympton of decay. Such juggling with words as this cannot be allowed in dealing with the Scriptures."

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While recognizing the right of private judgment, and rejecting the ipsissimis verbus view of theological subscription (in favor of a looser construction of the term "the system of doctrine"), Armstrong posited that there may be offenses that strike at the vitals of the system which the church cannot tolerate. His own exception to the six literal days, and what was his exception until the Confession of Faith had been recently changed, viz., that a man marrying his deceased wife's sister is not incestuous, had not been regarded by the community of faith as being of much consequence. Armstrong also noted how dangerous an error evolution had been in the lives of such people as Darwin and Drummond.[112]

John Lafayette Girardeau also wrote of this controversy in a manuscript that was apparently intended for publication but was apparently never published. He argued that, of necessity, the General Assembly had "the constitutional right to pronounce a delieverance which implicated [Dr. Woodrow]." Included in this authority were such notions as the Assembly's power over the theological instruction in the church's seminaries, and the subordinate position of synods to the higher court. While direct and immediate control of Columbia Seminary is vested in the four controlling synods, ultimate

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[112]George D. Armstrong, A Defence of the "Deliverance" on Evolution, Adopted by the General Assembly of the Presbyterian Church in the United States, May 26th, 1886 (Norfolk, Va.: John D. Ghiselin, n.d.), 3-17.

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control must rest with the Assembly. Not only may the church's highest court give advice it deems fit to the inferior courts, it may also instruct them to remove from a teaching post someone whose teaching is dangerous.[113]

Augusta Presbytery, when it took up the charges against Woodrow, concluded by a margin of 14 to 9 that he was not guilty of teaching doctrines contrary to the received orthodoxy, and by a vote of 17 to 6 that he was not guilty of teaching things that were dangerous and that were calculated to unsettle the mind of the church. The court also bore testimony against the action of the General Assembly in handling a matter that was not determined by the Word of God, and in thus falling into the same error of which it had accused the Northern Presbyterians in 1861. Those in the minority gave notice of complaint to the Synod of Georgia.[114]

In doing so, they received advice from Girardeau as to the lawfulness of a complaint in such a case. A complaint "is the only organ of resistance to a heretical court, as such, which the Constitution places in the hands of God's people who love the truth, and will not tamely submit to its being trampled into the dust; unless resort be had to the extraordinary measure of prosecution by another court." Unless a complaint in such a situation were lawful, an

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[113][John L. Girardeau], "The Woodrow Evolution Controversy" (handwritten manuscript), mfm. Roll #160, South Caroliniana Library.

[114]Thompson, op. cit., 483.

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inferior court could harbor heretics with impunity.[115]

Meanwhile, much of the rest of the church weighed in officially, and decisively, on the side of the Assembly. The Synods of Virginia and Texas both overwhelmingly supported the Assembly's position on evolution.

The Synod of Georgia voted 56 to 8 to instruct the Board of Directors of the Seminary (a majority of the other synods agreeing) again to request Woodrow's resignation, and, failing to obtain that, to declare the Perkins Professorship vacant. By a count of 45 to 15, the synod sustained the complaint against Woodrow's acquittal on the first charge. The verdict was thereby annulled, and Woodrow gave notice of taking the matter to the General Assembly.[116]

Led by John L. Girardeau, the Synod of South Carolina voted, 71 to 24, that Woodrow should resign from the faculty, and asked that he immediately inform the court if he would. When he telegraphed back that he had to decline complying with that request, the synod adopted a similar motion to that of the Synod of Georgia, by a vote of 78 to 42. The two remaining synods (South Georgia and Florida, and Alabama) voted for comparable motions.[117]

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[115][John L. Girardeau], letter to Rev. Dr. J. L. Rogers, Oct. 12, 1886, Evolution and Woodrow Case folder, Blackburn Papers, Reformed Theological Seminary, Jackson, Mississippi.

[116]Synod of Georgia, Minutes of the Synod of Georgia, at Their Annual Sessions at Sparta, Georgia, November 10-13, 1886 (Newnan, Ga.: McClendon & Co., n. d.), 8-13.

[117]Thompson, op. cit., 483-84.

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In the midst of this latest round of the controversy, Aaron Warner Clisby, a minister then in Macon, Georgia, wrote that at least a couple of Woodrow's friends counselled him to consider going to federal court against J. B. Mack and the other lying opponents ("Cretans"). However, such would probably be at best a pyrrhic victory: "It is questionable . . . whether you can touch such pitch and not be defiled, or notice such people without lowering yourself."[118] This correspondent made very clear that he had nothing but distaste for Girardeau and company, and did not regard them as Christian brothers. He believed that the next General Assembly would "decapitate" Woodrow, but that there would be an inevitable reaction against "such rank folly and injustice," which would "soon force a perception of it, [and] in due time, confession. Our church will find that it has hurt itself more than you."[119] It should be noted that Clisby was one of the trustees removed from the Board of the Seminary by the Synod of Georgia in 1884.

Behind the scene on the other side, a former student at Columbia Seminary wrote to Girardeau, disputing the article

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[118]A. W. Clisby, letter to James Woodrow, December 17, 1886, Woodrow file, South Caroliniana Library. Clisby also commended Woodrow for his steadfast opposition to union with the Northern Presbyterian Church, and cited "the nigger" question as being the best weapon to guarantee the continuance of the Southern Church.

[119]A. W. Clisby, letter to James Woodrow, December 21, 1886, Woodrow file, South Caroliniana Library. This letter also contained discussion of keeping the Sabbath day holy.

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that had been copied in the Southern Presbyterian (for June 10, 1886) from the New Orleans Times-Democrat, to the effect that a number of students would have returned to Columbia if Woodrow had been in the Perkins Chair. T. P. Burgess wrote that he and eight others of his colleagues who were pursuing their studies at Princeton "wrote no such letters." Burgess wrote this letter, "trusting this little token of esteem may soften some of the effects of the many rude thrusts you have recently received."[120]

Because of all the turmoil, the Seminary had been unable to operate for the 1886-1887 school year. Woodrow, the only one left of the old faculty, had been ousted by direction of the four synods. Three new professors were elected, including Girardeau (Chair of Didactic and Polemic Theology). A fourth declined the offer to occupy the Perkins chair.[121]

But Woodrow would not give up the post, clinging tenaciously to it until the four synods would ratify the Board's decision.[122] He and his friends displayed anger and

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[120]T. P. Burgess, letter to J. L. Girardeau, Oct[.] 2nd[,] 1886, Evolution and Woodrow Case folder, Blackburn Papers, Reformed Theological Seminary, Jackson, Mississippi. In the same folder, see also C[halmers] Fraser, letter to Pete [T. P. Burgess], Oct. 21[,] 1886. Fraser was one of the eight other former students at Columbia then at Princeton, and he wrote, "I did not write Dr. Woodrow that I would return, if he were in the Perkins Chair. I left Columbia because I knew the Seminary was not in a condition to afford the advantages I sought."

[121]Thompson, op. cit., 484.

[122]Ibid.

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bitterness at the re-institution of Girardeau as a professor and J. B. Mack as a trustee. J. B. Adger, for instance, wrote that Girardeau, having felt that he must, for the sake of honor, resign from the Columbia faculty since he had been so instrumental in securing the removal of his colleague, could not with honor return to his former post. The re-election of Girardeau and re-appointment of Mack "are a declaration that one party in the four Synods intend to keep control of the Institution to the exclusion of many of its oldest friends and supporters. United, we can with difficulty sustain it. Divided, it may not be found practicable."[123] Further irritation came when the faculty, backed by the Board, would not permit a seminary student to attend Woodrow's scientific lectures at the South Carolina College.[124]

Girardeau prepared to meet whatever the opposition might attempt at the 1887 meeting of the Palmetto State's synod. He anticipated that the Woodrow forces would attempt to say that the action of the synod at Cheraw (1886) was unconstitutional and null and void, in that it contradicted the decision of the synod at Chester (1885). Girardeau would meet all such challenge by pointing out that the decision at Chester was only the opinion of that particular synod, and that in order to be a final determination it had to be approved by a

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[123]Jno. B. Adger, "An Open Letter," October 31, 1887, mfm. Roll #160, South Caroliniana Library. This letter was published in a newspaper, probably the News and Courier.

[124]Thompson, loc. cit.

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majority of the Associated Synods. But two synods had approved the Board's action, and two had disapproved: in a tie vote, nothing was determined. However, the Cheraw synod had acted concurrently with the other three sister bodies, and therefore that decision was binding.

Furthermore, there is nothing illegal in unseating a professor for good reasons. And, great chaos, animosity with the Synod of Georgia, and the possibility of revolution, would result if the decision of the previous year were overturned. Girardeau conceded the right of revolution, but was concerned regarding "the heavy responsibilities in its exercise" and that it "may be attended with great disasters," including the possibilities of either secession or excision.[125]

Regarding the matter of a seminarian attending the classes of Prof. Woodrow at the university, the faculty sent a letter to the student's home presbytery, New Orleans. In that epistle, the professors noted first of all that the man in question, William W. Elwang, had voluntarily decided to stop attending Woodrow's lectures. Rev. J. William Flinn, a friend of Woodrow and the "Correspondent of Education" for New Orleans Presbytery, had indicated "his consent that he [Elwang] should resume his attendance upon Prof. Woodrow's lectures." Even though the faculty had taken no formal action in this matter, the members had informally approved of

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[125] [John L. Girardeau], "The Synod of 1887" (handwritten manuscript), Evolution and Woodrow Case folder, Blackburn Papers, Reformed Theological Seminary, Jackson, Mississippi.

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Elwang's original decision. In light of the conflict between the instructions of Presbytery's Correspondent of Education and the opinions of the faculty members, and in light of recent actions by a majority of the Associated Synods, the faculty respectfully referred the matter to the Presbytery "to solicit an expression of its judgment in regard to it, at as early a day as may be practicable." The letter concluded, "While we have disposition to lay an interdict upon the free inquiries of students in any sphere of investigation, we are impelled by a sense of duty to raise the question . . . whether restrictions are not legitimate in this peculiar and exceptional instance."[126]

In the meantime, a new theological journal, designed to replace Woodrow's Southern Presbyterian Review, made its debut. In the premier issue of the Presbyterian Quarterly, George D. Armstrong strongly argued against evolution.

He began by stating that since science can say nothing about creation ex nihilo, he would confine his discussion to creation out of already existing materials. The Scriptures then teach the following regarding creation: 1. it was immediate; 2. it was not a single, but a continuous, act; 3. it involved creation of particular species, each producing

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[126]J[ames] D[oak] Tadlock, John L. Girardeau, and C[harles] C[ampbell] Hersman, letter to The Presbytery of New Orleans, Dec. 14, 1887, Evolution and Woodrow Case folder, Blackburn Papers, Reformed Theological Seminary, Jackson, Mississippi. Tadlock had served as President of King College, Bristol, Tennessee, from 1867 to 1885.

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after his kind; 4. except for man, there were multitudes of species which God brought forth; 5. the efficient cause was God's Almighty power; 6. His intelligent purpose has governed the work of creation.

Turning to evolution, Armstrong quoted from Spencer to give the definition that "'Evolution is the transformation of the homogeneous, through successive differentiations into the heterogeneous'"--a definition which Armstrong did not find helpful. Nor did he find any more useful Darwin's slogan: "'Descent with modifications.'" Part of the problem is that the vagueness lends itself to confusion of different types of evolution. Better was Huxley, who at least was more precise and less vague.

Armstrong then attacked various particulars of Darwin's original theory, which had had to undergo modification in order to fit the facts. For example, Darwin originally taught that each new species was the result of evolution of one solitary organism or, at most, one pair. However, the wide distribution of certain species (such as the oyster, which has little locomotion), and the fossil testimony (which indicates that there arose many of the same species simultaneously), caused the evolutionists to change the theory.

For another example, Darwin's notion of "natural selection" did not jibe with several facts--including the presence of plants and animals preserved for several thousands of years in the tombs of Egypt with absolutely no change, and

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the unchanged nature of the globerigena (the skeletons which largely make up the English chalk). The facts which forced this modification of Darwinianism demonstrate that natural selection cannot be a universal law of nature (if it be a law of nature at all), and that evolution would face the same objection as has creation, viz., that an extravagant amount of Divine power would have to be expended to bring the world into being.

A further instance of having to change the theory to fit with reality has to do with the fact that most evolutionary changes result in retrogression instead of progression. Various examples were cited as evidence that even evolutionists have to admit this to be the case.

Armstrong concluded by referring to Solomon's wisdom--that evolution is "one of those 'crooked things' . . . which . . . 'cannot be made straight.'" He also quoted from Argyll's Primeval Man, to the effect that a hypothesis which causes more problems than the current alternative (creation) cannot be even provisionally accepted.[127]

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[127]George D. Armstrong, "Creation as a Doctrine of Science," Presbyterian Quarterly, Vol. I (1887-88), 106-28. For relevant review articles by Armstrong during approximately the same time in the "Criticisms and Reviews" section of the Presbyterian Quarterly, see rev. of "Creation or Evolution?" A Philosophical Inquiry by George Ticknor Curtis, Vol. I (1887-88), 384-87; rev. of The Ethical Import of Darwinism by Jacob Gould Schurman, Vol. I (1887-88), 566-69; rev. of Evolution versus Involution. A Popular Exposition of the Doctrine of True Evolution, a Refutation of the Theories of Herbert Spencer, and a Vindication of Theism by Arze Z. Rred, Vol. II (1888), 166-68; rev. of Evolution and Its Relation to Religious Thought by Joseph LeConte, Vol. II (1888), 498-500;

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James Woodrow's ill-health had prevented him from presenting his complaint against the Synod of Georgia to the 1887 General Assembly, so it was not until the next year that he appeared before the high court.[128] He started by making his standard argument that he had not been regarded by his accusers as having held to anything that contradicts the Word of God in the absolute sense. He also noted that his accuser, William Adams, a member of the Seminary's Board of Directors, had stated under oath that he would not have prosecuted Woodrow if he had withdrawn from the school.[129]

Woodrow next argued that there was no substance to the indictment, and that the proseution's testimony, including that from Girardeau, misrepresented his views. The heart of his argument was this:

> I ask that the Synod's judgment be not sustained for the following reasons:
>
> 1. Because it is contrary to the law, in this, that it implies that the Word of God as interpreted in the standards, teaches specifically the kind of matter employed in the formation of Adam's body, the length of time occupied in the preparation of that matter, and the mode in which God fashioned it into a human body.

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and rev. of The Religious Aspects of Evolution by James McCosh, Vol. II (1888), 501-04. In the same publication, see also "Recent Publications," rev. of The Unity of the Truth in Christianity and Evolution by J. Max Hark, Vol. II (1888), 506; and Robert Watts, "Criticisms and Reviews," rev. of Evolution and Its Relation to Religious Thought by Joseph LeConte, Vol. III (1889), 131-41.

[128]Thompson, op. cit., 485.

[129]Adams, as voluntary prosecutor, could be compelled by the defendant to testify.

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> And 2. Because it is contrary to the evidence; for since the Word of God does not teach anything as to these particulars, but is silent respecting them, the opinions and doctrines of the complainant cannot be contrary thereto; whatever the evidence may show the complainant's opinions to be, it cannot show them to be contrary to that which does not exist.

After several pages of quotations from his own writings, Woodrow reaffirmed his belief in the absolute supremacy of the Scriptures. But--and here was the crux of the matter--he maintained that the Bible was silent respecting the mode of man's creation, and further that the church could not inquire into the truth or falsity of the natural history issue, as to whether evolution was correct.

Dealing directly with the Scriptures, the complainant addressed the question as to what is meant by the term, "dust" or "the dust of the ground." He argued against the notion that the Bible is a scientific document, and, in order to illustrate his point, dealt with such phrases as: greater and lesser lights (Genesis 1); "four corners of the earth" (Isaiah 11:12, Revelation 7:1); "the water under the earth," etc. (Exodus 20:4, Psalm 24:2, 136:6); "Who laid the foundations of the earth, that it should not be removed forever," etc. (Psalm 104:5, 119:90, Ecclesiastes 1:4-5); "the Lord God had not caused it to rain on the earth" (Genesis 2:5); "for in six days the Lord God made heaven and earth, the sea, and all that in them is" (Exodus 20:9, 11; Genesis 1); and the various unclean and clean animals (Leviticus 11, Deuteronomy 14). Woodrow stated:

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> These considerations must constrain us to approach the examination before us with the expectation that we shall not find natural science taught us, or anything except moral, spiritual, and religious truth. We do not reject the scientific interpretations which have been enumerated because we find from outside considerations that they would cause the Bible to speak falsely; we can never consent that outside knowledge shall "assume to control the interpretation of the inspired word"; but we reject such interpretations because they are based on a false principle; upon a principle proved to be false by the only "infallible rule of interpretation of Scripture," namely "the Scripture itself."

The argument next turned directly to examine the Biblical usage of "dust." Two major points were made: one, that its use in Genesis 2:19 and 3:14 would not lead us to conclude that the word was intended to convey a chemical meaning; two, that when the Scripture refers to "an animal body being made of dust, or clay, or the ground," it is said that "it has been immediately transformed from the inorganic state into the animal frame" (Job 33:6; Ecclesiastes 3:20; 12:7). The complaint stated: "we have no right to say in any case where these expressions are used, that the derivation was immediate and not mediate, was instantaneous and not gradual." To posit that the silence of God in the case of Adam with regard to intervening steps, according to Woodrow, merely begs the question.

Woodrow noted that the confessional standards merely quote the Bible, and that furthermore the phrase "dust of the ground" has no historic sense (since it was not a matter of contention); thus those documents cannot be used to determine

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the authoritative interpretation in this particular issue. Even the indictment on the basis of that which is "'universally understood by the Church'" cannot be maintained.

The complainant also attacked the idea that the Confession of Faith and Catechisms can always be held to as historically understood. He cited as proof the use of the word "earth" (Larger Catechism #115, Shorter Catechism #57) as referring, in the minds of the Westminster divines, to a fixed, immoveable body; and the doctrine that the Church should be "countenanced and maintained by the civil magistrate" (Larger Catechism #191). He also applied the test of "historic sense" to the Bible itself, in rejecting that Christians would have to attribute sickness to the effects of the moon ("lunacy"--Matthew 4:24). He summarized the point this way: Presbyterian officers are bound to "the historic sense of what the Westminster divines said, and not of what they did <u>not</u> say."

Woodrow denied that his views were contradictory to belief in the organic unity of the human race, or that they implied a multiplicity of human beings at the beginning. He referred to a number of prominent individuals, in the Southern and the Northern Presbyterian Church, who were not opposed to his basic position.

Woodrow pleaded with the Assembly not to condemn a man who did not deny the teachings of the Bible. He also pleaded that the Church making scientific mistakes held her up to

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scorn and ridicule and only undermined her credibility.[130]

The Assembly, after lengthy debate, voted 109 to 34 not to sustain the complaint; and it adopted this statement:

> It is the judgment of this General Assembly that Adam's body was directly fashioned by Almighty God of the dust of the ground, without any natural animal parentage of any kind. The wisdom of God prompted him to reveal the fact, while the inscrutable mode of his action therein he has not revealed. Therefore the Church does not propose to touch, handle, or conclude any question of science which belongs to God's Kingdom of nature. She must, by her divine constitution, see that these questions are not thrust upon her to break the silence of Scripture and supplement it by any scientific hypothesis concerning the mode of God's being or acts in creation which are inscrutable to us.

Eighteen commissioners protested on several grounds, including that the Assembly had in effect, despite assertions to the contrary, determined "a purely scientific question."[131]

Despite the finding of the General Assembly, James Woodrow remained a member in good standing in Augusta Presbytery, which promptly elected him as Moderator in the fall of 1888 and as a commissioner to the 1889 General Assembly, where he was appointed as chairman of one of the

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[130]James Woodrow, In the General Assembly of the Presbyterian Church in the United States. Complaint of James Woodrow versus the Synod of Georgia (Columbia, S. C.: Presbyterian Publishing House, 1888), 5-41.

[131]Thompson, op. cit., 485. See J. William Flinn, An Argument on the Complaint of Rev. Jas. Woodrow, D. D. against the Synod of Georgia (n. p.: n. n., n. d.); this document argued in favor of Woodrow on the basis of technicalities of ecclesiastical law.

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important committees.[132] Apparently, there was no willingness to go any farther and force the issue by requiring Augusta Presbytery to defrock him--perhaps because of fear of the constitutional crisis that may have been precipitated, or of the possibility of splitting the church.

But what about seminarians attending Dr. Woodrow's classes at the state university? The Synod of Georgia agreed with the ban imposed by the Board, the Synod of South Carolina disagreed, and the Synod of South Georgia and Florida tabled motions dealing with the matter. In 1889, a graduate of that university who had studied various sciences under Woodrow applied for admission to Columbia Seminary and asked that he also be allowed to take a course in mineralogy under his old professor. The four-member faculty agreed unanimously that the student would be granted permission to attend any class at the university, except for one taught by Professor Woodrow--an action denounced by Woodrow as an act of cowardice, tyranny, and infamy.

Girardeau responded in an unpublished paper that the faculty's hand had been forced by the student who was seeking an "issue" and that the faculty had sought answer from his home presbytery. Further, it was unfair for the Woodrow crowd to censure the faculty without trial.[133]

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[132]Thompson, loc. cit.

[133][John L. Girardeau], "Paper on the Jurisdiction of the Faculty in the matter of the attendance of Students upon the Lectures of Prof. Woodrow" (handwritten manuscript), mfm. Roll

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In another paper, Girardeau set forth the proper jurisdiction of the faculty. His first premise was that there was a "right to arrest attendance upon instructions condemned by the judicial decision of our highest court." This power, incumbent on inferior courts, was, by analogy, possessed by a seminary. No one has the right to teach a condemned view, either from the pulpit or in the classroom. Nor does anyone have the right to sit under such teaching, because of the encouragement and sustenance given to that teacher; because the student "injures his own soul, if the judgment of the supreme court be correct"; because of the bad example he sets; and because "he lends his influence to the dissemination of the condemned view and so becomes responsible for its diffusion." Girardeau had no necessary problem with someone reading "injurous views," but "[t]here is a manifest difference between the reading of such views, and hearing them enforced by the personal influence of the living man." Further, anyone who read such views with a view to adopting them should be prohibited from that. And, "It is always dangerous for young persons to listen to heterodox speakers. The dangers of absorption of his views is great, even though the intentions of the hearer may be good." At this juncture, the Huguenot quoted from several Scripture texts, including Psalm 1:1 ("Blessed is the man that walketh not in the counsel of the ungodly, nor standeth in the way of sinners, nor

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sitteth in the seat of the scornful"); Genesis 49:6 ("O my soul, come not thou into their secret; unto their assembly, mine honor, be not thou united"); I Timothy 1:20 ("Of whom is Hymeneus and Alexander; whom I have delivered unto Satan, that they may learn not to blaspheme"); I Timothy 6:3-5 ("If any man teach otherwise, [etc.] from such withdraw thyself"); I Timothy 6:20, 21 ("O Timothy, keep that which is commited to thy trust, avoiding profane and vain babblings, and oppositions of science falsely so called: which some professing have erred concerning the faith"); and Titus 1:10, 11 ("For there are many unruly and vain talkers and deceivers . . . whose mouths must be stopped").[134]

Secondly, Girardeau asserted that the faculty, rather than the students' presbyteries, must have jurisdiction in the seminary's premises. Further, if the question were referred to the presbyteries, one might allow such attendance and another not, causing a lack of unity in the management of the school. The professor raised this last concern because Drs. McPheeters and Beattie had "demurred to the jurisdiction of the Faculty in determining upon the attendance of Seminary students upon the lectures of Dr. Woodrow. Their sprining of that question now will, I fear, issue in fresh agitation,

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[134] [John L. Girardeau], "Paper read to members of the Faculty, Dec. 3, 1889, as to Jurisdiction of Faculty, etc.", handwritten manuscript, Evolution and Woodrow Case folder, Blackburn Papers, Reformed Theological Seminary, Jackson, Mississippi. Girardeau had emphasized the underlined words in the Scripture quotations with his own heavy underlining.

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which may end in another sweep of professors out of the Seminary."[135]

Because of criticism of this decision, the Board of Directors stated that its policy had been misunderstood, and declared that in the future such decisions would be left in the hands of the student's presbytery.[136]

Meanwhile, the debate continued in public. For instance, James L. Martin wrote a booklet against Girardeau's article in the Presbyterian Quarterly in miracles--an article that was aimed not only at defining a miracle, but also against evolution. Martin took Girardeau to task for being redundant in his definition and for having a definition that does not disprove evolution in any case. He tried to demonstrate that Woodrow's old antagonist could not maintain the distinction between that which is contra-natural (a miracle) and that which is super-natural (such as creation).[137]

Because of the oft-times rancorous discussions being carried on in the church papers,[138] the Presbytery of

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[135]Ibid. He also expressed his view that "Prof. McPheeters's views as to the liberty of students and, indeed, of church-members, are radical."

[136]Thompson, op. cit., 485-86.

[137]James L. Martin, Anti-Evolution: Girardeau vs. Woodrow (Memphis, Tenn.: n.n., August 25, 1888). For another piece of writing by the same author, see Dr. Girardeau's Anti-Evolution: The Logic of His Reply (Columbia, S. C. :Presbyterian Publishing House, 1889).

[138]For an example of a pro-evolutionist pamphlet taking exception to various articles in one of the church papers, see The Christian Observer's Assault Repelled (n.p.: n.p., n.d.).

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Charleston sought to put a stop to it all within its bounds. The Presbytery accordingly voted for a motion which forbad public contention against the General Assembly decision. Bitter protestation from Woodrow and his friends ensued. By a count of 96 to 58, the Synod of South Carolina condemned this action, as being not only unconstitutional, irregular, and injudicious, but also infringing on private judgment. Charleston Presbytery was ordered to take corrective action as soon as possible.[139]

Complaint against the Synod brought the matter to the attention of the 1889 Assembly. Professor Girardeau stated that the severe criticisms of the church courts' actions which were appearing in the church press and were stirring up strife among families within the bounds of Charleston Presbytery had prompted the original resolution. The Presbytery had no problem with criticism done "in a constitutional manner." On the basis of that explanation, the Assembly sustained the complaint. As Thompson noted, both sides seemed to be satisfied with the ruling: "the synod's majority because it upheld the right of free speech, the presbytery's majority and the synod's minority because it sustained their ban against improper discussion."[140]

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[139]Thompson, op. cit., 486-87.

[140]Ibid., 487. See also A True History Of Charleston Presbytery's Order Forbidding Public Contending Against the Baltimore Assembly's Judgment in the Woodrow Case (n.p.: n.n., May 1889).

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James Woodrow caused still another controversy for the church courts. According to custom, he had retained membership in his home presbytery while a seminary professor. When he was finally relieved of that duty, he attempted to transfer to Charleston Presbytery, within whose bounds he was living. That judicatory, however, fearing renewed difficulties, refused to receive him, on a vote of 17 to 6; and the synod in 1890 upheld that decision.[141]

Girardeau was a key figure in those discussions within the presbytery. He apparently made several objections, including the following. First, that "he does no strictly ministerial work for wh[ich] he is responsible to any Presbytery. He had as well belong to one as another." Second, that Woodrow's "party aim to offer him again a place in the Seminary." Three, "Dr. W. himself has always held that he has not been legally displaced. If so, he is legally an incumbent of his chair, and therefore connected with the Seminary, himself being judge." Fourth, Woodrow "knows the position of the Presbytery, as opposed to his views. . . . By applying for membership, he forces the Presb. either to recant its doctrinal position, or, to reject him, or, to receive him and try him." Such a course of action, however, would disturb the peace of the church both within Charleston Presbytery and

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[141]Thompson, op. cit., 487-88.

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at large.[142]

Four years later, having become President of the University of South Carolina, he transferred into South Carolina Presbytery.[143]

5. Subsequent Discussions

Even with the major contentions within the church courts were dying down, articles were still being written and addresses were still being delivered on the matter of evolution. In John Lafayette Girardeau's handwriting are various examples of either class lecture notes and/or speeches on the subject; though hard to date, they are apparently from at least the late 1880's. In them, he pointed out that evolutionary theories had been extant long before Darwin; that no missing links had been found; that evolution, being based on speculation, was not properly science; and that evolution

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[142][John L. Girardeau], untitled handwritten manuscript, Evolution and Woodrow Case folder, Blackburn Papers, Reformed Theological Seminary, Jackson, Mississippi.

[143]Thompson, op. cit., 488. For a contemporary comment on the refusal of Charleston Presbytery to receive Woodrow, see "Dr. Woodrow's Application For Admission to Charleston Presbytery," Christian Observer, Vol. 77, n. 43 (October 22, 1890), 4: the article basically was a plea for "rest and quiet on this subject." For two other, twentieth century looks at the whole Woodrow situation, see T. Watson Street, "The Evolution Controversy in the Southern Presbyterian Church with Attention to the Theological and Ecclesiastical Issues Raised," Journal of the Presbyterian Historical Society, Vol. 37 (1959), 232-50; and Clement Eaton, "Professsor James Woodrow and the Freedom of Teaching in the South," Journal of Southern History, Vol. 28 (1962), 3-17.

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was not a satisfactory basis for faith. He noted various flaws in the nebular hypothesis with regard to the supposed evolution of the solar system, including, the fact that the planets rotate in the same direction as the sun; the retrograde rotations of several of the planetary moons and the very rapid revolution of Phobos, a moon of Mars; and inconsistencies regarding the masses of the various planets and the rings from which they were, supposedly, originally formed.[144]

In 1889, George D. Armstrong took note of the influence of Charles Darwin on nineteenth century scientific thought; and then delved into his character and his religious character. Armstrong demonstrated Darwin's increasing and gradual infidelity, and that his unbelief was not due to a "vicious life." He also wrote that Darwinism has not successfully been made compatible with the Bible, and that even Dr. James McCosh, the Scotsman of Princeton, has not been able to modify that theory sufficiently, even in terms of creative agency.[145]

From Westminster College in Fulton, Missouri, W. J. Wright sounded many of the same themes as had Armstrong. His

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[144][John L. Girardeau], "Evolution," "The Neanderthal Man," "Genesis," "The Original Man," and "Objections to Nebular Hypothesis" (handwritten manuscripts), Evolution: Clarksville, etc. folder, Blackburn Papers, Reformed Theological Seminary, Jackson, Mississippi.

[145]George D. Armstrong, "Darwin and Darwinism," Presbyterian Quarterly, Vol. III (1889), 334-51.

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major points were the following: 1. "The errors and concessions of evolutionists tend to discredit their whole theory"; 2. "Darwinism tends to obscure the idea of intelligent design"; and 3. "The doctrine of evolution tends to obscure Christianity."[146]

Neal L. Anderson of Montgomery, Alabama, considered the assault of evolution upon traditional Christian apologetics. He concluded by contending that evolution, far from weakening teleological arguments, actually strengthened them. Included among these points are the doctrine of Final Causes, the universal reign of law which eliminates Chance from cosmology, the demonstration of a law of progress, the fact that evolution cannot ever do away with proving that intelligence is informing the forces of the universe, and the acceptance by scientists "that all causation is in its last analysis of the nature of will-energy."[147]

Other articles could be explored in depth.[148] But

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[146]W. J. Wright, "A Generation of Darwinism," Presbyterian Quarterly, Vol. VII (1893), 223-41. For an earlier statement of the antagonism between evolution and Christianity, see "An Evolutionist's Creed," Christian Observer and Free Christian Commonwealth, Vol. 66, n. 35 (August 31, 1887), 1: "Advocates of Evolution are not unwilling to acknowledge its consequences, even when these impinge on the Christian faith."

[147]Neal L. Anderson, "The Recoil of Evolution's Assault Upon Teleology--A Review of the 'Argument to Design,'" Presbyterian Quarterly, Vol. XIII (1899), 268-80. See p. 272 for a reference to Lord Bacon.

[148]For example, see the following in the Christian Observer: "'Tigers, Bears, and Snakes.' By Prof. Pollywog," Vol. 71, n. 45 (November 9, 1892), 1-2; "The Troubles of Evolution," Vol. 74, n. 11 (March 13, 1895), 5; "'Is the Fall

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enough has been written to demonstrate conclusively the continuing interest by Southern Presbyterians in the subject of evolution.

D. OVERVIEW

In some sense, the Southern Presbyterian Church had to choose, in the Woodrow controversy, between two types of science; and it is tempting to say that the General Assembly condemned this professor's views because they were viewed as being bad science. It is much more on target, however, to say that it was both becasue of the perception of danger in subsequent developments, and because of the rationalism already inherent in Woodrow's system, that the Church stood against his views.

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of Man a Stage of Human Evolution?'", Vol. 84, n. 46 (November 11, 1896), 2; "The Character of Evolution," Vol. 85, n. 15 (April 14, 1897), 2; Sir J. W. Dawson, "The Case Against Evolution," Vol. 86, n. 6 (February 9, 1898), 16; "The Tendencies of Evolution," Vol. 87, n. 14 (April 5, 1899), 3; "From Comte to Kidd," Vol. 87, n. 34 (August 23, 1899), 2; and "Evolution," Vol. 87, n. 44 (November 1, 1899), 1-2, and n. 45 (November 8, 1899), 2. See, in the "Criticisms and Reviews" section of the Presbyterian Quarterly, these: Henry Carrington Alexander, rev. of The Science of Thought by F. Max Mueller, Vol. VI (1892), 628-33; J. S. Watkins, rev. of The Evolution of Christianity by Lyman Abbott, Vol. VII (1893), 124-32; Francis R. Beattie, rev. of The Ascent of Man by Henry Drummond, Vol. IX (1895), 334-39; and Francis R. Beattie, rev. of Evolution or Creation: A Critical Review of the Scientific and Scriptural Theories of Creation and Certain Related Subjects by Luther Tracy Townsend, Vol. XI (1897), 247-49.

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Unlike assertions to the contrary,[149] the nineteenth century Southern Presbyterians who accepted evolution did not do so because of a commitment to higher criticism. As we have seen, they were steadfast in their belief in the inspiration, inerrancy, and infallibility of Holy Scripture.

This does not mean, however, that they were totally sound in their views on the Bible. The key issue was not Bibliology, but hermeneutics. Increasingly, those who advocated evolution--or at least did not perceive any inconsistency between it and the Bible--rejected traditional interpretations of the Word of God in order to try to accommodate the Bible to science.

Even though there was no repudiation of the historic Christian view of Scripture in the nineteenth century, the fight over evolution paved the way for more bizarre interpretations of the Bible and, ultimately, to an acceptance of the critical perspective. This was accomplished especially because of the refusal of the Presbyterian Church in the United States (PCUS) to exercise full discipline against evolutionists.

James Woodrow remained a minister in good standing in the

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[149]See, for example, Jon Roberts, Darwinism and the Divine in America: Protestant Intellectuals and Organic Evolution, 1859-1900 (Madison, Wisc.: The University of Wisconsin Press, 1988), 160, 172-73. Roberts' book is a good general overview of how Darwinism affected American religious bodies; but its very breadth is a weakness, in that the volume is unable to distinguish sharply among various groups, such as the Southern Presbyterians.

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Southern Presbyterian Church. The Synod of South Carolina elected him as Moderator in 1901. However, that body rejected a motion that his retiring moderator's sermon the next year be printed--a very unusual happenstance--probably because of a possible reference to the old controversy, and even more likely because of his seeming to recognize the Roman Catholic Church as a key part of the visible church.[150]

In 1905, after he had retired, by reason of infirmity, from all activities, Columbia Seminary's Board of Directors formally expressed its confidence in his personal devotion, character, and orthodoxy. The trustees also repealed all former actions that may have adversely reflected on him and the actions that forbad seminarians from sitting under him at the university. Two years later, in 1907, Dr. Woodrow died, at the age of 78.[151]

But the controversy did not die with him. Darwinism continued as a topic of interest in the church papers throughout the first quarter of the twentieth century.[152] The modernist-fundamentalist war which heated up in the 1920's and 1930's served as the backdrop for the continued fight over

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[150]Thompson, op. cit., 488.

[151]Ibid. For his obituary, see J. William Flinn, "James Woodrow, A. M., D. D., M. D., LL. D.," The State (Columbia, S. C.), January 18, 1907, 10. See also Marion W. Woodrow, ed., Dr. James Woodrow as Seen by His Friends (Columbia, S. C.: R. L. Bryan Co., 1909) and J. B. Adger, My Life and Times (Richmond, Va.: The Presbyterian Committee of Publication, 1899).

[152]Thompson, op. cit., Vol. III, 307ff.

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evolution.

The PCUS, having taken the stance it did in the 1880's, was prepared to meet the challenges of Darwinism in the 1920's. In 1924, the General Assembly, along with other judicatories, condemned the teaching of evolution and reiterated the Church's position.[153]

However, in the period from 1929 to 1934, the Church failed to carry out discipline, for technical reasons, against Dr. Hay Watson Smith of Arkansas. According to one commentator, "The Hay Watson Smith case was a watershed case, because it opened the door for others to set forth their liberal views with impunity."[154]

Rev. A. M. Hart was turned down for reception by Central Mississippi Presbytery in the early 1960's. "The ground for his being turned down was the fact that he did not believe in the inerrancy of Scripture, and denied the historicity of Adam and Eve, as well as some other points that were brought in the rather detailed examination."[155] A lengthy series of judicial cases for several years again dealt only with proceedural matters, not with the substantial ones. Even though Central Mississippi was successful in blocking Hart

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[153]Ibid., 311.

[154]Morton H. Smith, How is the Gold Become Dim: The Decline of the Presbyterian Church, U.S., As Reflected in Its Assembly Actions, 2nd edition (Jackson, Miss.: Premier Printing Co., 1973), 85.

[155]Ibid., 87.

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from accepting a call within its bounds, the clear direction of the denomination was away from the traditional position. The 1969 Assembly adopted a report which stated, "Neither Scripture, nor our Confession of Faith, nor our Catechisms, teach the Creation of man by the direct and immediate acts of God so as to exclude the possibility of evolution as a scientific theory." Further, the Assembly declared,

> Our responsibility as Christians is to deal seriously with the theories and findings of all scientific endeavors, evolution included, and to enter into open dialogue with responsible persons involved in scientific tasks about the achievements, failures and limits of their activities and of ours. The truth or falsity of the theory of evolution is not the question at issue and certainly not a question which lies within the competence of the Permanent Theological Committee. The real and only question is whether there exists clear incompatibility between evolution and the Biblical doctrine of Creation. Unless it is clearly necessary to uphold a basic Biblical doctrine, the Church is not called upon and should carefully refrain from either affirming or denying the theory of evolution.
>
> We concluded that the true relation between the evolutionary theory and the Bible is that of non-contradiction and that the position stated by the General Assemblies of 1886, 1888, 1889, and 1924 was in error and no longer represents the mind of our Church.[156]

Woodrow's view regarding evolution thus triumphed in the Southern Presbyterian Church, but at a price not even he would have been willing to pay; for it gained victory only after the rejection of Scripture as the actual Word of God, coupled with

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[156]Permanent Theological Committee of the Presbyterian Church in the United States General Assembly, "Evolution and the Bible," paper adopted by the 1969 PCUS General Assembly; cited in Smith, op. cit., 262.

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a totally different type of theology, had gained the ascendancy.

In 1973, a "Continuing Church" movement, seeking to perpetuate the historic Southern Church, came out of the PCUS to form the denomination now known as the Presbyterian Church in America (PCA). Although the "Message to All Churches . . . " adopted by the PCA's First General Assembly did not specifically address the question of evolution, it is generally understood that that was one issue on which the Southern Church had strayed regarding its view of Scripture.[157]

But the implicit in the PCA has recently become explicit. In 1991, the General Assembly finally concluded a judicial case that had been boiling for several years. Mrs. George (Susan) Alder, a member of Grace Covenant Presbyterian Church, Blacksburg, Virginia, filed a complaint against the Session for its continuing to allow John Tyson, a professor at Virginia Technological University, to teach Sunday School. New River Presbytery agreed with the complainant that, even though Tyson was not ordained, his views were sufficiently dangerous so as to preclude him from occupying even a non-ordained teaching position. Grace Covenant Church complained

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[157]See Frank J. Smith, The History of the Presbyterian Church in America: The Continuing Church Movement (Manassas, Va.: Reformation Educational Foundation, 1985), for a discussion of the formation of this church. See also John Edwards Richards, The Historical Birth of the Presbyterian Church in America (Liberty Hill, S. C.: The Liberty Press, 1987).

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this action of Presbytery, but the Standing Judicial Commission denied the complaint. It was disclosed that the man in question "holds exceptions to such doctrines as the doctrine of inerrancy, the doctrine of creation (in that he holds to the doctrine of theistic evolution), the doctrine of the fall of man, the doctrine of original sin, and the role of confessional standards." The court agreed with the Presbytery that "'the view of beginnings expressed in "theistic evolution" is contrary to the fundamentals of our system of doctrine taught in the Word of God and our standards. Such a view destroys the basis of such doctrines as the doctrines of sin, of marriage, of salvation, of covenants, and others.'" Rodney King, the respondent for New River Presbytery, wrote: "'no system of safeguarding could be adequate in these circumstances. Continued broad spectrum teaching would, of necessity, impinge on these cardinal doctrines.'" The record states:

> It is clear to the [General Assembly Judicial] Panel that the teacher who was the subject of the original complaint holds exceptions to a number of the fundamentals of our system of doctrine and that when all these exceptions are taken together it does appear reasonable for the Presbytery to have taken the view that these exceptions would necessarily result in the teacher teaching views which were out of accord with the fundamentals of our standards.[158]

In a day when Darwin's views are increasingly coming

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[158]Minutes of the Nineteenth General Assembly of the Presbyterian Church in America (Atlanta, Ga.: Office of the Stated Clerk, 1991), Vol. I, 81, Vol. II, 479-87.

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under attack, including from irreligious scientists, this continuation of the Southern Presbyterian Church has spoken clearly against evolution--even the theistic variety--as being inimical to numerous basic doctrines of the Christian faith. The issue for the PCA is not that of science per se, but rather fidelity to the Word of God and the perspicuous teachings found therein.

Today on the corner of Assembly and Laurel Street in downtown Columbia, South Carolina, on a former site of storage for Confederate munitions, stands the building of Arsenal Hill Presbyterian Church. Originally the Second Presbyterian Church, this congregation had been founded by people from First Presbyterian Church, which had called John Lafayette Girardeau to be pastor--a call which he declined. Various families began holding services with Girardeau supplying the pulpit. He held a brief pastorate there (1886 to 1887); and was followed by his son-in-law, George A. Blackburn, who was the minister until his death in 1918.[159]

In 1983, this church voted, on the same day as First Church, to leave the Presbyterian Church, U. S., for a more conservative denomination, the Associate Reformed Presbyterian Church. Today, though long since abandoning the commitment of its initial pastors to a capella congregational singing, this church perpetuates their creationist perspective by remaining

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[159]Personal interview, Robert E. Herrmann, January 7, 1992, Columbia, South Carolina; and personal interview, Edith Blackburn, January 7, 1992, Lexington, South Carolina.

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steadfast in opposition to evolutionary ideology.[160]

[160]Personal interview, Robert E. Herrmann, January 7, 1992.

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IV. EVALUATION

A. RELATIONSHIP OF SCIENCE TO OTHER MATTERS

The pervasiveness of scientific thinking in the nineteenth century guarantees that the issues of science will not remain isolated from other areas of life. Indeed, one of the more fascinating aspects to this study is how these Southerners related--sometimes directly, sometimes analogically--their scientific interests with other idealogical factors.

The fact that science is related to other aspects of life was not lost on these Calvinists. An 1868 article stated:

> "Philosophy," says Lord Bacon, "is that part of human learning which has reference to the reason of things." This definition is useful, and therefore beautiful. I shall, therefore, treat of philosophy as being the science of ultimate truth--the science of sciences.
>
> . . . this search for the reason of things is limited to no particular field. It is the province of reason to go back of all most obvious phenomena of matter, of intelligence, of feeling, and to discover a second class of phenomena not so obvious as the first, antecedent to, or causal of, the first. It is her custom, to turn from the ignorant multitude and advance toward the supreme intelligence, to leave the Egyptian slaves around the mountain's base throwing their jewels together to form a golden calf, and herself to journey up toward the summit where the Creator reaches out the tables of law. It is constitutional law that is sought, law of matter and intelligence. While the field of research is infinite, yet as a fact, philosophy has tarried longest amid spiritual

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questions.[1]

Five years later, another article said:

> The votaries of science are not hindered in their progress by the spread of the gospel. And as the world grows in knowledge, so shall it grow in grace, and the postulates of finite wisdom shall resolve into the axioms of divine philosophy. . . . Like the four streams that watered the garden of Eden, these, Didactic Theology, Apologetic Theology, Physical Science, and Psychological Science, shall flow together and be known as the river, whose streams make glad the city of God. And, then, looking back upon the now inexplicable problems of time, it will be found that all of them had but one solution, to wit: the essential manhood, and the eternal Godhead of Jesus Christ Jehovah.[2]

1. Egalitarianism and Ethics

Puritan Calvinists in the seventeenth century were concerned about the "Levellers" of their own day; and part of their concern had to do with the way in which new scientific thought was being used to foster revolution. Two hundred years later, their counterparts in the Southern United States had similar concerns.

During the initial year of bloodshed between North and South, one article painted the necessity of God's personality for the just conduct of both science and morals. Following the lead of Lord Bacon, "experimental philosophy is grounded

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[1]"The Province of Philosophy," Christian Observer and Presbyterian Witness, Vol. 47, n. 3 (January 16, 1868), 1.

[2]Anonymous, "Christian Theology and Current Thought," Southern Presbyterian Review, Vol. XXIV, n. 3 (July 1873), 417.

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in the hypothesis of a personal God. The Jehovah of the Bible is presupposed in the method of induction." Pantheism can do "absolutely nothing, but transmute into its own jargon the laws which induction has established." The author wrote: "To sum up all that we would say in a few words, experimental philosophy is grounded in the hypothesis of a personal God." And, in underscoring the difference between rulers and the ruled, he went on to say: "Obligation is the correlative of law, and rewards and punishments are the expressions of merit and demerit."

> Here, then, the contrast between Pantheism and Theism is fundamental. It goes to the springs and measures of human action. Society, the State, the Family, every sphere into which the moral element enters, becomes, in the speculations of the Pantheist, a very different thing from what our natural sentiments lead us to apprehend, and from what is possible to be realized in experience. Man, in all his interests and relations, is a very different being, according as you view him on one aspect or the other; a moral subject under the government of God, or the property and affection--the mere modus--of an all-pervading substance.
>
> It is vain, therefore, to treat those speculations which strike at the personality of God as the harmless excursions of curiosity. . . . The Reign of Terror could never have been distinguished by its enormities, if God and retribution had not first been banished from the minds of its guilty agents. . . . The belief of a superintending Providence is the guardian of society--the security of the State--the safeguard of the family. Its influence pervades every interest, and sanctifies every office of man; it ennobles his actions; sweetens his affections; animates his hopes; gives courage in the hour of danger; serenity in time of trouble, and victory in death. If there be a God, it is a great thing to be a man; if there be none, and men should universally act on the belief that there were none, we had rather be any thing than a

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member of the human race.[3]

In a world that was threatening to be turned upside down, science--and particularly the scientific method--was employed in order to bolster the social order.

A few years after the war, the same sentiment found expression. L. G. Barbour, in an article reviewing various books dealing with natural theology, wrote:

> The general considerations on the structure of society are highly valuable, particularly in these days of rampant radicalism, when everything established, everything sacred, is questioned or contemned; and thoughtful, sober-minded men cannot look forward into the future without misgiving, if not dismay.[4]

Robert L. Dabney trumpeted the same tune, but more graphically, in his 1875 work against the sensualistic philosophy. "International Communism has, indeed, already given a prelibation from the pit, in its short-lived reign in Paris; and this society is the avowed patron of this animal philosophy [Sensualism]."[5]

Also in the 1870's, a judge from Monticello, Florida, wrote of moral science. W. Archer Cocke stated that "Christianity is the only basis of moral science embracing

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[3]"The Personality of God, as Affecting Science and Religion," Southern Presbyterian Review, Vol. XIV, n. 3 (1861-62), 461-66.

[4]L. G. Barbour, "Natural Theology," Southern Presbyterian Review, Vol. XXI, n. 4 (October 1870), 586.

[5]Robert L. Dabney, The Sensualistic Philosophy of the Nineteenth Century (New York: Anson D. F. Randolph & Co., 1875), 137.

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political and social ethics."[6]

Parke P. Flournoy made the same application specifically with regard to evolution. He suggested that evolution, if true, would "not only fit all the facts of his [man's] physical nature, and of the world of matter around him; but also, must not fail to harmonise with all the facts of his moral and religious nature." Flournoy taunted: "Let Evolution produce at least a few missionaries and martyrs before it begins to boast of its disinterestedness and self-sacrifice, while scornfully branding Christianity a selfish system."[7]

While still in Canada, Francis R. Beattie wrote a book criticizing the utilitarian theory of morals. He noted that utilitarianism is characterized by "an empirical Psychology, and a sensational theory of Knowledge." In summarizing his findings, Beattie pointed out the inadequacies of this approach in explaining Conscience and in allowing for Benevolence; as well as the dangers of socialism inherent in such schemes.[8]

In 1890, T. P. Epes decried the loss of the absolute standard of the Word of God as the judge of all things. "Of course, all forms of materialism, pure and simple, refuse to

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[6]Judge W. Archer Cocke, "Moral Philosophy and Christianity," SPR, Vol. XXII, n. 1 (January 1871), 1-33.

[7]P. P. Flournoy, "'Evolutionary Ethics and Christianity,'" SPR, Vol. XXXV, n. 3 (July 1884), 436, 438.

[8]F. R. Beattie, An Examination of the Utilitarian Theory of Morals (Brantford, Ontario: Watt & Shenston, 1885), 93, 216-22.

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admit the authority of the Bible and moral principles. According to it, man is only an arrangement of atoms and ceases to be at death."

> Materialism, even in its highest forms, can furnish neither a revelation nor ethics. To those who hold to a "physical basis" for mind in any sense accepted among materialists, authority must be an absurdity. For thought, perception and emotion are only sensations in the brain cells produced by impressions from without, passing along nerves connecting with them, when objective; or when subjective, sensations in brain cells produced by agitation among the molecules of the brain, either spontaneously or under the laws of association.

He concluded by writing:

> So the slogan of Satan in this age, then, is "no authority." In politics, in business, in science, in morals, in religion, he raises up anarchists, soulless corporations and impersonal stock companies, materialists, evolutionists, rationalists, to push the campaign, either by tearing down the flag of authority altogether, or by shifting the base in which it is planted. And, unfortunately, he makes unconscious asses of many good people in the socialistic, philanthropic and Christian movements of the times. The reason is easy enough to see. Without authority, no morality; without morality, no holiness; and "without holiness no man shall see God." While without the admission of objective evidences and abstract first principles, authority cannot stand. If it is made dependent upon the testimony of the senses or upon subjective perception, the individual cannot be brought under compulsion to acknowledge it. He has only to say: My senses made no report about it, my subjective perception does not receive it, and he is free.[9]

Also in the 1890's, John C. Molloy of Owensboro, Kentucky, developed the use of the imagination. He argued

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[9]T. P. Epes, "Authority in Revelation and Morality," Presbyterian Quarterly, Vol. V (1891), 329-31.

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that utilization of the imagination is essential for both science and morals; but also warned that it can be gravely abused, and that it can be more dangerous than "the possibilities of applied physical forced in the hands of anarchists taught by modern science."[10]

Towards the end of our period, W. J. Wright wrote of the necessity of an a apriori, transcendent regulative principle to order our lives. "In the ordinary affairs of life no such standard is possible. Probability, not necessity, is the rule of life. But in morality and religion the empirical standard is a needless, fallible, and offensive thing." Therefore, there must be "some unconditional test of validity" by which to judge matters of faith. Referring to both Abelard and Anselm, Wright posited that

> whatever is not rational is not of faith, and where there is no ground for faith there is no faith. . . . Philosophic speculation, both in morals and in religion, makes less and less demand upon our faith in God, while scientific inquiry in the physical world makes a bold demand for faith in a great multitude of abstractions, such as law, order, adjustment, and many other impersonal objects, in increasing numbers.

Evolution was perceived as having raised to a fever pitch the antipathy to Christian ethics; and "ethical writers have vied with each other to reduce morality to the methods of natural science." Wright noted that "every form of morality independent of God has degenerated into . . . gloomy pessimism

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[10]John C. Molloy, "Uses of the Imagination," Presbyterian Quarterly, Vol. VII (1893), 85.

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. . . or philosophical egoism."

Ludwig Feuerbach was cited as the premier advocate of pleasure as man's highest good, and which can be achieved only in society; his works have been the chief writings for nihilism and communism.[11] J. S. Mill, Bentham, and other utilitarians cannot escape the individualizing effect of their call for happiness. Like Comte and Spencer, their professed altruism turns into selfishness. Despite calls for self-renunication, such "humanitarianism has no commanding ground." Indeed, these "appeals for the progressive emancipation of society have no logical basis."

Wright concluded by stating that "the reflective reason can have no purpose, no end, if it is not to give unity to itself and to objects of its knowledge; but this is impossible apart from the fact of God." The idea of a First Cause is the proper substitute for Hume's empirical knowledge in supplying "the only secure datum of knowledge and refuge of faith."[12]

In his last book, Robert L. Dabney established a whole ethical treatise on a rejection of sensualism and an acceptance of final cause. He maintained the necessity of

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[11]Ludwig Andreas Feuerbach was noted for his attacks on the Christian faith. He sought to make theology more human; asserted that certain attributes of God (such as His moral being, His love, etc.) were projections of man's needs; and denied that God has a separate existence. See Feuerbach's Das Wesen des Christentums (1841; English translation, George Eliot, 1853).

[12]W. J. Wright, "The Speculative View of Faith," Presbyterian Quarterly, Vol. XI (1897), 142-47, 159-60.

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distinguishing between physical and spiritual causation. This theologian also refuted the utilitarianism of Hume, Bentham, and Spencer.[13]

At the turn of the century, Converse College's Benjamin Frank Wilson wrestled with the nature of reality and the tension between Materialism and Spiritualism--two perspectives between which the pendulum perpetually swings. Wilson wrote:

> Morality is not simply an evolutionary process growing out of experience, and therefore simply another name for expediency, nor is religion simply morality touched with emotion. Conscience is something other than nerve excitation or a mystical emotion or a chemical equation backed by ages of cell and nerve culture. The Ten Commandments are not simply a Jewish code born out of race experience as expressing relations that are of the greatest good to the greatest number. It is the noumenal "oughtness" of man's soul, and its ground is the nature of God, and the permanent constitution of and relations among men.[14]

But not only is it important to have the correct (i.e.,

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[13]Robert L. Dabney, The Practical Philosophy. Being the Philosophy of the Feelings, of the Will, and of the Conscience, with the Ascertainment of Particular Rights and Duties (1897; Harrisonburg, Va.: Sprinkle Publications, 1984), 22, 37ff, 43, 46f, 54, 67, 75-76, 134f, 148-51, 155-67, 181-85, 196-98, 214-19, 229-45.

[14]B. F. Wilson, "Ethical Applications to Materialistic Problems," Presbyterian Quarterly, Vol. XIV (1900), 349-50, 360. For a discussion in this publication by a Princeton College professor, see George S. Patton, "Kidd's Social Evolution," Vol. X (1895), 448-76. See also J. M. P. Atkinson, "Lecky's History of European Morals," Southern Presbyterian Review, Vol. XXXI, n. 2 (April 1880), 191-217. In a private letter to his brother in which he discussed geological findings on his properties, William Henry Ruffner expressed his fears about the rise of agrarianism and corruption and the almost-inevitable socialistic revolution that was to follow (William Henry Ruffner, letter, August 13, 1891, file Ruffner correspondence, Montreat archives).

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inductive) methodology, it is also necessary to apply it properly. An 1871 article discussing whether there can be such a thing as "Pre-historic Archaeology," warned against misinterpreting Providence--something which was done "by thousands of our civilized brethren in the Northern States, in their remarks on the issues of the late war."[15]

One of the particular matters of morals had to do with the Fourth Commandment. We have already noted the discussion of Sabbath keeping in relation to geology. Here we address the issue vis a vis a general skepticism.

An 1873 article argued against metaphysical attacks on Scripture, stated that the establishment of the Sabbath principle depended not on whether the "day" of Genesis was of twenty-four hour duration or of a great age, and noticed the universal nature of hebdomadal observance.[16] Five years later, a review of an atheistic book noted that the author thought that if Christianity were stripped of all its "perversions" (such as Calvinism; the doctrine of eternal punishments; Sabbath observance; etc.), with the "help of Sabbath amusements, dancing and theatres, evolutionism, and a mild form of pantheism, it would be made so reasonable and amiable that the unbelievers would no longer have any pretext; and if they then ran into atheism, it would be wholly their

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[15]"A New Science," Christian Observer and Presbyterian Witness, Vol. 50, n. 3 (January 18, 1871), 1.

[16]Anonymous, "Christian Theology and Current Thought," 410-16.

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own fault!" The reviewer responded: "The intelligent Christian will be more likely to conclude, with us, that were Christianity thus stripped and thus dressed in these new trappings, it would be too effete and worthless to justify the atheist's desertion even of his empty creed for its sake."[17]

One of the particular areas of concern for these Southern Calvinists was that of feminism. Accordingly, they used their scientific tools to champion traditional views and to fight against all notions of "women's rights."

For instance, the Christian Observer referred to Lord Bacon regarding beauty; and then asserted:

> There is a magic in beauty, that all confess--a strange witchery that fascinates and enchants us with a potency as irresistable as that of the magnet. It is to the moral world what gravitation is to the physical. It is easier to write about beauty in woman, and its all-pervading influence, than to define what it is.[18]

A year later, the same magazine extolled the time-honored role of women: "But Newton, though not blessed [like Bacon] with learned parents, possessed a devout and Christian mother, whose sole aim and study was to sow the seeds of piety and virtue in his mind, and whose tender care preserved to us, under God's blessing, one destined to be the glory of his

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[17]"Critical Notices," rev. of The Natural History of Atheism by John Stuart Blackie, Southern Presbyterian Review, Vol. XXIX, n. 2 (April 1878), 383-84.

[18]"The Best Part of Beauty," Christian Observer and Presbyterian Witness, Vol. XLII, n. 39 (September 24, 1863), 1.

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country and race."[19]

Samuel Cox argued for a woman having her head covered in public worship, citing the argument of the Apostle Paul from I Corinthians 11. He stated that we are to take the hints of nature with regard to "the divine intentions indicated by our physical structure; man is to go unveiled, woman is to use, or to imitate, the natural veil [her hair] which God has given her." Cox then appealed to Scripture, and particularly to the book of Genesis. The woman is the glory of man, having been made "not from the rude clay, but from clay already attempered by human and heat" and having been taken from man's very heart. As his "glory," "she represents what is finest in him and most exquisite, what is highest and best." Nevertheless, "her derived origin indicates her dependent condition. Although she is his glory, because she is his glory, she is to defer and minister to him from whom she sprang, just as the highest spirits are those who serve most and best.[20]

Samuel M. Smith used the opportunity of discussing Rationalism to protest the twisting of Scripture--whether by those who would try to justify female evangelists or by those who would try to mold Genesis to fit the latest scientific

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[19]"Sir Isaac Newton's Mother," Christian Observer and Presbyterian Witness, Vol. XLIII, n. 42 (November 17, 1864), 1.

[20]Samuel Cox, "Power on the Woman's Head Because of the Angels," Christian Observer (Literary & Miscellaneous), Vol. 50, n. 12 (March 22, 1871), 1-2.

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theory.[21] William P. McCorkle ridiculed Mary Baker Eddy's scientific religion as being the product of "the reasoning of such feminine thinkers as Mrs. Eddy."[22]

At the turn of the century, a minister from Charlotte, North Carolina, posited that there would not be such a race problem if people would not keep trying to make everybody equal. John Weldon Stagg wrote that even when sociology was elevated to the status of a science, it would not be helpful if it was utilized to try to break down natural barriers.[23]

A final application to be made under this heading has to do with universal public education. Robert L. Dabney, long an antagonist to such--especially when conducted not under Christian auspices--, used his discussion of induction and analogy to show how many people employ false reasoning in order to try to justify various social schemes. Dabney pointed out that merely noting a high illiteracy rate among criminals does not prove that illiteracy is the cause of

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[21]Samuel M. Smith, "Rationalism in the Church versus Rationalism Without," Southern Presbyterian Review, Vol. XXXI, n. 1 (January 1880), 54-60.

[22]William P. McCorkle, "The New Scientific Religion," Presbyterian Quarterly, Vol. XII (1898), 351. For an antebellum approach to the role of women, as determined by their physical nature, see George Howe, The Endowments, Position and Education of Woman. An Address Delivered Before the Hemans and Sigourney Societies of the Female High School at Limestone Springs, July 23, 1850 (Columbia, S. C.: I. C. Morgan, 1850).

[23]John W. Stagg, "Race Problem in the South," PQ, Vol. XIV (1900), 317-48. This was an address delivered in Massachusetts.

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criminality. Further, he demonstrated that the ratio of white persons in jail in Boston, a highly lettered city, in relation to the white population was one to thirty-four; while the ratio in Richmond, "the capital of a State endlessly reviled for its illiteracy," the ratio was one to one hundred and twelve. "The difference in favor of the less lettered communities, as revealed by subsequent censuses, is still more astounding; and this, when extended to the whole South, as compared with the North, and as deduced by Northern students of statistics."

Dabney then skewered the conclusions of his opponents, by noting that, if he used these facts in the same illogical way, they would "demonstrate exactly the opposite conclusion: <u>that the knowledge of letters causes crime, and illiteracy causes virtue</u>." However, the true solution is gleaned by understanding that "neither letters nor illiteracy cause crime in America, but another combination of moral causes, to which these states of the population are themselves related as effects."

> . . . [A]s American society happens to be constituted, the rearing of children without a knowledge of letters has happened to be the usual accompaniment of a domestic condition of penury and moral degradation, while families of substance and domestic morality have usually given letters to their children. Thus it is made plain that it is not the illiteracy, but the penury and domestic degradation which are the real causes of crime. The illiteracy turns out not to be the cause at all, but an incident or appendage which the domestic habits of Americans have connected with the real cause, the combination of want and domestic degradation.

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> But when, by the intrusive activity of the civil government, the children of destitute and morally degraded families are universally invested with the arts of reading and writing, without that moral and economical elevation of the parents and children, to work which the State and State schools are so nearly impotent, then the result is a fearful increase in the ratio of criminals to the whole number of citizens. The explanation is, that it is the want and family degradation which together is the main efficient cause of crime, and which the knowledge of letters, while those continue, rather aggravates than checks.[24]

2. Civilization

Anthropology, sociology, and psychology are sciences in which Southern Presbyterians had interest; and it is natural that there would be a corresponding study of civilization. The most fertile period for such curiosity was during Reconstruction.

A two-part series in the spring of 1869 dealt directly with the question of "what is civilization?" The author's basic point was that great technological achievements do not make a people civilized, but rather good morals.[25] A couple of weeks later, he argued that even though the use of fire differentiates between "civilized and savage man," he still

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[24]Robert L. Dabney, "The Metaphysical and Theological Applications of Induction and Analogy," Discussions, Vol. III: Philosophical, ed. by C. R. Vaughan (1892; Vallecito, Ca.: Ross House Books; and Harrisonburg, Va.: Sprinkle Publications, 1980), 453-55.

[25]"L.", "What is Civilization?", Christian Observer and Presbyterian Witness, Vol. 48, n. 10 and 11 (March 10 and 17, 1869), 1.

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must be given the incentive to use the tools of civilization, and that incentive "is found in the right of property in the fruit of his labor."[26] The same author later that spring opined:

> I am not sure that what is called the highest state of civilization is best for the individual members of a nation. When a land is crowded with railroads and telegraphs, when every thing is made by machinery, when the division of labor is carried so far that a man will spend his whole life in making only one part, or only one hundredth part of a pin, and knows nothing and has nothing to do with making any other part, I do not think that the individual's faculties are properly developed.[27]

The Japanese civilization was the subject of a three-part series. Discussed were such topics as their language, culture, agriculture, and technology--including how they built their houses in order to withstand earthquakes.[28]

Civilization in ancient times was also a topic of articles. In one, the author said, "The temple [of Babel] is the culmination--the apex of the pyramid of civilization--of

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[26]"L.", "Civilized by Fire," Christian Observer and Presbyterian Witness, Vol. 48, n. 13 (March 31, 1869), 1.

[27]"L.", "Marks of Civilization," Christian Observer and Presbyterian Witness, Vol. 48, n. 16 (April 21, 1869), 1. See also the perspective of a Brooklyn, New York, minister, Louis Albert Banks, "The Seeds of Anarchy in Modern Civilization," Christian Observer, Vol. 81, n. 46 (July 18, 1894), 10.

[28]H. G. H., "Facts About the Japanese . . .", Christian Observer and Presbyterian Witness, Vol. 48, n. 22, 23, and 25 (June 2, 9, and 23, 1869), 1. See also Rev. of Reindeer, Dogs and Snow-Shoes . . . by Richard J. Bush, Christian Observer (Literary & Miscellaneous), Vol. 50, n. 28 (July 12, 1871), 2. The book was about the Western Union projected telegraph line via Siberia: the project was dropped after the successful laying of the second Atlantic Cable (1867); but the exploring party wrote regarding the people of Northeastern Siberia.

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which all these various arts and sciences are but the various foundation layers."[29] In another, Henry G. Gilland presented a scheme of Scriptural genealogies.[30]

3. Missions

Closely related to the application of science to civilization, was the use of science in foreign missions. Southern Presbyterians, like most Americans, were fascinated with far away lands and their mysterious ways.

Hampden Coit DuBose, a missionary for many years in Soochow, China, wrote that in that country, "religion and medicine are inseparably connected."[31] In a later book, he spoke of the necessity of employing natural theology to reach the Chinese people, who were mostly idolaters and who did not accept the revelation of Scripture. It is not a helpful approach to bewilder the Chinese with a lecture on science. When preaching Jesus, Who is "the Light of the world," one need not "tell of light coming in waves, or the rapidity of its travel, for the Chinese know as much about the subject as

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[29]"L--e," "How Knowledge Was Transmitted," Christian Observer (Literary & Miscellaneous), Vol. 50, n. 13 (March 29, 1871), 1.

[30]Henry G. Gilland, "An Interesting Genealogy," Christian Observer, Vol. 77, n. 42 (October 15, 1890), 1.

[31]Hampden C. DuBose, The Dragon, Image, and Demon; or, the Three Religions of China: Confucianism, Buddhism, and Taoism. Giving an Account of the Mythology, Idolatry, and Demonolatry of the Chinese (New York: A. C. Armstrong & Son, 1887), 398.

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the Jews did when they heard of the 'true light, which lighteth every man that cometh into the world.'" DuBose made reference to the traditional argument from design; and then wrote of the necessity of showing the absurdity of various Chinese views of the origin of the cosmos. Included among these were: the self-production of all things; that all things originated from heaven and earth, the great father and mother; "that the Great Monad was the primordial germ"; that all things come from the yin and yang, the male and female principles of nature; "that the prime agent was the 'lee,' or 'the principle of organization by which matter is preserved, or the power that inheres to direct it'; and that Pankoo divided the heavens and the earth." Appeal was made to the heavens; to the fact that there is order rather than chaos in the world; to the wonder of man's physiology; to natural history and natural theology; all as pointing to the existence, unity, and benevolence of God.[32]

Samuel Hall Chester, the Secretary of Foreign Missions for the Presbyterian Church in the United States, wrote of his visits to the Southern Presbyterian missions in the Orient. The church's mission was not to civilize the Chinese, who have their own, long-standing civilization which "suits them in some respects better than our civilization ever will." Nor is

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[32]Hampden C. DuBose, Preaching in Sinim; or, The Gospel to the Gentiles, with Hints and Helps for Addressing a Heathen Audience (Richmond, Va.: Presbyterian Committee of Publication, 1893), 135-53.

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the appropriate mission "to introduce among them our western scientific knowledge and the material comforts and conveniences of our western civilization." Western scientific knowledge and western civilization would eventually benefit the Chinese, but if they precede the preaching of the gospel, they will impede rather than aid the spread of the kingdom.[33]

To avoid the horrors of a Reconstructed South, many Southern Presbyterians made their way to Brazil immediately after the War. Samuel Rhea Gammon, a veteran missionary to that land, began his account of Presbyterian missions there by telling of the physical characteristics of the land, including the topography and minerals, and the flora and fauna.[34]

What is evident from these writings is a sensitivity to the cultures and civilizations to which missionaries were sent, including an awareness of the native beliefs and of the physical surroundings in which the people lived. Because of the relative ignorance of these foreigners, sophisticated scientific concepts were to be avoided. At the same time, natural theology was to be utilized in order to present the gospel.

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[33]S. H. Chester, Lights and Shadows of Mission Work in the Far East: Being the Record of Observations Made During a Visit to the Southern Presbyterian Missions in Japan, China and Korea in the Year 1897 (Richmond, Va.: Presbyterian Committee of Publication, 1899), 65.

[34]Samuel R. Gammon, The Evangelical Invasion of Brazil: or a Half Century of Evangelical Missions in the Land of the Southern Cross (Richmond, Va.: Presbyterian Committee of Publication, 1910), 13-31.

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4. Doctrine

a. The Sacraments

We have already touched upon the fact that polemics against Roman Catholics on the one hand, and Baptists on the other, abounded in nineteenth century Southern Presbyterian literature. It is therefore not surprising that at least some of these writings would use science as part of the barrage of arguments.

Andrew Harper Caldwell pointed to the physical difficulties and dangers of people with various bodily ailments to be immersed. Illustrations given included the inconvenience and danger of immersing people in extreme cold weather or who were suffering from a fever; or the pain of trying to immerse someone who has been disabled because of an injury to the spine.[35]

The book by James McDonald Chaney, a Missouri pastor, against immersion and in favor of sprinkling or pouring as the proper modes of baptism, is of particular interest since it has been reprinted in recent times and is still in print. Chaney argued from the Scriptures, and using scientific reasoning, to make a circumstantial case for the Presbyterian position. For instance, John the Baptist would not have been

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[35]A. H. Caldwell, Christian Baptism by Local Application; Not by a Total Covering (New Orleans: E. S. Upton, 1898), 179-81.

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able physically to withstand the rigors necessary, if he personally immersed the immense crowds that came to be baptized. The Apostle Paul was baptized before he partook of food, after having been fasting for several days--certainly not something that would have been feasible if baptism was performed by immersion.[36]

George Dodd Armstrong, whom we have noted as a pastor with a science background, wrote a book on the sacraments. In dealing with transubstantiation, he declared that, if he would accept that doctrine, he would have to discredit the testimony of his bodily senses, as well as that of scientific investigation (that is, the results of chemical analysis).[37]

Another polemicist, in taking Romanism to task for this superstitious dogma, likewise challenged her priests to submit the bread and wine to a chemical analysis. The miracles of Jesus Christ were tested and certified, empirically: "Will your miracle of transubstantiation, Oh! priest of Rome, stand a similar test?"[38]

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[36]James M. Chaney, William the Baptist (Richmond, Va.: Presbyterian Committee of Publication, 1877; rpt. [Wilmington, Del.]: Department of Publications, Reformed Presbyterian Church, Evangelical Synod, n.d.), 77-78, 85f. He, too, referred to the physical impracticalities of immersing people in wintertime (p. 100).

[37]George D. Armstrong, The Sacraments of the New Testament, As Instituted by Christ (New York: A. C. Armstrong & Son, 1880; rpt. Richmond, Va.: Presbyterian Committee of Publication, 1884), 108.

[38]"L--e," "Papal Rome and Chemistry," Christian Observer and Free Christian Commonwealth, Vol. 48, n. 27 (July 7, 1869), 1.

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The other major discussion regarding the Lord's Supper was with regard to the fruit of the vine to be used. Was it wine, or grape juice?

In an era when the Women's Christian Temperance Union was prominent, and scoring major victories, the Southern Presbyterian Church was agitated by the question of prohibition, and the subsequent issue of what the proper liquid is to use at the Lord's Table. At least one of the arguments in favor of viewing the wine of the Bible as fermented employed science to make the case, as he asked if anyone knew of a process in ancient Palestine which could keep the grapes for fermenting for eight months.[39]

On the other hand, the opposite side also appealed to science. A medical doctor from Louisville, Kentucky, wrote that, since fermentation requires oxygen to take place, a cluster of grapes "cannot scientifically be said to contain any other wine than . . . unfermented grape juice." The "'new wine found in the cluster' . . . cannot be strictly be said of fermented wine, for it is never found in the cluster of grapes."[40]

b. Soteriology

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[39]Hon. S. W. Williams, "Questions on Grape Juice," Christian Observer and Free Christian Commonwealth, Vol. 66, n. 34 (August 24, 1887), 4.

[40]"A. Given," "Wine at the Lord's Table," Christian Observer, Vol. 71, n. 33 (August 17, 1892), 4.

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Theology being the queen of sciences, it follows that the doctrines of grace are to be dealt with in a logical way. As Reformed theologians who subscribed to the Westminster Standards, these Southern Calvinists understood rational presentation of doctrine.

But in a very definite manner, scientific concepts were used to set forth the teaching of salavtion. For example, Robert Lewis Dabney, in dealing with the psychology of the feelings, used that psychology to demonstrate the difference between genuine and counterfeit religious experiences. The psychology which he employed

> is that theory of man's powers everywhere assumed and postulated in Scripture. It gives that theory of human action on which all the instances, the narratives, and the precepts of Scripture ground themselves. Hence these mental laws and facts are of use, not as the mistress, but as the hand-maid of Scripture, to explain and illustrate those cautions which the Bible gives us.[41]

Dabney also criticized the Pelagianism of Albert Taylor Bledsoe, Professor of Mathematics at the University of Virginia. In doing so, he used the notion of cause in relation to volition.[42]

c. Worship

In 1878, an article in the Southern Presbyterian Review

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[41]Dabney, Discussions, Vol. III, 457-58.

[42]Ibid., 184, 270, etc.

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contrasted man's wisdom and God's power. To be sure, in the realm of nature, "human wisdom and divine power are not opposed to each other." Indeed, "they are in entire harmony, we might even say coincident, with each other." God, however, demonstrated His sovereign control of and care for His church by means of miracles, which confound the wisdom of man. And, He continues to use the foolishness of preaching to lead people to repentance and faith.

After condemning the use in public worship of both a liturgy and musical instruments, and the Romanist view of the efficacy of the sacraments (ex opere operato), the author took to task the use of "machinery" in "revivals."

> By "machinery" we mean all those "measures" over and above the means which God himself has appointed, which have been invented by "evangelists" or "revival preachers" for the purpose of awakening careless sinners, such as "the anxious bench"; "the altar" to which inquirers are invited in order to be specially prayed for; the reading of letters (which have been procured by solicitation) from young converts or from inquirers; "silent prayer" of the congregation; the calling on certain classes in the congregation to arise and separate themselves from the rest; the roaming over the congregation of certain persons for the purpose of making appeals to individuals; the calling upon certain discriptions of people in the audience to sing certain hymns, and the requiring of the rest not to sing; the demand for unusual postures in parts of the worship, as, for example, kneeling in singing, etc., etc. Measures of this sort are justly called "machinery." The use of them demands no spiritual gifts, no spiritual frame of mind, no piety, nothing, indeed, but the power of physical endurance and--brass. . . . They belong to the same class of things with mummeries of Rome. The priest performs the ceremonies prescribed in the ritual, and the business is done.

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In contrast, "God's measures are of a totally different sort. They are moral, not mechanical. They demand for effective use not only piety in the habit, but in the exercise."

The article indicted those who would use such mechanical measures as not only violating Scripture and causing many to be deluded, but also as breaking covenant with their fellow Presbyterians with whom they have taken ordination vows of theological and constitutional subscription.[43] So then, science can assist in religious matters; but when it comes to the prescriptions of worship, we are to reject such a rationalistic and mechanistic approach and rely only upon the clear divine commands found in the Bible--in other words, we must adhere to the regulative principle of worship.

We have seen the opposition of John Lafayette Girardeau to James Woodrow and evolution. But the Huguenot was also a champion of the traditional Reformed Protestant view regarding musical instrumentation in public worship. His 208 page treatise on the subject is a classic, and was reissued in the 1980's as part of a resurgent interest in purity of worship. The bulk of this work is on Scriptural and confessional considerations, but Girardeau also made the point that the reason why the Presbyterian Church was defecting from her ancient position is because she was conforming to "the demands

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[43]"The Wisdom of Man versus the Power of God," Southern Presbyterian Review, Vol. XXIX, n. 4 (October 1878), 742-69; this article was reprinted later in the Presbyterian Quarterly.

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of worldly taste."[44]

Girardeau made a similar point in his article on miracles (which, as we have seen, was penned primarily because of the evolution controversy). Speaking of the great success of the Church in spreading throughout the Roman world as an evident sign of Providential care, Girardeau noted the "antecedent improbability of success arising from the nature of the religion to be propagated":

> Its great law was self-denial: the cross was marked into the heart of its adherents. Its promise for this world was tribulation: its rewards were postponed to a future state. Faith, not sense nor carnal reason, was its principle of action, its motive to exertion. It was characterized by utter simplicity: it had no outward pomp, no magnificient temples, no gorgeous ritual, no smoking altars, and no vested priests.[45]

It was this sensualism that was the particular concern of Robert Lewis Dabney in this matter. In 1881, he lamented the rise of musical instrumentation as being a sure sign of spiritual decline, leading inevitably, systematically, to ritualism and Romanism.[46] In a lengthy review of Girardeau's

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[44]John L. Girardeau, Insturmental Music in the Public Worship of the Church (Richmond, Va.: Whittet & Shepperson, 1888; rpt. Havertown, Pa.: New Covenant Publication Society, 1983), 205.

[45]John L. Girardeau, "The Miracle, The Principle of Unity in the Evidences of a Divine Revelation," Presbyterian Quarterly, Vol. II (1888), 375-76. He also wrote of the evidence of the numerous Biblical writers who "maintain[ed] harmony with each other in regard to a regulative principle" (379).

[46]Robert L. Dabney, writing in the Central Presbyterian (May 18, 1881), cited in Thompson, Presbyterians in the South, Vol. III, 429-30.

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book, Dabney asserted both "the prudential and the doctrino-psychological arguments against the present organ worship." Regarding the latter, he wrote:

> . . . all true worship is rational. The truth intelligently known and intelligibly uttered is the only instrument and language of true worship. Hence all social public worship must be didactic. . . .
>
> Once more: man's animal nature is sensitive, through the ear, to certain sensuous, aesthetic impressions from melody, harmony and rhythm. There is, on the one hand, a certain analogy between the sensuous excitements of the acoustic nerves and sensorium and the rational sensibilities of the soul. (It is precisely this psychologic fact which grounds the whole power and pleasure of lyrical compositions.) Now, the critical points are these: That, while these sensuous excitements are purely animal and are no more essentially promotive of faith, holiness, or light in the conscience than the quiver of the fox-hunting horses' ears at the sound of the bugle or the howl of the houndwhelp at the sound of his master's piano, sinful men, fallen and blinded, are ever ready to abuse this faint analogy by mistaking the sensuous impressions for, and confounding them with, spiritual affections. Blinded men are ever prone to imagine that they have religious feelings, because they have sensuous, animal feelings, in accidential juxtaposition with religious places, words, or sights. This is the pernicious mistake which has sealed up millions of self-deceived souls for hell.

After excoriating Roman Catholicism for constantly encouraging this delusion, Dabney attacked innovating Protestants:

> But these organ-grinding Protestant churches are aiding and encouraging tens of thousands of their members to adopt this pagan mistake. Like the besotted Papist, they are deluded into the fancy that their hearts are better because certain sensuous, animal emotions are aroused by a mechanical machine, in a place called a church, and in a proceeding called worship.

Dabney warned: "Time will prove, we fear by a second corruption of evangelical religion and by the ruin of myriads

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more of nominally Christian souls, how much wiser is the psychology of the Bible than that of Mrs. Grundy."[47]

Dabney's concern in this matter was, of course, grounded in his pursuit of the truth. But a European trip in 1880 undoubtedly made a deep impression on his mind, as he witnessed first-hand the superstition of the papists. Describing his visit to Locarno, Italy, he wrote of the old women who thought they had secured salvation by kissing "the holy wax toe" of a replica of the Virgin who had purportedly made an appearance there.[48]

Thus the church's premier theologian utilized the same motifs--opposition to sensualism and advocacy of a Biblical psychology--that he had in his writings on science in order to oppose the imposition of organs on the church's worship.

But what is ironic is this regard is that James Woodrow was himself opposed to such innovation in the church. In 1869, the Southern Presbyterian Review carried an article against the use of organs in public worship. The author employed the usual Scriptural arguments and spoke of the difference between Old and New Covenants: in the Old, the Church was "in her juvenile state . . . being prepared for

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[47]R. L. Dabney, Dr. Girardeau's "Instrumental Music in Public Worship": A Review (Richmond, Va.: Whittet & Shepperson, 1889), 6-9.

[48]Thomas Cary Johnson, The Life and Letters of Robert Lewis Dabney (Richmond, Va.: Presbyterian Committee of Publication, 1903; rpt. London: The Banner of Truth Trust, 1977), 427.

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higher, simpler, more spiritual methods of instruction and worship by the use of these merely animal, fleshly, sensuous, material, temporal things."[49]

Woodrow's Southern Presbyterian expressed concern about the increasing interest in aesthetics and feared the coming ritualism. Objection was made to professional music, and to choral responses to Scripture reading and prayers.[50]

In 1870, the Southern Presbyterian opposed the celebration of December 25 in the church:

> If the exact date were known, or if some day (as December 25) had been agreed upon by common consent in the absence of any certain knowledge, we would still object to the observance of Christmas as a holy day. We object for many reasons, but at present mention only one--that experience has shown that the institution of holy days by human authority, however pure the intention, has invariably led to the disregard of the Holy day--the Sabbath--instituted by God.[51]

In the midst of the evolution controversy, Woodrow could join forces with Girardeau and Dabney in opposition to such man-made worship. An article in the Southern Presbyterian Review grieved at the acceptance of Episcopalian liturgy, even among

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[49]"A Denial of Divine Right for Organs in Public Worship," Southern Presbyterian Review, Vol. XX,n. 1 (January 1869), 103. What is also ironic is that this article was a response to Thomas Smyth of Charleston, South Carolina, who advocated musical instrumentation, and who would oppose Woodrow over evolution.

[50]Southern Presbyterian (October 19, 1882; March 26, 1885), cited in Thompson, op. cit., 431.

[51]Southern Presbyterian (December 22, 1870), cited in Thompson, op. cit., 434.

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Presbyterians.[52] His weekly expressed sorrow to see

> a growing tendency [to introduce church festivals into Protestant denominations], even in our own branch of the church. True, it is by no means general, and has not been carried very far, but it is enough to awaken our concern and to call forth at least a word of warning that the observance of Easter and Christmas is increasing amongst us. . . .[53]

Woodrow had old Scottish Covenanter roots, and he apparently did not, at least in the nineteenth century, abandon belief in Sabbatarianism or the simplicity of worship. His concern, in order to preserve the old order, was that the church not look foolish before a watching world or before the church's youth. His antagonists, particularly Girardeau and Dabney, were likewise concerned to avoid the folly of superstition. But while their goals were the same, their methodologies differed radically. The former approached matters scientifically, while the latter did so philosophically.[54]

In the end, Woodrow's approach failed. Unwittingly, he had abandoned the genuine inductivism of Lord Bacon. Without

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[52]"The Presbyterian Cultus," Southern Presbyterian Review, Vol. XXXV, n. 1 (January 1884), 78-96. The occasion for printing the article was the appearance in the Presbyterian Review, a Northern Presbyterian publication, the advocacy of Anglican-style worship by a professor at Auburn Theological Seminary.

[53]Southern Presbyterian (December 22, 1870; January 3, 1884), cited in Thompson, op. cit., 434.

[54]William Childs Robinson hinted at this, with regard to evolution; see his Columbia Theological Seminary and the Southern Presbyterian Church, 190ff.

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being aware of it, he had helped to set in motion a series of events which would lead to the eventual destruction of Puritan worship in the Presbyterian Church in the United States.[55]

And yet, it is also true that the church as a whole rejected traditional views of worship before it rejected traditional views regarding the creation of man. One could therefore argue that, although we cannot discount the effect of Woodrow's approach on how the church came to perceive worship, it was the acceptance of sensualism in the sanctuary that eventually guaranteed the acceptance of sensualism in the church's laboratories.

d. Eschatology

The doctrine of last things has often fascinated the people of God. What will heaven be like? When will Christ return? What will be the signs of His coming?

Calvinism had historically been post-millennial. The Puritans epitomized that optimistic perspective, that the sovereign King Jesus would rule over all the nations of the earth and that the knowledge of the glory of the Lord would cover the earth as the water cover the seas. Southern

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[55]It is also possible that he himself changed some of his views. For instance, compare his anti-Romanist sentiments in "A Further Examination of Certain Recent Assaults on Physical Science," Southern Presbyterian Review, Vol. XXV, n. 2 (April 1874), 250, 259; with the sentiments expressed in the retiring moderator's sermon before the Synod of South Carolina in 1902 (cited in Thompson, op. cit., 488).

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Presbyterians had followed in that same train of thinking. However, towards the end of the nineteenth century, pre-millennialism, especially in the form of dispensationalism, began to make inroads in the ranks.[56]

As George M. Marsden has documented, the literalistic hermeneutic of dispensationalism comported well with the inductivistic approach to both Calvinistic science and Calvinistic theology.[57] But his work concentrates on the North. What has not been shown up until now is how Southern Presbyterians joined scientific concepts with eschatology.

The year after the cessation of hostilities with the North, one author wrote of the blessings of the Millennium. The picture he painted was a rosy one:

> The old Jewish idea of the millennium seems to have been a state of physical, moral and spiritual perfection. Man was to become holy, healthy and happy. The earth was to be restored to its primeval fertility, in which it rejoiced before the cause of sterility was pronounced. the air was to become perfectly salubrious and pure--no miasms--no malaria--no noxious vapors, no chilling blasts. A close examination of the laws of God, civil, political, judicial, sanitary, agricultural, aesthetical, moral and spiritual, will convince any thinking man, that these laws, if obeyed, would produce that state of perfection described by the Jewish fathers.--The civil, political and judicial laws of the Bible would produce a perfect government. The sanitary laws of the Bible, we

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[56]Cyrus Ingerson Scofield was a Southern Presbyterian minister in Missouri. His notes on the Bible, commonly printed with the Scriptures as the "Scofield Bible," became the great source book for the dispensational movement.

[57]George M. Marsden, Fundamentalism and American Culture: The Shaping of Twentieth-Century Evangelicalism, 1870-1925 (New York: Oxford University Press, 1980; rpt. 1982), 57-62.

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> believe, would produce perfect health; the agricultural laws would make the bounteous earth yield to us her strength.[58]

The next year, Leander Ker, in dealing with the two great sources of truth--Creation and Revelation--expressed his belief that the former continues, under Providence, to provide for whatever man's physical needs are. Apart from death, Ker believed that there is not "a single natural evil or disease in this world, present or to come, for which God in his wisdom and goodness has not furnished a remedy, which time, science, and skill will discover."[59]

In 1868, one author stated, "Heaven is figuratively a cube," and then proceeded to describe the nature of crystals. He added that gold, of which the New Jerusalem is made, has for its primary form a cube.[60]

"S. S.", whose writings we have encountered with regard to geology, speculated that the asteroid belt between Mars and Jupiter was once an inhabited world which was destroyed because of the entrance of sin. He also speculated that it is not likely that the end of the world will soon come, because of the estimation that the solar system has not completed three-thousandths of its orbit since creation, and the fact

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[58]L. N., "The Millennium," Christian Observer and Presbyterian Witness, Vol. XLV, n. 20 (May 17, 1866), 1.

[59]Leander Ker, "Truth," Southern Presbyterian Review, Vol. XVIII, n. 4 (November 1867), 485.

[60]E. F. R., "The Tabernacle and Temple. Their Symbolic Significance," Christian Observer and Presbyterian Witness, Vol. 47, n. 32 (August 6, 1868), 1.

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that the glorious atonement, which is "perhaps the greatest manifestation of God's love," occurred here. The author suggested that "the great, sublime, grand figures which would seem to imply the destruction of the heavens and the earth," do not necessarily mean that. II Peter compares the conflagration to the Noahic flood; but that great inundation did not annihilate nor set aside the earth.[61]

Fron a different angle, in the 1890's, James Hall Brookes, a premillennialist, took a pessimistic view of the state of the world. Included among the examples of rebellion against God were atheistic scientists who were treating the Word of God with contempt.[62]

In the sixteenth and seventeenth centuries, Christianity had a renewed interest in millennial things, and that in the face of the challenges and opportunities presented by science. Southern Presbyterians in the nineteenth century also related their scientific studies to their understanding of the end times.

5. Ministerial Educational Requirements

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[61]"S. S.", "Final Destiny of the Earth. 'This World Shall Be Rolled Up and Laid Aside,'" Christian Observer and Free Christian Commonwealth, Vol. 50, n. 6 (February 8, 1871), 2.

[62]James H. Brookes, "I Am Coming": A setting forth of the Second Coming of our Lord Jesus Christ as Personal--Private--Premillennial (London: J. E. Hawkings, [1895]; 7th ed. rev., Glasgow: Pickering & Inglis, n. d.), 171ff.

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Presbyterians historically have insisted on an educated ministry. Normally, three years of theological seminary have followed a regular college degree. But in the late nineteenth century, the great demand for pastors led the Southern Presbyterian Church to consider lowering its standards so that men without classical learning could be ordained.

Robert L. Dabney raised a cry against this notion, which he regarded as quite dangerous. He argued that "a knowledge of the Latin language, of philosophy, of science, and of the languages of inspiration" was necessary. Indeed, in a world that was ever increasing in its knowledge, the church dare not have an ignorant ministry.[63]

This veteran seminary professor, who opposed the church herself teaching the physical sciences, nevertheless saw the value of her ministers being conversant with all branches of learning. For Dabney, science continued to be important, and a knowledge of it critical to ensure the spread of the gospel and the protection of the flock from infidelity.

B. FURTHER OBSERVATIONS

Protestants, and especially Calvinists, have always sought to use the study of science in their exploration of the world; and this interest was not confined to the late

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[63]"The Standard of Ordination," in Dabney, op. cit., 551ff.

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nineteenth century. Further, the scientific enterprise was often utilized to back up both theological orthodoxy and the existing social order.[64] The new challenge at the end of the 1800's, however, was the increasing hostility of scientists to divine revelation--particularly with regard to evolution.

We must disagree, therefore, with James R. Moore rejection of the metaphor of "war" between science and religion. Moore also maintained that the conflict was not theological, but rather philosophical, in nature. If there was a "Darwinian revolution" at all, it involved the overthrow of "the perennial belief that full and final certainty can be obtained through inductive inference and must be obtained for a scientific theory to be thoroughly credible; and the belief . . . that every form of life is essentially fixed by the divine will."[65]

There is much to commend this latter contention by Moore. However, what it fails to understand is the relationship between philosophy and theology, especially the hermeneutic that was to be common to both. To attempt to read God's revelation in other than an inductive fashion would involve the ultimate abandonment of the sola Scriptura of the

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[64]For example, see Mark A. Noll, Princeton and the Republic, 1768-1822: The Search for a Christian Enlightenment in the Era of Samuel Stanhope Smith (Princeton, NJ: Princeton University Press, 1989).

[65]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/New York: Cambridge University Press, 1979), 14f.

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Protestant Reformation in favor of a speculative approach that would impose man's wisdom on God's. Moore's view also assumes that people who give up belief in the details of Scripture while still believing in the "big" doctrines (such as Providence and Sovereignty) could still be considered "orthodox."

From a different perspective, Herbert W. Schneider set forth the proposition that there were two types of theologians. James Woodrow represented the dogmatic theologian since he was willing to dichotomize between science and religion. Philosophical theologians, on the other hand, were those who were unwilling to dichotomize and unwilling to relinquish speculation in the realm of science. Schneider exhibited the beliefs of James McCosh as a Calvinist who utilized Darwin's natural selection as dovetailing nicely with his own theory of both development over time via what appears superficially to be arbitrary selection and with the notion of struggle. McCosh, Asa Gray, and George Frederick Wright of Oberlin College were among those Calvinists who used Darwinism "to support the ideas of supernatural selection and design, revelation, transcendent deity, moral struggle, and social conflict."[66] And yet, although Woodrow did put forth a dichotomistic approach regarding the spheres of nature and Scripture, he did not do so in such a way as to be (knowingly)

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[66]Herbert W. Schneider, "The Influence of Darwin and Spencer on American Philosophical Theology," Journal of the History of Ideas, Vol. 6, n. 1 (January 1945), 3-18.

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insensitive in his scientific theorizing to the teachings of the Bible.

Jon H. Roberts' pioneering study, Darwinism and the Divine in America, sought a synthesis of understanding of the approach by American Protestants last century toward evolutionism. His position was that the glorification of science by Protestant apologists actually paved the way for relegating theology to the intellectual backwaters.[67]

Roberts observed that many Protestants adopted a flexible attitude toward the language of Genesis with regard to geology. This led to a couple of possibilities of reconciling the alleged findings of geological science with the Bible: either to view a long period of time between the original creation of the earth and its subsequent development; or to posit that "day" really means a long age. While many Southern Presbyterians adopted one or the other of these proposals, they were less reluctant to do what Roberts suggests animated many fellow Protestants: to regard the idea of a universal Noahic flood as not being central to the teaching of the Bible. As good Presbyterians, these churchmen from Dixie believed in the "whole counsel of God."

Darwinism and the Divine maintains that for the first fifteen years or so of encountering Darwinian evolution, most

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[67]Jon H. Roberts, Darwinism and the Divine in America: Protestant Intellectuals and Organic Evolution, 1859-1900 (Madison, Wisc.: The University of Wisconsin Press, 1988), xv-xvi.

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Protestants were content to examine the theory on its own grounds in order to demonstrate its falsity. At least two other scholars have elaborated on that view, seeing three phases of objections by churchmen: a relatively calm period, in which they put forth scientists' objections to the theory; a period of attacks on Darwin's supporters (especially Huxley) in which the guilt-by-association method was employed; and a period of accommodation, with various theistic interpretations of Darwin.[68]

Certainly, it is true that Southern Presbyterians were not behind others in seeking to prove the inherent contradictions in this theory. Similarly, these Southern Calvinists fought with their fellow Christians against scientific naturalism, which they believed was behind the Darwinian attack.

Part of the problem with Roberts' work is that its very sweep makes his generalizations sometimes meaningless. For example, to classify Unitarians as Protestants debases the latter term. Nevertheless, this important book does make some significant distinctions; and one of them is that Southerners and Presbyterians were less inclined to adopt ideas that

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[68]John Campbell, "A Rhetorical Analysis of the Origin of Species and of American Christianity's Response to Darwinism" (Ph. D. dissertation, University of Pittsburgh, 1968); and Windsor Roberts, "The Reaction of the American Protestant Churches to the Darwinian Philosophy, 1860-1900" (Ph. D. dissertation, University of Chicago, 1936), both cited in Michele L. Aldrich, "United States: Bibliographic Essay," in Thomas F. Glick, ed., The Comparative Reception of Darwinism (Austin/London: University of Texas Press, 1974), 214.

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contradicted the doctrine of Biblical infallibility. Accordingly, we are not surprised to find in our research that no Southern Presbyterian questioned the infallibility of Scripture, and that the vast majority of them rejected evolution.

But even those Southern Presbyterians who embraced or were open to evolutionism did not, in contrast to many other Protestants, seek to overturn existing dogma or to change radically the theological enterprise. James Woodrow, in particular, gives the lie to that proposition with regard to the Presbyterian Church in the United States. On the other hand, there was at least some sentiment that God's way of dealing with the world was characterized by "gradualness"--although these Calvinists would not take that notion to the extreme and imply that that was the way that God necessarily interacted with humanity.

Southern Presbyterians in the late nineteenth century were interested in science both for its own sake and for its apologetic value. But as they proceeded toward the twentieth century, they increasingly understood the hostility of much "science" (so-called) and the inadequacies of an apologetic that was based on neutralistic assumptions.

With regard to the former, they were in accord with the apparent minority of Protestant intellectuals who continued to fight evolution--maintaining a position that many

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intellectuals in the world would not regard as credible.[69] The fact that the defenders of the Lost Cause were among the most stalwart in the defense of this fortress is perhaps quite telling: a noble stand, based on the truth, against whatever apostate opposition might come.

With regard to the latter, the "natural theology" of Thomism--and Bishop Butler--could not withstand the modernist assaults. Thus an a priori, presuppositional approach was needed.

Leading theologians such as Robert Lewis Dabney helped engineer this maturing of thought for these Reformed churchmen. Though the Virginian was hardly alone in aiding this shift, he was perhaps the sharpest thinker in perceiving that Baconian inductivism was not a mindless enterprise. Not only must one employ deductivism, but one must also assume the very existence of logic and cause and effect in order to reason at all. To use the Van Tillian language of the twentieth century, there are no such things as "brute facts."

In many ways, these churchmen from Dixie were in advance of their counterparts from north of the Mason-Dixon line. Perhaps it was the hardships of war and reconstruction, which drove these ministers to look beneath the surface in order to ascertain the genuine nature of things. Perhaps it was because the Southerners had been kept in large measure from

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[69]Roberts, op. cit., 24-26, 31, 63, 87, 116, 144-45, 171-73, 208, 222.

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the rationalizing tendencies of New England and Europe. Whatever the reason, there seems to be no doubt that the Southern Presbyterian Church was able to maintain its traditional orthodoxy for a much longer period of time than the Northern Presbyterian Church. Further, these views often revolved around scientific matters--whether evolution or higher criticism.

The change in views of the Princeton theologians has been documented. Charles Hodge, the stalwart apologete whose three volume Systematic Theology is still standard fare at some seminaries, was steadfast in opposition to evolution. Both in his magnum opus and in What is Darwinism? (published 1874), Hodge maintained that Darwinism is atheism. His son, A. A. Hodge, who succeeded him in the theology chair (1877-1886), thought that theistic evolution is compatible with Scripture. He also gave his approval to the idea that Adam's body may have evolved, but not his soul; and A. A. was vigorously opposed to evolution as an interpretive principle. B. B. Warfield, who held the post from 1886 to 1921, came to believe that the evidence for evolution is insufficient for its proof; and furthermore that Eve's creation forms a stumbling block to a belief in her having been evolved. Mutations could have allowed Adam's body to have been the product of evolution, but not so with regard to his soul. C. W. Hodge, Jr., grandson of Charles Hodge, thought that a genetic connection with an

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earlier animal soul was compatible with Christian faith.[70]

Even Charles Hodge's frontal attacks on Darwin[71] were not as effective as the penetrating insights of a theologian such as Dabney. While Asa Gray was able to counter-attack with telling accuracy,[72] Dabney's perspective remains today, essentially untouched.

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[70]Deryl Freeman Johnson, "The Attitudes of the Princeton Theologians toward Darwinism and Evolution from 1859 to 1929" (Ph. D. dissertation, University of Iowa, 1968). Other relevant books include Jonathan Wells, Charles Hodge's Critique of Darwinism: An Historical-Critical Analysis of Concepts Basic to the 19th Century Debate (Lewiston, N. Y.: E. Mellen Press, 1988); and David N. Livingstone, Darwin's Forgotten Defenders: The Encounter Between Evangelical Theology and Evolutionary Thought (Grand Rapids, Mich.: W. B. Eerdmans; Edinburgh: Scottish Academic Press, 1987).

[71]Charles Hodge, Systematic Theology (rpt. Grand Rapids, Mich.: William B. Eerdmans, 1975), Vol. II, 4ff; and What is Darwinism? (New York: Scribner, Armstrong & Co., 1874).

[72]Asa Gray, Darwiniana: Essays and Reviews Pertaining to Darwinism, A. Hunter Dupree, ed. (Cambridge, Mass.: The Belknap Press of the Harvard University Press, 1963), 208-32.

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CONCLUSION

In a time of war, social upheaval, and challenges to the faith, Southern Presbyterians continued their interest in science.

Informed by the inductive approach which Sir Francis Bacon had promulgated for Protestantism, and fueled by Scottish Common Sense realism, these Dixie Calvinists did not relinquish their desire to put science to use for the good of the kingdom.

The perpetuator of Protestant natural theology provided the method of inductivism, an empiricism that fit well with the historic rejection of Roman Catholicism's Aristotelian approach to science and its view of Scriptural interpretation. The watchwords of sola Scriptura implied that the true interpreter of God's written revelation would seek not his own wisdom, but the Lord's. The same humility would be characteristic of the student of natural revelation.

Especially in regard to the relations between science and religion--or, in Baconian terms, between general and special revelation--one must be humble. Reading God's two "books" could sometimes be a tricky business.

But the exploration of creation led believers to a reverent worship. They were in awe of the One who made the burning stars and galaxies and also the tiny, delicate

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structures which the microscope was discovering, along with all the beauty in between; and they exulted in His handiwork.

The fields of inquiry ranged widely, from geology to geography, from astronomy to biology, from anthropology and sociology and psychology to archaeology and logic and military science. Metereology, agriculture, mathematics, and new technology were valued both for their fascination and their practical value. New sciences, such as geology and sociology, came to be topics of great discussion and heated argument. All of these sciences were not only the subjects of voluminous writings by these Southerners of Reformed persuasion, but were also taught--with an emphasis on both the apologetic value and the experimental--at the denominational colleges.

With regard to "earth science," most Protestants, including Southern Presbyterians, had come to accept the "long age theory." They did so because they felt compelled both by their Baconian inductivism and the pressure of these new discoveries. But a contrarian viewpoint came to expression from Robert Lewis Dabney, who taught that a genuine induction had to take into account the fact of a Creator--a factor that pre-empted speculation that attempted to go beyond revelation or recorded history.

Geology was also important because of the railroading and mining enterprises. Particularly in a New South endeavoring to rebuild, such knowledge could prove to be invaluable.

Science was regarded as an extremely broad

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categorization, and it was used as a term to refer to all systematic arrangement of facts in a given area of knowledge. Accordingly, theology was viewed as the queen of sciences. And, such matters as practical theology, prayer, and revivals were scrutinized in a scientific manner. Science as a concept permeated the thinking of the Southern Presbyterians.

Underneath the quest for the new was a commitment to the old. Traditional values such as belief in Scriptural inerrancy, infallibility, and inspiration--that the Bible is the "Word of God, the only infallible rule of faith and practice [life]"--, with the subsequent rejection of all forms of rationalism (pitting man's wisdom against God's), still characterized Southern Presbyterianism.

As a result, whatever deductions were made from the raw material had to fit with that which God had clearly revealed in Holy Writ. The Author of nature and Scripture is not an author of confusion, and He does not contradict Himself. All truth is found in Him.

By the middle of the nineteenth century, there was a growing unease on the part of churchmen with regard to science. What had been thought of as a handmaid to the kingdom of Christ had shown signs of turning against its Master.

The result was an increasing concern with the interface between scientific and religious endeavors, as well as various confrontations with skepticism of all sorts and varieties.

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These men of Zion sought to meet the skeptics on their own grounds in order to demonstrate the folly and untenableness of their positions.

Christians believe in the reality of the physical universe and secondary causes, but they also affirm that there is more to life than materialism and that the First Cause must be behind all other causes. Spokesman such as Dabney hurled these truths against the threat of the sensualistic philosophy. They also attacked the opposite position, viz., idealism, in maintaining a balanced position of realism.

But such apologetes also began to understand that the prior naivete about an area of putative "neutrality" between believer and unbeliever would no longer do. Only the theist could consistently hold to a belief in cause and effect, to rationality, to a reasonable and logical understanding of this cosmos. Yes, Francis Bacon was right: we proceed inductively to gain insight and wisdom into the laws of the universe. But, in a skeptical age, it was necessary to set forth unambiguously the truth that it is the very existence of the Almighty that makes such discoveries possible. It is because of a Lawgiver that there are laws by which the world is governed. Thus, a kind of presuppositionalism arose, in which these Southern Presbyterians maintained that there are certain a prior truths on the basis of which all reasoning takes place.

What particularly shattered the calm assurance of support

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from science was the turning of scientists to evolution. Their en masse desertion of the historic faith was a great blow; and the churchmen were forced to posit that they were opposed not to science per se, but the new pseudo-science that was masquerading as the genuine article.

James Woodrow's unique stance with regard to evolution thrust upon the Church the question of what is science. Led by Dabney and John Lafayette Girardeau, the Presbyterian Church in the United States rejected Woodrow's approach, not because it was bad science as such, but because it went beyond science properly considered and threatened the teachings of the Bible.

Not only was science the way of life for these Southerners, but various other controversies became bound up with the philosophy of science. In the forefront of these issues, perhaps, was that of proper worship. Presbyterians adhered to the "regulative principle of worship," and thus rejected man-made religious service. They also did not think that man's worship should be characterized by "sensualism"--the same criticism leveled against false and pagan science.

Southern Presbyterianism in the late nineteenth century was, of course, far from perfect in ascertaining God's will as revealed in Holy Writ or in reading His providential acts in natural history. But these Calvinists from Dixie held unswervingly to an acceptance of the Bible as the Word of God, and on that basis they sought to understand that Word and

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God's world around them. Their efforts may very well be of significance and importance to churchmen today who can build on the foundation they laid.

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[Please note--the following symbols are being used: CO--Christian Observer; COFCC--Christian Observer and Free Christian Commonwealth; CO(L&M)--Christian Observer (Literary & Miscellaneous); COPW--Christian Observer and Presbyterian Witness; SPR--Southern Presbyterian Review; PQ--Presbyterian Quarterly.]

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