

UNIVERSITY OF CALIFORNIA, SAN DIEGO

There's Power in the Blood: Religion, White Supremacy, and
the Politics of Darwinism in America

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requirements for the degree Doctor of Philosophy

in

Political Science

by

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Dedication

For Jami

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Abstract of the Dissertation

There's Power in the Blood: Religion, White Supremacy, and the Politics of Darwinism in America

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America's contentious relationship to Darwinism is often inadequately viewed as the product of religious reaction or educative failure. I argue that evolutionary biology has proven contentious in America because of the unique political context into which Darwin's ideas emerged. After the Civil War, evolution's content, and the predominately Northern scientists who supported it, became associated with the politics of radical Republicanism and racial egalitarianism. The Darwinian revision of the concept of racial variety made a polygenist conception of human origins untenable and discredited the structural inequalities implied by the rival "American School of Anthropology". Whereas before Darwin, natural history had formed an important part of the justification for slavery, after the publication of "The Origin of Species" in 1859, natural history became distasteful to the southern planters and slaveholders who had previously appealed to scientific authority.

Because of the particular historical, social, and political context into which Darwinian evolution emerged in the United States, to believe or not to believe in evolution carried social and political connotations about one's fidelity to white supremacy, and called into question one's identity within the larger milieu of American political traditions and groups.

Debates over evolution have been inextricably bound to a complex set of beliefs about race and political practices that have upheld white supremacy, sometimes called Southern nationalism, Southern civil religion, or ascriptive Americanism, which have operated to channel Southern understanding and treatment of evolution. The history of evolution in America teaches us how communities of identity use ideological beliefs to identify themselves as members of particular political and social groups, and how a constellation of mutually supporting ideas about the right to participate in the American polity and the nature of racial identity have shaped American reactions to science, religion, and society. Beliefs about racial identity and the constructed myths of Southern nationalism channeled white Southern reaction against evolutionary biology in ways that boosted the religious response to the scientific threat to white supremacy and increased the feeling that evolutionary biologists taught a dangerous, alien doctrine that was morally and socially subversive. The rejection of evolution by many Americans, especially in the South, has often been a way to signal and police social and political group boundaries. Because Darwinism had overthrown the scientific basis for polygeny, was supported by abolitionist New Englanders, and was charged with racially subversive undertones, while also challenging the conservative, Christian justifications for white supremacy, white Southerners reacted against evolution as a scientific doctrine, and in so doing they signaled support for the prevailing racial order and acted in solidarity to create the social and political ideology that sustained the Solid South.

The Four Traditional Stories of Evolution in America

Introduction

Of 35 countries surveyed for a 2005 poll on the public acceptance of evolution, the United States ranked next to last.¹ Only about 14% of Americans believe in naturalistic evolution²—the theory that humans evolved naturally over millions of years without divine guidance—even though it has been 150 years since Charles Darwin published his *Origin of Species* and evolution is the foundation of modern biology. Amongst scientists the consensus in favor of biological evolution is overwhelming, and the few exceptions to scientific unanimity represent naught but a rounding error when compared to the entire American biological community. How is it that there is such disconnect between scientific and public opinion? How can we explain this perplexing phenomenon? This project will seek to do so by looking at the politics of the biological sciences in nineteenth century America.

Creationism has a stronghold in the United States. The evolutionary biologist Stephen Jay Gould has called the creationist movement “peculiarly American.”³ The popular image of the evolution/creation debate in America is present in the famous Scopes Monkey Trial. In 1925 the Scopes Monkey Trial was hailed as the “Trial of the Century” and passed

¹ The United States ranked above only Turkey. Miller, Jon D.; Eugenie C Scott; Shinji Okamoto. “Science Communication: Public Acceptance of Evolution,” in *Science*, Vol. 313, No. 5788 (Aug. 11, 2006), pp. 765-66.

² The three categories polled were belief in “creationism”, “theistic evolution”, and “naturalistic evolution”. Creationism is the belief that humans have always existed in their current form, naturalistic evolution is the theory accepted by biologists, while theistic evolution is a theory accepted by, for example, the Catholic Church that evolution happened but was guided by supernatural forces. Gallup Poll. May 8-11, 2008. N=1,017 adults nationwide, MoE +/- 3%. www.pollingreport.com/science

³ “Creationism in NZ ‘Unlikely,’” *New Zealand Herald*, July 3, 1986, p. 14 (quoting Gould).

into legend as the clash of fundamentalist religion with rational, scientific truth. John T. Scopes was found guilty under Tennessee law of teaching evolution and fined \$100 after he supposedly taught from George W. Hunter's 1917 edition of the textbook *Civic Biology*.⁴ Attorneys for the prosecution and defense, William Jennings Bryan and Clarence Darrow, are long since gone, but not the issues over which they fought. Though the Supreme Court has banned the teaching of creationism in American public schools, the role of creationism and intelligent design in America's public school biology courses remains a politically potent issue. Public opinion polls show that Americans support teaching creationist theories alongside evolution by a wide margin.⁵

That there exists such disconnect between scientific and public opinion should surprise us. In this project I propose to explain this phenomenon by examining the nineteenth century political and social context in America which politicized the debates surrounding the reception to Darwinism and examine the ways that evolution fed into American debates over race and identity. This project should interest historians of science because of what it has to say about receptions to Darwinian biology, but it should also interest political theorists because this project is a story about the interaction of scientific truth and democratic politics, identity and power, and the breakdown of scientific authority in America.

Literature Review: Four Traditional Narratives

⁴ Larson, Edward J. *Summer for the Gods: The Scopes Trial and America's Continuing Debate Over Science and Religion*. (New York: BasicBooks, 1997).

⁵ 65% in favor, 29% opposed, 6% unsure. CBS News/New York Times Poll. Nov. 18-21, 2004. N=885, MoE +/- 3%. www.pollingreport.com/science

How can we understand the complex reception that America has had with evolutionary biology? Typical studies that describe the history of American debates over Darwinism⁶ or its impact on American social and political thought explain regional and cross-national variation by four dominant methods. In the past, scholars have explained evolution's acceptance as a function of *culture*, *class*, *education*, and *religion*. This project will show that these traditional explanations fail to capture the entire story.

Stories that employ the first two mechanisms, culture and class, tend to focus on Darwinism's *success* in America, most particularly evolution's relative success in the Northeastern states. Darwinian evolution is examined as an intellectual enterprise fitting into, and often strengthening, a preexisting mold of either middle class cultural mores or gilded age tycoon capitalism. Stories that employ the latter two explanatory devices, education and religion, tend rather to focus on the relative *failure* of Darwinism to overcome American scientific ignorance and religious hostility. Evolution's controversial status, particularly in the American South and Midwest, is explained by those regions' supposed provincialism and religiosity.

This project proposes an alternative analysis based on the politicization of Darwinian evolution to explain the American reaction to evolutionary ideas of human origins. We must understand how American debates over Darwin's theory of evolution have been shaped by broader social and political trends, most especially regarding issues of race and identity, and in return why the nature of Darwinian science made it applicable to rival American

⁶ "Darwinism" does not have, of course, only one definition. Here it shall be used, roughly, as synonymous with a naturalistic conception of evolution. Nearly all biologists and naturalists were convinced by Darwin that evolution happened, but many remained skeptical about his proposed method of natural selection until the twentieth century. Nevertheless, these "incomplete" Darwinists are still Darwinists in my definition. As James Moore has made clear there have been many "Darwinisms" not only over the last 150 years but immediately following the publication of *Origin of Species* in 1859. See Moore's "Deconstructing Darwinism: The Politics of Evolution in the 1860s," in *Journal of the History of Biology*, Vol. 24, No. 3 (Autumn, 1991), pp. 353-408.

conceptions of racial identity. My intention is to show that much of America's conflicted relationship with Darwinism is the product of the politics of biological science in nineteenth century America. Evolution's applicability to debates over the nature of race and human identity raised the political and social stakes of biological accounts of human origins. The political applicability of evolution lowered Americans' trust in the objective authority of the scientists who practiced biological science. I shall first proceed by discussing the inadequacy of the current analytical frameworks for discussing the history of evolution in America.

Evolution and Culture

One common lens for looking at the history of evolution in America is that of cultural and intellectual history. Explanations that rely on the distinctiveness of American middle class culture have a long pedigree. From Weber's *Protestant Ethic and the Spirit of Capitalism* to Louis Hartz's *Liberal Tradition in America*, American attitudes towards work, politics, and society have been defined by its Protestant culture and lack of landed aristocracy, which it is said gave to the United States its particular brand of 'middle-classness'. Without a landed aristocracy relying on the Church for authority and privilege and without a tradition of organic, hierarchical tory conservatism, American culture is said to unusually prize the ideals of merit, hard work, progress, and struggle. The explanatory power of middle class culture is used by scholars such as David Hull to explain receptions to Darwinian ideas.⁷ In this narrative Darwinism in America becomes a story about the cultural applicability to middle class mores of an evolutionary theory in which humankind is placed firmly within the laws of a natural world of competition and struggle.

⁷ Hull, David L. "Deconstructing Darwin: Evolutionary Theory in Context," in *Journal of the History of Biology*, Vol. 38, No. 1, The "Darwinian Revolution": Whether, What and Whose? (Spring, 2005), pp. 137-152.

Darwinian natural selection is seen as conforming to American folkways, and a biological theory of the natural world exalting competition and ‘survival of the fittest’ will find an intellectual home in “middle-class” American culture. The cultural hypothesis has some explanatory power for understanding regional variation within the United States. David Hackett Fischer’s *Albion’s Seed* revisits Louis Hartz’s germ theory of American culture, and in which Fischer tells us that the culture of the American South is a product of a “landed royalist” migration more akin to the aristocratic Tories of England than the migrations that populated New England.⁸ Perhaps then, this distinct cultural founding explains the variation found between New England and the southern states over the acceptability of Darwin’s theory of evolution. One newspaper editorial in 1925 saw the Scopes trial as a clash between calcified tradition and modern science. “It will be established at Dayton, beyond doubt, that the South prefers its traditions to science; its Southern self exaltation to any truth science may have discovered, or may yet discover.”⁹ A paternalistic, hierarchical southern culture of landed planters might find Darwinism more unsettling to traditional southern cultural values and morality. In regions of the United States that conform less to this “middle class” ideal-type, such as the American South, we will expect more resistance to the supposedly Darwinian ideals of competition and progress.

There are problems with the cultural hypothesis, however. It fails to explain cross-national variation adequately, for in the supposedly fertile middle-class parts of America we still observe lower levels of acceptance to evolution than in less “middle-class” countries in Europe, for example. It also conflicts with our understanding of the relationship between

⁸ Fischer, David Hackett. *Albion’s Seed: Four British Folkways in America*. (New York and Oxford: Oxford University Press, 1989).

⁹ Pittsburgh Courier, June 6, 1925, p. 16. Quoted in Moran, Jeffrey P. “Reading Race into the Scopes Trial: African American Elites, Science, and Fundamentalism,” in *The Journal of American History*, Vol. 90, No. 3 (Dec., 2003), pp. 891-911.

Protestantism and evolution. The supposed applicability of evolution to nonconformist Protestant cultural values did not make Protestants more receptive to Darwin than average. They have been and remain, on the contrary, less receptive.

Evolution and Class

Another story emphasizes class and economic interest to explain America's receptivity to evolutionary ideas. Examples include Richard Hofstadter's *Social Darwinism in American Thought* (1944), Robert Bannister's *Social Darwinism* (1979), as well as Barry Werth's more recent *Banquet at Delmonico's* (2009).¹⁰ This line of scholarship claims that America's brand of laissez-faire capitalism proved congenial to Darwinism, because natural selection and Darwin's vision of competition in nature mirrored gilded age economic interests.¹¹ There are many who have pointed out the joint influence that Thomas Malthus has had both on Darwin and modern economics.¹² Herbert Spencer's vogue in late nineteenth century America is explained as the product of capitalists and businessmen during the Gilded Age responding to 'Social Darwinism', which supported the free market principles of laissez faire. Spencer's vision of societal progress and health achieved through competition without governmental interference suited the material interests of the burgeoning industrial elite and

¹⁰ Richard Hofstadter, *Social Darwinism in American Thought*. (Philadelphia: University of Pennsylvania Press, 1944); Robert C. Bannister, *Social Darwinism: Science and Myth in Anglo-American Social Thought*. (Temple University Press, 1979); Barry Werth, *Banquet at Delmonico's: Great Minds, the Gilded Age, and the Triumph of Evolution in America*. (New York: Random House, 2009).

¹¹ See, for example, Ghiselin, Michael T. "Perspective: Darwin, Progress, and Economic Principles," in *Evolution*, Vol. 49, No. 6 (Dec., 1995), pp. 1029-1037, and Rogers, James Allen. "Darwinism and Social Darwinism," in *Journal of the History of Ideas*, Vol. 33, No. 2 (Apr.-Jun., 1972), pp. 265-280.

¹² Peter J. Vorzimmer, "Darwin, Malthus, and the Theory of Natural Selection," in *Journal of the History of Ideas*, Vol. 30, No. 4 (Oct.-Dec., 1969), pp. 527-542; Robert M. Young, "Malthus and the Evolutionists: The Common Context of Biological and Social Theory," *Past and Present*, Vol. 43 (1969), pp. 109-45; Sandra Herbert, "Darwin, Malthus and Selection," in *Journal of the History of Biology*, Vol. 4, No. 1 (Spring, 1971), pp. 209-217; Peter J. Bowler, "Malthus, Darwin, and the Concept of Struggle," in *Journal of the History of Ideas*, Vol. 37 (1976), pp. 631-50; Scott Gordon, 'Darwin and political economy; the connection reconsidered', *Journal of the History of Biology*, Vol. 22 (1989), pp. 437-59; Greta Jones, "Alfred Russel Wallace, Robert Owen and the theory of natural selection," *The British Journal for the History of Science*, Vol. 35, No. 1 (Mar., 2002), pp. 73-96.

the small shopkeepers that formed the backbone of the northern industrial economy. Henry Commager claims that “between them Darwin and Spencer exercised such sovereignty over America as George III had never enjoyed.”¹³

There is power in the materialist explanation that Americans believed in evolution when they found it congenial to their economic interests. It is in the industrialized north and amongst its industrial, capitalist class that Darwinian ideas were most fully accepted. In his dissent to *Lochner v. New York*, Justice Holmes felt it necessary to remark that “The Fourteenth Amendment does not enact Mr. Herbert Spencer’s *Social Statics*...[A] constitution is not intended to embody a particular economic theory, whether of paternalism and the organic relation of the citizen to the state or of laissez faire.”¹⁴ As Theodore Lowi points out, this makes Justice Holmes “one of the better prophets and one of the worst historians of his day.”¹⁵ For many, Spencer, Darwin, and evolution demonstrated the propriety of laissez-faire ideology. Some have questioned the degree to which the average American businessmen actually justified their business practices with evolutionary ideas¹⁶, but Spencer’s ‘survival of the fittest’ and Darwinian natural selection were certainly seen by intellectuals and business elites as congenial to laissez-faire.

Yale economist and philosopher, William Graham Sumner, epitomized this confluence of free market capitalism and nineteenth century biological science.¹⁷ Sumner held that society best develops when free from governmental interference, and that this vision was justified by analogy to the design found in a progressive, competitive natural

¹³ Commager, Henry. *The American Mind*. (New Haven: Yale University Press, 1950), pp. 89-90.

¹⁴ Oliver Wendell Holmes, dissent, *Lochner v. New York*, 198 U.S. 45, 75 (1905).

¹⁵ Theodore J. Lowi, *The End of Liberalism: The Second Republic of the United States*. (2nd edition) (New York and London: W.W. Norton & Company, 1979), p. 5.

¹⁶ Wylie, Irvin G. “Social Darwinism and the Businessman,” in *Proceedings of the American Philosophical Society*, Vol. 103, No. 5 (Oct. 15, 1959), pp. 629-635.

¹⁷ See, for example, Sumner’s *What Social Classes Owe to Each Other* (1883/Reprint: Caxton Press, 2003).

world.¹⁸ The steel magnate and philanthropist Andrew Carnegie believed in the power of Social Darwinism to better American civilization. “The price which society pays for the law of competition, like the price it pays for cheap comforts and luxuries, is also great; but the advantages of this law are also greater still...and while the law may be sometimes hard for the individual, it is best for the race, because it insures the survival of the fittest in every department.”¹⁹ One argument made against evolution by English Tories was that a belief in the transmutation of species would upset the natural order. For members of England’s landed aristocracy upsetting the social status quo with theories of natural progress and free competition was more than merely ‘reckless’; it also implied an end to the privilege inherent in a static, organic hierarchical order. In the United States, the closest equivalent to this landed aristocracy was the southern paternalist planter class, which depended on these hierarchies not being upset. Southern planters resisted the meritocratic ethos of liberal capitalism, and it accords with the materialist explanation that it is the least capitalist parts of the United States, e.g. the South, that were most hostile to Darwin’s ideas.

However, there are limits to the materialist explanation. Like the cultural hypothesis, an appeal to materialist interests fails to hold up to cross-country comparison. The northern American states are, relative to the southern states, more accepting of Darwin and evolution, but less so than many other countries. England, France, Canada, Germany, and Russia have all been more receptive to Darwinian ideas than even the northern, most industrial, parts of the United States. It is difficult to argue that these countries are all more capitalist or *laissez faire* than the United States; in fact, communist countries, such as the former Soviet Union, have adapted evolution to accord with their quite different conception of materialist interest.

¹⁸ Menand, Louis. *The Metaphysical Club: A Story of Ideas in America*. (New York: Farrar, Straus and Giroux, 2001), pp. 302, 431-432.

¹⁹ Andrew Carnegie, “Wealth,” *North American Review*, Vol. 148, No. 391 (June 1889), pp. 655.

Evolution and Education

The problem with appealing to culture and class is that triumphalist accounts of Darwinism in America imply that the United States was receptive to evolutionary biology, while in fact it has proven particularly resistant. One way to explain resistance to Darwinian evolution is lack of education or scientific literacy. A narrative based on American hostility to evolution may prove more satisfying, and indeed there is a scholarly tradition on the anti-intellectualism of the American mind.²⁰ According to Richard Hofstadter, “the common strain that binds together the attitudes and ideas which I call anti-intellectual is a resentment and suspicion of the life of the mind and of those who are considered to represent it; and a disposition constantly to minimize the value of that life.”²¹ The provincialism of American science or the American mind is often invoked to explain this acceptance “gap.” If nineteenth century American science lacked the tradition and expertise necessary to reach into the American hinterlands and set the agenda for broader patterns of American public education, then an initial American unfamiliarity with evolution combined with an American aversion to expert opinion might explain the American public’s hostile reception to Darwinian evolution.

In the nineteenth century there was indeed a lower level of biological and scientific scholarship in America than in countries such as England and France with longer, more distinguished scientific traditions. The most famous naturalist in America in the middle part of the nineteenth century was not a native-born American but a transplanted Swiss, Harvard’s Louis Agassiz. Because of the frontier and provincial nature of American

²⁰ For a classic statement of the American anti-intellectualism thesis see Richard Hofstadter’s 1963 study, *Anti-Intellectualism in American Life*. For more recent iterations of this thesis see Susan Jacoby’s *The Age of American Unreason* (New York: Pantheon Books, 2008) or Jennifer Ratner-Rosenhagen, “Anti-intellectualism as romantic discourse,” in *Daedalus*, Vol. 138, No. 2 (Spring 2009), pp. 41-52.

²¹ Hofstadter (1963), p. 7.

scientific scholarship, it's argued that Americans were either more distrustful or simply less aware of the success of scientific demonstration and scientific truth. The South enjoyed the least education as a region—and the South was particularly hostile to evolution. These provincial habits and frame of mind are used to explain American's comparatively cooler reception to the new evolutionary biology.

Controversy over the teaching of evolution in American schools has meant that students' exposure to evidence for evolution has been both less thorough and more hesitant than in other countries.²² Though creationism is not taught in public schools today (actually it sometimes is, just surreptitiously²³), evolution's controversial status incentivizes local school boards and teachers to present evolution as mere "theory" and to limit the time spent on evolutionary material, because it can be a risky business to offend either students or parents. Scientific doctrines can seem perplexing and counterintuitive, especially if presented as disputed or unsure. It might be the case that without a proper scientific education one cannot overcome traditional "common sense" beliefs. Maybe evolution is rejected because it is not properly understood. Level of education does correlate with belief in evolution in public opinion polls. People with graduate degrees are far more likely to believe in evolution than those with only a high school degree or less. There is both contemporary and historical validity to this explanation.

²² D. Aguillard, "Evolution Education in Louisiana Public Schools: A Decade following *Edwards v. Aguillard*," *American Biology Teacher*, Vol. 61 (19 99), pp. 182-188; M. L. Rutledge and M. A. Mitchell, "High School Biology Teachers' Knowledge Structure, Acceptance, and Teaching of Evolution," Vol. 64 (2002), pp. 21-28; Randy Moore, "Teaching Evolution: Do State Standards Matter?," *Bioscience*, Vol. 52, No. 4 (April 2002), pp. 378-381; Randy Moore, "The Creationist Down the Hall: Does It Matter When Teachers Teach Creationism?," *Bioscience*, Vol. 59, No. 5 (May 2009), pp. 429-435.

²³ *Edwards v. Aguillard*, 482 U.S. 578 (1987) established the teaching of creationism in public school classrooms as unconstitutional, but many teachers still want to and do teach creationism in their courses. One study of biology teachers in Louisiana showed that 29 percent want to teach creationism and 14 percent actually do (Aguillard, 1999). In addition, biology teachers who are more wary of the law can choose to ignore evolution or, as my 10th-grade biology teacher did, give equal time to the pastor of a local evangelical church to speak about creationism.

The problem with this argument is that even in the nineteenth century education and learning in America was not as provincial or underdeveloped as the “bumpkin” American story requires it to be. The literacy rate in the United States was higher than in England. American children spent more time in school and away from work, and American schools were more accessible to those outside of an elite upper-class than their English equivalents. Newspaper readership in America was very high, and sales of books, journals, and magazines sold very well, more even than in England. Popular magazines carried news of the latest natural history discoveries, and theories of the scientific avant-garde spread quickly and broadly across the continent. Public intellectuals did a brisk trade in public lectures, often selling out large auditoriums. Science was an important part of the secondary school education, and science enjoyed a significant following amongst an American middle class with its improving numeracy and literacy.²⁴ For most, the American educational system was better than England’s. It seems odd, then, to say that the average American citizen was more “provincial” and less educated than the average English subject. More recent surveys of scientific literacy show that while Americans are more hostile to evolution, their knowledge of science in general is roughly equal to that of the British.²⁵ If the American mind and educational system are responsible for American attitudes towards evolution, then why has this hostility not been replicated in other areas of scientific knowledge?

Perhaps what matters is not the scientific knowledge of the average person but the level of scholarship in a nation’s institutions of higher learning. Here indeed the argument

²⁴ Howe, Daniel Walker. *What Hath God Wrought: The Transformation of America, 1815-1848*. (Oxford: Oxford University Press, 2007), p. 466.

²⁵ Durant, John, Geoffrey Evans, and Geoffrey Thomas, “The public understanding of science,” in *Nature*, Vol. 340 (6 July 1989), pp. 11-14. See also, National Science Board, “Public science literacy and attitudes toward science and technology,” in *Science and engineering indicators*, (Washington, DC: National Science Board, 1990), pp. 162-77.

of provincialism has more merit. The upper crust of scholarship and high science did trail behind Europe's and England's in the middle part of the nineteenth century. The British Isles had had a long history of producing great works of science, first-rate Universities, more medical training, and greater scholarly exposure to scientific theories on the Continent. The United States had some history with scientific endeavor and some fine schools on the east coast, such as Harvard, Princeton, and Yale, but for the most part scholarship in natural history trailed European centers of learning. Even these universities were quasi-religious institutions focused on classical liberal education not fields of research like medicine and natural history. What little scientific activity there was existed in the Northeastern cities, and the Northeast became the region most receptive to Darwinian ideas. One sees an inverse relationship between the acceptance of evolution in a given location and its distance from Harvard.

However, after the Civil War, the second-tier American science improved. Land-grant universities educated farmers' sons and daughters in the prairie states of the Old Northwest far away from Boston and New York, and the triumvirate of Harvard, Yale, and Princeton secularized and began to emphasize scientific empiricism over the traditional liberal arts. To these schools would be added other institutions, such as Cornell, that would produce science and scholarship to rival or exceed that of Europe. It seems difficult to blame the provincialism of American science for Darwinism's reception in the United States.

Evolution and Religion

Most commonly, America's relationship to Darwinism is viewed as a reaction to religion. This formulation of anthropologist Christopher Toumey is typical: "The creation-

evolution controversy is obviously an interaction between science and religion, such that it is common to diagnose creationism as a case of using fundamentalist beliefs to control scientific knowledge.”²⁶ The historiography of the conflict between religion and science is long and distinguished.²⁷ Certain reliable figures, Galileo and the medieval Catholic Church for example, are trotted out to demonstrate the adversarial relationship between the sacred and the secular, tradition and enlightenment, or faith and reason. One recent book situates the reaction of religion to evolution as but merely the latest skirmish in a 2,500 year war fought by creationists against materialism since the ancient Greek Epicurus.²⁸ In the United States the Scopes Trial often stands as the definitive confrontation between evolutionary science and fundamentalist religion. *Inherit the Wind* colors our imagination.

Using religion to explain Darwin’s reception in America is appealing. Firstly, evolution does seem to conflict with some theological doctrines. Evolution’s timeframe conflicts with biblical accounts of an Earth less than 10,000 years old, and its materialism seems to deny the presence of an active god, and, for many, this means removing the world’s source of moral authority. The fear of moral relativism haunts anti-evolutionism. The 1871 *Times* of London review of Darwin’s *Descent of Man* accused Darwin of “undermining all authority” and proposing an amoral, or even immoral, doctrine. One of Charles Darwin’s nicknames was the “Devil’s Chaplain.” James Moore’s *The Post-Darwinian Controversies* is an

²⁶ Christopher Toumey, “Modern Creationism and Scientific Authority,” *Social Studies of Science*, Vol. 21, No. 4 (Nov., 1991), p. 681.

²⁷ Two classic statements of the warfare thesis are John William Draper’s *History of the Conflict Between Religion and Science*. (New York: 1875) and Andrew Dickson White’s *A History of the Warfare of Science with Theology in Christendom*. 2 Vols. (New York: Appleton, 1896).

²⁸ John Bellamy Foster; Brett Clark; and Richard York. *Critique of Intelligent Design: Materialism versus Creationism from Antiquity to the Present*. (New York: Monthly Review Press, 2008).

example of the sort of work that focuses on the interaction of religion and evolutionary science after the publication of Darwin's *Origin of Species*.²⁹

Americans have been and are more religious than Europeans, and Protestantism in the United States is more evangelical and fundamentalist than elsewhere. There is a strong correlation between religiosity and rejection of evolution within the United States. The American regions most hostile to evolution are the Midwest and South, and historians often casually accept this regional variation as the combined product of provincialism and religiosity. As Ronald L. Numbers says, "because people in the [South] were more religiously conservative and less well educated than people in the North, such differences were only to be expected."³⁰

However religion alone cannot satisfactorily explain why religious people have both accepted and rejected Darwinism. The view that science and religion are inherently rival is anachronistic to the nineteenth century for most nineteenth century intellectuals assumed that the truths of religion and science were in harmony rather than conflict. Reason and revelation were seen as mutually reinforcing views of God's laws. It is inadequate to argue that religion *is* hostile to science without understanding *why* evolutionary biology, in particular, has generated religious resistance in certain contexts but not others. There are three reasons for this: 1) Many scientific theories do not challenge religious doctrine, 2) Many scientific theories that do seem to challenge religious doctrines are ignored anyway, and 3) Religion has proven able to adapt doctrine to align with scientific discoveries. It is not clear *a priori* that religion should prove uniquely hostile to evolutionary biology. Indeed many religious people and denominations accept human evolution as fact.

²⁹ James Moore, *The Post-Darwinian Controversies*. (Cambridge University Press, 1979).

³⁰ Numbers (1998), *Darwinism Comes to America*, p. 58.

That evolution was an important scientific theory does not guarantee hostile religious sentiment. James Clerk Maxwell's work on electromagnetism was as important to the physical sciences as Darwin's to the biological sciences, and yet little response has been recorded by either mainline or evangelical Protestants in America regarding electromagnetism. The laws of thermodynamics predict that the universe will eventually devolve into a state of chaotic heat death. One could imagine the 2nd law of Thermodynamics sparking debate over creation, the space for God's benevolence in the universe, or descriptions of end times. During the nineteenth century there were some debates on the subject, but these remained relatively minor. Today, all else being equal, theists are no more likely than atheists to deny the laws of thermodynamics. People can also distinguish between epistemology and ontology. Some scientists practice 'methodological naturalism' though they are theists. It is possible to live with theoretical contradiction between scientific education and religious doctrine. Mere contradiction cannot explain the religious response to biological evolution.

The third reason we cannot assume an inherent conflict between religion and evolution is that religious doctrine has proven quite capable of incorporating and adapting to scientific discoveries. Perhaps the most famous example is the Galileo affair. Galileo Galilei's ideas conflicted with seventeenth century religious authorities but religious reinterpretation has incorporated heliocentrism. Though the Copernican system was once thought to contradict biblical passages, both Protestants and Catholics have adapted religious orthodoxy to coincide with modern science. In addition the last 150 years has witnessed the rise of 'scientific' literary analysis that treats the Bible as historical document;

many denominations have successfully adapted to these ‘modernist’ reinterpretations of scripture, as well.

Why have American churches not also adapted to biological evolution? In fact, they often have. Many religious denominations accept theistic evolution, and postulate evolution and natural selection as God’s mechanism for creating species. After 1859, some religious authorities argued that Genesis did not conflict with evolutionary science. The 1873 meeting of the Evangelical Alliance accepted M. B. Anderson’s theory that Protestants could accept both Darwinian evolution and Christian theology.³¹ The two most common types of ‘old-Earth’ creationism are the ‘day/age’ explanation, which interprets the Genesis account of six days of creation as six ages of unspecified length rather than literal twenty-four hour periods, and the ‘gap theory’ which claims a gap period between the first two verses of the Bible of unspecified length. These explanations attracted considerable support then and now.

The fundamentalist William Jennings Bryan did not subscribe to the young Earth hypothesis, and he was not alone among fundamentalists. George Frederick White, author of *The Fundamentals*, subscribed to the same view as Bryan, and so did William Bell Riley, the head of the World’s Christian Fundamentals Association. Until the middle part of the twentieth century fundamentalist insistence on six days of 24 hours each was confined mostly to a relatively small group of Seventh-Day Adventists. Fundamentalists argued over the merits of the three interpretations of Genesis (6 days, 6 ages, ‘gap’ theory), but it was not a question of heterodoxy. Theorists in all three camps considered themselves biblical literalists. A commitment to literalism does not exclude the interpretation of scripture.³²

³¹ George M. Marsden, *Fundamentalism and American Culture* (2nd Edition), (Oxford and New York: Oxford University Press, 2006).

³² “I believe everything in the Bible should be accepted as it is given there; some of the Bible is given illustratively. For instance: ‘Ye are the salt of the earth.’ I would not insist that man was actually salt...”

Bryan, along with the evangelical evolutionists James Dwight Dana, subscribed to the day/age theory and accepted that the Earth was millions of year old, yet they held differing views on Darwinian evolution.³³ Religion alone cannot explain the observed variation.

After Darwin, nineteenth century biological science challenged slavery, as well as scientific theories that used biological determinism to argue that blacks were inferior to whites. After Darwin's ascendancy, the natural sciences became associated with abolitionists and racial egalitarians and became politically distasteful to southern planters and white supremacists, who benefited from a power structure premised upon black inferiority. If nineteenth century science challenged the authority upon which the southern power structure rested, then it would benefit southerners to deemphasize science. We need to understand the reasons that people choose between rival sources of authority, and these reasons are shaped by larger social and political contexts. A richer, more rewarding, and ultimately more truthful account of Darwinian biology in America will pay attention to the incentives people have to accept what science says about the world and the way that political incentives in turn shape our understanding of science.

So, What Then Was It?

When *Origin of Species* was published in 1859 it entered an American political environment charged and splitting over race and slavery, as well as a political power structure premised on the racial inferiority of African slaves. Darwin's theory of evolution and the implication that all humans descended from a common ancestor were inescapably bound to American debates over identity and race. Debates in America about the biological sciences

William Jennings Bryan quoted in Jeffrey P. Moran, *The Scopes Trial*. (New York: Bedford/St. Martin's, 2002), p. 144.

³³ Numbers (1998), *Darwinism Comes to America*, p. 113.

were shaped by period debates about race, and evolution's legacy in America has been fundamentally influenced by nineteenth century America's most significant political division.

It was significant for Darwin's reception that his theory of evolution could not be separated in the public mind from a larger political tradition that existed in the United States, which used science, God, and history to justify racial hierarchy. No one denies Maxwell's propositions about electromagnetism, though they are as important as Darwin's contributions to scientific thought. What people object to are scientific doctrines that buttress opposing political agendas. The politics of evolution reflected the political priorities of northern American naturalists, who themselves shared important political sympathies with Charles Darwin and the cadre of English naturalists around him. Like his family, Darwin's politics were typical for a mid-nineteenth century Gladstonian Liberal. On economics, he believed in free-trade, anti-unionism, and laissez-faire. On race and slavery, Darwin was fiercely anti-slavery and a relative racial egalitarian. After 1860 the politics of evolution in England and America came to mirror these politics in important respects, and shaped the lens through which this theory was received.

Though a scientific law contradicted biblical teaching, nineteenth century Christians did not bother to object when there was no politically salient reason to do so. Darwin's theory of evolution *is* politically salient because it impacts our understanding of race. This is not to say that economic considerations were unimportant to the political reception of Darwin and Spencer in the United States; they were.³⁴ As in Great Britain, evolution was

³⁴ For example, Henry Demarest Lloyd railed against the "survival of the fittest" attitude amongst the business tycoons of his day, and attributed Darwinian ideas to gilded age capitalists. While the populist political economist Henry George, who favored state ownership of monopolies and argued that land belonged equally to all humanity used evolutionary arguments to justify his economic theories. Henry Demarest Lloyd, *Wealth against Commonwealth*. (New York and London: Harper & Brothers Publishers, 1894), p. 496. As for Henry George see most especially his last chapter in *Progress and Poverty* (1879), entitled "The Law of Human

capable of providing justification for widely divergent economic theories. However, the economic dimension only formed one dimension of political analysis; race formed another.

The publication of the *Origin of Species* caused a scandal in England and in America, but countries such as England and France more quickly and more uniformly accepted the argument that evolution by means of natural selection described the natural history of life on Earth. In America, however, the racial divide associated evolution with political controversy and decreased its chances for dispassionate acceptance. This project is about how and why Darwinian evolution fed into broader American political traditions of race and identity, and how debates over those ideas, in turn, shaped the public reception to evolution.

There have been some who have argued that the American political tradition and the corresponding ideology that undergirds it are broadly and basically unified around a core set of liberal, democratic ideas and institutions, and that this ideological tradition has played an important role in the creation of American nationalism and American national self-understanding.³⁵ This liberal tradition in America, rooted in a “Tocquevillian” story about American democracy, argues that a unified political tradition pushes Americans and their institutions towards “liberal” and “democratic” outcomes representing an inheritance of liberal and republican values arising out of the European enlightenment. According to this notion of unitary American political ideology, beliefs that deviate from this liberal pattern

Progress.” Alfred Russel Wallace, who independently formulated a theory of natural selection from Darwin, wrote to Darwin expressing admiration for George’s *Progress and Poverty* and said that he had “never been so impressed with a book”. Darwin replied that he would certainly order it himself. Quote appears in John Laurent, “Henry George: Evolutionary Economist?,” in *Henry George’s Legacy in Economic Thought*, ed. John Laurent (Edward Elgar Publishing, 2005), p. 73.

³⁵ Hector St. John Crevecoeur, *Letters from an American Farmer: Describing Certain Provincial Situations, Manners, and Customs, Not Generally Known; and Conveying Some Idea of the Late and Present Interior Circumstances of the British Colonies of North America*, (1782); Alexis de Tocqueville, *Democracy in America*. (1835-40); Gunnar Myrdal, *An American Dilemma: The Negro Problem and Modern Democracy*. (New York: Harper & Brothers Publishing, 1944); Louis Hartz, *The Liberal Tradition in America*. (New York: Harcourt, Brace, and World, Inc., 1955); Samuel Huntington, *American Politics: The Promise of Dis Harmony*. (Cambridge, MA: Harvard University Press, 1981).

and perpetuate illiberal and undemocratic values are un-American aberrations and merely marginal ideological contradictions resulting from ignorance and prejudice. The prevalence of this American political tradition is so strong, it is argued, that it even constrains political rhetoric in such that even America's political dissenters must articulate and defend their ideals within the American tradition of liberal and democratic values.³⁶ The American commitment to liberal values becomes not merely a belief in political goals, but a "habit of the heart," which expresses the American belief in the nation itself and an expression of one's place in the community. The expression of political beliefs therefore, represents also an expression of solidarity with the community of which one is a part arising out of one's presence in that American community.³⁷

Gunnar Myrdal, arguing in this Tocquevillian vein, described what he called the "American Creed," which reflected the ideals of "humanistic liberalism" and emphasized the moral equality of all human beings and their "inalienable rights to freedom, justice, and a fair opportunity."³⁸ According to Myrdal "Americans of all national origins, regions, creeds, and colors, have something in common: a social ethos, a political creed. It is difficult to avoid the judgment that this 'American Creed' is the cement in the structure of this great and disparate nation."³⁹ Myrdal argued that this American creed was strong enough to bind the nation towards these ideals, and to provide the lens through which Americans viewed and judged political "wrongs", and that failures to live up to this American Creed, such as showing support for white supremacy, arose not from the mainstream of American society

³⁶ Hendrik Hartog, "The Constitution of Aspiration and "The Rights that Belong to Us All," in *The Constitution and American Life*, ed. David Thelen. (Ithaca, NY: Cornell University Press, 1987).

³⁷ Robert Bellah, et al., *Habits of the Heart: Individualism and Commitment in American Life*, updated ed. (Berkeley and Los Angeles, CA: University of California Press, 1996 [1985]); Robert Putnam, *Bowling Alone: The Collapse and Revival of American Community*. (New York: Simon & Schuster, 2000).

³⁸ Myrdal, (1944), p. 9, 4.

³⁹ *Ibid.*, p. 3.

but were aberrations arising from the "poor and uneducated white person" in those "isolated and backward rural" places of the deep South, and people who expressed such views were "irrational" or "prejudiced".⁴⁰ Such an understanding of the American political tradition implied that education and time would bring about a more fully complete display of American values as the United States learned to live up to its own unitary set of high ideals.

Samuel Huntington echoed Myrdal's thoughts on the consensus inherent in American political life, and used that consensus to try to explain why the crises that do emerge in American political life look the way that they do. Huntington argued that political crises have emerged when American institutions failed to realize American ideals completely.⁴¹ According to Huntington, disagreements within American politics happen when Americans notice inequalities that violate the American creed, and then seek to reform American institutions that create or perpetuate those inequalities in order to realign these institutions with consensus American beliefs. This "consensus theory" of American politics argues that Americans basically agree about the goals of American institutions, and even when they seem to disagree they remain loyal to the basic American faith in liberal egalitarianism. While Americans are often disappointed by their institutions, fundamental disagreement is anomalous and works itself out as information and learning allows Americans to coordinate around the particular constellation of ideas to which all American subscribe.

When Americans fail to act in accord with their presumed liberal egalitarianism ignorance and apathy are often blamed. For example, the political scientist Larry Bartels argued that the 2001 Bush tax cuts were favored by the American public, because the

⁴⁰ *Ibid.*, p. xlvii, xlix.

⁴¹ Samuel Huntington, *American Politics: The Promise of Disharmony*. (Cambridge, MA: Harvard University Press, 1981).

average American failed to understand that such tax cuts heavily favored the wealthy and would increase economic inequality.⁴² Bartels characterized the “ordinary” American citizen as a simple-minded Homer Simpson unable to understand his true self-interest, and he concluded that “the strong plurality support for Bush’s tax cut...is entirely attributable to simple ignorance.”⁴³ Bartels assumes that there is a general American consensus against inequality and that if truly informed Americans would oppose the tax cuts. In actuality, more information about the connection between economic inequality and public policy did not uniformly lead to more negative views on the Bush tax cuts. Rather, the information's effect was dependent upon political ideology and political partisanship.⁴⁴ Amongst voters who identify as liberals or Democrats, receiving more information about the Bush tax cuts led to higher rates of opposition, but amongst voters who identified as conservatives or Republicans, those who received more information actually supported the tax cuts even more.⁴⁵ Information about the tax cuts worked to polarize public opinion away from agreement rather than to drive it toward consensus, and ideology drove people's reaction to the economic information they received.

The consensus view of American politics is powerful, but it is also problematic because it can teach us to misinterpret disagreements in American politics. While some crises that emerge are destined for resolution as American institutions are brought into alignment with American ideals, others cannot go away because there is no fundamental level upon which the factions agree. In such cases, disagreements are not aberrations from a

⁴² Larry M. Bartels, “Homer Gets a Tax Cut: Inequality and Public Policy in the American Mind,” *Perspective on Politics*, Vol. 3, No. 1 (Mar., 2005), pp. 15-31.

⁴³ *Ibid.*, p. 24.

⁴⁴ Arthur Lupia, Adam Seth Levine, Jesse O. Menning, and Gisela Sin, “Were Bush Tax Cut Supporters ‘Simply Ignorant?’ A Second Look at Conservative and Liberals in ‘Homer Gets a Tax Cut,’” *Perspective on Politics*, Vol. 5, No. 4 (Dec., 2007), pp. 773-784.

⁴⁵ *Ibid.*, p. 775.

consensus, but self-sustaining competitions between rival ideas. Viewing American support for white supremacy, for example, as a surprising deviation from a consensus American creed completely misinterprets the centrality of white supremacy in American public life and white supremacy's role in shaping America's ideals and institutions. Similarly, commentators who view creationism as an irrational or surprising deviation fueled by ignorance or prejudice misunderstand the strength that creationism has drawn from its place in American racial theories. Disputes over Darwinian evolution are part of the historical disputes over the composition of the American polity itself. The consensus view of American politics would misinterpret 19th-century creationists as potential Darwinians needing only a little more education and a little less religion to accept the scientific consensus on evolution, while forgetting that creationists may simply be people who have different visions of what is good in American social life. One model says that creationists do not accept evolution because they do not understand it, while another says that they do not accept it because they do not like it.

Adjectives that Bartels used to describe citizens who supported the Bush tax cuts (“simple-minded,” “unenlightened,” “superficial”) sound similar to those used to describe creationists who oppose Darwinian evolution, but characterizing opposition to Darwinism as ignorance underestimates the true strength of the antievolution movement in the same way that the consensus view of American politics underestimates the strength and historical centrality of white supremacy in American public life. White supremacy and ascriptive Americanism are not aberrant political phenomena but are rooted as deeply in the American political tradition as liberal egalitarianism. Fights over the definition of humanity are rooted in the American Constitution with the 3/5th clause considering black slaves to be less than

fully human. There was no education campaign that could dislodge slavery from American life and white supremacy continued long after the Civil War ended slavery. Ideology creates and reaffirms communities of identity and none has been more powerful in American history than ideologies of racial hierarchy of which evolution is inextricably bound, and because evolution is inextricably tied to our understanding of racial identity, evolution can never cease to be controversial as long as race itself remains a contested idea in America.

The liberal tradition in America exists alongside other persistent, powerful, and American ideologies, which Rogers Smith has called the "multiple-traditions" view of America.⁴⁶ This is especially true in the American South. The presence of slavery in the antebellum South, and the long tradition of white supremacy that persisted after emancipation were not "aberrations" from a unified American political tradition, but were manifestations of a separate but also deeply American political tradition that rested on the subjection of black Americans and an ideological system that placed whites on the top of a racial hierarchy granting privileges and power to white men. A belief in white Supremacy was not merely an "irrational" aberration from an overriding American tradition of liberalism and equality, but rather a manifestation of a parallel and long-sustaining American political tradition of inequality and ascriptive hierarchy.

By the mid-19th century, Richard Hildreth was already challenging Tocqueville's vision of the American democratic tradition's prevalence in the American South. Writing about the slave states of the American South, Hildreth described a land and people who thought and acted differently than other Americans and demanded that their social "creed" serve as the unitary political and social understanding of their social order. Rather than a

⁴⁶ Rogers Smith, "Beyond Tocqueville, Myrdal, and Hartz: The Multiple Traditions in America," *The American Political Science Review*, Vol. 87, No. 3 (Sep., 1993), pp. 549-66.

tradition of equality amongst men, Hildreth argued that Southern whites considered blacks “not merely as animals, but as animals of the wildest and most ferocious character.” To even entertain the notion that black slaves were men was considered to be “an absurd, a misplaced and a fanatical tenderness, certain, if persevered in, to uproot the foundations of society, and to end in results indeterminate, but terrible.” Hildreth continued:

Whether or not there is any thing of reason and truth in these ideas, is not now the question. Suffice it to say, that they are universally prevalent throughout the southern states. They are received, the authorized, the established creed. They are interwoven into the very frame-work of society; laws, customs, charities, morals, and religion, all are modified by them. Doubtless there are men of reflection and discernment, and men in whom a warm benevolence supplies the place of reflection and discernment, who perceive more or less clearly, the monstrous and extravagant absurdity of these popular ideas. But for their lives they dare not whisper the suspicion of doubt. To do so would be high treason against the authority of the privileged order,—an order as jealous, fretful and suspicious as ever was the aristocracy of Venice; and as apt to punish too, on vague suspicion, without a trial, or a responsible accuser.⁴⁷

Hildreth argued that the public culture of the South was distinct, and the beliefs and behaviors of Southern whites about even such seemingly "non-political" beliefs about honor, decorum, and work ethic followed this Southern creed.⁴⁸ Just as Tocqueville, Myrdal, and Hartz had identified what they considered to be belief systems about the social and political world that expressed "Americanness," Hildreth argued that the South had a similar political tradition that identified Southerners as Southerners, and through which they expressed their political and racial identity as white, Southern masters. As opposed to the egalitarian, liberal, democratic ideals supposedly dominate in the North of America, the Southern political tradition was distinct, and though it shared elements of the democratic tradition of the rest of the United States, it existed alongside a crucial tradition that argued that white Protestant

⁴⁷ Richard Hildreth, *Despotism in America: an Inquiry into the Nature, Results, and Legal Basis of the Slave-Holding System in the United States*. 2nd ed. (Boston, MA: John P. Jewett & Co., 1854), p. 71.

⁴⁸ *Ibid.*, p. 150-5.

Anglo-Saxon males deserved to wield disproportionate social and political power over other, distinct subordinate racial groups.

Since the settlement of North America, biology and natural history were inescapably bound to the American political tradition, because identity was inescapably bound to the American political tradition. As Rogers M. Smith puts it, "American politics is best seen as expressing the interaction of multiple political traditions, including *liberalism*, *republicanism*, and *ascriptive forms of Americanism*, which have collectively comprised American political culture, without any constituting it as a whole."⁴⁹ The "ascriptive Americanist traditions believe true Americans are in some way 'chosen' by God, history, or nature to possess superior moral and intellectual traits..."⁵⁰ Ascriptive outlooks provide "credible intellectual and psychological reasons for many Americans to believe that their social roles and personal characteristics express an identity that has inherent and transcendent worth, thanks to nature, history, and God."⁵¹ While the United States lacks a strong political tradition of aristocratic hierarchy prefaced upon lineal differences among white men, it has had an aristocratic hierarchy prefaced upon racial differences between black and white men.

The very same Virginians who so adamantly favored supplanting an aristocracy of birth with American democracy, were the same ones who worked so hard to build a racial hierarchy prefaced upon white supremacy.⁵² The American democracy simultaneously enacted liberal and republican values amongst white men, while it excluded non-whites from the category of "American" and justified the separation through intellectual appeals to God and nature. Racial identity was inextricably bound to political and social inequality, and the

⁴⁹ Smith, (1993), p. 550.

⁵⁰ *Ibid.*, p. 563, Note #4.

⁵¹ *Ibid.*, p. 550.

⁵² Edmund S. Morgan, *American Slavery, American Freedom*. (New York: W. W. Norton & Co, 1975).

"ascriptive American tradition" maintained white supremacy by pulling white Americans, particularly Southern white Americans, towards a biological understanding of race as a determinant of political and social power. This would culminate in the 19th century with the polygenist movement, which argued that nature demonstrated that whites and blacks were not even the same species. This biological and anthropological tradition found its greatest support in the American South and among scientists who sympathized with white supremacy. Because Darwinian evolution removed the "scientific" support for innate racial essentialism, racial fixity, and racial distinctiveness it represented a threat not just to religion, or alternative scientific models of the natural world, but to a foundational American political tradition that ascribed rights and privileges in the social order to white men. During the 19th century, this tradition of ascriptive Americanism would emerge, alongside conservative evangelical Protestantism as vital components of an emergent Southern nationalism by the time of the Civil War, and would continue afterwards as a set of high ideals guiding Southern political and social life. The distinctive "Southern civil religion" as Charles Reagan Wilson describes it, will prove crucial to the distinctive Southern reaction to the new "anti-religious" and racial leveling doctrine of Darwinian evolution.⁵³ As this dissertation shall show, the presence of this ideological tradition provided the lens through which Southerners engaged the debate over Darwinian evolution, and the history of Darwinism in America cannot be fully understood without this critical historical context.

Because of the particular historical social and political context into which Darwinian evolution emerged in the United States, to believe or not to believe in evolution carried social and political connotations about ones fidelity to white supremacy, and called into

⁵³ Charles Reagan Wilson, *Baptized in Blood: The Religion of the Lost Cause, 1865-1920*. (Athens, GA: The University of Georgia Press, 1980).

question one's identity within the larger milieu of American political traditions and groups. In other words, "belief" in evolution came to reflect who we know rather than what we know. According to Yale's Dan Kahan:

What people are doing, then, when they say they "believe" and "disbelieve" in evolution is expressing *who they are*. Evolution has a *cultural meaning*, positions on which signify membership in one or another competing group. People reliably respond to "Evolution" and "Big Bang" in a manner that signifies their identities. Moreover, many of the people for whom "false" correctly conveys their cultural identity *know* plenty of science.⁵⁴

The scientific consensus in favor of Darwinian evolution and the racially egalitarian message of its content and context might have seemed to favor its broad acceptance within a vision of the American tradition that emphasizes liberal and republican values of the enlightenment, suggesting both that American attitudes towards Darwinian evolution are aberrant and unexpected and that Americans who do not accept the scientific consensus in favor of evolution suffer from either too much religion or too little education. But this ignores the importance that scientific authority played in the shaping of American political ideology. In England and America, science emerged throughout the nineteenth century as an increasingly secular, independent, and professional source of political authority.⁵⁵ In the 19th century, this view of science as savior became increasingly popular for this was an age increasingly enamored of the certifiable truths that scientists were increasingly able to provide, and, it is said, less satisfied with biblically mandated guidance.⁵⁶

⁵⁴ <http://www.culturalcognition.net/blog/2013/6/19/what-does-disbelief-in-evolution-mean-what-does-belief-in-it.html>. Accessed 6/4/2014.

⁵⁵ On the growing prestige of science see David A. Hollinger's, "Justification by Verification: The Scientific Challenge to the Moral Authority of Christianity in Modern America," in *Religion and Twentieth-Century American Life*, ed. Michael J. Lacey (New York: 1989) and Thomas L. Haskell, ed., *The Authority of Experts: Studies in History and Theory* (Bloomington: 1984).

⁵⁶ Drew Gilpin Faust, *The Ideology of Slavery: Proslavery Thought in the Antebellum South, 1830-1860*. (Louisiana State University Press, 1981), p. 11.

In this dissertation, I show how a complex set of beliefs about racial identity and political practices that have upheld white supremacy, sometimes called Southern nationalism, Southern civil religion, or ascriptive Americanism, have operated to channel Southern understanding and treatment of evolution. The history of evolution in America teaches us how communities of identity use ideological beliefs to identify themselves as members of particular political and social groups, and how a constellation of mutually supporting ideas about the right to participate in the American polity and the nature of racial identity have shaped American reactions to science, religion, and society. The history of evolution, in particular, provides a unique opportunity to understand the political disputes that have been waged to decide who counts as a member of the American polity. The scientific disputes over the nature of personhood, the limits of humanity, and the relationship between racial groups cuts to the very core of American political life. The Declaration of Independence claims that “all men are created equal,” yet the history of American social life has been a history of inequality. Evolution is the preeminent theoretical advancement in biology in the 19th century, and it remains the unifying theoretical core of modern biological science, and goes to the heart of what it means to be human, which has been at the heart of the American political tradition.

The New World of American Science, 1770-1830

The question of questions for mankind—the problem which underlies all others, and is more deeply interesting than any other—is the ascertainment of the place which Man occupies in nature and of his relations to the universe of things.

-Thomas H. Huxley, *Evidence as to Man's Place in Nature* (1863)

We must know all the tribes, all the productions of nature, before we can comprehend and exhibit accurately their mutual connexion and dependence.

-Stephen Elliott, "Views of Nature", *De Bow's Review* (1828)

Introduction

The previous chapter demonstrated the inadequacy of the four traditional frames (culture, class, education, religion) through which scholars analyze evolution in America. As an alternative, the importance of political ideology was proposed as a superior alternative to explain Darwinism's controversial history in America.

This chapter will do three things: 1. Show that the political forces that shaped American democracy during the early Republic significantly influenced the course of American science. In fact, like the Republic, American science became more democratic, and its practitioners increasingly came from the sorts of social and political groups that shaped the nation during the Jeffersonian revolution and the increasingly democratic Jacksonian era. Scientists, technologists, inventors, and innovators increasingly came from the middling classes, and these pragmatic yeoman inventors and shopkeeper scientists cared less about scientific theory itself and more about the uses to which science and innovation could be put. Their focus on results meant that they took into account the political

ramifications of science. 2. This chapter will also show that Americans were particularly interested in natural history, and more specifically the classification of the natural world. America was a virgin wilderness filled with strange and wonderful creatures, and as such was particularly fertile ground for the study of nature. Furthermore, Europeans were interested in understanding their relationship to the people they encountered in the new world, as well as to those they brought there to enslave. Sometimes this interest was the product of simple curiosity, but often it arose in order to justify social inequality. Early modern and enlightenment thinkers wondered how climate shaped man's moral and physical nature, and they sought to understand the relationship between humans in the new world, and justifications for hierarchies amongst peoples were useful and sought for. 3. This desire to classify and understand the natural world, and man's place in it, had important ramifications for the social world. The growing importance of scientific methods of understanding in the eighteenth and nineteenth centuries invested scientific theories with significant political clout, and this clout encouraged southern slaveholders to use natural science as ideological support for the slave system. Slavery was the pivot around which politics turned in the United States after the 1820s, and as northern emancipators stepped up their attacks on slavery, slave-owners sought intellectual and political justifications with which to ground their defense of the peculiar institution.

This takes the story to the next chapter where the use of the natural sciences is examined in the context of the political disputes between northern liberals/abolitionists and southern conservatives/slaveholders from the 1830s to the publication of Darwin's *Origin of Species* in 1859 and the outbreak of war in 1861.

A Peculiarly American Science

Science and natural history were already intimately tied to politics well before the founding of the United States. In fact science and technology had been consciously cultivated because of their association with American democracy. Science in the early Republic was characterized by three peculiarly American phenomena: An emphasis on practical results rather than knowledge for its own sake, the gathering of facts rather than the formation of theory, and the importance of amateur opinion rather than professional expertise. The growth of this American spirit of scientific enterprise paralleled the growth of American democracy, and contemporaries thought so, too. As Hugo Meier puts it:

Evident in the early years of the republic, this association came to emphasize the special role of technology in providing the physical means of achieving democratic objectives of political, social, and economic quality, and it placed science and invention at the very center of the age's faith in progress.⁵⁷

American scientists and inventors were not especially highly-regarded by Europeans at this time, but what American science was known for was its particular brand of observation, classification, and practical usefulness.

Though in the nineteenth century, there were many who were interested in science for its own sake, American scientists preferred to study things that could be turned to practical use. Thomas Jefferson said that Benjamin Franklin's science was valuable, because "he always endeavored to direct it to something useful in private life."⁵⁸ For Jefferson, "a smaller agent, applicable to our daily concerns, is infinitely more valuable than the greatest which can be used only for great objects."⁵⁹ Thomas Grimké said that "the true glory and

⁵⁷ Hugo Meier, "Technology and Democracy, 1800-1860," *Mississippi Historical Review*, Vol. 43, No. 4 (Mar., 1957), p. 618.

⁵⁸ Thomas Jefferson to Thomas Cooper, July 10, 1812, Andrew A. Lipscomb (ed.), *The Writings of Thomas Jefferson* (20 vols., Washington, 1903-1904), XIII, 176-77.

⁵⁹ Thomas Jefferson to George Fleming, December 29, 1815, Lipscomb (ed.), *Writings of Jefferson*, XIV, 366-67.

excellency of Science consists in its aptitude to meliorate the condition of man.”⁶⁰ To the early American, the value of science lay in its ability to lessen even the minor burdens of life.

Science was associated with democracy’s progress, and as the Jeffersonian revolution made the nation more democratic, the nation’s science followed suit. Enthusiasm ran high for scientific enterprises both as a source of curiosity amongst local citizens and as a source of civic pride. American citizens supported amateurish and boosterish endeavors even though those endeavors often led to little of real scientific value. For example, in rapidly modernizing Ohio in the early nineteenth century, citizens donated enough money to build a new astronomical observatory in Cincinnati without any government aid.⁶¹ Democratic patronage of science was seen as proof that Ohioans had advanced in their development of civilization and could stand comparison with older, more developed societies. When the Cincinnati observatory project was conceived in 1842, Ormsby MacKnight Mitchel told his audience that he was “determined to show the autocrat of all the Russias that an obscure individual in this wilderness city in a republican country can raise here more money by voluntary gift in behalf of science than his majesty can raise in the same way throughout his whole dominions.”⁶²

As in the case of the Cincinnati observatory, the democratic citizens of the early Republic viewed science and innovation as reflective of the emergent power of the new democracy. Many saw the new innovative practices as helping to create and strengthen the

⁶⁰ Thomas Smith Grimké, *An Address on the Character and Objects of Science and Literature, Past, Present and Future, of Protestant Nations, Delivered in 1st Presbyterian Church at Charleston, on Wednesday, the 9th of May, 1827, being the Anniversary of the Literary & Philosophical Society of South Carolina* (New Haven, 1831), p. 8.

⁶¹ Stephen Goldfarb, “Science and Democracy: A History of the Cincinnati Observatory, 1842-1872,” *Ohio History*, Vol. 78, No. 3 (1969), pp. 172-8.

⁶² Quoted in Goldfarb (1969), p. 172-3.

new Republic by combining civil liberties with public enlightenment.⁶³ The American engineer and inventor Robert Fulton can provide a good example. Fulton is widely credited as the developer of the first commercially viable steamboat, and he played an important role in the development of the Erie canal.⁶⁴ Fulton argued that a canal would bind the new republic together socially and economically and thus politically. He argued that his “creative canals” could help to secure the nation’s republican institutions from the destabilizing effects of separation.⁶⁵ As Fulton said, “every order of things which has a tendency to remove oppression and meliorate the condition of man, directing his ambition to useful industry, is, in effect, republican.”

In addition, partisans of equality and liberty in the United States argued that just as science and technological innovation could contribute to democratic institutions, the native spirit of innovation and the broad-based contributions of the middle class depended on the high degree of equality and civil liberties present in America.⁶⁶ Popular and scholarly magazines and journals extolled the importance of American political institutions and civil liberties for,

the rapid progress of science in general...in the United States. The men of science in Europe, are astonished at the rapidity with which one discovery succeeds another, and cannot conceive, how, in so short a time, so many hands, and heads are occupied with the exact sciences, and mechanics. The vast advantages attached to freedom, are unknown on this side of the Atlantic, and the spirit of energy with which a free people pursue whatever they perceive to be for their interest, are only beginning to be understood by the few.⁶⁷

⁶³ Meier (1957), p. 619.

⁶⁴ Peter L. Bernstein, *Wedding of the Waters: the Erie Canal and the Making of a Great Nation*. (New York: W. W. Norton & Company, 2005), pp. 114, 163.

⁶⁵ Robert Fulton to Albert Gallatin, December 8, 1807, in Report of Albert Gallatin, secretary of the treasury, to the Senate, April 4, 1808, *American State Papers, Miscellaneous* (2 vols., Washington 1834), I, 917-21.

⁶⁶ Meier (1957), p. 620.

⁶⁷ “Extracts of a Letter from Wm. McClure, Esq., to the Editor, dated Madrid, December 4, 1821,” *American Journal of Science and Arts* (New Haven), V (1822), p. 197.

Another technological journal agreed that the cause of progress was the “degree of civil liberty which leaves the human mind untrammelled to avail itself of its own strength.”⁶⁸ Even American participation in science and technology was marked by its democratic composition, and the skills at this time was marked by a broad participation rather than by than being dominated by an elite class of highly-skilled inventors.⁶⁹ As one contemporary observer put it, “when there is free labor upon a free soil, a free head and a free heart to direct, and a free hand to do, we need have no fear of the result.”⁷⁰

Observers considered the American political system played an important role at making Americans tinkerers. The Frenchman Alexis de Tocqueville noticed the relationship between Americans’ democratic values and their relationship to science and technology. Tocqueville speculated that the American preference for practical rather than theoretical science was related to their belief in equality and democracy. “Those who cultivate science in democratic nations are always fearful of losing their way in utopian speculation. They distrust systems, they enjoy adhering to facts which they themselves study.”⁷¹ Even the education of American children focused more heavily on practical and applied matters than those of European children.⁷²

Jeffersonian democracy seemed made for this new broad class of independent tinkerers newly able to participate in the creation of science and government. The Jeffersonian revolution morphed “the people” from the lower portion of society, as it

⁶⁸ *Mechanics’ Magazine and Register of Inventions and Improvements* (New York), II (November, 1833), p. 246.

⁶⁹ Kenneth L. Sokoloff and B. Zorina Khan, “The Democratization of Invention During Early Industrialization: Evidence from the United States, 1790-1846,” *The Journal of Economic History*, Vol. 50, No. 2 (Jun., 1990), pp. 363-378.

⁷⁰ Augustus Woodbury, *The Character and Influence of American Civilization: An Oration Delivered before the Authorities of the City of Lowell, July 4, 1855* (Lowell, Mass., 1855), pp. 23-4. quoted in Meier (1957), p. 620.

⁷¹ Alexis de Tocqueville, *Democracy in America*, trans., by Gerald Bevan (London: Penguin Classics, 2003), p. 530.

⁷² Goldin, Claudia, “Education” in chapter Bc of *Historical Statistics of the United States, Earliest Times to the Present: Millennial Edition*, edited by Susan B. Carter, Scott Sigmund Gartner, Michael R. Haines, Alan L. Olmstead, Richard Sutch, and Gavin Wright (New York: Cambridge University Press, 2006), p. 2-387.

remained in Europe, to a class encompassing all white men, and American science paralleled that.⁷³ While there were Federalists who opposed the further democratization of American politics as well as its science, and as Noah Webster noted, “attempted to resist the force of public opinion, instead of falling into the current with a view to correct it,” the progress of a broadly based, popular science and technology (“the useful arts”) were associated with the rise of men like William Findley, Melancton Smith, John Lamb, and Jedediah Peck, who represented the democratic middling sorts of backwoods farmers, shopkeepers, and mechanical types challenging the reigning Federalist elites.⁷⁴ This emergent political class, and the Democratic-Republican societies of the late 1790s that supported it, emphasized democratic opinion over aristocratic expertise, and this was reflected in the American attitude towards scientific expertise. As Tocqueville described it, “as they do not easily defer to the reputation of their fellow men, they are never inclined to swear by the authority of an expert.”⁷⁵

Americans believed that innovation and progress in both science and democracy were tied to a well-informed citizenry, and education was supported to encourage both. Innovations, knowledge, and the spread of scientific expertise were believed to carry profound political implications in a society whose government’s legitimacy rested on the consent of its citizens.⁷⁶ The United States postal service was allowed to run a significant deficit for many years, in contrast to European postal services that were expected to return

⁷³ Gordon S. Wood, *Empire of Liberty: A History of the Early Republic, 1789-1815*. (Oxford and New York: The Oxford University Press, 2009), p. 35.

⁷⁴ Quoted in David Hackett Fischer, *The Revolution of American Conservatism: The Federalist Party in the Era of Jeffersonian Democracy* (New York, 1965), pp. 151-2; For an illuminating discussion of the rise of Jedediah Peck in Otsego County, New York see Alan Taylor, *William Cooper’s Town: Power and Persuasion on the Frontier of the Early American Republic*. (New York: Alfred A. Knopf, 1995), esp. pp. 241-9.

⁷⁵ Tocqueville, *Democracy in America*, p. 530.

⁷⁶ See Richard D. Brown, *The Strength of a People: The Idea of an Informed Citizenry in America, 1650-1870*. (Chapel Hill: University of North Carolina Press, 1996), esp. chapter 4.

great sums annually to the treasury, because it was argued that the need to foster education and communication amongst the population superseded the need for fiscal returns.⁷⁷ Benjamin Rush called the postal service the “true non-electric wire of government” which brought “light and heat to every individual in the federal commonwealth.”⁷⁸ Alexis de Tocqueville called the American postal system a “great link between minds” which brought enlightenment.⁷⁹

However, because science and politics were so closely bound, political ideology was capable of playing a role in the public perception of the value of science itself. For example, in the frontier town of Cooperstown, New York, agricultural societies were established to provide farmers with the means to improve their techniques and harvest. These agricultural societies, like other civic societies, tended to be dominated by the sorts of Federalists who,

resisted cultural changes that challenged patriarchy and deference. Seeking technical progress within a traditional culture, the reformers tried to manage social change: accelerating agricultural innovation while reclaiming a lost, golden age of superior harmony, morality, and hierarchy presumed to have existed in the New England past.⁸⁰

For many poor and middling farmers the desire to learn the techniques that agricultural societies could provide was tempered by their suspicion of private associations dominated by Federalists. This was especially true if the association seemed to centralize power and authority over the provision of information.⁸¹ One member of the agricultural society board characterized the opposition as common people who feared “that all societies, or combinations of this kind, are bodies not organized for their good, but for the express

⁷⁷ Richard R. John, “The Politics of Innovation,” *Daedalus*, Vol. 127, No. 4, Education Yesterday, Education Tomorrow (Fall, 1998), pp. 188-90.

⁷⁸ Benjamin Rush, “Address to the People of the United States,” *American Museum*, Vol. 1 (1787), p. 10.

⁷⁹ Tocqueville, *Democracy in America*, p. 452.

⁸⁰ Taylor (1995), p. 385.

⁸¹ *Ibid.*, p. 385.

purpose of debasing and oppressing them.”⁸² In 1821, the Republican assembly in New York voted to remove funding for county agricultural societies, because public opinion did not support their continuation. Scientific expertise was resisted when seen as the product of politically disagreeable organizations. The American public was neither particularly uneducated nor disagreeable to learning nor adverse to the benefits of science and innovation, but they were skeptical of the claims of experts with whom they disagreed politically.

The American public (both North and South) trusted the ability of scientists to discover useful knowledge, and they believed that the progress of science was both validated and strengthened their democracy. They also valued scientific judgments as they were seen to relate to even “nonscientific” matters. Increasingly in the 19th century, even religious fundamentalists felt the urge to square their religious and political beliefs with science. As George Marsden puts it, “In an age that revered science, it was essential that this confidence in Scripture not be based on blind faith alone. God’s truth was unified, so it was inevitable that science would confirm Scripture.”⁸³

But all through it, Americans maintained a decidedly pragmatic attitude towards the achievements of science. Here is historian Robert Bruce describing the relationship of American science to pragmatism better than I can:

It was all in tune with that most American of formal philosophies, pragmatism. And while pragmatism, like the general attitude of American scientists, had its roots in the whole American experience, it was natural that the formal expression of pragmatism should have come not from American

⁸² “A Member,” *Otsego Herald*, Sept. 18, 1817.

⁸³ George Marsden, *Fundamentalism and American Culture: The Shaping of Twentieth-Century Evangelicalism: 1870-1925*. (New York and Oxford: Oxford University Press, 1980), p. 16.

political thinkers, as a casual observer might have expected, but from the American scientific community...”⁸⁴

This utilitarian approach to scientific endeavors was prevalent amongst the general public since early colonial America.

By the 1840s science emerged as a powerful voice of authority in American society, but that voice spoke with an American accent. This American science was connected to the world of politics and democracy, and it tended towards the useful and the practical rather than the abstract and theoretical. Even John C. Calhoun showed his faith in the value of scientific achievement for society when he said that “the subjugation of electricity to the mechanical necessities of man would mark the last era in human civilization.”⁸⁵ This democratic and political American science affected and was affected by changes in the larger social and political world of the United States in the age of Jefferson and Jackson. Views of the products of scientific endeavor were filtered through the lens of partisan applicability, and it should therefore not surprise us then that science and innovation would come, as we shall see, to be viewed through the lens of the most important political issue in nineteenth century America: slavery.

America and the Classification of the Natural World

Nineteenth century Americans were interested in science, and the natural sciences, especially, found a broad audience.⁸⁶ Many of the era’s leading magazines, such as *The*

⁸⁴ Robert V. Bruce. *The Launching of Modern American Science, 1846-1876*. (Ithaca: Cornell University Press, 1987), p. 74.

⁸⁵ Quoted in Meier (1957), p. 634. “Career of Science,” *American Polytechnic Journal* (Washington), I (January, 1853), 4. Remark said to have been made to Editor Charles G. Page.

⁸⁶ “...Americans were keenly interested in natural science. Most of their knowledge, to be sure, came from Europe. In geology they debated the rival theories of James Hutton of Edinburgh and Gustav Werner of Freiburg; in biology the rival classifications of Linnaeus, Buffon and Cuvier. But it was socially significant that

Universal Asylum and Columbian Magazine and *The Monthly Anthology and Boston Review*, published articles on scientific subjects like botany, chemistry, and mineralogy.⁸⁷ And the American people took an active interest in the American environment, including its weather, its plants, its animals, and its people. Americans imported scientific instruments from Europe and used them and their “calculating” methods to fill weather journals and letters with obsessive and precise descriptions of local rainfall, atmospheric pressure, temperature, and cloud formations.⁸⁸ In the early nineteenth century, the Frenchman Constantin-Francois de Volney observed that the Americans’ quantitative approach to weather measurement fit the national character, when, “conformably to the national genius, [they] reduce every thing to direct and systematic calculations.”⁸⁹

Perhaps the most obvious explanation for American interest in the understanding and classification of nature was simply that there was so much nature in America. Settlers had been busily plowing fields, chopping trees, and building fences since 1492, but in the early part of the nineteenth century the United States still possessed a great variety of wilderness, and its lands were much less tamed than Europe’s, which gave American naturalists a competitive advantage over their old world counterparts when it came to making observations of the natural world. As Beverly Tucker explained, “to the great marts of science, where its votaries congregate for the exchange of knowledge and thought for thought, each man should come freighted with that which his own country yields, and

these ideas found a general hospitality. They were not imported for a small and artificial market, as they were into Russia by the exotic academy which Catherine the Great sponsored.” J. A. Krout and D. R. Fox, *The Completion of Independence 1790-1830* (History of American Life, V). (New York, 1944), pp. 313-314.

⁸⁷ John C. Greene, “Science and the Public in the Age of Jefferson,” *Isis*, Vol. 49, No. 1 (Mar., 1958), p. 13.

⁸⁸ Jan Golinski, “American Climate and the Civilization of Nature,” in *Science and Empire in the Atlantic World*, ed. by James Delbourgo and Nicholas Dew (New York and London: Taylor & Francis, 2008), p. 156-7. Patricia Cline Cohen, *A Calculating People: The Spread of Numeracy in Early America* (New York: Routledge, 1999), esp. pp. 81-115.

⁸⁹ Constantin Francois de Volney, *View of the Climate and Soil of the United States of America* (English trans., London: from J. Johnson, 1804), p. 134.

especially that which can not be found elsewhere.”⁹⁰ North America was fertile ground for the study of nature with plants, animals, and people that Europeans had never seen before.

When Europeans first landed in the West Indies and encountered Indians already there as well as the Africans that they brought there to enslave, their understanding of the natural world played an important role in creating the emergent cultural boundaries between the various peoples in these new empires. European colonists possessed knowledge about the sorts of cultural requirements necessary for the creation of borders both of and within empires, and Europeans created social hierarchies, which they justified by religion, morality, economics, and most importantly here, nature. In fact it is perhaps fair to say that “knowledge of such cultural requirements was a distinctive feature of colonial settings—a distinctive knowledge born of empire.”⁹¹

Many European Christians used religion to argue for empire. They considered their religion to be self-evidently superior and clear evidence of the inferiority of the native heathens. They reasoned that Christians either implicitly deserved to dominate heathens or that they had been expressly directed to do so by God, the Pope, and the Bible. Alternatively, Christians argued that without the light of the true God the heathens would surely perish, and that when they died they were doomed to hellfire. The heathens’ self-interest properly understood, they argued, gave the Europeans the right and duty to civilize and proselytize in the new land.

The discoverers argued from moral grounds, as well. According to the Europeans, native rituals demonstrated a debased nature that deserved to be dominated by those who

⁹⁰ Nathaniel Beverley Tucker, “An Essay on the Moral and Political Effect of the Relation between the Caucasian Master and the African Slave,” *Southern Literary Messenger*, Vol. 10 (Jun., 1844), p. 330.

⁹¹ Christopher Grasso and Karin Wulf, “Nothing Says ‘Democracy’ Like a Visit from the Queen: Reflections on Empire and Nation in Early American Histories,” *The Journal of American History*, Vol. No. (Dec., 2008), p. 778.

could put a stop to immoral practices. Perhaps most famously, examples of New World indigenous peoples engaging in cannibalism and human sacrifice, both real and supposed, convinced many Europeans that Indian culture was not worth preserving. The Spanish conquistadors appealed to morality, and the English in North America would also. As the historian Hugh Thomas puts it, “later on, the Anglo-Saxons in North America seized upon the action of scalping as a justification of conquest. The conquistadors judged human sacrifice similarly.”⁹² Natives became “heathen barbarians”, and in the process were deemed self-evidently incapable of self-government.

The conquerors also made economic arguments. Indian methods of land use were used to justify the taking of land. The Europeans argued that natives failed to cultivate land properly, and therefore forfeited their right to the land. Those who would improve the land by plowing, building fences, and planting orchards, had a right to the land in order to do so.⁹³ In such a paradise, the Indians had no need for all the land surrounding them—there was plenty to spare. Often the Native Americans were imputed even to lack a conception of private property. As the early explorer Peter Martyr put it:

Amongst them the land belongs to everyone, just as does the sun and the water. They know of no difference between the *meum* and the *tuum*, that source of all evils. It requires so little to satisfy them that, in that vast region, there is always more land to cultivate than is needed. It is indeed a golden age, [for] neither ditches nor hedges nor walls enclose their domains; they live in gardens open to all, without laws and without judges.⁹⁴

Though this observation might have meant to have been complimentary of the indigenous population, even things for which the Indians were admired could threaten their land.

⁹² Hugh Thomas. *Conquest: Montezuma, Cortés, and the Fall of Old Mexico*. (London and New York: Simon & Schuster, 1993), p. xiii.

⁹³ For an elaboration of this theory, see John Locke’s *Two Treatises of Government*, ch. 5.

⁹⁴ Peter Martyr, *De Orbe Novo*, tr. with notes by F. A. McNutt, London: 1912), p. 103-4.

For many settlers, the wilderness and the frontier were places where the natural moral order seemed almost not to exist.⁹⁵ Land improvement was not only useful to acquire wealth but also a responsibility to create a suitable and civilized landscape capable of supporting healthy, uncorrupted settlers. As Jan Golinski puts it, the Europeans,

assigned exclusive possession and a consequent responsibility for improvement. The natives, conversely, whatever their inspirational virtues as freedom-loving people, were regarded as having failed to take charge of their natural surroundings or to civilize the world around them....The settlers thereby reassured themselves that they had no reason to fear the natives' appalling fate, their catastrophic decline from epidemic diseases.⁹⁶

These rationales, and others like language and clothing, were used to form borders between cultures in the new world.

But perhaps the most important method used to justify the subordination of native Americans and Africans was the use of natural history to analyze their encounters with the new plants, animals, and peoples they met in the new world. As the Europeans left their ships to walk on the American beaches they were prepared to meet fantastic creatures like satyrs, Amazons, and other assorted monsters. Their preparatory sources consisted of an amalgam of ancient Greek science, Renaissance natural history, and medieval romantic fiction and poetry, like *Amadis*, where fantastic events took place on imaginary islands and archipelagos.⁹⁷ These sources gave America enough strangeness for Ponce de León to seek gold and the fountain of youth in Florida,⁹⁸ and for Christopher Columbus to note that while

⁹⁵ It is an astounding irony that it was in the civilized, unnatural Europe in which natural law was thought to be most fully operative. Of course, there were exceptions to this rule; see Rousseau, Jean-Jacques.

⁹⁶ Golzinski (2008), p. 169. For more on the ecological effects of the settlers' appropriation of the land, and their belief in the consequent effect upon the environment see William Cronon, *Changes in the Land: Indians, Colonists, and the Ecology of New England* (New York: Hill and Wang, 1983).

⁹⁷ Leonardo Olschki, "What Columbus Saw on Landing in the West Indies," *Proceedings of the American Philosophical Society*, Vol. 84, No. 5 (Jul. 30, 1941), p. 648.

⁹⁸ The history of the legend of the Fountain of Youth is a wonderful example of how pre-Columbian European legends framed the encounters in America. There is reference to a youth-restoring drink in Herodotus' *Histories* (*Histories*, Book III, 22-24), but it seems that the legend originated in an Arabic epic romance of Alexander the

he had discovered the Bahamas, he had not seen any monsters, just yet.⁹⁹ Early modern natural history and the legacy of Aristotelian science expanded the explorers' expectations in ways that can seem bizarrely open-minded and credulous, today.

However, the European discoverers were also limited by the analytical categories they brought with them to study America's plants, animals, and weather. Classification is a powerful device to aid the understanding, but it also bounds what can be seen and distinguished. Often, early explorers sought merely to confirm their ancient Greek and medieval sources and to show that Petrus Comestor, Nicolaus of Lyra, St. Augustine, and St. Ambrose had been right all along.¹⁰⁰ Natural historians attempted to classify oddities, such as the medicinal qualities of new world tobacco, into the same categories used by the first century Greek physician, Dioscorides, in his *De materia medica*, and observers tried to apply familiar European names and understandings to American animals.¹⁰¹ For example, "for men like Gonzalo Fernández de Oviedo, chief overseer of the mines of Hispaniola and author of the earliest natural history of America, pumas *were* lions, jaguars tigers and so on."¹⁰² That knowledge of the natural world could simply be transferred to the new world

Great. Later the legend took real shape in Europe in the *Letter of Prester John*, a forged letter about a Utopia, that propagated throughout Europe after 1165 AD. Many medieval romances, such as the French *Roman d'Alexandre*, looked back to quasi-legendary Greek sources and continued to describe a wondrous island with a river of youth-giving waters. Ponce de León never found the Fountain of Youth in Florida, and as of the early twenty-first century, no one else has either. See Leonardo Olschki, "Ponce de León's Fountain of Youth: History of a Geographical Myth," *The Hispanic American Historical Review*, Vol. 21, No. 3 (Aug., 1941), pp. 361-385; Samuel E. Morison, *The European Discovery of America: The Southern Voyages*. (New York: Oxford University Press, 1974); for a view which disputes the fact that the Fountain of Youth actually influenced de León, see Douglas T. Peck, "Anatomy of an Historical Fantasy: The Ponce de León-Fountain of Youth Legend," *Revista de Historia de América*, Vol. 123 (Jan.-Dec., 1998), pp. 63-87.

⁹⁹ Christopher Columbus, *Selected documents illustrating the four voyages of Columbus*. (1493-1505), ed. Cecil Jane, (London: 1930), 2 vols, I, p. 15 and *The Journal of Christopher Columbus*, trans. Cecil Jane, revised and annotated by L. A. Vigneras, (London: 1960), pp. 52, 100. See also Olschki, (Jul. 30, 1941), pp. 633-59.

¹⁰⁰ Stephen Greenblatt, *Marvelous Possessions: The Wonder of the New World*. (Chicago: the University of Chicago Press, 1991), pp. 88-9.

¹⁰¹ Pagden (1982), p. 12.

¹⁰² Anthony Pagden, *The fall of natural man: The American Indian and the origins of comparative ethnology*. (Cambridge: Cambridge University Press, 1982), p. 11.

caused Europeans to make other mistakes as well. An English visitor to Virginia, John Clayton, joined the ranks of confused naturalists when he said, the “Rackoone, I take it to be a Species of a Monky...,” and at the very least “they are very Apish.”¹⁰³ To Europeans, American weather was unexpectedly harsh and anomalous. Many hopeful transplants to America made the mistake of following classical tradition, which stipulated that climate was a function of latitude. To many settlers’ dismay, citrus crops would not grow in Virginia though it is on the same latitude as Spain, and Newfoundland, which is no farther north than London, had frighteningly cold Canadian winters.¹⁰⁴

The European discovery of America initiated an unprecedented interest in the natural world. Earlier maritime journeys to Africa, Asia, and the Atlantic islands had not generated important reports on the new lands and peoples encountered the way that encounters with the new world did.¹⁰⁵ The wonderful inadequacy of European natural history eventually became apparent, and the need to deal with this inadequacy spurred the creation of new observational and descriptive techniques.¹⁰⁶ The new environments and cultures seemed both alien and familiar, and European naturalists—as well as sailors and missionaries—could no longer rely on Dioscorides or Pliny’s *Natural History*. As the discoverers increased their proficiency with the animals, vegetables, and minerals of America they adapted their classificatory devices to better suit what they found. Naturalists in the seventeenth and eighteenth centuries came to recognize the incompleteness of Dioscoridean

¹⁰³ John Clayton, “A Continuation of Mr. John Clayton’s Account of Virginia,” *Philosophical Transactions of the Royal Society*, Vol. 18 (1694), p. 122.

¹⁰⁴ Golinski (2008), p. 153-4.

¹⁰⁵ Felipe Fernández Armesto, *Before Columbus: Exploration and Colonization from the Mediterranean to the Atlantic, 1229-1492*. (Philadelphia: Macmillan, 1987), pp. 185-200.

¹⁰⁶ Karl W. Butzer, “From Columbus to Acosta: Science, Geography, and the New World,” *Annals of the Association of American Geographers*, Vol. 82, No. 3, The Americas before and after 1492: Current Geographical Research (Sep., 1992), p. 543-5.

classification, and they became increasingly comfortable with the idea that classical authorities had not known the vast variety of creatures in the Americas.¹⁰⁷ New terminology was brought into the descriptive language, which proved useful to describe such lovely objects as the “tomato” and “avocado”. The wonders of the new world forced naturalists to reevaluate the methods they used to understand natural history, and the sheer variety of life in America meant that there was plenty of work for them to do.

Of course, to the European explorers, some of the most fascinating things in America were the people, and there were all kinds of questions to ask about these new peoples. Ralph Waldo Emerson made the astute point that nature is interesting, but what really interests people are people. So, when nature can shed light on people, then nature becomes extra interesting. Here’s how he said it:

All the facts in natural history taken by themselves, have no value, but are barren like a single sex. But marry it to human history, and it is full of life. Whole Floras, all Linnaeus’ and Buffon’s volumes, are but dry catalogues of facts; but the most trivial of these facts, the habit of a plant, the organs, or work, or noise of an insect, applied to the illustration of a fact in intellectual philosophy, or, in any way associated to human nature, affects us in the most lively and agreeable manner....The instincts of the ant are very unimportant considered as the ant’s; but the moment a ray of relation is seen to extend from it to man, and the little drudge is seen to be a monitor, a little body with a mighty heart, then all its habits, even that said to be recently observed, that it never sleeps, become sublime.¹⁰⁸

So, what kinds of people were these non-Europeans, exactly? Were they barbaric or civilized? And come to mention it, were they quite people, anyway? Descriptions focused on both physical and behavioral attributes. Naturalists and theologians discussed the Indians’ size and shape, their attire, and their social structure, and these descriptions shaped

¹⁰⁷ See Alix Cooper, *Inventing the Indigenous: Local Knowledge and Natural History in Early Modern Europe*. (Cambridge: Cambridge University Press, 2007).

¹⁰⁸ Ralph Waldo Emerson, *Nature; Addresses and Lectures*. (Boston and Cambridge: James Munroe and Company, 1849). pp. 25-26.

European perceptions of the natives and the rights of the indigenous peoples. Benjamin Franklin, for example, justified his prejudice against the Indians because of their perceived physical differences. He argued that their predilection to smallpox and alcohol might lead to their eventual demise.¹⁰⁹ From descriptions of natural order and human nature, eighteenth and nineteenth century thinkers drew important conclusions about the people around them.

Some descriptions of North America painted the indigenous people as familiar. For example, in about 1585 an English colonist and artist named John White, made a series of drawings of the native landscapes, creatures, and people he saw around the Roanoke Colony area of Virginia and today's North Carolina.¹¹⁰ White drew the Indians surrounded by the accoutrements of their civilization; containers, ornaments, tools, etc. The portrayal of the Indians as tool-makers and tool-users emphasized artifice rather than nature and separated these humans from the animals of the forest. White's drawings also included a quite similar series on the ancient Britons and Picts, which helped to fit the natives within a prototype that, while primitive, was understandable and comprehensible to the English and encouraged potential colonists to view the natives as prospective partners in the new world.¹¹¹ In the new world from the encounters with the natives, the terrain, and the plants and animals, much of the scientific energy was focused upon classification, which it was argued was the only way to understand an object or a person. It is summed well by the botanist Stephen Elliot when he says, "We must know all tribes, all the productions of

¹⁰⁹ Joyce Chaplin, "Benjamin Franklin's Political Arithmetic: A Materialist View of Humanity," Dibner Library Lecture, December 13, 2006 (Washington, D. C.: Smithsonian Institution Libraries, 2008), p. 23.

¹¹⁰ One can see White's drawings in *A New World: England's first view of America*. ed. by Kim Sloan, (Chapel Hill: The University of North Carolina Press, 2007).

¹¹¹ Joyce Chaplin, "Roanoke 'Counterfeited According to the Truth'" in *A New World: England's first view of America*. ed. by Kim Sloan, (Chapel Hill: The University of North Carolina Press, 2007), p. 51-63.

nature, before we can comprehend and exhibit accurately their mutual connexion and dependence.”¹¹²

This passion extended beyond the natural world and to the social, as well. John Taylor of Caroline was thinking like a Linnaean classifier when he set out to write *An Inquiry into Principles and Policy of the United States*.¹¹³ Taylor had this to say about the purpose of his attempt to work out a political theory for America: “The possibility of effecting a classification of the beings or individuals of the moral world, and of assigning each to his proper class, by an impartial and careful investigation of phenomena, with a degree of accuracy, exceeding even the classification of the vegetable kingdom, is not incomprehensible.”¹¹⁴ Nature’s classification shaped perceptions about natural order, which in turn had consequences for American understandings of the larger social and political world.

Racial classification shared a history within a larger practice of classification with natural history, which made this science particularly important for Americans. Classification legitimates groups and associates individuals within those groups with essential qualities that identify and distinguish the group, and by doing so classification creates order by giving names. It’s easier to recognize the forest from the trees, if one can name the trees. To name a tree is to see it, and to classify the tree is supposed to provide valuable information about the tree by allowing for comparison and contrast between essential or model types. An illuminating example of how classification can shape perceptions can be seen with whales and dolphins (cetaceans). Cetaceans can be grouped by function with the swimming fish, or

¹¹² Stephen Elliot, “Views of Nature,” *Southern Review*, Vol. 2 (Nov., 1828), p. 416.

¹¹³ O’Brien (2004), Vol. II, pp. 788-9.

¹¹⁴ John Taylor, *An Inquiry into the Principles and Policy of the United States*. (Fredericksburg: Green and Cady, 1814), p. 405.

they can be grouped by morphology with the land mammals (either is reasonable, depending upon ones purpose). Today, cetaceans are usually grouped with the land mammals, but in the past this has struck many as both unusual and unnatural.¹¹⁵

An example of the interplay between the classification of nature and social order can even be seen in the Linnaean name “mammals”. Linnaeus’s choice to classify viviparous, hairy quadrupeds as “mammals” was an attempt to reflect social ideas about the maternal aspect of the female breast.¹¹⁶ During the eighteenth century, enlightenment Europeans extolled the virtue, healthfulness, and propriety of women who nursed their own children. Carolus Linnaeus, Jean-Jacques Rousseau,¹¹⁷ and others struggled to convince European women to avoid the practice of wet nursing, alongside other social movements that stressed the importance of middle-class domesticity.¹¹⁸ By classifying humans as “milk-producing animals” rather than possible alternatives like the “hairy animals” or the “hollow-eared animals”, Linnaeus emphasized the naturalness of a mother nursing her child. As Londa Schiebinger puts it, “the idea that women should follow the example of beasts was a common feature of the anti-wet-nursing literature flooding Europe at this time. Appealing to law and order, the French midwife Marie Anel le Robours pleaded with women to follow

¹¹⁵ “Popular prejudice was long universal and is still largely against the idea involved. Sacred writ and classical poetry were against it. It seemed quite unnatural to separate aquatic whales from the fishes which they resembled so much in form and associate them with terrestrial hairy quadrupeds.” Theodore Gill, “Systematic Zoology—Its Progress and Purpose,” *Science*, Vol. 26, No. 668 (October 18, 1907), p. 491.

¹¹⁶ Londa Schiebinger, “Why Mammals are Called Mammals: Gender Politics in Eighteenth-Century Natural History,” *The American Historical Review*, Vol. 98, No. 2 (Apr., 1993), pp. 382-411.

¹¹⁷ “Let mothers deign to nurse their children, morals will reform themselves, nature’s sentiments will be awakened in every heart, the state will be re-peopled.” Jean-Jacques Rousseau, *Emile: ou, De l’éducation* (1762), in *Oeuvres complètes*, Bernard Gagnebin and Marcel Raymond, eds. (Paris, 1959-69), 4: 255.

¹¹⁸ “Europeans’ fascination with the female breast provided a receptive climate for Linnaeus’s new term. But more immediate political concerns compelled him to focus scientific attention on the mammae. His scientific vision arose alongside important political trends in the eighteenth century—the restructuring of both child care and women’s lives as mothers, wives, and citizens. The stress he placed on the naturalness of a mother giving suck to her young reinforced the social movements undermining the public power of women and attaching a new value to mothering.” Schiebinger (1993), p. 404.

the ‘animal instinct’ that prompts a mother to care for her young immediately after birth.”¹¹⁹ Linnaean classification not only provided taxonomic order but also infused the natural world with European notions of proper social order.

There was much debate on how to classify the American natives, including whether the heathens they encountered were of a different kind than the Europeans themselves. Later, Americans would grapple over similar questions trying to classify their African slaves. Often, the Indians were grouped with animals of the forest. For example, the Florentine historian Francesco Guicciardini claimed that the Indians were like tame animals because “they had no knowledge and no experience whatsoever of things.”¹²⁰ Cornelius de Pauw described native Americans as lying outside of human morality: “The American, strictly speaking, is neither virtuous nor vicious. What motive has he to be either? The timidity of his soul, the weakness of his intellects, the necessity of providing for his subsistence, the powers of superstition, the influences of climate, all lead him far wide of the possibility of improvement;...he is in himself insensible,” and they follow “a law of the animal nature.”¹²¹ It was said that the Indians had no understanding of the formal objects of knowledge, along with the notions of speech and sociability that determined the boundary between human and animal.¹²² Understanding how to classify the native inhabitants of the Americas shaped perceptions of these individuals, held great power, and was intensely political.

Well before Darwin, natural history and religion overlapped in the attempt to interpret human creation. Of interest was whether the natives in the new world were the

¹¹⁹ *Ibid.*, p. 406.

¹²⁰ Francesco Guicciardini, *Storia d'Italia*. Edited by C. Panigada, 5 vols. (Bari, 1929), II, p. 13.

¹²¹ Originally published as Cornelius de Pauw, *Recherches philosophiques sur les Américains* (Berlin, 1770); quotes here from *Selections from M. de Pauw, with Additions by Daniel Webb*. (Bath and London: 1794), pp. 15-17.

¹²² Anthony Pagden, “The Savage Critic: Some European Images of the Primitive,” *The Yearbook of English Studies*, Vol. 13, Colonial and Imperial Themes Special Number (1983), p. 33.

product of the same creation as the rest of mankind. One of the classical assumptions that the European discoverers brought with them was the idea the human species was unitary, however their experiences in America would cause them to reevaluate that inherited tradition, as well. After all if Adam and Eve had been created somewhere in Mesopotamia, how could their progeny have been able to spread to the new world in time for Columbus to discover them? Controversy over the presence of so-called non-Adamic people was a popular topic, in large part because of what separate creations implied about the “familial” relationship between all humans on earth. When the Spanish conquered Mexico in 1519, Cortés explained to Montezuma the Christian story of creation through Adam and Eve. This story implied, as Cortés argued, that all people were of one family and were brothers, including the Aztecs.¹²³ Shortly thereafter, in 1520, Paracelsus would propose his theory (a heretical one at that) that mankind was the product of two creations; a western and an eastern one.¹²⁴ Though Cortés was no friend to Montezuma and the Mexica of Tenochtitlan, he understood that this creation story of human origins implied a familial brotherhood between disparate peoples. Cortés urged Montezuma to end the practice of human sacrifice on these “humanitarian” grounds. Later in the nineteenth century it was the Darwinian evolutionists that, perhaps ironically, represented the more orthodox view of creation when compared with the polygenist anti-evolutionists that supported the idea of multiple creations.

¹²³ Hugh Thomas (1993), pp. 295-296.

¹²⁴ For example, as quoted in Thomas (1993), p. 705, note 30. “Paracelsus thought that the new Indians had been found in out-of-the-way islands, such as no descendent of Adam would go to: ‘it is most probable that they are descended from another Adam’. Perhaps they were born there ‘after the deluge and perhaps have no souls. In speech, they are like parrots.’ (*Philosophiae Sagacis*, Frankfurt, 1605, lib. 1, c. 11, Vol. x. 110, cit. Thomas Bendyshe, “The History of Anthropology”, in *Memoirs read before the Anthropological Society of London*, 1863, I, 353).”

The natives seemed unusual to the Europeans, but of course the Europeans seemed strange and unusual to the indigenous Americans, too. In fact, it is probably fair to say that the Europeans shocked the natives more than they were shocked themselves. While Europeans had had experience with “barbarians” of various sorts for thousands of years, the peoples of the new world had had a much more limited experience with foreign peoples.

To Europeans, the Amerindians and the Africans seemed to be, at worst, defective members of their own species. But the Arawak took the Spaniards to be sky-visitors, the Inca assumed them to be *viracocha*, a term which seems to have been applied to any supernatural being, and the Congolese imagined that the Portuguese, who carried large eyes painted on the prows of their caravels, were the spirits of the sea.¹²⁵

Indeed, thinking in terms of the species *homo sapiens* was often an unusual or impossible task. Many societies lack adequate terms to describe the concept of “man” for anything beyond the family or tribe.¹²⁶ The Europeans had extensive history with the hierarchical structures inherent in the Great Chain of Being which better equipped them to find a spot in which to place the peoples they encountered.¹²⁷

The Great Chain of Being was an organizing principle that placed all life on Earth onto the rung of a ladder that extended from the lower beasts to the higher angels, with humans in between. Within this ladder the various races were placed in order, as well, and there was a great deal of debate over how to place these various races. How many races were there? Johann Friedrich Blumenbach divided humans into five essential races, while

¹²⁵ Pagden (1982), p. 17. For a contrary argument that takes on the idea that indigenous Americans viewed the arriving Europeans as gods, see Camilla Townsend, “Burying the White Gods: New Perspectives on the Conquest of Mexico,” *The American Historical Review* (Jun., 2003), pp. 659-687.

¹²⁶ “A very great number of primitive tribes simply refer to themselves by the term for ‘men’ in their language, showing that in their eyes an essential characteristic of man disappears outside the limits of the group.” Claude Lévi-Strauss, *The Elementary Structures of Kinship*. trans. by James Harle Bell, *et al.* (London: 1969), p. 46.

¹²⁷ For a discussion of the term “Great Chain of Being” see Arthur O. Lovejoy, *The Great Chain of Being: The History of an Idea*. (Cambridge, Mass: Harvard University Press, 1948).

Immanuel Kant thought there were just four.¹²⁸ Were they merely different varieties of humans created by the contingent chance of environmental variation? Or, the product of something more important and significant. Some said that, perhaps, the human races were actually different species. The scientific debate on the question of whether human races were separate species or mere varieties was both significant and longstanding.¹²⁹ Whether races were fixed or variable was an important distinction. The species was a divinely created unit made “in the beginning,” while varieties were merely the product of environmental circumstance.

Americans wondered how environment shaped human nature. Literary critics theorized about the effects of sunny climates upon literature, and moralists discussed the enervating effects of northern climates upon vigor and character, both in Europe and America. Southerners, in the United States, fretted about “that tendency to mental repose and luxurious indulgence supposed to be peculiar to southern latitudes.”¹³⁰ In addition to character, many in the eighteenth century also believed that climate could shape a person’s physical nature. A number of European thinkers, such as Buffon, the Abbé de Pauw, and the Abbé Raynal, developed the theory that the American environment led to degeneration.

Buffon, for example, argued that the new world environment was degraded when compared to the old world, and that new world animals were degenerated compared to those

¹²⁸ Blumenbach, J. F. “On the natural variety of mankind (3rd ed.) in *The Anthropological Treatises of Johann Friederich Blumenbach*. Thomas Bendyshe, ed. and tr. (London: 1865), pp. 146-276; and Kant, Immanuel. “On the Different Races of Man,” in *Race and the Enlightenment: a Reader*, edited by Emmanuel Chukwudi Eze (Wiley-Blackwell, 1997).

¹²⁹ See, for example, the debate between pluralists and unitarists in the Charleston, South Carolina’s *Southern Quarterly Review*, VII (1845).

¹³⁰ James Ewell Heath, “Southern Literature,” *Southern Literary Messenger*, Vol. 1 (Aug., 1834), pp. 2-3; quoted in Michael O’Brien, *Conjectures of Order: Intellectual Life and the American South, 1810-1860*. 2 vols. (Chapel Hill and London: The University of North Carolina Press, 2004), vol. II, p. 700.

of the old world.¹³¹ Buffon argued not only that American animals were smaller than their old world counterparts, but that even European animals brought to America degenerated.¹³² “All the animals which have been transported from Europe to America, as the horse, the ass, the ox, the sheep, the goat, the hog, the dog, &c. have become smaller...”¹³³ His conclusion was that “in this New World, therefore, there is some combination of elements and other physical causes, something that opposes the amplification of animated Nature.” Buffon extended this analysis to the native people as well: “For, though the American savage be nearly the same stature with men in polished societies, yet this is not a sufficient exception to the general contraction of animated Nature throughout the whole Continent. In the savage, the organs of generation are small and feeble....He has no vivacity, no activity of mind.”¹³⁴ Even more hurtful to European-Americans, Raynal argued that even white Americans had degenerated in the new world.¹³⁵ Cornelius de Pauw concurred: “The Europeans who pass into America degenerate, as do the animals; a proof that the climate is unfavourable to the improvement of either man or animal.”¹³⁶

The plants and animals were said to be inferior, and naturalists used their study of American flora and fauna to prove it, although some proud Americans attempted to rebut these charges. Though often overlooked today, a main reason that Thomas Jefferson wrote his *Notes on the State of Virginia* was to defend the American environment as healthy, virile,

¹³¹ Clarence J. Glacken, “Count Buffon on Cultural Changes of the Physical Environment,” *Annals of the Association of American Geographers*, Vol. 50, No. 1 (Mar., 1960), pp. 1-21.

¹³² Comte de Buffon, *Natural History, General and Particular*. Trans. William Smellie (W. Strahan & T. Cadell, 1785), Vol. 5, pp. 128-30.

¹³³ *Ibid.*, p. 129.

¹³⁴ *Ibid.*, p. 130.

¹³⁵ Guillaume Thomas François Raynal, *L'Histoire philosophique et politique des établissements et du commerce des Européens dans les deux Indes* (Amsterdam, 4 vols., 1770); Dwight Boehm and Edward Schwartz, “Jefferson and the Theory of Degeneracy,” *American Quarterly*, Vol. 9, No. 4 (Winter, 1957), p. 451.

¹³⁶ de Pauw (1794), p. 17.

and fully capable of supporting well-developed and civilized human beings.¹³⁷ Other Americans defended America's climate and its salubrious effects upon its inhabitants, too. Jeremy Belknap, in his *History of New Hampshire*, defended the quality of the American environment and argued that "notwithstanding the dreams of European philosophers America can best be described by those who have for a long time resided in it."¹³⁸ Both Jefferson and Belknap used their knowledge of local animals to contradict Buffon. Jefferson sent a large American moose to France so that Buffon might witness how large American animals can grow, and Belknap "took Buffon to task for his ignorance of skunks, bears, raccoons, and wildcats, all of which had been found in America to be larger than they were reputed to be in Paris."¹³⁹

Many white Americans were concerned that they themselves might degenerate in the New World. John Clayton claimed that Virginia's wild forests contributed to the great extremes in local weather, which he blamed for the health problems of the inhabitants. "When the Weather breaks many fall sick, this being the time of an Endemitical Sickness, for Seasonings, Cachexes, Fluxes, Scorbutical Dropsies, Gripes, or the like, which I have attributed to this reason".¹⁴⁰ These fears were often most pronounced on the frontier in

¹³⁷ Thomas Jefferson, *Notes on the State of Virginia*, in *Writings*, ed. Merrill D. Peterson (New York: The Library of America, 1984), pp. 169-82; also "Thomas Jefferson to Chastellux," June 7, 1785, in Jefferson, *Writings* (1984), pp. 800-1. For more contextual information about Jefferson's *Notes*, see David Tucker, *Enlightened Republicanism: a study of Jefferson's Notes on the State of Virginia*. (Lanham, MD: Rowman & Littlefield, 2008), esp. ch. 2.

¹³⁸ Jeremy Belknap, *The History of New-Hampshire, Containing a Geographical Description of the State*, 2nd edn, 3 vols (Dover, NH: for O. Crosby and J. Varney, by J. Mann and J.K. Remick, [1791-2] 1812), Vol. 3, p. 172.

¹³⁹ On Jefferson sending a moose to Buffon see "Thomas Jefferson to William Buchanan and James Hay", January 26, 1786, in Jefferson, *Writings* (1984), pp. 844-5. Howard C. Rice, Jr. "Jefferson's Gift of Fossils to the Museum of Natural History in Paris," *Proceedings of the American Philosophical Society*, Vol. 95, No. 6 (Dec. 21, 1951), pp. 597-627; Lee Alan Dugatkin, *Mr. Jefferson and the Giant Moose: Natural History in Early America* (Chicago: University of Chicago Press, 2009); Golzinski (2008), p. 165; see also Antonello Gerbi, *The Dispute of the New World: The History of a Polemic*, trans. Jeremy Moyle (Pittsburgh: University of Pittsburgh Press, 1973), pp. 252-68; and Belknap ([1791-2] 1812), pp. 109-12.

¹⁴⁰ John Clayton, "A Letter from Mr. John Clayton Rector of Crofton at Wakefield in Yorkshire to the Royal Society, May 12. 1688. Giving an Account of Several Observables in Virginia, and in His Voyage Thither,

America. For many, the frontier was a lawless place where lawless white men and semi-barbaric adventurers lost their civility and became like the Indians of the woods.¹⁴¹ Lurid stories of whites living as and becoming native shaped the whites' perceptions of what it meant to be a "wild Indian". As the historian Alan Taylor describes the situation in New England:

The New English saw the Indians as their opposite—as pagan peoples who had surrendered to their worst instincts to live within their wild, instead of laboring hard to conquer and transcend nature. Suspecting that the wilderness was seductive as well as evil, Puritan leaders also feared that their own people would degenerate into Indians from prolonged contact with native ways and the native land.¹⁴²

In a 1786 report on the Pennsylvania frontier, Benjamin Rush described the frontiersman thusly, "in his intercourse with the world, he manifests all the arts which characterize the Indians of our country."¹⁴³ St. John de Crèvecoeur, in his "Letters from an American Farmer", describes frontier Europeans as living in the forest "regulated by the wildness of the neighbourhood," where they become "ferocious, gloomy and unsociable...no better than carnivorous animals of a superior rank, living on the flesh of wild animals."¹⁴⁴ Only after the frontier environment was improved through the civilizing creation of laws and fences could the frontiersman begin to rise into a more civilized manner of living.¹⁴⁵

However, this worry over degeneracy also carried with it an implied underlying optimism about potential improvement that might be possible. If humans were largely the

More Particularly concerning the Air," *Philosophical Transactions of the Royal Society*, Vol. 17 (1693), pp. 784-9. (quote on p. 785).

¹⁴¹ Andrew R. L. Cayton, *The Frontier Republic: Ideology and Politics in the Ohio Country, 1780-1825*. (Kent and London: The Kent State University Press, 1986), pp.14-5.

¹⁴² Alan Taylor, *American Colonies: The Settling of North America*. (New York: Penguin Books, 2001), p. 188.

¹⁴³ Benjamin Rush, "An Account of the progress of Population, Agriculture, Manners, and Government in Pennsylvania. In a Letter from a Gentleman in Philadelphia to his Friend in England," *The Edinburgh Magazine: or Literary Miscellany*, Vol. VII (Jul., 1787), p. 99.

¹⁴⁴ St. John de Crevecoeur, J. Hector, "Letter III: What is an American," in *Letters from an American farmer* (London: Printed for T. Davies: 1782).

¹⁴⁵ Cayton (1986), p. 14-15. and reference to Rush.

product of their environment, then an improvement in their environment could civilize and improve them, both physically and morally. For many whites in America, the taming of the American wilderness was not merely a commercial exercise but a spiritual one, too. The settlers' fears of degeneration encouraged them to cling to their identity as Europeans, and to "improve" the people and environment around them. By improving the land and converting the Indians, the settlers reassured themselves that they could remain fully-developed Christians and protect their civilization by altering their surroundings, though otherwise surrounded by wilderness.¹⁴⁶ To the modern reader, the desire to "improve" the Native Americans is more than troubling, but for English settlers this was an optimistic belief about the natives as improvable rather than naturally debased, lost souls. Priests and preachers that sought to Christianize the Indians, were often restraining forces against other, crueler explorers, merchants, and adventurers seeking land and fortune regardless of the natives' fate. This was true in both the English and Spanish colonies.¹⁴⁷

In the English colonies of North America, and after 1776 the United States, attitudes towards slavery often paralleled debates over the environment's role in shaping the degraded state of African slaves and the possibility of their improvement. Put generally, there were two schools of thought on the status of African slaves. While all whites agreed that Africans were degraded and uncivilized they disagreed about the reason, and they disagreed about whether Africans' status was permanent. Such scientific and philosophical distinctions played a role in European ideas about the rights and duties owed to the peoples they

¹⁴⁶ *Ibid.*, p. 188-203.

¹⁴⁷ For one prominent example see Bishop Bartolomé de las Casas, *In Defense of the Indians*. (Northern Illinois Press, 1999).

encountered in the New World as well as the Africans they enslaved there.¹⁴⁸ Defenders of slavery tended to argue that Africans were permanently debased and naturally suited to slavery, and as evidence they appealed to natural history. Some naturalists pointed to the fact that African slaves' skin-color had not lightened in America, and they argued that this demonstrated that racial characteristics and African nature were more or less fixed. Others even began to hint that whites and blacks might not even belong to the same species.¹⁴⁹

On the other hand, antislavery individuals argued that it was slavery itself that was responsible for black inferiority and that if removed from slavery blacks could improve. If given the chance to live as civilized human beings, freed blacks would not only develop improved moral and intellectual characters, they argued, but many of the physical attributes which marked them as inferior, including their skin color, would change. Freed blacks, such as the poet Phillis Wheatley, were used to demonstrate what black people were capable of when freed from slavery. Medical tales of freed slaves whose skin had mysteriously lightened after living free demonstrated was used to argue that physical characteristics were not inherently fixed and were capable of improvement.¹⁵⁰ Anti-slavery advocates often argued that black inferiority was like a sickness, which, though harmful, could be cured. In 1792 the American anti-slavery campaigner Benjamin Rush argued that the human species was unitary and that black skin was caused by leprosy (thus a mere medical condition), and not proof of diverse human species. Rush went on to say that if this was true then “all the

¹⁴⁸ See John C. Greene's "Some Early Speculations on the Origin of Human Races," in *American Anthropologist*, New Series, Vol. 56, No. 1 (Feb., 1954), pp. 31-41.

¹⁴⁹ William Stanton, *The Leopard's Spots: Scientific Attitudes Toward Race in America, 1815-59* (Chicago and London: The University of Chicago Press, 1960).

¹⁵⁰ On Wheatley, see Henry Louis Gates, Jr. *The Trials of Phillis Wheatley: America's First Black Poet and her Encounters with the Founding Fathers*. (New York: Basic Civitas Books, 2003). On the vitiligo blacks, see Stanton (1960), pp. 5-7.

claims of superiority of the whites over the blacks, on account of their color, are founded in ignorance and inhumanity.”¹⁵¹

Others argued that rather than a medical deformity, black skin was a product of the amount of sun present in an environment. For example, Samuel Stanhope Smith, who held relatively progressive views on slavery, noted that “the gradation of colour holds a more regular progression according to the latitude from the equator,” and that color was the product of climate. Smith argued that just as the sun could cause freckles, “a dark colour of the skin may be considered as a universal freckle.”¹⁵² Smith appealed to both revelation and natural history to argue that all humans were derived from an original pair of ancestors, and that racial variation was merely the product of adaptability within a unitary species.¹⁵³

In the first half of the nineteenth century, James Cowles Prichard became the outstanding spokesperson for the unity school of the human species, otherwise known as monogeny. The 1836 edition of Prichard’s book, *Researches Into the Physical History of Mankind*, was written in order to combat the pluralists (polygenists), who maintained that blacks were a different species than whites. Prichard recognized the social and political debates into which the unity/plurality or monogeny/polygeny debates fed.¹⁵⁴ Darwin thought highly of Prichard’s work and would become, like Prichard, a future adversary of the polygenist worldview. Though inconsistent with the Genesis account of human creation, polygeny had widespread support in the slave states. In fact the polygenist account became influential

¹⁵¹ Rush, Benjamin. “Observations Intended to Favor a Supposition That the Black Color (As It Is Called) of the Negroes is Derived from the LEPROSY,” in *Transactions of the American Philosophical Society*, Vol. 4 (1799), 295.

¹⁵² Samuel Stanhope Smith, *Essay on the Causes of Variety of Complexion and Figure in the Human Species* (1787, 2nd ed. 1810), p. 65, 49. The argument that race is the product of climate and geography is similar to the explanation for racial origins made by modern evolutionary biologists.

¹⁵³ William Stanton, *The Leopard’s Spots: Scientific Attitudes Toward Race in America, 1815-59*. (Chicago and London: The University of Chicago Press, 1960), p. 5.

¹⁵⁴ Edward Lurie, “Louis Agassiz and the Races of Man,” in *Isis*, Vol. 45, No. 3. (Sep., 1954), pp. 228.

enough and dominant enough to be called the “American School of Anthropology.” In general, those who claimed that human races were mere varieties are those that tended to favor the rights of natives and slaves, while those who claimed human races were different species tended to downplay or ignore the rights of natives and slaves.

These debates over the place of the races within a natural hierarchy and the relationship between politics and natural rights have been fundamental to political thought in the United States, and no figure better exemplifies this than Thomas Jefferson. Jefferson has been hailed as a cosmopolitan and a provincial, a philosopher and a scientist, and as both a supporter of slavery and its opponent. Jefferson’s legacy was such that both abolitionists and proslavery Southerners would claim his legacy. When Thomas Jefferson wrote the "Declaration of Independence," he invoked the rights that nature and nature's God gives to all men, and in so doing implicitly involved the work of naturalists and anthropologists who were attempting to classify the human species itself. While that founding document made it part of the liberal tradition in America that "all men are created equal," the parallel political ideology of ascriptive Americanism would involve scientific naturalists to decide who exactly counted as men.

The Slavery Debate and the Need for a Scientific Proslavery Defense

American slavery was the most significant, and perhaps most obvious, social or political debate to which scientific theories of the natural world were applied. Both pro and anti-slavery rhetoric discussed the utility of slave labor, but for the most part only emancipators dealt with questions of the rightness of slavery in the eighteenth century. Antislavery arguments argued that free labor was more productive than slave labor, but more

importantly they argued that slavery was unjust. Anti-slavery arguments tended to emphasize rights and argued that slavery denied the fundamental rights of the slave by denying their humanity. As Serjeant Davy put it, “upon what principle is it that a man can become a dog for another man?”¹⁵⁵ On the other hand, arguments made on behalf of slavery in the eighteenth century portrayed slavery as an unfortunate, though necessary evil, and tended to argue for the usefulness of slavery. Eighteenth century proslavery arguments were different than those made later, before the Civil War. Proslavery advocates had not yet developed equivalent appeals to right and justice, but they would. In the nineteenth century, southerners would develop a rhetoric of positive justification on behalf of slavery. Scientific and anthropological theories about the inferior nature of Africans would be used to form these new, justice-based proslavery arguments. The type of arguments made for slavery would change from a predominantly utilitarian type at the time of the revolution to arguments based upon notions of justice in the height of the antebellum South after 1820.

We know, or can imagine quite easily, the gist of the antislavery argument, which were similar in both America and England. In 1772 at the Somerset Trial, Serjeant Davy summarized the argument for emancipation: “whatever was its origin, at whatever time it commenced, [slavery was] tyranny and oppression...a usurpation upon the natural rights of mankind...”¹⁵⁶ American abolitionists made similar appeals to justice rather than mere utility. Benjamin Rush, thusly:

If you possessed an estate which was bequeathed to you by your ancestors, and were afterwards convinced that it was the just property of another man, would you think it right to continue in the possession of it? Would you not give it up immediately to the lawful owner? The voice of all mankind would

¹⁵⁵ Quoted in Steven M. Wise, *Though the Heavens May Fall: the Landmark Trial that led to the end of Human Slavery* (Cambridge, MA: Da Capo Press, 2005), p. 143.

¹⁵⁶ Quoted in Wise (2005), p. 135.

mark him for a villain who would refuse to comply with this demand of justice.¹⁵⁷

As Judge Mansfield said in delivering the judgment in the Somerset's case, "*fiat justitia, ruat coelum* [let justice be done though the heavens may fall]."¹⁵⁸ In the northern American states and in England around the time of the American Revolution, the antislavery argument proved persuasive to many. Utility was important to the emancipators, but the heart of their argument was that justice, right, and natural law demanded emancipation.

The antislavery appeals to justice often proved effective, and the anti-emancipators were often without adequate rhetorical defense. In time this would necessitate new, more powerful, arguments in response on behalf of slavery's defense. When Benjamin Rush published his *Address to the Inhabitants of the British Settlements in America upon Slave-Keeping*, in 1773, he did not feel compelled to rebut any out-and-out proslavery arguments, rather Rush dealt with arguments that merely emphasized the difficulty of freeing the slaves. To its eighteenth century defenders, slavery was a necessary evil that could not be remedied with reasonable expense and safety. Perhaps in a few hundred years it could be done but certainly not sooner. As we shall see, southern planters would have to turn away from relying on utilitarian arguments because antislavery arguments based upon conceptions of justice were increasingly able to trump utility.

When the Somerset's case was tried in London in 1772, the lawyers on the side of Somerset's owner, Charles Steuert, made a number of arguments in slavery's defense to convince Judge Mansfield not to free the slave, Somerset. The defense was financially supported by West Indian planters and had at their disposal skilled lawyers who were fully

¹⁵⁷ Rush, *Address...upon Slave-keeping*, p. 21.

¹⁵⁸ Quoted in Wise (2005), p. 173.

capable of presenting the most compelling case to preserve the legality of slavery. They argued that freeing the roughly 15,000 slaves would be imprudent and against legal precedent. Priced at around £ 50 a piece, slaves commanded a substantial sum – roughly the amount of a good English horse – and the £ 750,000 loss in capital was too much to forcibly divest from slave-owners.¹⁵⁹ Many would be unfairly ruined, they argued, if the slaves were freed, even though their owners had acquired their property in accordance with the law operating at the time. In addition medieval English law had recognized villeinage and the feudal ties of serf and lord, which they claimed was similar to the relationship of slave and master. In defense of slavery, Steuert's lawyers did not appeal to justice but to precedent and prudence.

Slavery's defenders also argued that emancipation would invite racial disaster. It was bad enough that the Irish were flooding into England, but if Judge Mansfield was to free Somerset, then hordes of black slaves would buy passage (somehow) on the next ship headed to England, disembark free men and women, and swell the numbers of the indigent and idle. Not to mention the free black men who might fraternize with English women. Similarly, in America, the fear of an onslaught of black freedmen brought states on the northern bank of the Ohio River, such as Ohio, Indiana, and Illinois, to consider or pass laws that barred not only slavery but also the freed slaves themselves.

Slavery's defenders also claimed that emancipation might lead down a slippery-slope until all legitimate hierarchy was undermined. Perhaps the abolitionists might object to the subordination inherent between parent and child or God and man? To conflate slavery with all other sources of authority seems disingenuous, but we must remember that before the

¹⁵⁹ Wise, (2005), p. 120.

revolution slavery was merely the lowest form of dependency in a hierarchical society chock full of dependent relationships. Sometimes slavery was compared to an apprenticeship extended to the end of life. But even if slavery was an evil sort of dependency, that evil necessitated its own continuation. Slavery had produced slaves incapable of freedom who needed not liberty but care. Undermining the slave-owner's authority fed a larger fear that the loss of authority would create a new, sizeable idle and criminal class of "masterless men."¹⁶⁰

Before the revolution, slavery and indentured servitude were often viewed as forms of forced labor not all that different from free labor. There were innumerable forms of enforced labor and slavery was but another, lower kind. Servitude and apprenticeships were common both in England and America as in all pre-modern societies. To the modern capitalist schooled in the logic of Adam Smith and the economists, labor is something that one owns, and through labor men and women can create and, if thrifty, accumulate wealth. Owning the product of one's own labor then is just like any other form of property; a mechanism for pursuing ones interests and securing independence. However, before this "Smithian revolution" labor was seen merely as something that was necessary for the poor to perform. If labor is not a mechanism for independence and personal improvement, then what matters it why or how one has to perform it?

However, during and after the revolution this would change. A man must be independent to have liberty, and if the goal of the revolution was to secure liberty than dependent labor would have to justify its continuing existence. As Gordon Wood says, "the republican attack on dependency compelled Americans to see the deviant character of

¹⁶⁰ For an important discussion of the political importance of "masterless men" see Michael Walzer, *The Revolution of the Saints: a Study in the Origins of Radical Politics*. 2nd edition (Cambridge, MA: Harvard University Press, 1982).

slavery and to confront the institution as they never had to before.”¹⁶¹ This new vision of labor and interest was a powerful weapon in arsenal of the abolitionists, and without a positive justification slavery’s defenders were left in the unenviable position of arguing for the continuation of slavery on the grounds of fearing the alternative.

The New World’s export-driven economy relied heavily on cash crops like sugar, tobacco, rice, indigo, and cotton, and slavery’s defenders stressed the importance of slave labor to produce these valuable products. Montesquieu mocked this proslavery argument in his *Spirit of the Laws*¹⁶², and Serjeant Davy presented Montesquieu’s irony during the Somerset trial: “Sugar would be dearer, therefore for God’s sake let these men be slaves.”¹⁶³ Benjamin Rush countered the argument that only African slaves were capable of performing the backbreaking work necessary to make sugar in the West Indies. “It has been urged by the inhabitants of the Sugar Islands and South Carolina, that it would be impossible to carry on the manufactories of Sugar, Rice, and Indigo, without negro slaves.”¹⁶⁴ Because slavery’s apologists relied on utility, Rush was able to counter this proslavery argument by claiming the superior productivity of free labor (Rush claims that if only freemen were employed twice as much sugar would be produced). “The earth, which multiplies her productions with a kind of profusion, under the hands of the free-born labourer, seems to shrink into barrenness under the sweat of the slave.”¹⁶⁵ Or, when slavery’s apologists claimed that only African slaves could stand the excessive heat and labor of the West Indies, then once again Rush countered by pointing out that Europeans were quite capable of living and working in hot climates. In fact, Rush claims, since Europeans came from less fruitful places than

¹⁶¹ Wood, Gordon. *The Radicalism of the American Revolution*. (New York: Vintage Books, 1991), p. 186.

¹⁶² Baron de Montesquieu, *Spirit of the Laws* (New York: Hafner Press, 1949), p. 238.

¹⁶³ Wise, (2005), p. 139.

¹⁶⁴ Rush, *Address...upon Slave-keeping*. P. 5

¹⁶⁵ *Ibid.*, p. 7.

Africans they were actually more fit to perform strenuous work since they were used to working hard to procure sustenance at home in a less fertile climate.

Benjamin Franklin presents the proslavery arguments made during the revolutionary period, though he does it, of course, with irony and misdirection. Under the alias “Historicus”, Franklin purports to present the translation of an anti-abolition speech made by a Divan of Algiers, Sidi Mehemet Ibrahim.

If we cease our cruises against the Christians, how shall we be furnished with the commodities their countries produce, and which are so necessary for us? If we forbear to make slaves of their people, who, in this hot climate, are to cultivate our lands? Who are to perform the common labours of our city, and in our families?...If we then cease taking and plundering the Infidel ships, and making slaves of the seamen and passengers, our lands will become of no value for want of cultivation; the rents of houses in the city will sink one half; and the revenues of government...be totally destroyed.

For Franklin’s irony to hit its mark it needed to replicate the tenor of the arguments made by the proslavery forces in America. It did. Sidi Mehemet Ibrahim’s speech relies, like the southern planters, on utilitarian arguments about the cost of emancipation or the consequences of different races attempting to coexist equally (“our people will not pollute themselves by intermarrying with them”). Where Ibrahim’s speech does speak of justice it is, as it was for the slave-owners at the time, to the injustice of denying slave-owners their rights of property. “But who is to indemnify their masters for the loss? Will the state do it? Is our treasury sufficient?” “Or would they, to do what they think justice to the slaves, do a greater injustice to the owners?”¹⁶⁶

Another founding father whose opinion on slavery was important was Thomas Jefferson, and, like America, Thomas Jefferson was complicated. On the one hand he seemed to abhor slavery, but on the other hand he owned a lot of slaves. He exemplified the

¹⁶⁶ Benjamin Franklin, “On the Slave Trade,” 25 March 1790, in the *Autobiography and Other Writings on Politics, Economics, and Virtue*. Ed. Alan Houston (Cambridge: Cambridge University Press, 2004), p. 369-371.

confused and ambivalent attitude towards slavery found amongst southern slaveholders from the time of the revolution until the early part of the nineteenth century. Jefferson wrote:

I can say, with conscious truth, that there is not a man on earth who would sacrifice more than I would to relieve us from this heavy reproach, in any *practicable* way....But as it is, we have the wolf by the ear, and we can neither hold him, nor safely let him go. Justice is in one scale, and self-preservation in the other.¹⁶⁷

Slaveholders could afford to be circumspect with regards to their peculiar institution for awhile, but abolitionist attacks and Caribbean slave revolts would sharpen their focus to preserve their institution. What we see in proslavery arguments of the revolutionary period is not that slavery is being defended *per se* but rather that the alternative would be even worse. But this would change in the nineteenth century. It's not that slavery is a positive good, but it is rather that emancipation is too dangerous and, in the end, too costly a burden. Without a positive defense of slavery, slavery's defenders are left arguing for prudence without a suitable answer to the charge that slavery debased the enslaved. This positive defense would be created in the nineteenth century, in large part, by appeal to biological and anthropological theories of race.

Conclusion

When scientists, naturalists, philosophers, and others formed a particularly American science they tried to understand the new world of plants, animals, and people that they encountered in America. Their labors were not always performed with political interest in mind, rather their great efforts to understand the world, out of which modern science in

¹⁶⁷ Thomas Jefferson to John Holmes, April 22, 1820, Thomas Jefferson Papers, Library of Congress. Also, found in Thomas Jefferson, *Writings*. (New York: The Library of America, 1984), p. 1434.

America emerged, “flowed from this great task of comprehension, which involved the subjection of particularity to a greater order.”¹⁶⁸ However, the comprehension that they attempted to create had political interest and was useful politically. Science’s progress was associated with the progress of American democracy after the revolution and into the nineteenth century, and when scientific expertise was seen as partisan it was often rejected for that reason. American science was dominated by amateurs from a broad middle-class who were interested in improvement and consequence, and their innovative and scientific techniques were beginning to gain large measures of credibility as sources of authority in nineteenth century America. The importance of classification of the natural world in America derived from a number of sources, and it proved especially applicable to the understanding of the relationship between the races and classifying hierarchies in America. It should not surprise us then that the politics of slavery in the north and the south would come to drive much of the perception of the natural sciences in nineteenth century America. In the next chapter, we shall see the development of the natural sciences in the American North and South until just before the Civil War when war and Darwin would change the trajectory of American science and allow abolitionists and Radical Republicans use natural science rather than the slaveholders of the American South.

¹⁶⁸ O’Brien, (2004), vol. I, p. 215.

Scientists and Slaveholders: Proslavery Orthodoxy and Proslavery Science, 1830-1860

*Now we begin to talk of races—their true positions in the social scale, &c. These are not merely curious speculations, or results of scientific investigations; but they are questions forced upon us by outward and accumulating circumstances, which are directing the attention of science to new and unexplored fields. Races, since the discovery of the mariner's compass, have been brought into closer contact—have been more mixed up—have been compelled to study each other; and ethnological inquiries have been forced upon modern civilized nations—they have become a positive necessity.*¹⁶⁹

-Josiah C. Nott (1851)

Our new government is founded upon...the great truth that the negro is not equal to the white man; that slavery subordination to the superior race is his natural and normal condition. This, our new government, is the first, in the history of the world, based upon this great physical, philosophical, and moral truth.

.....
As I have stated, the truth of this principle may be slow in development, as all truths are and ever have been, in the various branches of science. It was so with the principles announced by Galileo it was so with Adam Smith and his principles of political economy. It was so with Harvey, and his theory of the circulation of the blood....May we not, therefore, look with confidence to the ultimate universal acknowledgement of the truths upon which our system rests? It is the first government ever instituted upon the principles in strict conformity to nature, and the ordination of Providence, in furnishing the materials of human society.

-Confederate Vice-President Alexander Stephens (1861)

Introduction

The previous chapter demonstrated that American science was, like American society, pragmatic, democratic, and results-oriented. In addition, the strange, new American wilderness encouraged Europeans to emphasize taxonomy and natural history in order to understand the native flora and fauna, the indigenous peoples they encountered, and the

¹⁶⁹ Josiah C. Nott, "Diversity of the Human Race," *De Bow's Review*, Vol. 10 (Feb., 1851), p. 114.

Africans they enslaved. Natural history and new taxonomic schemes shaped the manner in which European-Americans understood the rights of these newly encountered peoples, as well as the duties and obligations owed to these other “races.”

This chapter will do three things: 1. Show that scientific expertise can prove valuable as a source of “objective” facts to which citizens may turn, which can prove useful in a democracy. But that, contrary to the arguments of some theorists, science is not necessarily a democratizing force, nor does exist separate from democratic politics. 2. Show that in the 30 years before the Civil War, the slave states of America had an active and flourishing tradition of science and natural history that reflected the proslavery tenor of southern society. The South was neither an uneducated nor an unscientific wasteland nor was it unable to accept scientific arguments that contradicted Christian doctrines, at least not when that science aligned with the political tradition of ascriptive Americanism. 3. Show that while Southern slavery did not inhibit the development of southern science, it did shape it.

This takes the story to the next chapter where the evolution’s politics after the publication of *Origin of Species* changed the political compatibility of natural history for Southern political tradition. Darwinism’s politics played an important role in creating the lens through which southern slave-owners and white supremacists saw the work of northern scientists who came to dominate the practice of natural history in America.

Knowledge and the Value of Scientific Expertise

Democratic citizens face a problem of information; they have both to acquire it and to disseminate it.¹⁷⁰ Citizens must acquire information in order to form preferences, and they must transmit information about their preferences to their representatives and authorized delegates. *A priori* reasoning may supply a part of a citizen's knowledge about the world, but the rest must be acquired. Citizens can gain the knowledge and information they need from schools, newspapers, or an informal gathering of friends, and they had better do so for their democracy to function well. But there are reasons to worry about the capacity or incentive of the average citizen to acquire enough knowledge to adequately participate in a democracy.¹⁷¹ Joseph Schumpeter doubts the capacity of citizens to understand rational arguments¹⁷², and Anthony Downs claims that citizens have little incentive to learn; rather, they will choose to remain in a state of "rational ignorance."¹⁷³ For this reason democratic theorists tend to take citizen education seriously, and theories of liberal democracy are often tied to theories of education, and classic liberal theorists, such as John Locke,¹⁷⁴ Jean-Jacques Rousseau,¹⁷⁵ John Stuart Mill,¹⁷⁶ and John Dewey¹⁷⁷ have emphasized the importance of an electorate's knowledge, and modern democratic theorists have, too.¹⁷⁸

¹⁷⁰ See, for example, Arthur Lupia and Mat McCubbins, *The Democratic Dilemma: Can Citizens Learn What They Need to Know?* (Cambridge: Cambridge University Press, 1998).

¹⁷¹ Michael Delli Carpini and Scott Keeter, *What Americans Know About Politics and Why it Matters* (New Haven, CT: Yale University Press, 1996).

¹⁷² Joseph Schumpeter, *Capitalism, Socialism, and Democracy*. (Reprint, London: Allen and Unwin, [1942] 1976), p.257-62.

¹⁷³ Anthony Downs, *An Economic Theory of Democracy* (New York: Harper, 1957).

¹⁷⁴ John Locke, *Some Thoughts Concerning Education* (1693) in *The Educational Writings of John Locke*. Ed. by James Axtell (Cambridge University Press, 1968).

¹⁷⁵ Jean-Jacques Rousseau, *Emile; Or, On Education*. (1762). Trans. Allan Bloom (New York: Basic Books, 1979).

¹⁷⁶ For Mill on education see F.W. Garforth, *John Stuart Mill's Theory of Education* (Oxford, 1979); F.W. Garforth, *Educative Democracy: John Stuart Mill on Education in Society* (Oxford, 1980); and E.G. West, "Liberty and Education: John Stuart Mill's Dilemma," in *Philosophy*, Vol. 40, No. 152 (Apr., 1965), pp. 124-42.

¹⁷⁷ John Dewey, *Democracy and Education: An Introduction to the Philosophy of Education* (New York: The MacMillan Company, 1916).

¹⁷⁸ Richard Arneson and Ian Shapiro, "Democratic Autonomy and Religious Freedom: A Critique of *Wisconsin V. Yoder*, in *Nomos XXXVIII: Political Order*, ed. by Ian Shapiro and Russell Hardin, (New York: New York University Press, 1998), pp. 365-411. Archon Fung, "Democratic Theory and Political Science: A Pragmatic

Schools, newspapers, and coffeehouses help to inform citizens, but still a vast array of issues confronts the citizen of a modern democracy upon which many would find it difficult to ably decide on their own. Various modern media outlets play a role as well, and communication researchers emphasize the role that the mass media plays in supplying citizens with useful information about their governments and the world, although some are less than optimistic about the media's ability to successfully fulfill that role.¹⁷⁹ Members of the press can err in their observations, and a variety of incentives might encourage insincerity or dishonesty in press reports. It isn't just Emma Goldman who doubts the press's ability to act as effective arbiter and educator.¹⁸⁰ In addition, Jurgen Habermas reminds us that informed public opinion is also shaped in places of equality where people gather to talk and deliberate as in upper-class salons and middle-class coffeehouses.¹⁸¹ The equality inherent in deliberative exchange can prove useful within a limited set of issue areas, but uninformed citizens are likely to reach suboptimal outcomes without the benefit of expertise. In a

Method of Constructive Engagement," *American Political Science Review*, Vol. 101, No. 3 (Aug., 2007), pp. 443-458 contains a nice summary of four theories of democracy amongst political theorists. All four (minimal, aggregative, deliberative, and participatory) democratic visions rely to a lesser or greater degree on an informed citizenry. For more on representation see Hanna Pitkin, *The Concept of Representation* (Berkeley: University of California Press, 1967); Bernard Manin, *The Principles of Representative Government*, (Cambridge and New York: Cambridge University Press, 1997).

¹⁷⁹ Walter Lippmann, *Public Opinion* (New York: Harcourt, Brace, and Company, 1922). Gaye Tuchman, *Making News: A Study in the Construction of Reality* (New York: The Free Press, 1978). Susan Herbst, "Political Authority in a Mediated Age," *Theory and Society*, Vol. 32 (2003), pp. 481-503. Maxwell McCombs, *Setting the Agenda: The Mass Media and Public Opinion* (Cambridge: Polity Press, 2004).

¹⁸⁰ Here's Emma Goldman on the press in "On Trial," *Mother Earth* (February 1909), p. 412: "The papers, the papers! The only sources of information, of knowledge, of the American people. The poisoners of the mind, the corrupters of the human soul. The villifiers and misrepresenters of the truth, America's greatest scourge and pest, the arch-enemies of all that is big and fine and true." For a contemporary example of the failure of the press to adequately educate the American citizen see Peter Dreier and Christopher R. Martin, "How ACORN was Framed: Political Controversy and Media Agenda Setting," *Perspectives on Politics*, Vol. 8, No. 3 (Sep., 2010), pp. 761-792.

¹⁸¹ Jurgen Habermas. *The Structural Transformation of the Public Sphere: An Inquiry into a Category of Bourgeois Society*. Trans. by Thomas Burger with the assistance of Frederick Lawrence (Cambridge, Mass: The MIT Press, 1989 [1962]).

modern democracy, an epistemic division of labor seems necessary. So, experts have a role to play, and their testimony is needed.

Experts can provide useful, important, but often obscure information that is otherwise unavailable to the ordinary citizen. Experts can share their knowledge through testimony to citizens, though this process can leave citizens unequal to and dependent upon the experts. As Francis Bacon said, “*scientia potentia est*”, and the knowledge that experts have gives them power over democratic proceedings, which presents democracy with a paradox.¹⁸² On the one hand, *vox populi, vox dei*, which implies that no matter how valuable experts are sovereignty remains with the people-at-large. Yet, on the other hand, experts are needed if citizens are to govern themselves competently, which privileges some with epistemic authority and may devolve into an undemocratic rule by experts. In such a situation, balancing the autonomy of individuals to participate with the value of expertise is difficult, and “could in many cases give rise to hierarchical organization for the sake of efficiency or impersonal trust in authority, leaving us with epistemic improvements at the cost of democracy itself.”¹⁸³ Can democrats keep both equality and competency, or is it a case of never the twain shall meet?

Science has been proffered as a democratic solution to this paradox because of its effectiveness and its objectivity, and it has been argued that science fits nicely with the liberal tradition in America as a secular, egalitarian, and universal methods for discovering and creating knowledge. Rather than challenging democracy, scientific experts can actually

¹⁸² Of course, Bacon wasn't the only one to see the relationship between power and knowledge. Michel Foucault did, too.

¹⁸³ James Bohman, “Democracy as Inquiry, Inquiry as Democratic: Pragmatism, Social Science, and the Cognitive Division of Labor,” *American Journal of Political Science*, Vol. 43, No. 2 (Apr., 1999), p. 592. For an interesting take on the difficulties of balancing the need for expertise and democratic participation see Keith Topper “Arendt and Bourdieu between Word and Deed,” *Political Theory*, Vol. 39, No. 3 (Jun., 2011), pp. 352-377.

strengthen it. The effectiveness of science can make citizens more competent, because “scientific practices are veritistically better than any set of non-scientific practices available to human beings for answering the sorts of questions that science seeks to answer.”¹⁸⁴ And science’s objectivity, so the story goes, makes proper science, like liberal democracy, not particular but universal; science employs public methods that “all could accept.” These factors make science and democracy both mutually supportive and functionally similar, and some therefore lionize science as a democratic savior.¹⁸⁵ For example, Yaron Ezrahi has argued that modern science levels the playing field for experts and ordinary citizens by providing grounds for universal, rather than particular, action and making it possible to reconcile democracy and central action.¹⁸⁶ Here’s Ezrahi: “The assumption underlying the representativeness of technical action is connected, therefore, with the notion that science, as the intellectual construction of general regularities, is both a universal enterprise and—at least potentially—the ground for universal actions.”¹⁸⁷ In a sense, scientists are like trustees, to whom citizens grant authority in order to implement better policies than would the

¹⁸⁴ Alvin I. Goldman, *Knowledge in a Social World* (Oxford: Clarendon Press, 1999), p. 247. Goldman’s defense of scientific practices is based upon his belief in the comparative superiority of science, but there is also a more “naïve” defense of scientific realism. For example, as suggested by Bas van Fraassen in *The Scientific Image* (Oxford: Clarendon Press, 1980), p. 7: “The picture which science gives us of the world is a true one, faithful in its details, and the entities postulated in science exist: the advances of science are discoveries, not inventions.”

¹⁸⁵ On the similarity of science and democracy: Helen Longino, *Science as Social Knowledge: Values and Objectivity in Scientific Inquiry* (Princeton: Princeton University Press, 1990) & James Bohman, “Epistemic Value and Deliberative Democracy,” *The Good Society*, Vol. 18, No. 2 (2009), p. 30. On the lionization of science as democratic savior: Yaron Ezrahi. *The Descent of Icarus: Science and the Transformation of Contemporary Democracy*. (Cambridge, Ma: Harvard University Press, 1990).

¹⁸⁶ Ezrahi (1990). The issues discussed here are similar to those attempting to balance bureaucratic independence with democratic control over policy. See, for example, John Stuart Mill, *Considerations on Representative Government* (London: 1861) and Max Weber, “Bureaucracy,” in H.H. Gerth and C. Wright Mills, *From Max Weber: Essays in Sociology* (New York: Oxford University Press, 1946).

¹⁸⁷ Ezrahi (1990), p. 49. See also Ezrahi on page 206, “Science and its socially relevant practices and authorities have provided here the means with which sincerity (or insincerity) can be attributed to individual actors by reference to external and hence accountable and supposedly decidable, factual aspects of action.”

public-at-large.¹⁸⁸ Science’s reputation for objectivity and disinterestedness creates a realm of indisputable facts from which democratic citizens can learn, and to which citizens can appeal during their policy disputes, thus strengthening their reasoning and basis for action.¹⁸⁹

When such lionizers of science describe “objectivity” they mean something similar to what Karl Popper and Immanuel Kant meant, which Kant expresses thusly, “if the assent is valid for everyone, provided that he has reason, then its basis is sufficient *objectively*...”¹⁹⁰ In other words, the grounds upon which our knowledge rests are objective if all reasonable people can assent to them; not just particular characters. It is unnecessary that science actually be “True” in a Platonic sense, or a second-rate truth about a phenomenal world, in a Kantian sense, or merely the product of contingent human language, in a Richard Rortian sense.¹⁹¹ The mere *reasonableness* of science is valuable enough for a political liberalism that grounds political legitimacy in that same *reasonableness*.¹⁹²

Objectivity can be a prescriptive rather than a descriptive phenomenon. In other words, objectivity is dependent upon people treating it as so. The objective nature (or at least the reputation for objectivity) of these facts and truths are valuable politically, precisely

¹⁸⁸ The classic defense of the representative as trustee is Burke’s “Speech to the Electors of Bristol.” Edmund Burke, “Speech to the Electors of Bristol,” [1774], in ed. R. J. S. Hoffmann and P. Levack, *Burke’s Politics, Selected Writings and Speeches* (New York: A. A. Knopf, 1949).

¹⁸⁹ Of course, it isn’t just scientists that might play this role. It might be the Congressional Budget Office, factcheck.org, or Walter Cronkite, just as long as it is a source to which all reasonable people can appeal.

¹⁹⁰ Immanuel Kant, *Critique of Pure Reason*. trans. By Werner S. Pluhar (Hackett Publishing, 1996); The Transcendental Doctrine of Method, Chapter ii, section 3, On Opinion, Knowledge, and Faith, p. 747. For Popper’s use and definition of objective see Karl Popper, *The Logic of Scientific Discovery* (London and New York: Routledge Classics, 2002 [1935]), p. 22.

¹⁹¹ “To say that truth is not out there is simply to say that where there are no sentences there is no truth, that sentences are elements of human languages, and that human languages are human creations.” Richard Rorty, *Contingency, irony, and solidarity*. (Cambridge and New York: Cambridge University Press, 1989), p. 5.

¹⁹² See for example John Rawls, “The Idea of Public Reason Revisited,” in *The Law of Peoples* (Cambridge, Mass: Harvard University Press, 1999), pp. 129-80. And, for a critique of reasonableness’s central place in liberalism see Don Herzog’s “Romantic Anarchism and Pedestrian Liberalism,” *Political Theory*, Vol. 35, No. 3 (Jun., 2007), pp. 313-333.

because of their (supposed) non-political nature. The physicist John Ziman summarizes well:

Objectivity is what makes science so valuable in society. It is the public guarantee of reliable disinterested knowledge. Science plays a unique role in settling factual disputes. This is not because it is particularly rational or because it necessarily embodies the truth: it is because it has a well-deserved reputation for impartiality on material issues. The complex fabric of democratic society is held together by trust in this objectivity, exercised openly by scientific experts. Without science as an independent arbiter, many social conflicts could be resolved only by reference to political authority or by a direct appeal to force.¹⁹³

Science and technology widen the space for democratic action by providing citizens with objective, impersonal, and reasonable sources of knowledge upon which to act and with which to hold politicians accountable.

When Hank Morgan visited King Arthur's Court in Mark Twain's 1889 allegory, *A Connecticut Yankee at King Arthur's Court*, he found that "the most of King Arthur's British nation were slaves, pure and simple, and bore that name, and wore the iron collar on their necks; and the rest were slaves in fact, but without the name... the nation as a body was in the world for one object, and one only: to grovel before king and Church and noble."¹⁹⁴ In order to democratize Camelot, Hank first attempts to modernize the romantic but backwards people through rationality, science, and patents (and bicycles and baseball). Science and modernity are necessary to train the common person for democracy, end his proclivity to worship his oppressor, and rid Arthur's land of unnecessary dominance; or, at least, that's how the story goes. And it wasn't just Hank Morgan who thought that science could end superstition and democratize at the same time. Condorcet argued that science would strengthen liberal democracy by dispelling old prejudices like censorship, dogma, and

¹⁹³ John Ziman, "Is Science Losing its Objectivity," *Nature*, Vol. 382. (29 August 1996), p. 754.

¹⁹⁴ Mark Twain, *A Connecticut Yankee in King Arthur's Court* (Oxford: Oxford World's Classics, 2008 [1889]), p. 54.

superstition.¹⁹⁵ More recent theorists have argued the same: “In politics science was bound to undermine hierarchy and make it finally possible for men to enjoy their natural rights to equality.”¹⁹⁶ A reasonable, public method of inquiry that relies on reasons that “all could accept” is necessary for a liberal democracy that grounds legitimacy on reasons that “all could accept”.

In *Connecticut Yankee*, Mark Twain satirizes the romantic idea of medieval chivalry as seen in the writings of Sir Walter Scott, which also influenced the southern character; Twain called it the “Sir Walter disease.” Here’s Twain:

It was Sir Walter that made every gentleman in the South a Major or a Colonel, or a General or a Judge, before the war; and it was he, also, that made these gentlemen value these bogus decorations. For it was he that created rank and caste down there, and also reverence for rank and caste, and pride and pleasure in them.¹⁹⁷

According to Twain, the southerner was infatuated with a “jejune romanticism of an absurd past” without which the “South would be fully a generation further advanced than it is.”¹⁹⁸ Supposedly, the romantic southern spirit, fed by Sir Walter Scott and others, prejudicially rejected rational and democratic progress in the modern era, and was therefore an inhospitable environment for science’s development. Like Twain’s Arthur, the southern spirit of romanticism and organic hierarchy was often associated with custom, tomfoolery, and prejudice, rather than their presumed antithesis, science.

So, if this is true, then in the slave states of America we should expect science to be exist uneasily alongside the dominance-laden hierarchies of the pre-Civil War era. Perhaps

¹⁹⁵ Marie Jean-Antoine Nicolas Caritat, marquis de Condorcet, *Sketch for a Historical Picture of the Progress of the Human Mind* (1795), trans. June Barraclough (Westport, Conn: Greenwood Press, 1955).

¹⁹⁶ Sanford Lakoff, “The Third Culture: Science in Social Thought,” in *Knowledge and Power: Essays on Science and Government*, ed. Sanford Lakoff (New York: The Free Press, 1966), p. 17.

¹⁹⁷ Mark Twain, *Life on the Mississippi* [1883], in *Mark Twain: Mississippi Writings* (New York: Literary Classics of the United States, 1982), ch. XLVI, p. 501.

¹⁹⁸ *Ibid.*, pp. 500-1.

this, combined with hyper-religiosity, can explain the resistance of these pseudo-chivalric, hierarchical southern states to the doctrines of evolution and Darwinism, in particular. However, the answer is no, it cannot. It will turn out that the slave-holding states of the United States were opposed neither to science in general, nor to natural history in particular before the Civil War. In fact there was an active scientific proslavery movement in the southern states of America.

The proslavery movement was protected and bolstered by old prejudices like censorship, dogma, superstition, and racial bigotry, but it was also protected by avant-garde practitioners of the scientific method. It shall turn out to be the case that slavery did not prevent the growth of southern science but effectively adapted itself to it, and adapted the science itself to the political goals of a southern defense of slavery before the Civil War. The political fight over slavery was not an arena in which bigoted southerners opposed the light of science, but rather a place in which both sides claimed the mantle of scientific authority and sought to use this powerful tool to defeat their political and intellectual opponents. Perhaps ideally scientists should be insulated from social and political themes, but of course they are not.¹⁹⁹ And as we have seen, it was not Darwin that made natural history political in the United States, for it had always been so, but Darwinian science did alter the political “space” for natural history, by making it less amenable to an American political tradition that assigned rights and privileges based upon fixed racial essences.

The story of evolution in the United States and England illustrates how the politics of scientific advice changes the authority of scientists to deliver the specialized knowledge

¹⁹⁹ A good example of the prototypically ideal “scientific” personality of the late nineteenth/early twentieth century can be seen in the character of Max Gottlieb in Sinclair Lewis’s novel *Arrowsmith* (1924). “...old Gottlieb! Ideal of research! Never bein’ content with what *seems* true! Alone, not carin’ a damn, square-toed as a captain on the bridge, working all night, getting to the bottom of things!” (New York: First Signet Classics Printing, 2008), p. 22.

that they have to the public. I argue that scientific authority depends on the trust that citizens place in scientists, and that political ideology shapes the public's reaction to scientists, as happened in nineteenth century America. Citizens face a dilemma in acquiring the knowledge that they need in order to make decisions. No citizen can gather all the knowledge that they need about the world alone, and they must depend upon the testimony of experts to a large degree. Unfortunately, for citizens it can be difficult to identify expertise and to know whom to trust. I show how even in the face of overwhelming expert consensus about a given scientific discovery, political ideology can dissuade citizens from relying on scientific advice. Ultimately, citizens may need normative or affective reasons to trust the advice of scientists beyond the simple belief that scientists can provide useful information, since politically distasteful conclusions are not useful. This chapter elucidates some of the issues and challenges facing the successful incorporation of expert knowledge and opinion into 19th century political discourse by looking at the history of natural history in the southern states of America from the rise of a powerful proslavery discourse to the publication of Darwin's *Origin of Species* and the outbreak of Civil War.

Before Darwin: Science in the American South

After the Civil War and the publication of Darwin's *Origin of Species*, natural science languished in the American South, but before the Civil War things had been different. Science's place in the antebellum South has inspired a lively historiographical debate; on the one hand there are those who argue that the people and institutions of the old South were anathema to the development of southern science. In 1927, Samuel Eliot Morison established the traditional, and perhaps standard, view of science in the old South. Morison claimed that cotton economics and chattel slavery had stunted the development of southern

science (as well as all other intellectual enterprises) and that “by 1850 the cotton kingdom had killed practically every germ of creative thought.”²⁰⁰ Others agreed with Morison’s negative assessment. For example, in *The Mind of the Old South*, Clement Eaton concluded that “the Southern mind of the antebellum period was, on the whole, essentially unscientific,” and that the pursuit of science had been stifled by “religious and proslavery orthodoxies.”²⁰¹ However, these viewpoints have been challenged. The first response was by Thomas Cary Johnson’s *Scientific Interests in the Old South*, in which he argued that “between 1801 and 1861, the people of the Southern States in common with those of the North and of Western Europe were intensely interested in the exploration and mastery of the forces of nature.”²⁰² Merle Curti also acknowledged the accomplishments of southern science, and even Morison would later recant his earlier views on the stultifying effects that slavery had upon scientific enterprises.²⁰³

As is often the case, the truth lies somewhere in between. Those, like Morison and Eliot, who downplay the state of southern science correctly point out that scientific expertise lagged in the southern compared to the northern states. This was true “by almost every measurable criterion—publication, participation in national associations, inclusion in the *Dictionary of American Biography*, and the founding of scientific journals and societies—the Old South lagged markedly behind the Northeast in promoting science.”²⁰⁴ However, the reason that southern science was handicapped was not by slavery-induced mental deficiencies, as

²⁰⁰ Samuel Eliot Morison, *The Oxford History of the United States, 1783-1917* (2 vols.; London, 1927), Vol. II, p. 24.

²⁰¹ Clement Eaton, *The Mind of the Old South* (Rev. ed.; Baton Rouge, 1967), pp. 224, 243.

²⁰² Thomas Cary Johnson, *Scientific Interests in the Old South* (New York, 1936), p. 10.

²⁰³ Merle Curti, *The Growth of American Thought* (3rd ed.; New York, 1964), pp. 427-8 and Samuel Eliot Morison, *The Oxford History of the American People* (New York, 1965), p. 513.

²⁰⁴ Ronald L. Numbers and Janet S. Numbers, “Science in the Old South: A Reappraisal,” in *Science and Medicine in the Old South*, ed. by Ronald L. Numbers and Todd L. Savitt (Baton Rouge and London: Louisiana State University Press, 1989), p. 11.

Morison had argued, but by demographic and environmental factors.²⁰⁵ The southern states remained much more rural than the North, since its economy was dominated by agriculture and the countryside, rather than manufacturing and the city. It was amongst sophisticated urbanites that science, as well as libraries, operas, universities, and other city frills predominated. The southern states lacked these amenities, but so did the largely rural, northern free-states of the Midwest. The urban Northeast outpaced the more rural, agrarian South in scientific enterprise, though the South was not totally without scientific expertise, most especially in natural history.

In fact the scientific output of the slave-states was neither exceptionally productive nor barren, but was in fact quite average by American standards. One way to measure the development of science as a practice in the nineteenth century is to look at the development of the American Association for the Advancement of Science (AAAS), founded before the Civil War in 1848. By looking at the regional variation of the scientific membership we can get a sense of the scientific “production” of the slave and free regions of the United States, and by doing so we see that while the slave states trailed the free states in absolute numbers, in relative comparison the slave states held their own.²⁰⁶ Historian of science, Sally Gregory Kohlstedt, identifies as “leaders” of the AAAS those members who either once held an office with the institution or presented a paper between its founding and suspension during the Civil War and has identified the regional distribution of these leaders.²⁰⁷ In 1850, 29.3% of AAAS “leaders” were from Slave-states, which is quite close to the 32.3% of the non-slave population living in those states. In 1860, the 30.5% of “leaders” in Slave States almost

²⁰⁵ Numbers and Numbers (1989), p. 35.

²⁰⁶ Numbers and Numbers (1989), p. 14 (Table 3).

²⁰⁷ Sally Gregory Kohlstedt, *Formation of the American Scientific Community: The American Association for the Advancement of Science, 1848-1860* (Urbana: 1976), pp. 192-3, 203.

perfectly matched its 30.4% of the non-slave population. New England's contribution to the scientific leadership during the early years of the AAAS was disproportionately large. In 1860, 35.4% of the society's leaders came from New England, though that region had only 11.4% of the population of the United States. Compared to New England, the slave states look positively unscientific, but compared to the nation as a whole, the South compares adequately.

Though we see that there was, basically, an average level of science in the slave states perhaps this level was below the potential of what would have been possible in the absence of slavery. In other words, did slavery or a strengthening proslavery attitude in the South after the 1830s inhibit the development of southern science? According to Ronald and Janet Numbers, "the answer is no. If anything, southerners *increased* their commitment to science during the decades immediately preceding the Civil War."²⁰⁸ Of course, preventing black slaves by law and force from acquiring literacy and other skills excluded a terribly large portion of the population from contributing to scientific expertise. However, slavery also freed an aristocratic class of southern planters from enough mundane chores to pursue science in their leisure time. Like in ancient Greece, it was possible for robust intellectual pursuits to exist alongside a large slave population. Many of the South's most prominent scientists owned slaves.²⁰⁹ Indeed Alexis de Tocqueville even thought that the absence of an aristocratic leisure class in the United States would hinder the development of its theoretical sciences.²¹⁰ As Tocqueville says, "Nothing is more vital to the study of the higher reaches of science than meditation; nothing is less suited to meditation than the internal constitution of democratic nations where you do not encounter, as in aristocracies, one class which sits back

²⁰⁸ Numbers and Numbers (1989), p. 15.

²⁰⁹ *Ibid.*, p. 19.

²¹⁰ *Ibid.*, p. 18.

in its own comfort and another which will not stir itself because it despairs of ever improving its status.” To the degree that Tocqueville’s description of the importance of aristocratic leisure is correct, we would expect slaveholder’s leisure to have benefited the creation of science in the American South.

While there was a set of elite individuals with the time, inclination, and ability to pursue scientific enterprises, there was also a much larger set of people in the United States who were not the producers of science, technology, and innovation but their consumers. This class of science-consumers was largely educated in American public schools, and so the state of education in the United States was also important to the cultivation of scientific ideas. Many have argued that the level of popular education is a key determinant of the public reception to controversial scientific ideas, such as evolution.²¹¹ Though America was provincial in some senses, its public education was widespread and worthy of a sophisticated nation. By the 1840s, the United States had higher rates of primary school enrollment than did Germany and was, by that standard, the best-educated country in the world.²¹² As Horace Greeley put it, “We have *universalized* all the beautiful and glorious results of industry and skill. We have made them a common possession of the people....We have democratized the means and appliances of a higher life.”²¹³ Literate, educated Americans gained exposure to scientific ideas through coffeehouse conversations, public school teachers and private tutors, newspapers and magazines, and lyceums, all of which were in supply in nineteenth century America.

²¹¹ See Chapter 1 of this dissertation for evidence of this.

²¹² Richard A. Easterlin, “Why Isn’t the Whole World Developed?,” *Journal of Economic History*, Vol. 41, Issue 1, The Tasks of Economic History (Mar., 1981), pp. 1-19.

²¹³ Horace Greeley (ed.), *Art and Industry at the Crystal Palace* (New York: 1853), 52-53.

Of course, we aren't just interested in aggregate levels of education in the United States but in differences between American regions, too. Therefore, we need to distinguish between the levels of general education in both slave-states and free. Compared to the northern states, the state of education in the South was indeed lacking, and perhaps the clearest way to see this disparity is by looking at literacy rates. A big reason for the disparity between North and South was due to slavery, since the overwhelming majority of slaves were prevented from learning to read or write.²¹⁴ However, even a comparison of white adults shows that there was still a significant disparity in educational achievement. In the northern free states the measured illiteracy rate in the 1840 census was 4.55%, while in the southern slave states over three times higher at 17.07%.²¹⁵ This wide disparity narrowed but persisted throughout the nineteenth century and gives credence to the argument that the southern slave-states were educationally backward. Though a given individual's ability to read or write does not guarantee any familiarity with scientific literature, it certainly tells us something valuable about the comparative state of learning across regions.

Though the North was more educated, it would be a mistake to consider the slave-states as unusually uneducated. Rather, when looking at the state of general literacy and education on a cross-national level it is actually America's North not its South that looks like the outlier. In fact, the education of nineteenth century white southerners compares

²¹⁴ Estimates of slave literacy are very difficult to calculate, and necessarily imprecise, but a reasonable estimate is that between 5 and 10% of slaves in the later antebellum period could read. Janet Duitsman Cornelius, *"When I Can Read My Title Clear": Literacy, Slavery, and Religion in the Antebellum South* (Columbia: University of South Carolina Press, 1991).

²¹⁵ This data comes from the 1840 census and represents the number of individuals falling under the category "Number of white persons over 20 years of age in each family who cannot read and write" divided by the total number of white persons enumerated separated by states. In 1840 the southern slave states includes the following states and territories not yet admitted but enumerated by the 1840 Census: Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, Missouri, North Carolina, South Carolina, Tennessee, and Virginia. Northern Free states and territories includes Connecticut, Illinois, Indiana, Iowa, Maine, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, and Wisconsin.

favorably to that of the French, as well as to that of the English and Welsh. Measuring literacy is tricky for much of the nineteenth century, but France, England, and Wales seem to have had significantly higher rates of illiteracy than even the most illiterate regions of the United States.²¹⁶ Often the reputation of the South as an uneducated backwater is due to more to its sharing a national boundary with hyper-educated New England than to an alternative standard set by, say, Europe or the rest of the world. In fact, James McPherson has made a compelling case that on a global level it was the South that was the more “normal” region, while it was the North that was the exceptional region.²¹⁷

Slavery did not prevent southern science from developing, but rather, as we shall see, it played a role in directing science in the South towards outcomes that supported slavery’s preservation. The question of race could never be outside the political process for, as Josiah Nott nicely put it, “these are not merely curious speculations, or results of scientific investigations; but they are questions forced upon us by outward and accumulating circumstances, which are *directing* the attention of science to new and unexplored fields”²¹⁸

The state of scientific achievement in the southern states was relatively limited compared to the urban North, but there was real scientific achievement present, particularly in specific

²¹⁶ The best estimate for literacy rates in France and England comes from government tables showing the percentage of individuals who were unable to sign their name, but rather “made their mark” on their marriage certificate. The percentage of illiterates in the entire of France was 28% in 1840 and in England was 40.8% in 1841 (the first year for which statistics are available). It is true that some of the individuals getting married were younger than 20 years old, and if teenagers were less literate than those 20 and older this may artificially raise the measured illiteracy rate. However, in England and Wales the proportion of individuals marrying younger than 21 was only 8.83%. In addition, it is probably true that the marrying population was more literate than the country as a whole, thus driving down the measured literacy rates. These countervailing factors are frustrating, but are unlikely to change the results enough to alter the direction of the cross-country comparisons. Data for England and Wales comes from the *Annual Registrar General of England and Wales, 1857* (Table III and Table IV, pp. iii, vii), while the data for France comes from Alain Blum and Jacques Houdaille, “L’alphabétisation aux XVIIIe et XIXe siècles: l’illusion parisienne,” *Population*, Vol. 40, No. 6 (1985), pp. 944-951.

²¹⁷ James M. McPherson, “Antebellum Southern Exceptionalism: A New Look at an Old Question,” *Civil War History: A Journal of the Middle Period*, Vol. 29, No. 3 (Sep., 1983), pp. 230-44.

²¹⁸ Nott (1851), p. 114.

areas like geology, and especially natural history, which most in the South considered “the queen of the sciences.”²¹⁹ Lester Stephens, a historian of science in antebellum Charleston, describes the scene there: “contrary to older historical interpretations, however, the institution of slavery did not deter scientific inquiry and activity. In fact, Charleston produced a group of naturalists equal in ability and accomplishments to any elsewhere in the nation.”²²⁰ Southern science was not just a matter for ivory-tower folks either but was an active force in the nitty-gritty world of antebellum politics. In fact it was a crucial part of the southern proslavery worldview that shaped the South’s conception of itself, and this conception also influenced the reception that scientific ideas received in the South. Science was not just a force that acted but was also a force that was acted upon. For that reason it is important to understand the political content and context, which Americans imputed to that science, which the next section shall explore.

Science and the Proslavery Argument

In the latter half of the 19th-century, the American South did not have a reputation for scientific endeavor; in fact, only one southern naturalist was elected to the National Academy of Sciences between its founding in 1863 and 1900.²²¹ As was shown above, this had not always been the case. Before 1859, natural history had had a stronghold in the

²¹⁹ Ibid., p. 7.

²²⁰ Lester D. Stephens. *Science, Race, and Religion in the American South: John Bachman and the Charleston Circle of Naturalists, 1815-1895* (Chapel Hill & London: The University of North Carolina Press, 2000), p. 9

²²¹ Number of NAS naturalists—biologists, geologists, and anthropologists—by region, 1863-1900.

New England	30
Middle Atlantic	38
South	1
Midwest	7
West	2
Non-US	2

Table from Numbers (1998), p. 25-6.

American South, and a forerunner of what-would-be-called Anthropology that sought to understand the place of human races in nature was well established. The modern perception that evolution is antithetical to southern thought because science is antithetical to southern thought is anachronistic. In the first half of the 19th century, scientists (alongside clergymen) played an important role in supporting the proslavery worldview. As historian Drew Gilpin Faust puts it,

But for an age increasingly enamored of the vocabulary and methods of natural science, biblical guidance was not enough. The accepted foundations for truth were changing in European and American thought, as intellectuals sought to apply the rigor of science to the study of society and morality, as well as the natural world. The proslavery argument accordingly called not only upon divine revelation, the traditional source and arbiter of truth, but sought at the same time to embrace the positivistic standards increasingly accepted for the assessment of all social problems.²²²

Before Darwin, southerners used science to justify slavery and white racism even when scientific claims conflicted with biblical authority.

One of the subjects for both science and politics was race. Whether human races were separate species or merely varieties produced by different climates mattered to 19th-century scientists, and their verdict implicated politics. Today we often dismiss these racially-motivated enterprises as pseudoscience because of the racial assumptions their practitioners had. However, phrenology, ethnology, and the debates between monogenists and polygenists operated according to contemporary scientific norms and were considered cutting-edge scientific work. In fact, most southerners that accepted polygeny did so because they believed it to be well supported by scientific arguments, often regardless of religious scruples.²²³ In fact it was “monogenesis” that was considered to be the product of

²²² Faust (1981), p. 11.

²²³ Stephens (2000), p. xiii.

“religious dogma” and to which a “trembling orthodoxy clutches like sinking mariners at their last plank.”²²⁴

Until the late eighteenth century, the antislavery movement strengthened. Abolitionist societies in the northern states grew in size and influence, and in the heady days after the revolution it seemed possible that emancipation might soon follow even in the southern states. The new state of Vermont outlawed slavery, and slavery was disappearing in Massachusetts and New Hampshire. The slave states of Virginia and Maryland were showing encouraging signs for emancipators, and planters in the upper South who doubted slavery’s profitability were becoming increasingly hostile to the African slave trade. Virginia even removed legal obstacles in the way of private manumission, and across the Atlantic Ocean, an English court set James Somerset, a black slave, free simply by virtue of his having lived in England; thereby declaring any slave free as soon as he or she set foot on English soil, or breathed the pure English air.²²⁵ Benjamin Rush hoped that even South Carolina would respond to the idealism of the Revolution and cease slave-importation.²²⁶ All-in-all slavery seemed to be waning enough for Jonathan Edwards, Jr. to predict that in fifty years time it would “be as shameful for a man to hold a Negro slave, as to be guilty of common robbery or theft.”²²⁷

But this didn’t happen. Instead there was, after 1789, a conservative reaction in America against the humanitarian and cosmopolitan impulse that had previously emphasized the joint humanity of whites and blacks. After the revolution and the ratification of the

²²⁴ Quoted in Adrian Desmond and James Moore, *Darwin’s Sacred Cause: How a Hatred of Slavery Shaped Darwin’s Views on Human Evolution* (Boston and New York: Houghton Mifflin Harcourt, 2009), p. 289.

²²⁵ Steven M. Wise, *Though the Heavens May Fall: the Landmark Trial that Led to the End of Human Slavery*. (Cambridge, Massachusetts: Da Capo Press, 2005).

²²⁶ David Brion Davis, *The Problem of Slavery in the Age of Revolution, 1770-1823*. (Oxford: Oxford University Press, 1975), p. 313

²²⁷ Quoted in *Ibid.*, p. 313.

Constitution, liberty had become a secular ideal of the highest order creating tension for slaveholders that had protested British tyranny. If human rights were, as the Declaration of Independence asserted, derived from nature, then how could slave-owners deny blacks their natural rights as humans? To make consistent the American love of liberty with the existence of slavery, there had to be a reason to deny enslaved (and free) blacks their political rights, and to this end natural history was employed. Natural history was able to help Southerners bridge the liberal political tradition in America with a parallel political tradition of ever-present racial inequality that proscribed rights to non-white Americans. After the constitutional moment and the solidification of the constitutional consensus, attitudes towards slavery began to shift in a proslavery direction as racial theories of black inferiority began to harden. This is the classic tale told by Winthrop Jordan about the rise of white racism and its relationship to slavery in early America.²²⁸ The proslavery defense would reach its height after 1830 when southern slave-owners would justify slavery by denying the equal humanity of black slaves and would do so, in part, by appealing to biological classifications of race.

Though during the Revolutionary era, slaveholders had found themselves somewhat embarrassed by slavery, by 1806 attitudes had shifted enough that a southern Congressman could say, “I will tell the truth. A large majority of the people in the Southern States do not consider slavery as even an evil.”²²⁹ From the Revolution to the Civil War, the question of slavery became less amenable to normal political give-and-take and instead became a question of constitutional politics. As Gary Shiffman puts it, “what’s at issue are

²²⁸ Winthrop Jordan. *White Over Black: American Attitudes Toward the Negro, 1550-1812*. (Chapel Hill, 1968).

²²⁹ Quote is from Rep. Peter Early of Georgia, *A Century of Lawmaking for a New Nation: U.S. Congressional Documents and Debates, 1774 – 1875* (Annals of Congress, House of Representatives, 9th Congress, 2nd Session) p. 238.

fundamental principles and the basic rules that will define the body politic into the indefinite future. Constitutional politics is about the integrity of the polity, and its premise is that a crisis of some sort has been reached, such that a *decision* must be made that will have the effect of violating or maintaining that integrity.”²³⁰ Negotiation over slavery became increasingly difficult once southerners began to make a forthright defense of slavery.

After the Missouri debates of 1818-20, antislavery sentiment strengthened in the North, which made increasingly clear to southerners that it was impossible to reconcile the North to slavery by agreeing with the critique of slavery’s fundamental shortcomings. The Somerset’s case seemed to call for positive defense of slavery: “The question of this case...was essentially whether anything could be suffered to support slavery but positive law...”²³¹ Abolitionist attacks on slavery also called for a positive defense of slavery. Many southerners began to embrace an organic conception of society that rejected abstract notions of rights and justice. Instead of Lockean social contracts, southerners argued for a conservative organic view of social order that did not characterize the master-slave relationship as debased. Whereas before “one generation might be able to oppose slavery and favor everything it made possible...” slavery now became a defining issue for the South’s social organization, and the “next had to choose sides.”²³² The reactionary movement that arose in order to defend the challenge to the institution of slavery relied upon the belief that slaves not only occupied a lower place on the Great Chain, but also were something other than fully human. Racial identities and theories of white privilege and black

²³⁰ Gary Shiffman, “Construing Disagreement: Consensus and Invective in ‘Constitutional’ Debate,” *Political Theory*, Vol. 30, No. 2 (Apr., 2002), p.180.

²³¹ Justin Buckley Dyer, “After the Revolution: *Somerset* and the Antislavery Tradition in Anglo-American Constitutional Development,” *The Journal of Politics*, Vol. 71, No. 4 (Oct., 2009), pp. 1422-1434.

²³² Eugene Genovese, *Roll, Jordan, Roll: The World the Slaves Made*. (Random House: 1972), p. 133.

subhuman inferiority reified in the period following the Revolutionary War as a mechanism to legitimize the enslavement of blacks in America.

Paradoxically the success of liberty strengthened the relationship between slavery and race. Slave-owners could and did appeal to property rights, but so did emancipators who stressed the right of the slave to own his or her own labor. As long as the defenders of slavery conceded the goals of revolutionary liberty, they were fighting an uphill battle. An appeal to justice is meant to trump meager considerations like cost or industrial output. As Benjamin Rush says, “no manufactory can ever be of consequence enough to society, to admit the least violation of the Laws of justice or humanity.”²³³ However, the southern planters would develop an alternative vision of justice and right within an alternative political tradition to which they could appeal, and thereby push slavery as a positive contribution to a healthy polity. Rather than Lockean liberalism, southerners would increasingly appeal to a conservative notion of organic hierarchy supported by both religion and science.

Certainly white Americans and Englishmen *were* racist before the development of biological theories of race, and the racial inferiority of blacks was taken for granted by even emancipators, generally; there were some that justified slavery on the basis of race during the revolutionary period, or else Benjamin Rush would not have felt the need to answer them: “Would it avail a man to plead in a Court of Justice that he defrauded his Neighbour, because he was inferior to him in Genius or Knowledge?”²³⁴ But before the 19th-century, slavery’s apologists appealed to utilitarian arguments about the difficulty and cost of ending slavery rather than to the justice of the slave-system. Biological theories of justification had not yet come to form a cornerstone of the southern proslavery position before the end of

²³³ Ibid., p. 5.

²³⁴ Benjamin Rush, *A Vindication of the Address, to the Inhabitants of the British Settlements, on the Slavery of Negroes in America*. (Philadelphia: J. Dunlap, 1773), pp. 32-33.

the eighteenth century. The nineteenth century would see the development of two types of positive justifications for slavery, religious and scientific. Before the Civil War, and before Darwin, natural history was politically amenable to slavery, and it was, like religion, accepted as a bulwark of the southern social order.

Religion as a Bulwark of Slavery

At the end of the 18th-century, evangelical religion generally sided with those who sought to end of slavery. Both Methodist and Baptist circuit-riders were aggressive in gaining converts in a relatively unchurched America, and they sought those converts amongst both black and white audiences in the North and South. In the 1780s both Baptists and Methodists condemned slavery. As one Methodist assembly put it, slavery was “contrary to the laws of God, man, and nature, and hurtful to society contrary to the dictates of conscience and pure religion.”²³⁵ In fact some Methodists moved to excommunicate slaveholders from the church in 1784, although this was not ultimately done.²³⁶ During and after the Revolution it seemed possible that religious evangelicalism could threaten the southern social order, though this turned out to be a false hope. In reality both slavery’s apologists and its opponents would find ways to appeal to biblical interpretation to justify their position for or against slavery.

Church authorities that proselytized about the evils of slavery met resistance in the South, and religion during the Great Awakening proved amenable to slaveholder mores. In 1800 authorities in Charleston burned antislavery pamphlets produced by the Methodists,

²³⁵ Donald G. Mathews, *Religion in the Old South*. (Chicago and London: University of Chicago Press, 1977), p. 68.

²³⁶ Sean Wilentz, *The Rise of American Democracy: Jefferson to Lincoln*. (New York: W.W. Norton & Company, 2005), p. 268.

and by 1816 the Methodists officially ceased their attempts to end slavery.²³⁷ Personal holiness was preached to the exclusion of campaigns centered on the outcomes of secular politics, unless they were proslavery politics. As one well-known Baptist clergyman put it, “We who own slaves honor God’s law in the exercise of our authority.”²³⁸ Southern evangelicalism transformed into a message centered upon personal Christian mastery, and taught masters moral imperatives for the treatment of their slaves. As historian Sean Wilentz puts it, “among whites, slaveholder, and nonslaveholders, the Second Great Awakening became a pillar of the reborn slaveholding order.”²³⁹

Southern Methodists, Presbyterians, and Baptists formed distinct institutions that sublimated theology to the goal of protecting slavery. In the South a proslavery evangelical mainstream emerged such as is exemplified here by South Carolina politician James Henry Hammond: “*We accept the Bible terms as the definition of our slavery, and its precepts as the guide of our conduct.* We desire nothing more.”²⁴⁰ Evangelical conservatives argued that scripture supported human slavery:

The Bible served as the core of this defense. In the face of abolitionist claims that slavery violated principles of Christianity, southerners demonstrated with ever more elaborate detail that both Old and New Testaments sanctioned human bondage. God’s Chosen People had been slaveholders; Christ had made no attack on the institution; his disciple Paul had demonstrated a commitment to maintaining it.²⁴¹

²³⁷ Mathews (1977), p. 75.

²³⁸ James C. Furman to W. E. Bailey, Dec. 18, 1848, quoted in Mathews (1977), p. 136.

²³⁹ Wilentz (2005), p. 269.

²⁴⁰ James Henry Hammond, “Two Letters on the Subject of Slavery in the United States, Addressed to Thomas Clarkson, Esq.,” January 28, 1845, *Selections from the Letters and Speeches of the Hon. James H. Hammond of South Carolina* (New York: John F. Trow & Co., 1866), p. 124. Italics in original.

²⁴¹ Faust (1981), p. 11

The Book of Exodus says that a slave was chattel no different than his master's money, and Leviticus 25:44 was said to unambiguously support slavery of the Israelites over the heathen.

Hammond also appealed to the Tenth Commandment:

Let us open these Holy Scriptures. In the twentieth chapter of Exodus, seventeenth verse, I find the following words: "Thou shalt not covet thy neighbor's house, thou shalt not covet thy neighbor's wife, nor his man-servant nor his maid-servant, nor his ox, nor his ass, nor anything that is thy neighbor's"—which is the Tenth of those commandments that declare the essential principles of the Great Moral Law delivered to Moses by God Himself....Does it not emphatically and explicitly forbid you to disturb your neighbor in the enjoyment of his property; and more especially of that which is here specifically mentioned as being lawfully and by this commandment made sacredly his? Prominent in the catalogue stands his "man-servant and his maid-servant," who are thus distinctly *consecrated as his property* and guaranteed to him for his exclusive benefit in the most solemn manner.²⁴²

The most famous biblical story was that of Noah and his sons, which held that Noah had cursed his son Ham and Ham's descendants to be the servants of servants. Southerners argued that Ham's descendants were Africans, who were therefore naturally and divinely-sanctioned slaves.

Hammond's thoughts on slavery were typical. He argued that every civilization needed a "mud-sill" class, and that the southern system of human bondage organized necessary inequalities in accordance with principles of morality and Christianity.²⁴³ Southerners commonly argued that they treated their slaves better and more generously than northerners treated the wage-laborers, who worked for them. South Carolinian William J. Grayson compared the plight of the southern slave favorably to the life of the northern hireling not only in prose but in poetry, as well:

²⁴² James Henry Hammond, "Two Letters on the Subject of Slavery in the United States, Addressed to Thomas Clarkson, Esq.," January 28, 1845, *Selections from the Letters and Speeches of the Hon. James H. Hammond of South Carolina* (New York: John F. Trow & Co., 1866), p. 121.

²⁴³ Hammond, "On the Admission of Kansas, Under the Lecompton Constitution. Delivered in the Senate of the United States, March 4, 1858," in *Letters and Speeches* (1866), p. 318.

*How small the choice, from cradle to the grave,
Between the lot of hireling, help, or slave!
To each alike applies the stern decree
That man shall labor; whether bond or free,
For all that toil, the recompense we claim—
Food, fire, a home and clothing—is the same.*²⁴⁴

From the 1830s until after the Civil War, American political thought was largely defined by perspectives on slavery and race. Slavery's apologists used both religion and science to buttress their defense, and in regards to this defense, Larry Edward Tise has said, "Proslavery thought was nothing more or less than thought about society."²⁴⁵

In both slave states and free, slavery served as a focal point around which institutions of religion, economics, and politics formed either to support or to oppose human slavery.

In the course of the next decade, slavery's apologists would, in their collective oeuvre, develop a comprehensive defense of the peculiar institution that invoked the most important sources of authority in their intellectual culture and associated slavery with the fundamental values of their civilization.²⁴⁶

Religious denominations split along sectional lines, such as the rift within the Baptist church between southern and northern factions in 1845. As Ulysses S. Grant recalled about Georgetown, Ohio:

The line between the Rebel and Union element in Georgetown was so marked that it led to divisions even in the churches. There were churches in that part of Ohio where treason was preached regularly, and where, to secure membership, hostility to the government, to the war and to the liberation of the slaves, was far more essential than a belief in the authenticity or credibility of the Bible.²⁴⁷

²⁴⁴ William J. Grayson, *The Hireling and the Slave, Chicora, and Other Poems*, (Charleston, S.C.: McCarter & Co., 1856), p. 22.

²⁴⁵ Larry Edward Tise quoted in, Faust (1981), p. 2.

²⁴⁶ Faust (1981), p. 10.

²⁴⁷ Ulysses S. Grant, *Personal Memoirs of U. S. Grant, Vol. I*, in *Ulysses S. Grant: Memoirs and Selected Letters* (New York: Library of America, 1990), p. 30.

In the north, southern churches were seen as politically amenable to slavery. “Black and white abolitionists in the nineteenth century identified churches, in the words of James G. Birney, as ‘the bulwarks of American slavery.’”²⁴⁸

Attitudes toward market capitalism were also shaped by attitudes toward slavery. Many Jacksonian Democrats in the South were suspicious of market capitalism because they feared it would undermine slavery, which they argued was a more humane method of establishing hierarchies than the market capitalism of the North. As George Fitzhugh put it, “For writing a one-sided philosophy, no man was better fitted than Adam Smith....He had probably never heard the old English adage, ‘Every man for himself, and Devil take the hindmost.’ This saying comprehends the whole philosophy, moral and economical, of the ‘Wealth of Nations.’”²⁴⁹ Or, as South Carolinian politician James Henry Hammond put it, in his famous “Mudsill” speech, the wage-laborers of the capitalistic North were *de facto* slaves, and it was actually the South’s system of bondage that accorded with the laws of nature.²⁵⁰ It is true that market forces operated in the nineteenth century slave states, even if to a lesser extent than in the North, but for much of the southern planter class, at least, the move to a market economy was lamented and resisted.²⁵¹

Attitudes toward religion, economics, and politics were shaped a Southern ideology based on the maintenance of white supremacy and the preservation of slavery. Political

²⁴⁸ Charles Irons, *The Origins of Proslavery Christianity: White and Black Evangelicals in Colonial and Antebellum Virginia*. (Chapel Hill: The University of North Carolina Press, 2008), p. 1.

²⁴⁹ George Fitzhugh, *Sociology for the South: or the Failure of Free Society* (Richmond, VA: A. Morris, 1854), p. 10.

²⁵⁰ James Henry Hammond, “On the Admission of Kansas, Under the Lecompton Constitution. Delivered in the Senate of the United States, March 4, 1858,” in *Letters and Speeches* (1866), p. 318.

²⁵¹ For more on the historiography of the state of the market economy in the South see Douglas R. Egerton, “Markets without a Market Revolution: Southern Planters and Capitalism,” *Journal of the Early Republic*, Vol. 16, No. 2, Special Issue on Capitalism in the Early Republic (Summer, 1996), pp. 207-221. Michael Merrill, “Putting ‘Capitalism’ In Its Place: A Review of Recent Literature,” *William & Mary Quarterly*, Vol. 52 (Apr., 1995), pp. 315-326. Robert Fogel and Stanley Engerman, *Time on the Cross: the Economics of American Negro Slavery* (2 vols., Boston, 1974). Eugene Genovese, *The Political Economy of Slavery: Studies in the Economy and Society of the Slave South* (New York: 1965).

tradition provided the lens through which Southerners viewed ideas and institutions, and this included attitudes towards science, as well.

Science as a Bulwark of Slavery

Science and the scientific study of nature helped to form and support the proslavery worldview in the United States before the Civil War. It was not the only method of thought which did so (southerners relied upon the authority of economics, religion, and philosophy, as well), but science was nevertheless an important aid to their vision of a racially-based hierarchical order. This section will explore how the biological sciences, and evolution in particular, were used to augment the political strength of the American slave-power, and it will show that contrary to the traditional belief southern science was neither dismal nor weak prior to the Civil War but was vibrant, strong, and relatively influential.

White southerners, like most Americans, used scientific evidence and the power of natural history to justify elements of human society and its dominance structures. Many studied natural history and turned to the nonhuman animal world in order to clarify the naturalness of slavery. Of course, an appeal to the naturalness of slavery is neither necessarily modern nor necessarily scientific. Aristotle justified slavery through its naturalness in ancient Greece: “It is thus clear that, just as some are by nature free, so others are by nature slaves, and for these latter the condition of slavery is both beneficial and just.”²⁵² Though in some ways an atypical thinker, the southerner George Fitzhugh relied heavily upon the Aristotelian conception of slave’s nature to justify the southern social

²⁵² Aristotle 1254^b39, *Politics*, I:6 (Oxford: Oxford University Press, 1995), p. 17.

order.²⁵³ As Mr. Fitzhugh puts it, “Bees and herds are naturally subjects or slaves of society. Such is the theory of Aristotle, promulgated more than two thousand years ago, generally considered true for two thousand years, and destined, we hope, soon again to be accepted as the only true theory of government and society.”²⁵⁴ The degree to which Fitzhugh actually understood Aristotle is debatable, but Fitzhugh did share with Aristotle the desire to ground his sociology in nature.²⁵⁵ The power of science to explain the natural world was a powerful provider of valuable analogies for those who defended the justice of slavery.

The antebellum period took a particular interest in the natural world of insects. Like humans insects form large, complex communities that operate according to fascinating (and sometimes bizarre!²⁵⁶) hierarchies and perform intricate feats of cooperation. Natural studies of ants in the first half of the 19th-century were common, and much excitement and interest was aroused by the existence of slavery in the ant kingdom.²⁵⁷ William Van Amringe recognized that if one accepts the argument by analogy, then the existence of ant-slaves seems to indicate nature’s (and God’s) acceptance of slavery:

There are two species of ants (the *formica rufescens*, and *f. sanguinea*) which regularly and systematically make predatory wars on two other species (*f. niger* and *f. cunicularia*), for the sole purpose of procuring slaves to perform the servile drudgery of their habitations....Here then, we have an example, by a most unerring law, derived directly from the Creator, manifested in the instinct of these insects, that slavery is permitted, if not ordained. It is remarkable, too, that the resemblance (we will not say analogy), to human institutions is perfect, not only in regard to the genus, but to the color of the beings enslaved: and not only to the color, but to the comparative social, and, if we may so speak, mental conditions of the masters and slaves; for the

²⁵³ C. Vann Woodward, “George Fitzhugh, *Sui Generis*,” in George Fitzhugh, *Cannibals All! Or Slaves without Masters* ([Richmond: 1865] Cambridge, MA: Harvard University Press, 1960), pp. vii-xxxviii.

²⁵⁴ Fitzhugh ([1865] 1960), p. 71.

²⁵⁵ Robert J. Loewenberg, “John Locke and the Antebellum Defense of Slavery,” *Political Theory*, Vol. 13, No. 2 (May, 1985), p. 269.

²⁵⁶ For proof watch David Attenborough’s BBC Documentary, *Life in the Undergrowth* (DVD, 2005).

²⁵⁷ Desmond, Adrian and James Moore. *Darwin’s Sacred Cause: How a Hatred of Slavery Shaped Darwin’s Views on Human Evolution*. (Boston and New York: Houghton Mifflin Harcourt, 2009), p. 222-224.

domestic economy of the rufescent and sanguineous ants exhibit an advance in comfort and security, beyond the condition of the negro ants, the fair representative of the comparative advance in the civilization of Europe over Africa.²⁵⁸

In the ant kingdom, natural historians witnessed another world—a natural world—where black ants were enslaved by other, lighter colored ants. Even Darwin himself took to studying the behavior of these tiny creatures, remarking that he had seen “the rare Slave-making Ant & saw the little black niggers in their Master’s nests”.²⁵⁹ One weakness in Aristotle’s claim that slavery is the natural condition for certain types of humans is that nature seems not to have distinguished clearly the form of the slave-type from the master-type, at least not as nature had for the ants. In fact the attempt to demonstrate that nature *had* differentiated humans in such a way would form the research agenda for much of southern science during the 19th-century.

The Turn of Blumenbach

Nineteenth century biological theories of race helped form the modern conception of racial identity, and a coterie of scientific racial supremacists, phrenologists, ethnologists, and polygenists sought to deny the equal humanity of blacks and whites. Alongside a declining antislavery rhetoric there was a decline in the primacy given to environmental explanations by ethnologists, anthropologists, and naturalists who studied racial variety. In the latter half of the eighteenth and the first half of the nineteenth centuries, naturalists

²⁵⁸ William Frederick Van Amringe, *An Investigation of the Theories of the Natural History of Man by Lawrence, Prichard, and Others: Founded Upon Animal Analogies: and an Outline of a new Natural History of Man, Founded upon History, Anatomy, Physiology, and Human Analogies* (New York: Baker & Scribner, 1848), pp. 311-2. Note that while Van Amringe recognized the power that analogy with the ant-slaves had, he did not himself believe in the power of analogy between the human and animal world. As he says on page 312, “It is evident that all the theories built upon animal analogies, without known relation or agreement of properties common to them, must fall to the ground.”

²⁵⁹ Darwin quoted in Desmond & Moore (2009), p. 301.

increasingly dismissed theories that explained racial difference as a contingent adaptation to environmental circumstance. Instead they argued that human nature and the races of humankind were immutable from time immemorial.

An important and illustrative figure during this transition is Johannes Blumenbach. Blumenbach is, in many ways, exemplary of the shift in natural history towards a racialist conception of the human species, which can be well seen by comparing the various editions of Blumenbach's dissertation. In 1775 the first edition of Blumenbach's dissertation was published at Göttingen, and his discussion of human races showed his belief that climate and custom were the dominant shapers of human nature.²⁶⁰ In his first edition Blumenbach separates humans into four varieties, but he describes them by their geographical location rather than their race. Blumenbach argued that humans' physical features were contingent, epiphenomenal, plastic, and exhibited an imperceptible gradation between types. M. Flourens described Blumenbach's feelings on Africans thusly:

The human mind is one. The soul is one. In spite of its misfortunes, the African race has had heroes of all kinds. Blumenbach, who has collected everything in its favour, reckons among it the most humane and the bravest men; authors, learned men, and poets. He had a library entirely composed of books written by negroes.²⁶¹

In the first edition to his dissertation, Blumenbach recognized human types but defended the overall unity of the human species.

However, by the third edition in 1795 things had changed dramatically. Blumenbach now argued that nature had "large gaps," and that there was a discontinuity exhibited by human skulls. And now Blumenbach discussed physique and physical attributes rather than

²⁶⁰ Johann Friedrich Blumenbach, *De Generis Humani Varietate Native Liber: Cum Figuris Aeri Incisis: Naturae Species Ratioque* (Göttingen: Abr. Vandenhoeck, 1776).

²⁶¹ Johann Friedrich Blumenbach, *The Anthropological Treatises of Johann Friedrich Blumenbach*, ed. Thomas Bendyshe (London: Longman, Green, Longman, Roberts, & Green, 1865), p. 57.

climate, and he asserted that human reason was derived not from custom or civilization but was given by God. In addition he discussed racial varieties in a way he hadn't before by referring to the races as classes that he could order ("the white colour holds the first place"). As historian Michael O'Brien puts it, "In this manner, environmentalism mutated into something harder, unyielding, imposing."²⁶² Blumenbach's changing emphasis from environmental contingency into a more rigid system of racial classification based upon God-given variation was debated by other thinkers in Europe as well, including Baron Georges Cuiver, Francois Péron, and Julien-Joseph Virey, John Hunter, James Cowles Prichard, and Sir William Lawrence.²⁶³

It was debated in America, too, and came to have important implications for social and political debates over the viability and morality of slavery in the United States. Blumenbach's emphasis upon permanent racial type rather than environment served to buttress the arguments of those Americans, like Thomas Jefferson, who had argued against Buffon's characterization of the American climate as degenerative.²⁶⁴ If races were more or less fixed then the threat that white settlers would degenerate in North America was thereby removed, though not for the reason that Jefferson gave (which was that the American climate was as suitable as the European), but for the alternative reason that climate was less important than inborn physical traits.

Phrenology

²⁶² O'Brien, (2004), vol. I, p. 231.

²⁶³ George W. Stocking, Jr., "French Anthropology in 1800," *Isis*, Vol. 55, No. 2 (Jun., 1964), pp. 134-150; See also, O'Brien (2004), vol. I, p. 231.

²⁶⁴ O'Brien (2004), vol. I, p. 233. See also, Gerbi (1973).

As the idea that inborn physical traits determined one's character took hold, people began to turn to the study of such physical traits to see what they could predict about individuals and racial groups. One famous example was the scientific fad of phrenology. Phrenology was a physiognomic study of the relationship between personality and a skull's shape and contour. Early phrenology was a sort of "scientific horoscope" with mass appeal that went beyond American and English scientific circles.²⁶⁵ For many, phrenology represented a real breakthrough because of its naturalistic interpretation of the mind.²⁶⁶ Robert FitzRoy, Darwin's captain onboard the *Beagle*, was a follower of phrenology; "his own nose, of course, indicated leadership and intelligence."²⁶⁷ The science of phrenology began by making claims about individual "characters", but it became a method to classify racial intelligence and personality based upon supposed statistics of shapes and sizes of the brains of various races. The classification of racial intelligence created a racial hierarchy (Europeans on top; Native Americans and Africans below). Charles Darwin encountered phrenology as a fad while at Edinburgh, but later at Cambridge he encountered opposition to this new "pseudo-science" and became convinced of its falsity.

As phrenologists began to study the "bumps" on the skulls of the races, some of them began to conclude that the difference between black and white skulls were so great that there had to be multiple human species. The phrenologist Charles Caldwell (1772-1853), a Kentucky slave-owner and medical doctor, traveled to England in 1841 to present his theory

²⁶⁵ Phrenology inspired both academic scholarship, for example the *American Phrenological Journal* (published 1838-1911), as well as American entrepreneurialism. One product of phrenology's commercialization in the United States is the Automatic Electric Phrenometer, which can be viewed at The Museum of Questionable Medical Devices in St. Paul, Minnesota.

²⁶⁶ Desmond and Moore. (2009), p. 31-37.

²⁶⁷ *Ibid.*, p. 70.

that the black and white races were different species.²⁶⁸ Caldwell's book *Thoughts on the Original Unity of the Human Race* (1830) was an attack on James Cowles Prichard's unity-of-the-human-species book, *Researches into the Physical History of Mankind* (1st edition, 1813). Anatomical study and phrenological research, said Caldwell, proved that Africans bore "a nearer resemblance to the higher Quadrumana than to the highest varieties of his own species."²⁶⁹ Caldwell argued that it was science, not the revelation of the Christian Bible, that demonstrated the truth about the common origins of mankind. In fact Caldwell called the Word of God spoken through the study of the natural world the "Elder Revelation".

Another American phrenologist, Samuel George Morton (1799-1851), was the founder of invertebrate paleontology in America and the most famous anthropologist of his day. Morton classified skull variations by race, and although we now know that his data was unsound, he was cited as authoritative by scientists in Europe and America.²⁷⁰ Morton began by studying the crania of American Indians and received numerous samples of Indian skulls from field investigators across the American continent and published his findings in his *Crania Americana*.²⁷¹ Later Morton expanded his interest into the skulls of individuals from Egypt, India, Europe, and elsewhere. Morton's phrenological work influenced Louis Agassiz, nineteenth century America's most famous naturalist and Darwinism's most important American opponent after 1859. Before arriving in the United States and visiting with Morton in 1846, Agassiz believed in the unity of the human species, but Morton's data

²⁶⁸ *Ibid.*, pp. 152-154.

²⁶⁹ 'Notices and Abstracts of Communications', etc., 75, in *Report of the Eleventh Meeting of the British Association for the Advancement of Science...1841* (London: John Murray, 1842).

²⁷⁰ Stephen Jay Gould, "Morton's Ranking of Races by Cranial Capacity," *Science*, Vol. 200 (5 May 1978), pp. 503-509.

²⁷¹ Robert E. Bieder, *Science Encounters the Indian, 1820-1880: The Early Years of American Ethnology* (Norman, OK: The University of Oklahoma Press, 1986), p. 64. Bieder notes on page 67 that "the collecting of Indian crania appears to have been a cottage industry on the frontier."

convinced Agassiz otherwise. According to Jules Marcou, Agassiz's disciple and biographer, after Georges Cuvier no zoologist had more influence on Agassiz.²⁷²

Polygeny: The American School of Anthropology

William Van Amringe, whose comments on slavery in the ant-world we saw earlier, argued for the “naturalness” of slavery in the human-world, because he believed that human races were multiple species. He appealed to contemporary science: “The anatomical and physiological differences between the races of men, constitute them distinct species. All the historic facts of the human species, and all the scientific principles of classification, support and confirm these conclusions.”²⁷³ Van Amringe, and others, relied on science that was considered cutting-edge during the 1840s and 50s. Until the theory of plural human species was largely destroyed by Charles Darwin's theory of natural selection which posited a unitary origin for humankind, the unitary theory was considered passé and mostly appealing to religious dogmatists. Prior to Darwin, the pluralists (or polygenists, as they were also called) ruled the scientific world.

In Mobile, Alabama, Josiah Nott became the most important proponent of polygeny. Samuel Morton's work provided Nott with empirical firepower, and in 1844 Nott published *Two Lectures on the Natural History of the Caucasian and Negro Races*. Nott viewed himself as first and foremost a scientist, and though he sprinkled his work with protestations of devotion to “sacred truth”, Nott saw his work as a bit of a crusade against religion.²⁷⁴ Nott maintained that scientific and religious truth could be unified, and he blamed inconsistencies on fallible

²⁷² Jules Marcou, *Life, Letters, and Works of Louis Agassiz*, vol 2. (New York: Macmillan and Co., 1896), p. 29.

²⁷³ Van Amringe (1848), pp. 419-20.

²⁷⁴ *Ibid.*, p. 110.

clergy interpreters.²⁷⁵ Nott worked with George Gliddon, an Englishman who had served as the American vice-consul in Cairo, a position which Gliddon was able to use to provide Morton with Egyptian specimens for his phrenological research. After Morton died, Nott and Gliddon began the project of making “Morton’s research the basis for authoritative work of racial science. Through their efforts polygenism became known as the American school of anthropology.”²⁷⁶ Nott and Gliddon cultivated Louis Agassiz, and Agassiz came around to their perspective. On a visit to a plantation near Charleston in 1850, Agassiz interviewed slaves there and claimed “these races must have originated where they occur...Men must have originated in nations [i.e. separately], as the bees have originated in swarms.”²⁷⁷

Agassiz was bit of a hero to southerners and after 1859 became the most important scientific opponent of Darwinism in America. Agassiz was a polygenist and a visceral racist. Agassiz described his shock upon being served by black waiters at a Philadelphia hotel: “I could not tear my eyes away from their appearance in order to tell them to keep their distance. And when they put their hideous hand on my plate in order to serve me, I wished I were able to distance myself in order to eat my morsel of bread elsewhere...”²⁷⁸ Upon first seeing black waiters, Agassiz suspected that blacks and whites were not the same species; the work of Nott and Gliddon confirmed his suspicion.²⁷⁹

Agassiz believed in a fixed variety of human species, in part because he objected to an implied familial relationship between the races. Darwin’s theory necessitated a common

²⁷⁵ See, for example, Nott’s *Two Lectures on the Connection Between the Biblical and Physical History of Man* (1849; reprint ed., New York: Negro Universities Press, 1969).

²⁷⁶ Menand. (2001), p. 111.

²⁷⁷ Louis Agassiz, “The Diversity of Origin of the Human Races,” *Christian Examiner*, Vol. 49, (1850), p. 125m 128,

²⁷⁸ Quoted in Desmond and Moore (2009), p. 232-3.

²⁷⁹ Edward Lurie, *Louis Agassiz: A Life in Science*. (Baltimore: Johns Hopkins University Press, 1988), p. 256-7.

creation, or as Darwin put it in *Descent of Man*, “all the races of man are descended from a single primitive stock.”²⁸⁰ When the Civil War began, Agassiz claimed that abolitionists would “Mexicanize the country,” by allowing racial intermarriage.

Conceive for a moment the difference it would make in future ages for the prospect of republican institutions and our civilization generally, if instead of the manly population descended from cognate nations, the United States should hereafter be inhabited by the effeminate progeny of mixed races, half Indian, half negro, sprinkled with white blood.²⁸¹

Most American scientists rapidly accepted evolution but not Louis Agassiz. Agassiz objected to Darwinism and to the politics of the abolitionists that used Darwinism.

The southern physician, Samuel Cartwright popularized the work of the American school of Anthropology and made it his goal to make polygenism compatible with the Genesis account of creation by claiming that there had been *two* creations. Blacks had been created with the animals, while whites were the descendents of Adam and Eve. Cartwright saw the political importance of the polygenist/monogenist debate, and he argued in *De Bow's Review*, a leading southern journal, that “the abolition delusion is founded upon the error of using the word *man* in a generic sense, instead of restricting it to its primary specific sense [i.e. for whites only].”²⁸²

Polygeny proved difficult to square with Genesis, and ministers challenged polygenist science for that reason.²⁸³ One challenger was John Bachman, a Lutheran pastor who ministered to African-American slaves, and who also wrote the anti-Morton book

²⁸⁰ Darwin discusses the polygenist/monogenist debate in Chapter VII, Part I of the *Descent of Man*. Quote from the Norton edition (2006), p. 907.

²⁸¹ Louis Agassiz to Samuel Gridley Howe, August 10, 1863, autograph copy, Agassiz Papers (152). Quoted in Menand (2001).

²⁸² Samuel A Cartwright, “Unity of the Human Races Disproved by the Hebrew Bible,” in *De Bow's Review*, Vol. 29 (1860), pp. 130-131.

²⁸³ For example, Moses Ashley Curtis, “The Unity of the Races,” *Southern Quarterly Review*, VII (1845), pp. 372-448.

Doctrine of the Unity of the Human Race in 1850. Bachman argued that racial variation was merely contingent on environmental circumstance. Darwin read Bachman's work, and it influenced his theory of evolution. Bachman invoked the principles of science as well as religion in his defense of unitary origins, and he viewed the polygenists as anti-clerical and anti-religious.

Gliddon's cat-calling was worst, especially when he ended up calling the Bible a 'fetiché'....This was guaranteed to leave a minister like Bachman shaking, but then he was one of Gliddon's 'biblical dunces'. *Types of Mankind* was rank blasphemy to Bachman: irresponsible science unconstrained by a better Book.²⁸⁴

Ironically, before Darwin effectively ended the scientific debate on polygeny, rendering it unavailable for slavery's defense, it was unitarists, like Darwin, who were aligned with clerics, like Bachman, *defending* the Genesis account. For some the best defense of the theory of human unity was the common descent in Darwin's evolutionary theory. The geologist Charles Lyell claimed that "it was believers in Genesis...who 'led towards C. Darwin'."²⁸⁵

The polygenist/monogenist debate went beyond racism, science, or racist science; it was part of a political tradition that supported white supremacy and the slave system. Just as Lyell identified Darwin, ironically, with the monogenist defenders of Genesis, monogenism was associated with the Darwin's position against slavery. For example, Bachman was viewed as being antislavery because he believed in the unity of species, even though he owned slaves himself and was a loyal southerner. Bachman claimed a defense of monogenism could lead to being labeled an unpatriotic Southerner:

Politicians who resorted to DeBow's and the Southern Quarterly Reviews for arguments in defence of slavery, such as have been instilled into their minds by Dr. Nott and others, have been taught to believe that the best arguments

²⁸⁴ Desmond and Moore. (2009), p. 263.

²⁸⁵ Ibid., p. 270.

that could be urged in favor of slavery, was to prove the negro of a different species. Hence, those who have supported the doctrine of the unity, have sometimes been stigmatized as abolitionists and the enemies of the South.²⁸⁶

Southern politicians used polygenist arguments to defend slavery. Bachman argued that it was on account of slavery that polygenists strove to prove not only that blacks were intellectually inferior to whites, but that “he was of a different species and not of the same blood.” Furthermore, he argued, that “this doctrine was acceptable to the politicians of the South...”²⁸⁷

And Josiah Nott agreed. Nott claimed that South Carolina Senator John C. Calhoun was a convinced pluralist and had used polygenist science in his 1844 negotiations with England and France over the annexation of Texas to assert that scientific authority backed slavery.²⁸⁸ To prepare for the negotiations, Calhoun studied the science of racial types. “[Calhoun] was convinced that the true difficulties of the subject could not be fully comprehended without first considering the radical difference of humanity’s races, which he intended to discuss...”²⁸⁹ In a letter to an English abolitionist, Hammond argued for the impossibility of black and white people living together without slavery, and he referenced the core argument of the American school of Anthropology: “They [black and white people] differ essentially, in all the leading traits which characterize the varieties of the human species, and color draws an indelible and insuperable line of separation between them.”²⁹⁰ Confederate Vice-President, Alexander Stephens, also referenced that the social system of the South was in accord not just with religion and morality, but with science and nature as

²⁸⁶ John Bachman, “Review of *Types of Mankind* by J.C. Nott and Geo. R. Gliddon,” *Charleston Medical Journal and Review*, Vol. 9 (1854), p. 657.

²⁸⁷ *Ibid.*, p. 647.

²⁸⁸ Nott and Gliddon (1855), pp. 50-52.

²⁸⁹ *Ibid.*, p. 51.

²⁹⁰ Hammond, “Two Letters,” January 28, 1845, *Selections* (1866), p. 170.

well (“slavery subordination to the superior race is his natural and normal condition” and “It [the Confederacy] is the first government ever instituted upon the principles in strict conformity to nature”).²⁹¹ Pro-slavery politicians James Henry Hammond, Alexander H. Stephens, Robert Toombs, and Robert B. Rhett all adopted the scientific argument for the permanent fixity of racial types to defend slavery.²⁹² As it would later be in apartheid South Africa, antievolutionism formed part of an orthodoxy that stressed fixed racial privileges and norms.²⁹³ Darwinism removed this argument in favor of slavery, and after 1859 it became nearly impossible to make a scientifically credible argument in favor of polygeny.

Polygeny was an attempt to define whites and blacks as separate species to the detriment of blacks, and “the net result of such labors was to supply a ‘scientific’ basis for a theory of racial inequality.”²⁹⁴ Certain inalienable rights derived from one’s humanity were denied to slaves and polygeny provided a justification. As Drew Gilpin Faust puts it, slaveowners wanted to argue that “nature produced individuals strikingly unequal in both qualities and circumstances. ‘Scientific’ truths demonstrated through empirical study

²⁹¹ Alexander Stephens, “Cornerstone Speech”, (1861). See the opening page of this chapter for the full quote in which Stephens makes his argument.

²⁹² Lurie (1954), Note 66.

²⁹³ It is interesting to note that ruling whites in South Africa resisted the teaching of evolution. Evolution was seen as politically inconsistent with the doctrines of the ruling Christian National party’s pro-Apartheid stance. South African students were taught the CN perspective through curriculum which omitted ‘anti-biblical’ concepts like evolution. South African whites were taught a version of history which, “omitted, distorted or vilified the role of blacks, ‘coloureds’ and Asians in the country’s past”. (Dean, J. & Sieborger, R. “After Apartheid: the outlook for history,” *Teaching History*, Vol. 79 (1995), pp. 35-38) The post-apartheid ANC has altered the curriculum to “rid the education and training system of a legacy of racism, dogmatism, and outmoded teaching practices.” (African National Congress. *A Policy Framework for Education and Training*. (Johannesburg: 1994), pp. 10-11) One of the steps they have taken to modify the curriculum has been to introduce human evolution to history classes for the first time. Students recognized the racial component to evolution right away. “For black children, for example, the issue of whether early humans were black or white was of importance. The concept of a single ancestor was significant. They enjoyed the fact that ‘blacks and white people are from the same person’ (Moir Mabuya, Grade 5), and that skin colour is simply an adaptation to environmental conditions: ‘I learned that we a one human being child, our skin changes from the wether’ (Cynthia, Grade 5).” (Esterhuysen, Amanda; Jeannette Smith, “Evolution: ‘the forbidden word?,” *South African Archaeological Bulletin*, Vol. 53 (1998), pp. 135-137).

²⁹⁴ Edward Lurie, “Louis Agassiz and the Races of Man,” *Isis*, Vol. 45, No. 3. (Sep., 1954), pp. 230.

prescribed a hierarchically structured society reproducing nature's orderly differentiations."²⁹⁵ The subjugation of Africans was easier if black slaves were not the same species as Europeans, especially within the American political context. For example "polygenism was cited in support of the view that slavery did not violate the spirit of the Declaration of Independence, on grounds that Jefferson's term "all men" did not, scientifically, mean blacks."²⁹⁶ The definition of human identity and the rights derived there from are intimately tied.²⁹⁷

Conclusion

In the 1830s the politics of slavery, and the intellectual justification for it shifted. In the late 18th century, slavery was typically considered to be an unfortunate legacy left behind by colonial England, which would be better gotten rid of if only there was some feasible way to be rid of the freed slaves afterwards. By the 1830s, slavery's defenders began to make a positive defense of the value of slavery as an institution. Religion and Biblical exegesis was used as part of this defense, and it was also used by the antislavery forces, too. Natural history and science operated similarly. Like the authority of religion, science emerged in the nineteenth century as an increasingly powerful source of authority, and was also an increasingly important site of political dispute.

Slavery did not retard southern science, particularly natural history, but was a defining agent for its development. Those who argue that "in politics science was bound to undermine hierarchy and make it finally possible for men to enjoy their natural rights to

²⁹⁵ Drew Gilpin Faust, *Southern Stories: Slaveholders in Peace and War*. (University of Missouri Press, 1992), pp. 80-81.

²⁹⁶ Menand (2001), p. 112.

²⁹⁷ On the difficulties of incorporating nonhuman species into a liberal polity see Martha Nussbaum, *Frontiers of Justice: Disability, Nationality, Species Membership*. (Harvard University Press, 2006).

equality” are incorrect.²⁹⁸ Though Condorcet, Yaron Ezrahi, and Hank Morgan argued that science aids democracy, dominance-laden hierarchical systems are fully capable of coexisting with cutting-edge science. John Ziman argued that “without science as an independent arbiter, many social conflicts could be resolved only by reference to political authority or by a direct appeal to force.”²⁹⁹ Ultimately, the publication of Darwin’s *Origin of Species* in 1859 made it impossible for polygenists to credibly argue on behalf of separate species of humans, but this was not “Science” but a particular scientific theory. The resolution of the scientific argument over evolution and polygeny was ultimately decided by “political authority” and “force”; barely a year after the publication of the *Origin*, Lincoln was elected President of the United States and the Civil War was begun. In addition to Darwin, the scientific case for polygeny was solved by the political process.

A political and military solution, implemented by the thirteenth, fourteenth and fifteenth amendments, four civil rights acts, and an equal number of force bills, answered, at least temporarily, the Negro question and established his position in the order of American society. It was the final blow to those polygenist scientists who had lent their names to the politics of the prewar era. The American school of polygenism was scathingly rebuked and accused of scientific casuistry in making the Negro a separate species to soothe a southern rationale.³⁰⁰

Scientific ideas about race did not create an area of indisputable, public facts but required resolution through political discourse and action.

In the next chapter we will see that Darwinian evolution did not create the opposition that it received merely because it offended religious sensibilities, or because an uneducated backwards part of the world was unable to understand it, but rather because of the preexisting political tradition that had already shaped southern natural history. Darwin

²⁹⁸ Lakoff, (1966), p. 17.

²⁹⁹ Ziman (1996), p. 754.

³⁰⁰ John S. Haller, Jr. “The Species Problem: Nineteenth-Century Concepts of Racial Inferiority in the Origin of Man Controversy,” *American Anthropologist*, New Series, Vol. 72, No. 6 (Dec., 1970), pp. 1323.

did not make evolution political, but Darwinian evolution did alter the way that people viewed the role that natural history could play in ideological understandings of ascriptive Americanism.

The southern slave states of the United States suffer by comparison to highly educated New Englanders, but the South was not an intellectual, uneducated backwater. Compared with non-New England regions of the United States and Western Europe the average level of literacy and education in the south was basically “normal”. To the degree that education in the south lagged behind New England, it was due more to environment and demography than slavery. Perhaps slavery neither hindered nor encouraged southern science, but slavery did shape the goals of southern scientists. Southern religion acted as an alternative authority on behalf of slavery, and it is anachronistic to impute a disharmony between religion and sciences as rival voices of authority in the nineteenth century. More often they were viewed as mutually reinforcing and actually were so.

A Brother and a Man: Darwin and the Politics of Race in America, 1860-1880

*The changes in the history of science have a remarkable, almost comic aspect....Three years ago, just before Darwin's book appeared, the theory of the possibility or probability of the different races of mankind having descended from a single pair was considered as perfectly antiquated, and as having lagged behind all scientific progress.*³⁰¹

-Rudolph Wagner (1862)

*It's difficult to get a man to understand something, when his salary depends on his not understanding it*³⁰²

-Upton Sinclair (1934)

Introduction

In early 2013 a scientist at Arizona State University named Daniel Sarewitz wrote an editorial in the journal *Nature*, where he argued that scientists in the United States lost much of their ability to influence public policy, because they were viewed as a Democratic interest group rather than a neutral source of information.³⁰³ Without endorsing or condemning epistemic inequality, we can note that scientific voices are often privileged in public debate because they are believed to be more reasonable, more objective, and more useful than the layman's opinion. However, scientific voices are viewed more skeptically, and are more easily ignored, when scientists are viewed as political partisans. Political ideology, and beliefs about other people's political ideology, provides a lens through which people view the

³⁰¹ Rudolph Wagner quoted in Karl Christoph Vogt, *Lectures on Man: His Place in Creation, and in the History of the Earth*. (London: Longman, Green, Longman, and Roberts, 1864), p. 463.

³⁰² Upton Sinclair, *I, Candidate for Governor: And How I Got Licked* (Berkeley and Los Angeles: University of California Press: 1994 [1934]), p. 109.

³⁰³ Daniel Sarewitz, "Science Must be Seen to Bridge the Political Divide," *Nature*, Vol. 493, No. 7430 (Jan. 3, 2013), p. 7.

opinions of others. Sarewitz argues that the party allegiances of scientists in the United States, which are overwhelmingly Democratic, has led citizens and public officials to view them as biased and politically interested, and therefore doubt the trustworthiness of their work—at least when it touched on politically contentious issues like the environment or public-health. Sarewitz recommended that if the scientific community wished to “reassert its value as an independent national asset,” scientists must be able to show that their recommendations are supported by scientists with conflicting political allegiances. Bipartisanship would signal that scientific recommendations were trustworthy, and make it more likely that scientific opinion would be heeded. Regardless of *why* scientists are seen this way, it remains true that politics can shape the perceptions about the reliability of scientific work. This chapter will show that debates over Darwin’s theory of evolution in the 19th century were similarly “politicized.” The assumed political content of Darwinian evolution as well as the political allegiances of that theory’s scientific supporters were viewed as overwhelmingly representing the political viewpoint of one side of the most contentious issue in 19th century American politics—the existence of slavery in American life and governmental support for white supremacy. Darwinian evolution was thoroughly associated with a scientific message that challenged ascriptive Americanism and the Southern civil religion that emerged in the 19th century to protect that political tradition.

Traditional narratives that have been used to explain the reception and diffusion of Darwinian evolution have been either incomplete or misleading. Attitudes towards Darwinian science are not simply a function of religion, education, class, or culture, but are attitudes towards political tradition and ideology. Scientists and other experts can be quite useful in democracies, because they can provide data and knowledge otherwise unavailable.

However, when political coalitions view scientific recommendations as antagonistic to group ideologies they face an incentive to ignore scientific experts. Such a pattern shaped the reception to Darwinism in 19th century America. Darwinian science, and its most prominent proponents, became involved in larger social and political discussions, which shaped how the public, and even scientists themselves, viewed the new Darwinian science. During the 19th century, science gained an increasingly prominent role in political discourse. For this reason, scientists, as purveyors and creators of political legitimacy were viewed not as neutral but as interested political participants. Believing or not believing in Darwinian evolution reflected group loyalty, as well as ones understanding of the theory.

In the United States, evolutionary scientists have been unusually ineffective at generating assent from the public, because evolutionary science has been inextricably bound to claims about racial identity, which has played a particularly strong role in the American political tradition. We cannot understand the reception to Darwinism without understanding the particular historical and political circumstances in which it was introduced to America. In this chapter I will show how this happened. I will present case studies of the United States and United Kingdom, where the political persuasions of Darwinists and the political implications of Darwinism shaped the debate over evolution and where the reception to evolution was dominated by issues of race and class, respectively.

Politics, Culture, and Scientific Authority

Max Weber has said that “it should be remembered that the belief in the value of scientific truth is the product of certain cultures and is not a product of man’s original

nature.”³⁰⁴ Southerners could not accept the emerging scientific consensus in support of Darwinian evolution, because white supremacy and Southern nationalism created a social and political context in which evolutionary science was perceived to be untrustworthy and in opposition to white Southern values. In the 19th-century, the politics and discourse surrounding racial identity combined with the desire to protect white supremacy polarizing public opinion about the truth of evolution and the scientists with whom it was associated. Because of political partisanship, concerns over racial identity, and the prevailing Southern civil religion which channeled Southern intellectual life, Northern scientists were perceived as untrustworthy outsiders rather than objective experts who spoke with scientific authority. Against Darwinism Southerners rallied together using the language of Conservative Protestantism against the new modern, “materialistic”, anti-Christian, racial egalitarian doctrine of Darwinism.

Southerners opposed Darwinian evolution because of both the *context* in which it emerged, and the racial *content* with which it was associated. In the middle of the 19th-century, the desire to protect white supremacy before and after the Civil War, as well as a preexisting American tendency to judge science by its usefulness, meant that the American public’s judgment of Darwinian evolution was colored by its implied racial message. Darwinian evolution was perceived to be a radical departure from previous biological understandings of the nature of race and species, and its radicalism undermined biological conceptions of race as a fixed and natural phenomenon. In addition, the political leanings of the scientists who were associated with evolution were such that the messengers, as well as

³⁰⁴ Max Weber, “‘Objectivity’ in Social Science and Social Policy,” *Max Weber on the Methodology of the Social Sciences*. Trans and ed. Edward A. Shils and Henry A. Finch. (Glencoe, Ill.: Free Press, 1949), p. 110.

the message, were viewed as outsiders and political opponents whose scientific message hid a political agenda.³⁰⁵

Science emerged throughout the nineteenth century as an increasingly secular, independent, and professional source of political authority.³⁰⁶ The increasing power to diagnose and solve social and political disputes gave science increasing political clout. In the 19th century, the view of science as savior became increasingly popular. This was an age increasingly enamored of the certifiable truths that scientists were increasingly able to provide, and, it is said, less satisfied with biblically mandated guidance.³⁰⁷ Similar to church authority, scientific opinion lent credence and strength to political doctrines and often possessed enough leverage to shift political agendas, and norms of social discourse dictated that scientific opinions could not be ignored. During the nineteenth century, both religion and science were capable of serving as bulwarks to political authority, and both were, therefore, the potential subjects for political dispute. In the United States religious denominations split over political questions related to race and slavery. Many have viewed scientific activity as different, as somehow better, purer, and more insulated from the day-to-day grubbiness of democratic compromise, or the humbug of superstitious custom, traditional tomfoolery, and bigoted prejudice. However, scientific authority was fully capable of being subject to political incentive and partisan politics. Southerners cared what scientists had to say about evolution, because social norms of democratic discourse and the authority of science made it impossible to brush aside science as “irrelevant.” Darwinian

³⁰⁵ A similar phenomenon can be seen today in the description of climate scientists as “watermelons,” who are green on the outside but red on the inside.

³⁰⁶ On the growing prestige of science see David A. Hollinger’s, “Justification by Verification: The Scientific Challenge to the Moral Authority of Christianity in Modern America,” in *Religion and Twentieth-Century American Life*, ed. Michael J. Lacey (New York: 1989) and Thomas L. Haskell, ed., *The Authority of Experts: Studies in History and Theory* (Bloomington: 1984).

³⁰⁷ Faust (1981), p. 11.

evolution had to be opposed as bad or corrupt science, and, as we shall see, the Lost Cause mythology and Southern civil religion dictated the form in which the opposition would emerge. The defense of white supremacy would be led by Conservative evangelical clergy and other shapers of Southern nationalism.

The Formation of the Southern Civil Religion

Though the American South is now known as the “Bible Belt”, one must remember that the religiosity that the South is known for has not been a permanent feature of the American landscape. Rather, it was not until the South’s evangelicalism emerged and evolved over the latter part of the 18th century and the first half of the 19th century that it became the dominant religious orientation of Southern whites by the time of the Civil War.³⁰⁸ Even after the Civil War, American Protestantism’s dominant region was not the South but New England, where almost all of the leading thinkers, writers, and intellectuals of American Protestantism had been born and resided.³⁰⁹ By the early 20th century this had changed, and the American South had gained the reputation as the country’s most religious region. Political Evangelicalism has not been an eternal part of the Southern identity. Rather, Southern evangelicalism arose in the midst of the South’s defense of the political and social white supremacy in the 19th century, and in the process merged with Southern nationalism creating a sort of Southern civil religion that guided, shaped, and set the bounds for political discourse and infused Southern politics with a religious inflection that is clear well into the 20th century.

³⁰⁸ Christine Leigh Heyrman, *Southern Cross: The Beginnings of the Bible Belt*. (New York: Alfred A. Knopf, 1997).

³⁰⁹ George Marsden, *Fundamentalism and American Culture: The Shaping of Twentieth-Century Evangelicalism: 1870-1925*. (New York and Oxford: Oxford University Press, 1980), p. 22.

The evangelical denominations initially faced hostility in the American South due to features of evangelicalism that clashed with prevailing Southern norms, including disapproval of slavery and challenges to Southern notions of white male honor.³¹⁰ For evangelicals to tell their story in the American South, they had to engage with a preexisting Southern discourse of white male privilege, honor, and shame.³¹¹ In the process of evangelizing the American South, evangelicals made peace with the types of Southern values that upheld white supremacy to such a degree that by the middle of the 19th century, an initially resistant Southern power structure came to embrace evangelicalism as a vital part of Southern identity and distinctiveness.

During the 18th century, the South's dominant form of Protestantism was state-supported Anglicanism, but the Revolutionary War had a profound impact on Protestantism by delegitimizing the Anglican Church in much of America through its association with Great Britain. The simultaneous disestablishment of state-supported Churches at that time also created an opportunity for rival denominations to gain converts. The evangelical Baptists, Methodists, and Presbyterians all made concerted efforts to spread the word, and by taking up the challenge with gusto found themselves bringing many into the evangelical fold. This was especially true outside of the wealthier, older settlements along the Southern coast, where the Anglican churches, now called Episcopalian, held on amongst some of the well-to-do social establishment.³¹²

The evangelical denominations met with success, though less so in the South than in the North due to evangelicalism's antislavery position, and because its relative egalitarianism

³¹⁰ Bertram Wyatt-Brown, *Southern Honor: Ethics and Behavior in the Old South* (New York: Oxford University Press, 1982).

³¹¹ Robert Elder, *Southern Saints and Sacred Honor: Evangelicalism, Honor, Community, and the Self in South Carolina and Georgia, 1784-1860*. Diss. Emory U, 2011.

³¹² Heyrman. (1997), chapter 1.

challenged white male patriarchal authority as masters in the home. Evangelicals challenged traditional white male authority, and they challenged white southern notions of male honor by condemning dueling, drinking, gambling, carousing, and fighting, all things that Southern white men considered normal behaviors for men such as them.³¹³ The methods that Southern white men considered necessary to establish their identity as men of honor were frowned upon by the new evangelical clergy. The evangelicals, in fact, found what success they had in the South by preaching to those who lacked traditional power status, such as women, the young, the poor, and Southern blacks. Southern white men were less inclined to see their authority challenged and their codes of honor questioned by the new evangelical preachers who began to ride across the rural townships of the Southern frontier. The traditional barons of Southern power, the white, wealthy, established middle-aged scions of Southern society stayed largely aloof from the new evangelicalism sweeping the land.

However, by the beginning of the 19th century, the Southern preachers began to acclimate their preaching to the preexisting Southern honor code, and in so doing began to find greater success with the established, white, "independent" masters that possessed the highest status in Southern society. Evangelical preachers in the South had been mocked as unmanly and dishonorable men by the white Southerners who wielded power and had been looked down upon as effeminate men who were unwilling to assert themselves and to engage in the traditional folkways of Southern "masters." To overcome the antipathy of Southern white men, Southern evangelical preachers began to assert their manliness and assert their place within the southern culture of male honor. As Christine Heyrman describes it, "preachers insisted that they, too, were masters, men who had lost neither the

³¹³ Richard Hildreth, *Despotism in America: an Inquiry into the Nature, Results, and Legal Basis of the Slave-Holding System in the United States*. 2nd ed. (Boston, MA: John P. Jewett & Co., 1854), p. 150-5.

will nor the skill to dominate and, when necessary, by violent means."³¹⁴ Baptist and Methodist preachers altered their behavior and conduct among worldlier men, and in so doing began to win over the South's masters. The evangelical preachers confronted a rigid mode of discourse that stressed masculinity over femininity and the dominance of patriarchal control over the home. To succeed in the South, evangelicalism had to adapt to preexisting ideologies that stressed male privilege and white supremacy.³¹⁵ In so doing, evangelicalism became more acceptable to traditional modes of Southern mastery and honor and thereby became acceptable for the traditional scions of Southern power. Rather than Southern white men changing their norms to fit into evangelical patterns, Southern evangelicalism changed itself to accommodate preexisting and prevalent norms of Southern white society.

By the 1830s and 1840s, Southern evangelicalism posed no challenge to prevailing attitudes towards slavery or the accoutrements of the Southern honor code. In the North, the growing antislavery movement began to attempt to use the northern evangelical Churches as conduits for their antislavery message by teaming up with the northern evangelical Methodists and Baptists that had maintained their antislavery evangelical message. The split over slavery between the evangelical churches in the north and south led to a compromise within the church over slavery. In order to hold the Church together, Church organizations agreed that the Church's position within each state would depend upon the laws of that state. Those in favor of such a compromise argued that the secular order was ordained by God and should be respected. However, the growing antislavery movement within the Church became increasingly unhappy with the Church's acquiescence

³¹⁴ Heyrman (1997), p. 238.

³¹⁵ Bertram Wyatt-Brown, "God and Honor in the Old South," *Southern Review*, Vol. 25, No. 2 (Spring 1989), pp. 283-96.

to slavery in the South and began to push for stronger evangelical denunciations of slavery everywhere, even where it was protected by secular laws.

The southern churches declared that the northern churches were flirting with infidelity due to their rejection of the compromise that had been previously agreed to, and because, they argued, a clear Biblical understanding that adhered to the letter of the Word showed that Christian religion clearly accommodated, accepted, and even celebrated slavery. The Southern evangelicals saw a religious defense of slavery to be part of a conservative religious persuasion, and they argued that it was the Northerners who were changing the clear meaning of the Bible and flirting with infidelity by attempting to force the word of God to submit to a “higher law” of human-made reason and modern interpretation. Southerners associated abolitionism with infidelity and considered the South to be a bastion of religious and political “conservatism.”³¹⁶ The southern churches reacted harshly against the use of “rationality,” the “higher law,” and “reasonableness” when it came to interpreting the Bible as an antislavery document, and they accused Northern evangelicals of flirting with materialism and infidelity by being willing to change the Bible to suit their political and moral “fanaticism.” Southerners accused Northern evangelicals of being arrogant enough to place fallible human rationality and reason over the clear and literal word of God. These fights over Biblical interpretation would be echoed later in Southern attitudes towards Northern Christians, who considered evolution to be compatible with the Bible. As they had over slavery, Southerners would denounce the evolutionists as condoning materialism and infidelity.

³¹⁶ Mitchell Snay, *Gospel of Disunion: Religion and Separatism in the Antebellum South*. (Cambridge: Cambridge University Press, 1993), p. 13.

In the 1840s and 50s, the Southern churches split away from the national evangelical churches, because of differing views on slavery. In this split, the Southern churches cast themselves not as renegades who were leaving because they wanted to establish a new church but as defenders of the true faith who were casting out the infidels who threaten to poison the community. Though it was the Southerners who broke communion with the North, Southerners argued that it was Northern fanaticism, which they argued had departed from a traditional understanding of the Bible, that had broken the unity of the Church. By the middle of the 19th century, the Southern evangelicals saw themselves as religious conservatives determined to defend traditional Protestantism against Northern infidels and fanatical abolitionists. By the Civil War, the rebellious, secessionary South saw itself not as revolutionaries or radicals but as defenders of traditional American values and institutions.³¹⁷ The historian James McPherson agrees with those Southerners and argues that it was the North that had changed, while the South had remained rooted in the past.³¹⁸ Conservative Evangelical Protestantism had become a part of Southern identity separating Southerners from non-Southern whites, just as racial identity separated whites from blacks in the racial hierarchy. The myth of the Southern Anglo-Saxon's social and political identity depended as much on the belief in "conservative" Protestantism as it did in racial distinctiveness.

This conservative religious evangelicalism had accommodated itself to southern honor codes, folkways, and white supremacy, and was now being used as a unifying force of southern identity. Southern evangelicalism now became a marker of Southern distinctiveness and an influence on the growth of Southern identity. Whereas previously evangelical preachers had been a thorn in the side of Southern slave-masters by preaching

³¹⁷ Snay (1993), p. 47.

³¹⁸ McPherson (1983), pp. 230-44.

against slavery and attempting to teach and convert Southern blacks, evangelicals now strengthened the slave system. Evangelicals started schools and missions that sought to keep black children under surveillance and to inculcate values supportive of the slave regime. Southern masters that had rejected evangelical effeminacy and antislavery now saw support for "evangelical missions and local churches as a sign of their responsibilities as citizens and masters."³¹⁹ Donald G. Mathews describes the situation thusly:

In this gradual manner were the boundaries between believers and worldlings blurred. During the years when the southern ideology was taking shape, therefore, Evangelicalism became in the view of many Christian theorists one of the distinguishing marks of what it meant to be a southerner.³²⁰

White Southerners also cast themselves as conservative "letter-of-the-law" readers of the Constitution, who argued that Northern abolitionists were determined to tear up documents based upon compromise and to subject the Constitution to a "higher law" that rejected traditional interpretations of the powers given to the southerners.

Southern religious identity was formed during the transition of the evangelical faith into Southern folkways, and in the formation of Southern nationalism during the creation of the Confederacy. As Mitchell Snay put it, "the centrality of religion in the Old South, the strongly religious flavor of the slavery controversy, and the close affinity between religion and American nationalism suggest, then, the importance of religion in the formation of antebellum Southern distinctiveness."³²¹ Southern clergymen were important creators of political ideology in the South, and Southern Baptist, Methodist, and Presbyterian clergy took up crucial leadership positions in the creation of southern identity and southern

³¹⁹ Mathews (1977), pp. 245-6.

³²⁰ Ibid., p. 246.

³²¹ Snay (1993), p. 5.

nationalism in the 1860s during the creation of the Confederacy.³²² By the 1860s, conservative Protestantism had become a focal point of Southern nationalism, and also a useful supporter of white supremacy.

After the end of the Civil War, conservative Protestantism served as a marker of cultural and political identity for white Southerners that allowed them to accept their defeat as a martyrdom in a righteous cause, and it served as a vital part of the Southern civil religion which worked to preserve white Supremacy after the end of slavery. The fusion of conservative Protestantism with a particular set of values based on Southern honor codes and white supremacy came to form an important part of Southern white identity and united Southern whites together in defense of the "Southern way of life." As historian Edward Crowther describes it, "the common struggle to maintain white supremacy, shared concepts of honor, and similar visions of society tightened the ideological tie that transcended material differences among southerners; and evangelical religion was the lashing for their shared ideas and values."³²³ The rhetoric of the Lost Cause and the sacralization of Southern politics set Southerners apart from the rest of the United States as a distinct people with a distinct culture, and prescribed accepted codes of conduct in both social and political contexts. While the liberal tradition in America was present, so was another, distinctive political tradition that existed in parallel.

Conservative religion was a powerful tool in the defense of tradition, the status quo, and the existing social order which favored hierarchy and white supremacy. The controversy over evolution was deeply related to the defense of white supremacy, and in attacking

³²² William J. Cooper, Jr. and Thomas E. Terrill, *The American South: A History* (New York: McGraw-Hill, 1991), pp. 265-6; Drew Gilpin Faust, *The Creation of Confederate Nationalism: Ideology and Identity in the Civil War South* (Baton Rouge and London: Louisiana State University, 1988), p. 22.

³²³ Edward R. Crowther, "Holy Honor: Sacred and Secular in the Old South," *Journal of Southern History*, Vol. 58, No. 4 (Nov., 1992), p. 619.

evolution Southern whites were attacking what they saw as a tool of racial leveling while at the same time acting out tropes of conservative Evangelicalism that formed important parts of Southern white identity. The political opposition and the religious opposition to evolution cannot easily be separated, and just as we saw in the defense of slavery, though the language and inflection may sound religious, the core opposition to evolution carries a clear racial message.

When evolution emerged in the middle of the 19th century, scientific authority and social norms around discourse in American public life ensured that Southern white supremacists would distrust Northern evolutionists, but that they would feel it necessary to engage with evolutionists rather than to ignore them. The power of science to legitimize ideas and shape public debates over race was a potentially powerful threat to white supremacy, and the Southern civil religion that fused a defense of white racial privilege and conservative Evangelicalism formed the methods and sources of opposition to evolution. It was no accident that conservative Southern clergy were the both the primary creators and upholders of the Lost Cause mythology in the South and the primary factors behind the anti-evolution movement, as well.

Science, North and South

In his Pulitzer-Prize winning book on 19th century American Science, historian Robert Bruce asks if scientists' minds threw "a brighter, purer, steadier light on political issues than that of the layman?"³²⁴ According to Bruce, they did not. Bruce argued that, actually, the political leanings of scientists were "not perceptibly different" from everyone

³²⁴ Robert V. Bruce. *The Launching of Modern American Science, 1846-1876*. (Ithaca: Cornell University Press, 1987), p. 271.

else's, and that "in those turbulent years the scientific methods resolved no political questions, not even to the satisfaction of the scientists."³²⁵ Bruce claimed that, by and large, the political opinions of scientists regarding the most important issues of the era, slavery and union, reflected not their scientific training but their sectional affiliation.³²⁶ This was true, but Bruce does not go far enough. Not only did the scientists' political opinions tend reflect their section, but their scientific opinions tended to do so as well. Or, as I shall show in this chapter, at least regarding their scientific opinion of Charles Darwin's new theory, which had just been released on the eve of the Civil War.

It is often difficult to reconstruct 19th century naturalists' opinions about racial hierarchy and human slavery, because during the mid-19th-century, tensions ran so high that it was advisable for scientists to remain silent on the subject of race or slavery lest they court controversy and incite animosity amongst fellow scientists or the politicians and philanthropists, who provided the funding upon which they relied. The biographer of Spencer Fullerton Baird, the first curator of the Smithsonian Institution, described it thusly: "Peace had to be kept not only among [the scientists] but between them and the public only too ready to criticize. Opinions on politics and on the burning question of human slavery must be withheld from utterance."³²⁷ In an age before science's professionalization, keeping donors and benefactors happy was vital. It makes sense then that politically controversial opinions would tend to be kept quiet.

Yet, many scientists did make their political preferences known even at great personal cost. One supporter of Darwin's theory, the physiologist Charles-Edouard Brown-

³²⁵ *Ibid.*, p. 271.

³²⁶ *Ibid.*, p. 272.

³²⁷ William Healey Dall, *Spencer Fullerton Baird: A Biography, Including Selections from His Correspondence with Audubon, Agassiz, Dana, and Others*. (Philadelphia & London: J. B. Lippincott Company, 1915), p. 224.

Sequard, provides an example of how an unpopular opinion about human slavery could be costly professionally. Shortly before the Civil War, Brown-Sequard briefly worked at the Medical College of Virginia, resigning after only four months, in large part because “he disapproved of slavery and expressed himself so frankly on the subject that a malicious rumor eventually circulated that, with his dark complexion and foreign background, he himself was of black origin.”³²⁸ Another scientist, the Massachusetts-born Frederick Augustus Barnard, fled the south and his position as chancellor of the University of Mississippi. Barnard’s sympathies were with the North, where he returned to denounce the slave system and southern traitors.³²⁹ The Connecticut-born Sereno Watson also fled the South on the eve of the War, returning to the North where he would go on to become one of America’s foremost botanists.³³⁰ Watson had taken a position in Greensboro, Alabama which he left in 1861 because of disunion sentiment. He told his brother in 1860 that “the people is apparently gone crazy. I do not know how to account for it & have no idea what might be the end of it.” He continued, “it seems to be their endeavor here as elsewhere to browbeat & bully into silence those whom they cannot persuade to go with them & so to make it appear that there is but one opinion throughout the South...I would like to breathe free air once more,—have the privilege of speaking as I think, & feel that I am a freeman.”³³¹ Another similar story was shared by the geologist, physicist, and future president of MIT, William Barton Rogers. For much of his career Rogers had served as a distinguished

³²⁸ Michael J. Aminoff, *Brown-Sequard: An Improbable Genius who Transformed Medicine*. (Oxford: Oxford University Press, 2010), p. 84.

³²⁹ Frederick Augustus Porter Barnard, “Letter to the President of the United States, by a Refugee,” (New York: C. S. Westcott & Co., 1863).

³³⁰ John Coulter, “Sereno Watson,” *Botanical Gazette*, Vol. 17, (May, 1892), pp. 137-141.

³³¹ “Sereno Watson to Henry Watson, November 17, 1860,” *Henry Watson Papers, 1765-1938*, Box 6, Duke University; Quoted in Marc Egnel, *Clash of Extremes: The Economic Origins of the Civil War*. (New York: Hill and Wang, 2009), pp. 282-3.

Professor at the University of Virginia. Rogers was well-respected by students there, and enjoyed support from the University for his work, but he decided to leave his comfortable employment in Virginia in 1853 for an uncertain future in the North. He did so in order to leave the lands of slavery and to leave what he described as the illiberal and violent atmosphere fostered by slavery in Virginia.³³² In addition, Rogers faced pressure in Virginia to apply his work in a way that was useful to the preservation of slavery. As A.J. Angulo describes it, “as criticism from northern and international communities intensified, abstract or practical studies that failed to help defend the South met with opposition or even scorn.” Rogers tried to keep his sympathies for northern social and political values private in order to maintain his ability to work, but eventually it became too difficult to stay in Virginia.³³³ The intensity and pressure of proslavery feeling in the American South was so great that it pushed these four elite scientists (all members of the National Academy of Sciences) away from their employment in the South, because they were viewed as being unsympathetic to the preservation of slavery.

Though the pressure outside the South was less intense, the intrusion of political opinions around slavery and secession was not confined there. This can be seen by the importance that government funding played in the founding and shaping of the National Academy of Sciences, which was founded in 1863 during the height of the Civil War. The newly formed NAS required a loyalty oath from its members until 1872, which discouraged southern scientists from participating in the institution even after the reunion of the states and the cessation of the war. There was a considerable dispute, described by the scientist J. Peter Lesley as an “exciting debate,” over the requirement that members subscribe to such a

³³² A.J. Angulo, *William Barton Rogers and the Idea of MIT*. (Baltimore: The Johns Hopkins University Press, 2009), pp. 17-31.

³³³ *Ibid.*, p. 21-22.

loyalty oath.³³⁴ Frederick A. Barnard claimed that if an oath was required “there was not a man of science in the South who would not *continue* to be a rebel, and spit on our diploma.”³³⁵ The oath was passed over the opposition and vehement speeches of Louis Agassiz and other “Copperheads,” who argued that the oath would unfairly exclude those who were “even slightly *implicated* in the Rebellion.”³³⁶ Hurt feelings seemed to follow the resolution of the dispute. Many of those who had fought to remove the oath felt the need to reestablish their antislavery credentials amongst their fellow northern scientists, while the contingent that had fought for the loyalty oath (made up disproportionately of Bay Staters) found themselves described as forming “an illiberal clique, based on Plymouth Rock.”³³⁷ In the end the oath was required, because as Lesley put it, “some one, I willingly forget who, argued that we would lose government patronage, unless we bid for it with the oath; I suspect it was only an unfortunate way of stating a higher truth, that we are the children of government, and the Academy is the creation of the government, and owes it an oath of allegiance as its first duty...”³³⁸ Unfortunate or not, American science was inextricably linked with the political realities of mid-nineteenth century American politics.

Northerners dominated the elite forums of American science, and this was particularly true in the natural sciences. The Civil War was disastrous for Southern scientists. Collections and libraries were lost, ties to Northern correspondents were interrupted, often

³³⁴ *Ibid.*, p. 419.

³³⁵ J. Peter Lesley, “Letter from Peter Lesley to His Wife, April 23, 1863,” *Life and Letters of Peter and Susan Lesley*, Vol. I, ed. Mary Lesley Ames. (New York and London: G. P. Putnam’s Sons, 1909), p. 419.

³³⁶ Quoted in Rexmond Cochrane, *The National Academy of Sciences: The First Hundred Years, 1863-1963*. (Washington, D. C., National Academy of Sciences, 1978), p. 73.

³³⁷ Peter Lesley describes a fellow scientist as approaching him after the dispute to tell him that his wife “Emma was going out to see the black regiment” while appealing to “his record as an old and consistent anti-slavery man.” J. Peter Lesley (1909), p. 420. “Letter from Joseph Leidy to Ferdinand Hayden, April 28, 1863,” *Science in Nineteenth-Century America: A Documentary History*. Ed. Nathan Reingold. (Chicago and London: The University of Chicago Press, 1964), p. 209.

³³⁸ Lesley (1909), p. 420.

forever, and southern scientists found that funding for science had dried up along with almost all government-supported functions during Reconstruction.³³⁹ America's elite scientific institutions would be almost entirely populated and controlled by non-Southerners, who were disproportionately New Englanders. Only five of the National Academy's (NAS) fifty founding members were born in border states (one from Kentucky, one from Washington, D. C., and three from Maryland), while not a single NAS founder was born in a Confederate state. On the other hand, twelve of the NAS's founders had been born in Massachusetts, twelve in Pennsylvania, and ten in New York. Connecticut alone accounted for as many NAS scientists as all the slave states combined, even though the slave states possessed twenty times the population of free whites as Connecticut in 1860. At exactly the same moment that Darwin's theory was being debated amongst the elite scientific minds of the United States, southern scientists were almost entirely separated by war and political animosity from the great debates taking place over the new theory of evolution. Of course, it is unsurprising that none of the founders would hail from the Confederacy, since the NAS was founded by the Federal Government in 1863, yet this northern domination persisted in the natural sciences for the rest of the nineteenth century, long after end of the Civil War, Reconstruction, and the disappearance of the loyalty oath.

Amazingly, the proportion of NAS "naturalists" born in slaves states (both border and Confederate) was even smaller than that of the founding NAS members. Of the eighty scientists classified as "naturalists" that joined the NAS between 1863 and 1900, only three were born in slave states (Joseph LeConte of Georgia, John Edwards Holbrook of South Carolina, and Alpheus Hyatt of Washington, D. C.). Ninety-six percent of American-born

³³⁹ Bruce (1987), pp. 342-3.

naturalists admitted to the NAS before 1900 were born in free states. Once again New England was overrepresented. More than half of the NAS's American-born naturalists came from New England, while Massachusetts alone accounted for nearly thirty percent.³⁴⁰ The rate at which New England produced naturalists was exceptionally high, and, after properly accounting for population size, positively dwarfs the contributions of any other region. While the middle-Atlantic states produced NAS naturalists at roughly the national average, the state of Massachusetts produced them at five-times the national average and nearly 50 times the rate of the slave states, when adjusted for population.³⁴¹ In the era during and after

³⁴⁰ 71 out of the 80 were born in the United States. Of those 71, 54% were from New England and 28% were from Massachusetts. (Table shows birth places of NAS members classified as naturalists, 1863-1900; # of NAS naturalists, 1863-1900; % of NAS naturalists, 1863-1900) (birth places found in official NAS biographies and compiled by author):

<u>State</u>	<u>#</u>	<u>%</u>
Massachusetts:	20	25
New York:	13	16
Pennsylvania:	10	13
Foreign-born:	9	11
Connecticut:	8	10
Maine:	6	8
Indiana:	3	4
New Hampshire:	2	3
Ohio:	2	3
Georgia:	1	1
Illinois:	1	1
New Jersey:	1	1
Rhode Island:	1	1
South Carolina:	1	1
Vermont:	1	1
<u>District of Columbia.:</u>	<u>1</u>	<u>1</u>
TOTAL	80	100%

³⁴¹ New Englanders were far more likely to produce NAS-level naturalists than any other region of the country. (Table shows N-Ratio; i.e. the ratio of the % of NAS naturalists born in state/region divided by that state/region's % of the free population of the United States in 1830; 1.0 = average):

<u>Region</u>	<u>N-Ratio</u>
<i>Massachusetts</i>	5.01
<i>Connecticut</i>	4.11
New England	2.97
<i>Pennsylvania</i>	1.13
<i>New York</i>	1.04
Mid-Atlantic	1.02
Midwest	0.62
Slave States	0.12

*compiled by the author

the Civil War, America's naturalists were overwhelmingly not from the regions that had fought to preserve slavery during the war and were continuing to fight to preserve white supremacy in the American South after the war.

Robert Bruce's claim that the political opinions of American scientists tended to reflect their sectional affiliations is by and large true.³⁴² New England, and especially Massachusetts, had led the nation in anti-slavery sentiment before the war, and overwhelmingly threw its support behind John C. Fremont, Abraham Lincoln, and the new anti-slavery Republican Party. However, though anti-slavery sentiment ran strongly in New England and the northern Midwest, there remained a significant minority of slavery sympathizers, the Cotton Whigs and the Copperheads, who opposed the ending of slavery, or opposed a war to preserve the union, in places like New York City as well as southern Ohio, Indiana, and Illinois. This mixture was reflected in the political attitudes of the NAS naturalists themselves, who were mostly, but not entirely, opposed to slavery, the Confederacy, and state-supported white supremacy.

I have been able to discover clear political opinions for a little more than half of the eighty naturalists that joined the NAS before 1900, related to the issues of slavery, race, and white supremacy. Any attempt to narrowly define a 19th century person's political beliefs about a controversial issue like that of 19th century race and slavery is difficult. To categorize a citizen's political beliefs as pro-, anti-, or unclear, as I have done, lumps together wide varieties of nuanced differences in belief between persons, oversimplifies the nuances everyone holds about important political issues, and also has to take into account people's ability to change their minds throughout their life. Much of the historical evidence about the

³⁴² Bruce (1987), p. 272.

political beliefs of the NAS scientists is contradictory or unclear enough to make it impossible to say on which side of the issue they fell. In addition, many scientists have left little to no historical trace that can shed light on their political beliefs at all. Notwithstanding the difficulties in doing so, I have categorized all NAS naturalists in this period as holding either pro-white supremacy, anti-white supremacy, or unclear political opinions.³⁴³

Of NAS naturalists having clear opinions on state-supported white supremacy, I have categorized 79% as against and 21% as being for. Of those NAS naturalists who have made their opinions about evolution and the development of species known, 87% supported the idea of evolution and the development of species, while 13% were opposed. There was also a substantial age difference between these two groups. The average naturalist who joined the NAS before 1900 was 26 years old in 1859 when Darwin published the *Origin of Species*, while the average age of an NAS naturalist who opposed was 52. As the 19th century progressed, the ratio of naturalists who opposed evolution to those who supported it got even smaller. The vast majority of elite American naturalists supported evolution and opposed state-supported white supremacy.

These labels, of course, include a wide range of opinion about both evolution and white supremacy. For example, the 87% of naturalists who supported evolution includes those who fully accepted Darwinian evolution (that is to say, unguided natural selection) as correct, those who held an Asa Gray-type belief in divinely guided evolution, as well as those who believed in evolutionary Neo-Lamarckianism, which rose to real prominence in the United States by the 1870s but differed from Darwinian evolution in a number of important

³⁴³ In addition to the database of naturalists' political opinions that I have compiled, I have relied on Ronald Numbers' data on the evolutionary beliefs of the NAS naturalists to reach conclusions about the relationship between political opinions over race and slavery and scientific reception to Darwinism in America. Ronald L. Numbers. "Naturalists in the National Academy of Sciences, 1863-1900," *Darwinism Comes to America*. (Cambridge, MA: Harvard University Press, 1998), pp. 137-159.

respects. Though Darwin was undoubtedly the most important influence behind the scientific consensus around the existence of species development and evolution through time, the scientific consensus that Darwin's method of natural selection was correct did not completely win out until the early part of the 20th century and the completion of the modern synthesis.

These caveats hold for their political opinions as well. Some scientists are easy to classify: Asa Gray was clearly and consistently anti-slavery, while Louis Agassiz abhorred the idea of racial mixing and believed that whites and blacks were separate species, and they both said so multiple times in their writings. Some, like Clarence King or Jared Kirtland, are also easy to categorize. Geologist King once claimed that "miscegenation was the hope of the white race," and at another time talked of a future in which White, Black, and Asian-Americans would form a single American race, after which point the "American race" would finally "become conscious of its own ideals and aspirations, its own sentiments and emotions, and, as all other great races have done before it, will find its own fit means of expression."³⁴⁴ The blond-haired, blue-eyed King even performed a feat that was quite unusual for the 19th century, by leading a double life "passing" as a black man named James Todd, so that he might secretly marry a black woman named Ada Copeland, who had been born in slavery in Georgia before the Civil War.³⁴⁵

The naturalist Jared Kirtland moved from his native Connecticut to Ohio in the early part of the 19th century, and once there rose to both political and scientific prominence. Before being admitted to the NAS, Kirtland had served for a number of years starting in

³⁴⁴ Robert Underwood Johnson, *Remembered Yesterdays*. (Boston: Little, Brown, and Co., 1923), p. 226; Clarence King, "Style and Monument," *The North American Review*, Vol. 141, No. 348 (Nov., 1885), pp. 443-4.

³⁴⁵ Martha A. Sandweiss, *Passing Strange: A Gilded Age Tale of Love and Deception Across the Color Line*. (New York: Penguin Press, 2009).

1828 as a member of the Ohio House of Representatives. After leaving active politics, he took part in the hiding of runaway slaves as they traveled to Canada on the Underground Railroad. Kirtland's farm was one of the final stops as slaves approached Lake Erie to cross over to Fort Malden in Canada. In one particularly daring episode, Kirtland hid two runaway slaves in his parlor at the same time as he entertained their southern masters in his kitchen.³⁴⁶ During the Civil War, Kirtland served as the examining surgeon for recruits from Columbus and Cleveland, but gave all his pay to the "Soldiers' Aid Society" of northern Ohio.³⁴⁷

Kirtland, like King, was easy to classify, but others were trickier. Geologist J. Peter Lesley switched positions on both evolution and race. Before and during the Civil War, Lesley was a dedicated anti-slavery man.³⁴⁸ In 1850, Lesley had a sermon that he preached against the "Fugitive Slave Bill" printed in William Lloyd Garrison's abolitionist newspaper, *The Liberator*.³⁴⁹ At the same time he flirted with the idea of supporting Darwinian evolution. One friend described him as having an "inclination towards the theory, as he would occasionally confess, yet never fully adopting it."³⁵⁰ In his 1866 memoir of the geologist Edward Hitchcock, Lesley describes Hitchcock's fame as having risen through forces of natural selection, because he says "the struggle for posthumous fame, like the struggle for

³⁴⁶ "Charles J. Morse letter to Wilbur Siebert, March 5, 1897," *Wilbur H. Siebert Collection*. MSS116AV BOX58 09OH 022. Ohio Historical Society; "Emma Kirtland Hine letter to Wilbur Siebert, Jan. 23, 1897," *Wilbur H. Siebert Collection*. MSS116AV BOX58 09OH 027. Ohio Historical Society.

³⁴⁷ Ed. James Grant Wilson and John Fiske, "Jared Potter Kirtland," *Appleton's Cyclopaedia of American Biography*, Vol. III (New York: D. Appleton and Company, 1892), p. 558.

³⁴⁸ W. M. Davis, "Biographical Memoir of Peter Lesley, 1819-1903," *National Academy of Sciences Biographical Memoirs*, Vol. VIII, (Washington, D.C.: National Academy of Sciences, 1915); Lester Stephens, "'Forget their Color': J. Peter Lesley on Slavery and the South," *The New England Quarterly*, Vol. 53, No. 2 (Jun., 1980), pp. 212-221.

³⁴⁹ J. P. Lesley, "The Fugitive Slave Bill: A Sermon Delivered in Milton, (Mass.), October 30, 1850," *Liberator* (Nov. 1, 1850).

³⁵⁰ Benjamin Smith Lyman, "Biographical Notice of J. Peter Lesley," *Life and Letters of Peter and Susan Lesley*, Vol. II, ed. Mary Lesley Ames. (New York and London: G. P. Putnam's Sons, 1909), p. 472-3.

animal life, is crowned only in the persons of the best competitors.”³⁵¹ Yet, later, Lesley’s opinions would drastically change on both issues. By the end of the 1860s, Lesley had turned decisively away from Darwinism into hard opposition, and he seems to have abandoned his belief in the racial equality of blacks and wished them to leave the North and return to the South.³⁵² Demonstrating the confusing historiographical understanding of the relationship between race and Darwinism, historian Lester Stephens is unsure how to explain Lesley’s changing opinions, but nevertheless attributes them to “the influence of the doctrine of Social Darwinism, which caused many Americans to alter their views of the intellectual capacity of the black race,” even though it was when Lesley was adamantly opposed to Darwinism that his abolitionist zeal waned.³⁵³ Though Lesley’s opinions shifted throughout his life, I have characterized him as a creationist and an opponent of white supremacy, because these represented his longest-held opinions on the matter. This makes Lesley the only NAS naturalist to be an anti-slavery creationist who outlived the Civil War.³⁵⁴

Another tricky case to classify is that of Georgia’s Joseph LeConte. LeConte was born in Liberty County, Georgia and grew up on a slave plantation. He studied under Louis Agassiz at Harvard before returning to the South to serve as professor of chemistry and geology at what would become the University of South Carolina. LeConte would be one of the rare slave-state born evolutionists. LeConte called himself “an evolutionist, thorough and enthusiastic. Enthusiastic, not only because it is true, and all truth is the image of God in the human reason, but also because of all the laws of nature it is by far the most religious,

³⁵¹ J. Peter Lesley, “Memoir of Edward Hitchcock, 1793-1864: Read Before the National Academy, Aug. 9, 1866,” *Biographical Memoirs*, Vol. 1 (Washington, D. C.: National Academy of Sciences, 1877), pp. 115.

³⁵² J. Peter Lesley, *Man’s Origin and Destiny: Sketched from the Platform of the Physical Sciences*. 2nd ed. (Boston: George H. Ellis, 1881 [1868]); Stephens (1980), p. 220-1.

³⁵³ Stephens (1980), p. 220.

³⁵⁴ The geologist Edward Hitchcock and the chemist Benjamin Silliman, Sr. were both anti-slavery creationists, but both died in 1864.

that is, the most in accord with religious philosophic thought.”³⁵⁵ Though he was born in the South, LeConte was no longer there when he said that. Although LeConte stayed in South Carolina through the Civil War, he left in large part out of frustration over the oppression of newly freed slaves during the reconstruction era. LeConte made his way to California, where he became one of the first science professors at UC Berkeley (LeConte Hall is named after him). LeConte’s political opinions were somewhat anomalous for a southerner during reconstruction. He insisted in 1866 that the franchise should be given “without distinction of color,” and claimed that slavery should have ended long before.³⁵⁶ It is unclear to what degree LeConte actually rejected slavery or believed in racial equality, but he abandoned the defense of the Southern status quo and has been classified as for evolution and against the Southern defense of white supremacy.

There was a strong correlation between those who supported evolution and those who opposed state-supported white supremacy. If we exclude the Neo-Lamarckians, who held quite different beliefs about the nature of evolution than Darwin, the overwhelming majority of Darwin’s supporters opposed white supremacy. Of those NAS naturalists whose opinion on both racial politics and evolution is known, only 8% of non-Neo-Lamarckian evolutionists favored state-supported white supremacy, while 92% were opposed. This contrasts sharply with the 50% of Creationists and 67% of Neo-Lamarckians, whose opinions are known, who supported state-supported white supremacy. Moreover of those NAS naturalists who helped to found the institution, 100% of those who supported evolution were opposed to white supremacy, while founding naturalists who supported creationism were split 50%-50%. There was a clear correlation among elite natural scientists

³⁵⁵ Ed. William Dallam Armes, *The Autobiography of Joseph Le Conte*. (New York: D. Appleton and Company, 1903), p. 336.

³⁵⁶ Armes (1903), p. 235-6.

in the United States between support for Darwinian evolution and racial attitudes that were congenial to the southern proslavery position.

Table 4-1: Political beliefs of NAS Naturalists, 1863-1900

w/ unclears	racist	nonracist	Unclear	Total
Evolutionists	2 (4.4%)	23 (51.1%)	20 (44.4%)	45 (100%)
Creationists	3 (37.5%)	3 (37.5%)	2 (25%)	8 (100%)
Neo-Lamarckians	2 (28.6%)	1 (14.3%)	4 (57.1%)	7 (100%)
Unclear	2 (10.0%)	6 (30.0%)	12 (60.0%)	20 (100%)
Total	9 (100%)	33 (100%)	38 (100%)	80 (100%)

Source: Evolutionary opinions from Numbers (1998); Opinions on race and slavery compiled by author.

Table 4-2: Political beliefs of NAS Naturalists, 1863-1900 without unclears

w/o unclears	Racists	Nonracists	Total
Evolutionists	2 (8.0%)	23 (92.0%)	25 (100%)
Creationists	3 (50.0%)	3 (50.0%)	6 (100%)
Neo-Lamarckians	2 (67.7%)	1 (33.3%)	3 (100%)
Total	7 (100%)	24 (100%)	34 (100%)

Source: Evolutionary opinions from Numbers (1998); Opinions on race and slavery compiled by author.

America's elite naturalists in the second half of the 19th century were overwhelmingly northern, antislavery, pro-evolutionary scientists and this was increasingly true as the century progressed. To the degree that citizens perceived Darwinian evolution as having political content and political salience, citizens would have had good reason to believe that the scientists most notably associated with this new theory represented one side of the political

argument over race and slavery in America. We must now turn to establish the political content of Darwinian evolution, and examine the most common alternative explanation for resistance to Darwinism, religion.

Religious Attitudes to Darwinism

America's atypical reaction to Darwinism is usually thought to reflect its religiosity. Since Darwin's theory seems to contradict the Book of *Genesis*, as well as William Paley's natural theology, it has seemed natural that Darwinian evolution should face resistance from the religious. Indeed, some prominent historians of science have argued that Darwin's theory represented a major schism between religion and science. The historian of biology, Peter J. Bowler, has gone so far as to say that "Darwinism's greatest triumph was that it soon established a complete break between science and religion."³⁵⁷ Yet there are important problems with this way of thinking. Firstly, during the middle of the nineteenth century, science and religion were more often seen as mutually reinforcing than necessarily hostile, and religious doctrine was flexible enough to accommodate new scientific theories. Secondly, the American South was not an obviously more religious region of the country at the time, and both evolution's supporters and detractors tended to be religious themselves.³⁵⁸ Thirdly, we have clear evidence that American Southerners objected specifically to

³⁵⁷ Peter J. Bowler, *The Eclipse of Darwinism: Anti-Darwinian Evolution Theories in the Decades around 1900*. (Baltimore & London: The Johns Hopkins University Press, 1983), p. 27.

³⁵⁸ In fact the regional composition of church adherence is remarkably consistent across various regions of the United States at the time. Finke and Stark estimate that the various regions of the country all had church adherence rates of between 32%-39%, with the exception of areas of heavy internal migration in the West (Mormon Utah boosted the "Mountain" region to a high of 69% in 1860). New England's 36% and the East North Central's 39% are remarkably similar to the South Atlantic's 39% and the East South Central's 35%. Roger Finke and Rodney Stark, "Turning Pews into People: Estimating 19th Century Church Membership," *Journal for the Scientific Study of Religion*, Vol. 25, No. 2 (Jun., 1986), pp. 180-192. In addition, the religious mix of Americans was similar across regions, with the vast majority of Americans belonging to some form of Protestantism. While there were indeed denominational differences between Northern and Southern Protestantism, much of the denominational splits were themselves a result of views towards slavery.

Darwinian evolution rather than to other scientific theories even though those theories shared many of Darwinism's supposedly anti-religious implications. Religious objection is unable to explain the variation we see in terms of either scientists or lay citizens in the United States.

There certainly are ways in which Darwinism was perceived to be antagonistic to theology. First, Darwinian evolution does contradict Archbishop James Ussher's traditional dating of the universe's creation (8 o'clock in the evening on Saturday, October 22, 4004 BC). Second, Darwin argued that the development of the various species of life on earth had occurred in a different order than the Bible claims. Third, Darwin's theory seemed to contradict William Paley's natural theological argument for the existence of God. Paley's "watchmaker argument" uses the reasonable assumption that the presence of a watch implies the presence of an intelligent watchmaker. By analogy, Paley reasons, the presence of the marvelous and intricate natural world implies the necessary existence of a creator, i.e. God.³⁵⁹ Though David Hume had done a fairly thorough job of destroying Paley's arguments (before Paley even wrote them), many Christians still viewed Paley's *Natural Theology* as wonderful proof of God's existence.³⁶⁰ Finally, evolution seemed to imply a materialistic universe free from the protective hands of a God who interacted with its

³⁵⁹ William Paley, *Natural Theology; or, Evidences of the Existence and Attributes of the Deity* (1802).

³⁶⁰ David Hume beats Paleyesque reasoning in his *Dialogues Concerning Natural Religion* (1779). For evidence that many Christians still viewed Paley's *Natural Theology* as wonderful evidence of God's existence see this quote from Charles Darwin: "In order to pass the B.A. examination, it was, also, necessary to get up Paley's *Evidences of Christianity*, and his *Moral Philosophy*. This was done in a thorough manner, and I am convinced that I could have written out the whole of the *Evidences* with perfect correctness, but not of course in the clear language of Paley. The logic of this book and as I may add of his *Natural Theology* gave me as much delight as did Euclid. The careful study of these works, without attempting to learn any part by rote, was the only part of the Academical Course which, as I then felt and as I still believe, was of the least use to me in the education of my mind. I did not at that time trouble myself about Paley's premises; and taking these on trust I was charmed and convinced by the long line of argumentation." Charles Darwin, *The Autobiography of Charles Darwin, 1809-1882*, ed. by Nora Barlow (London: Collins, 1958), p. 59.

creation. All of these “contradictions” could have, and often did, cause theological difficulties for the religiously observant.

Yet, mainstream nineteenth century Christian theology would have seen little to distinguish Darwinian evolution from other scientific “controversies” that faced earlier Christians. The Darwinian dating issue was unlikely to have dissuaded seriously many lay Christians, let alone scientists or Christian theologians. Though evolution necessitated a much earlier date for creation than Ussher, there were few who rejected Darwin’s theory because of dating issues. This topic is discussed in greater depth below chapter six, but before the mid-20th century few creationists even argued for a young-Earth creationism. Besides, the necessity of an “old-Earth” would not have distinguished Darwinian evolution from either astronomy or geology, both of which also argued for a much longer history than a literal reading of the Bible, but neither of them have received sustained political opposition in the United States. Similarly, neither has Hume’s (or Kant’s) philosophical works on the existence of God been raised in the political consciousness of the American South to the level of Darwinian evolution. Like Darwinian evolution, there were some who called Newtonian mechanics materialistic and atheistic, since Newtonianism also seemed to imply that God did not intervene actively in the world. But the materialism of Newtonian physics has not encouraged the religious to banish the theories of Newton from public schools anywhere in America, so it is unclear why charges of materialism would doom Darwin’s theory. Many Christians have been perfectly comfortable to argue that natural laws were simply the methods by which God operated.³⁶¹ The new uniformitarian geology also worked by “materialistic” forces, but those who accepted Lyell’s theories did not find themselves

³⁶¹ Betty Jo Teeter Dobbs, *Newton and the Culture of Newtonianism*. (Amherst, NY: Humanity Books, 1995); J. B. Shank, *The Newton Wars and the Beginning of the French Enlightenment*. (Chicago: The University of Chicago Press, 2008).

banished from the ranks of the orthodox. The geologist and theologian Edward Hitchcock, for example, argued that the geological sciences did not collide with revelation, but merely illustrated “the perfections and government of Jehovah” and that the idea that geology and religion were in conflict was “rapidly passing away.”³⁶² It was perfectly possible to hold a similar attitude towards sciences, like evolution, that seemed to remove an active God from the workings of the world. In fact 19th century America’s greatest Darwinian, Asa Gray, and others argued exactly that—that natural selection was simply God’s method for creating the diversity of life on Earth.³⁶³

When one examines America’s scientists in the mid-19th century, it is difficult to see much of a correlation between their religious faith and their attitudes toward evolution and natural history. Joseph Henry, a founding member of the National Institute for the Promotion of Science, described religion and science as complementary tools of human inquiry. The scientist, and intensely religious, James Dwight Dana claimed that believers made up a greater portion of the scientific profession than any other besides the clergy.³⁶⁴ The South Carolina-born chemist J. Lawrence Smith agreed when he said (13 years after the *Origin’s* publication), “I will here, in defence of science, assert that there is a greater

³⁶² “I know indeed, that our science has been regarded as coming into collision with that sacred volume, to which, as Christians, we are bound to bow as the invariable standard of religious truth....but I am happy to believe, that such apprehensions are rapidly passing away. Theologians of enlarged and impartial minds are beginning to study geology; and instead of finding its truths hostile to revelation, they find, that it furnishes them with new and interesting matter, such as no other science can, for illustrating the perfections and government of Jehovah...I trust that the day is not distant, when the supposed geological objection to revelation will be as little remembered, as is not the analogous objection derived from the Copernican system of astronomy; and which, two or three hundred years ago, was supposed to be fraught with so much danger.” Edward Hitchcock, *First Anniversary Address before the Association of American Geologists at their Second Annual Meetings* (New Haven: B. L. Hamlen, 1841), pp. 44-5. For more on Hitchcock see Stanley Guralnick, “Geology and Religion before Darwin: The Case of Edward Hitchcock, Theologian and Geologist (1793-1864),” *Isis*, Vol. 63, No. 4 (Dec., 1972), pp. 529-43.

³⁶³ This “theistic evolution” is discussed in greater detail above in the first chapter. It argues that evolution was an historical process guided by God and is accepted by many mainline Protestant denominations, the Roman Catholic Church, and virtually all Jewish denominations.

³⁶⁴ Bruce (1987), p. 119, 259.

proportion of its votaries who revere and honor religion in its broadest sense, as understood by the Christian world, than in any other of the learned secular pursuits.”³⁶⁵ Both Dana and Henry would come to accept the theory of evolution; Smith did not. But none of them seemed to think that scientists were a particularly irreligious group of people. Indeed one did not have to be religious to reject Darwinism, which is made clear by looking at the two most famous American combatants over Darwin’s theory, Louis Agassiz and Asa Gray: Gray was a very religious Presbyterian, while Agassiz was not religious. Henry Wadsworth Longfellow described Agassiz as but a “sparse and infrequent worshiper of the Gods.”³⁶⁶ Agassiz’s biographer describes him as “never much of a churchgoer” who “routinely rebuffed any invitations to join others for Sunday worship.”³⁶⁷ Certainly, Agassiz had had no problems with other scientific arguments even though they seemed as capable of generating religious objection as Darwin’s. Agassiz’s support for the polygenist view of separate origins for the human races, and his Ice Age theory contradicted the *Genesis* stories of Adam and Eve and the Noachian flood, respectively. The religious southerners who feted Agassiz did not seem to raise religious objections to Agassiz’s polygeny or Ice Age theory either.³⁶⁸ The objections to Darwinian evolution of America’s most famous creationist were not religious in nature.

Certainly there were some who did reject the new Darwinian science on religious grounds or ridiculed the new theory. The Princeton Presbyterian Theologian Charles Hodge, for example, offered this summary of his position on the conflict between science

³⁶⁵ J. Lawrence Smith, “President’s Address,” *Proceedings of the American Association for the Advancement of Science, 1873 (22nd)*, (Salem, MA: Frederic W. Putnam, 1874), p. 25.

³⁶⁶ Quoted in Christoph Irmscher, *Louis Agassiz: Creator of American Science*. (Boston and New York: Houghton Mifflin Harcourt, 2013), pp. 28-9.

³⁶⁷ Irmscher (2013), pp. 28-9.

³⁶⁸ Bruce (1987), p. 344.

and religion, “It may be said that Christ did not teach science. True, but He taught truth; and science, so called, when it comes in conflict with truth, is what man is when he comes in conflict with God.”³⁶⁹ Another preacher after the Civil War, Brooklyn’s Thomas De Witt Talmage, ridiculed the idea of “survival of the fittest” by asking if the generals who had died during the Civil War had not been as good as those who had survived.³⁷⁰ But more common than an outright rejection, was for the religious to either ignore the new scientific thought on evolution or to interpret scripture as consistent with Darwinism. In fact the 19th century agnostic, Robert Green Ingersoll, mocked the malleability and changeability of religious thought towards Darwin:

The Church demonstrated the falsity and folly of Darwin's theories by showing that they contradicted the Mosaic account of creation, and now the theories of Darwin having been fairly established, the Church says that the Mosaic account is true, because it is in harmony with Darwin. Now, if it should turn out that Darwin was mistaken, what then?³⁷¹

While Ingersoll meant to mock the religious, he also pointed out that religious adherents usually retain enough flexibility to shape their doctrines to accord with the new discoveries of their time.

Such flexibility was commonly demonstrated by scientists and theologians. James McCosh, the president of Princeton and a Presbyterian like Hodge, warned against the Church’s rejection of Darwin and claimed that there was “nothing atheistic in it if properly understood...”³⁷² McCosh claimed that Darwin and the Bible could be reconciled through the method of divinely-guided evolution, and he worried that if churches denounced the

³⁶⁹ Charles Hodge, *What is Darwinism?* (New York: Scribner, Armstrong, and Company, 1874), p. 47.

³⁷⁰ Cynthia Eagle Russett, *Darwin in America: The Intellectual Response 1865-1912*. (San Francisco: W.H. Freeman and Company, 1976), p. 26.

³⁷¹ Robert G. Ingersoll, “Col. Ingersoll t Mr. Gladstone,” *The North American Review*, Vol. 146, No. 379 (Jun., 1888), p. 618.

³⁷² James McCosh, *The Religious Aspect of Evolution*, Enlarged and Improved Ed.. (New York: Charles Scribner’s Sons, 1890 [1888]), p. vii.

possibility of such a reconciliation they would “drive some of our thoughtful young men to infidelity, for they could see for themselves that development was everywhere in nature.”³⁷³ This is not to say that McCosh faced no opposition to his theological acceptance of Darwinism, in fact he faced off in a famous debate with his fellow Princetonian, the seminarian Charles Hodge, who declared simply about Darwinism that “it is atheism.”³⁷⁴ While Hodge had accepted the new astronomy, Darwinism was too much for him.³⁷⁵ Like the naturalists in the National Academy of Sciences, McCosh and Hodge differed in their opinion of Darwinism and slavery. McCosh opposed slavery and hoped “that the war may continue till the Northern States declare that every man who sets foot on their territory is free.”³⁷⁶ Hodge, on the other hand, was a supporter of slavery and had himself owned slaves.³⁷⁷

While the irreligious Agassiz opposed Darwin, it was common to find spirited defenses of Darwin amongst the religious. The Calvinist theologian, George Frederick Wright, argued that Darwinism presented no theological challenges to Calvinism; the two fields supported one another. Wright claimed that “the student of natural history who falls in the modern habits of speculation upon his favorite subject may safely leave Calvinistic theologians to defend his religious faith.” Wright continued, “The man of science need not live in fear of opprobrious epithets; for there are none left in the repertory of theological disputants which can be specially aimed at the Darwinian advocate of continuity in nature.”

³⁷³ Russett. (1976), p. 27.

³⁷⁴ Hodge (1874).

³⁷⁵ Bruce (1987), p. 355.

³⁷⁶ Quoted in J. David Hoeveler, Jr., “Evangelical Ecumenism: James McCosh and the Intellectual Origins of the World Alliance of Reformed Churches,” *Journal of Presbyterian History*, Vol. 55, No. 1 (Spring, 1977), pp. 46.

³⁷⁷ David Torbett, *Theology and Slavery: Charles Hodge and Horace Bushnell*. (Macon, GA: Mercer University Press, 2006).

Those epithets, Wright claimed, had all been exhausted in attacks on Calvinism.³⁷⁸ University of California geologist Joseph LeConte claimed that evolution did not demean humans as God's creation. He argued that it was a mistake for Christians needn't believe that evolution and religion operated in separate spheres and that evolutionary biologists "have nothing to do with [evolution's] effect on religion and on life."³⁷⁹ In fact, the history of evolution led to Christ: "As organic evolution reached its goal and completion in *man*, so human evolution must reach its goal and completion in the *ideal man*—i.e., the Christ."³⁸⁰ LeConte's reconciliation of Christianity with Darwinian evolution was not entirely ordinary, but it was an example of the way that many religiously minded individuals were perfectly capable of accepting both Christianity and Darwinian evolution.

The naturalist John Muir was an admirer of Darwin's and, like Gray, LeConte, and others, Muir had no trouble reconciling Darwin and religious belief.³⁸¹ In fact, in an interview near the end of his life Muir claimed that evolution seemed to *require* a religious faith: "To my mind, it is inconceivable that a plan that has worked out, through unthinkable millions of years, without one hitch or one mistake, the development of beauty that has made every microscopic particle of matter perform its function in harmony with every other in the universe...no; somewhere, before evolution was, was an Intelligence that laid out the plan, and evolution is the process, not the origin, of the harmony."³⁸² Even after Darwin's

³⁷⁸ George Frederick Wright, "Some Analogies Between Calvinism and Darwinism," *Bibliotheca Sacra*, Vol. 37, No. 1 (1880), p. 54.

³⁷⁹ Joseph LeConte, *Evolution: its Nature, its Evidences, and its Relation to Religious Thought*, 2nd ed., revised. (New York: D. Appleton and Company, 1891 [1888]), p. 276.

³⁸⁰ *Ibid.*, p. 360.

³⁸¹ Stephen Fox, *The American Conservation Movement: John Muir and His Legacy*. (Madison, WI: The University of Wisconsin Press, 1981), p. 82.

³⁸² French Strother, "Three Days with John Muir," *The World's Work*, Vol. 17, No. 5 (Mar., 1909), p. 11356.

Origin of Species it was perfectly possible to maintain the view that religion and science were not in necessary conflict.

Historian of science Ronald Numbers has declared that he is unable to see any correlation between mid-19th century scientists' personal religious beliefs and their acceptance of Darwinism, and that he has "found no evidence in either biographical or autobiographical accounts to suggest that a single one of these [scientists] severed his religious ties as a direct result of his encounter with Darwinism."³⁸³ Neither does Numbers see a relationship between the various religious denominations and their acceptance of Darwin: "if there is a pattern to these diverse responses, I fail to see it."³⁸⁴ While it is certainly true that some prominent scientists were without significant religious feelings (Edward S. Morse for example), this should not surprise us. In fact, it would be more striking if there were no un-churched Darwinists in a country where most ordinary adults were not themselves church members.³⁸⁵ The religious background of the mid-nineteenth century scientist was as varied as that of the layman's. As we shall see, it was not religion that explained the separation of the pro- and anti-Darwinians in America but politics.

The Politics of Science

³⁸³ Numbers, Ronald L. *Darwinism Comes to America*. (Cambridge, MA and London: Harvard University Press, 1998), p. 40-2. Numbers also points out that work done by Darwin's biographer, James Moore, has shown that not even Darwin gave up Christianity because of evolution, but rather because of the death of his beloved daughter, Annie. James Moore, "Of Love and Death: Why Darwin 'Gave up Christianity,'" *History, Humanity, and Evolution: Essays for John C. Greene*, ed. James Moore. (Cambridge: Cambridge University Press, 1989). pp. 195-229.

³⁸⁴ Numbers (1998), p. 43. Numbers is backed up by Jon H. Roberts, "Darwinism, American Protestant Thinkers, and the Puzzle of Motivation," *Disseminating Darwinism: The Role of Place, Race, Religion, and Gender*, ed. Ronald L. Numbers and John Stenhouse (New York: Cambridge University Press, 1999), pp. 145-72.

³⁸⁵ Finke and Stark argue that only 37% of Americans over the age of 13 were "church adherents." Certainly there were many Americans who possessed a religion, even if they didn't possess a church, yet it is striking nonetheless. Finke and Stark (1986), pp. 187.

In August 1876 in Buffalo, New York, the zoologist Edward Sylvester Morse delivered an address to the Natural History section of the American Association for the Advancement of Science (AAAS).³⁸⁶ In his address Morse discussed the important changes that had come to the study of natural history since the publication of Charles Darwin's theory of natural selection. According to Morse, "never before ha[d] the study of animals been raised to so high a dignity as at present." While zoology had previously been considered a sort of "adjunct to geology," its importance had been raised to such a degree that it was now "the pivot on which the doctrine of man's origin hinges."³⁸⁷ The abolitionists had described enslaved Africans as "a man and a brother," and the study of human origins had an important role to playing in deciding the scientific truth behind this statement.

Morse argued that one of the most far-reaching changes to come from scientific understanding of natural selection's power to shape life's variety was that it drastically altered how Earth's plants and animals were classified and how their essential nature was understood. Louis Agassiz took issue with this. His position, and that of his supporters, was that both varieties and species were, as Asa Gray described it, "primordial" and "original creations."³⁸⁸ For Agassiz, species and varieties were fixed, and "even the most extraordinary changes in the mode of existence, and in the conditions under which animals are placed, have no more influence upon their essential characters than the lapse of time."³⁸⁹ For Agassiz, this fixity certainly extended to human varieties. As proof of the immutability of the "the races of man" and the permanent nature of their essential characteristics, Agassiz

³⁸⁶ Edward Sylvester Morse, "Address of Professor Edward S. Morse, Vice President, Section B.," *Proceedings of the American Association for the Advancement of Science, 1876 (25th)* (Salem, MA: Frederic W. Putnam, 1877), p. 137-176.

³⁸⁷ *Ibid.*, p. 138.

³⁸⁸ Asa Gray, *Natural Science and Religion*. (New York: Charles Scribner's Sons, 1880), p. 43.

³⁸⁹ Louis Agassiz, *An Essay on Classification*. (London: Longman, Brown, Green, Longmans, & Roberts and Trubner & Co., 1859), p. 76.

cited the polygenist work of Nott and Gliddon, which argued that the races of man were separate species with an unchangeable nature stretching back into the dawn of time.³⁹⁰ The implication for the racial hierarchy was clear: black inferiority and white supremacy were natural and eternal facts. They were permanent, ideal types created by God.

But as Asa Gray and Edward Morse showed, this was no longer the consensus scientific view: “Scientific opinion upon this point is not what it was thirty or forty years ago....it was an article of scientific faith that species on the whole were fixed...and that probably they have come down essentially unaltered from the beginning.”³⁹¹ Gray articulated the naturalists’ growing realization that groups which had previously been considered species were actually mere varieties, which was philosophically an entirely different description. “What then is the substantial difference between varieties and species? Just here is the turning-point between the former view and the present. The former doctrine was that varieties come about in the course of nature, but species not; that varieties *became* what they are, but that species were *originally made* what they are.”³⁹² Morse called this the “prime question” of natural history—whether or not the nature of forms was a result of “something inherent” which forms it, or if “a correlation can be established between the variation of species and certain physical conditions inducing these variations...”³⁹³

The understanding of Darwin’s theory of natural selection, Morse argued, had drastically tilted the bar in favor of the environmental thesis, and as a result, the classification of species. After Darwin, naturalists began to radically reduce the number of species that they observed in nature. The number of bird and mammal species were reduced by nearly a

³⁹⁰ *Ibid.*, p. 79, 82. The work cited by Agassiz is Josiah C. Nott and George R. Gliddon, *Types of Mankind*. (Philadelphia: Lippincott, Grambo & Co., 1854).

³⁹¹ Gray (1880), p. 37-8.

³⁹² *Ibid.*, p. 42-3. Gray’s italics.

³⁹³ Morse (1877), p. 142-3.

third, and many species were reclassified as mere varieties within a changeable continuum of variation.³⁹⁴ This change generated resistance. Many early classifiers had attached their name to their newly discovered species and had “persistently overlooked” deviations which might have downplayed the uniqueness of their discoveries.³⁹⁵ Scientific progress faced resistance from personal honor as well as political advantage.

Morse claimed that the belief in the fixed nature of species type literally shaped the way that naturalists observed the world. If naturalists merely “looked upon classification as an artificial method to facilitate the study” of the natural world, the results of their studying would change. For example:

Those who have believed in types as fixed laws, rigidly impressed at the outset of life, are those also who have recognized in the cells of a honey-bee, as well as in the arrangement of leaves about the axis of a plant, a perfect mathematical adjustment of parts, which were stamped at the beginning, and have so continued to exist without deviation.³⁹⁶

Those who saw speciation as an eternally fixed and inherently present phenomenon saw types as having a more rigid and more significant existence. Morse pointed out that true understanding of the variation in honey-bee cells was harmed by naturalists’ belief in the fixed nature of species type. When bee cells were actually measured it was discovered that there was not one mathematically perfect “type” of honey-bee cell, and in fact “a cell of this perfection is rarely if ever attained.” There is great variation “which almost defies description,” and for the study of which naturalists would have been better served to have “had adopted the plan followed by Mr. Darwin” to see that there is not a fixed form of the honey-bee cell, but a range of variation amongst the same species.

³⁹⁴ *Ibid.*, p. 147-8.

³⁹⁵ *Ibid.*, p. 139.

³⁹⁶ *Ibid.*, p. 155.

This reinterpretation of species classification had ramifications for understanding the “origins of man.” Morse argued that a belief in the fixed nature of species type forced Agassiz, Morton, and the other polygenists to deny the unity of the human species, and that Agassiz’s belief in the fixity of animal species was intimately tied to his belief in the fixity of racial types. Morse quotes Agassiz as saying that he “saw the time coming when the position of the origin of man would be mixed up with the question of the origins of animals, and a community of origin might be affirmed for them all.”³⁹⁷ Morse claims that because Agassiz held such a conviction it should not surprise us that he held human races to be not mere variations but separate species. Because Agassiz and his supporters thought in terms of fixed type rather than a continuum of variation and perceived great differences between the human races, they had to see racial differences as having the same nature and identity of other species’ differences. Morse quotes Agassiz:

Unless we recognize the differences among men, and we recognize the identity of these differences with the differences which exist among animals, we are not true to our subject, and, whatever be the origin of these differences, they are of some account; and if it ever is proved that all men have a common origin, then it will be at the same time proved that all monkeys have a common origin, and it will by the same evidence be proved that man and monkeys cannot have a different origin.³⁹⁸

Morse points out, as did a previous chapter of this dissertation, that Agassiz and the Southern polygenists were assailed by the Church, just as Darwin would later be, which shows the degree to which a fear of religious retribution was not sufficient to stop Southern naturalists before Darwin from supporting “religiously objectionable” science, so long as that science supported white supremacy and slavery. Though Agassiz and the Southerners opposed it, Darwinism had swept away the scientific defensibility of the notion that race was

³⁹⁷ Quoted in *Ibid.*, p. 164.

³⁹⁸ Quoted in *Ibid.*, p. 164.

an eternally fixed essence—divine or natural. Instead racial groups were mere varieties from a common stock shaped by time and chance and fully capable of change in the future, as well.

Morse argued that Darwin raised natural history's status and made zoology the most important pivot upon which man's origins hinged. Regarding human origins, he argued that "to a mind unbiased by preconceived opinions, and frankly willing to interpret the facts as they stand revealed by the study of these ancient remains the world over, the evidences of man's lowly origin seems, indeed, overwhelming." Like almost all 19th century white Americans, Edward Morse was a racist, yet with a Darwinian understanding of racial variation he had to acknowledge that human racial type was not fixed, that all humans shared a common origin, and that "no one race possesses all the low characters" inherited from that common inheritance.³⁹⁹ His scientific understanding changed the way that he saw the world, and importantly for the reception that Darwinism would have in the United States, Morse felt that a new understanding of human origins and heredity ought to have political implications: "the statute-books are to be again revised from the standpoint of science, with its rigid moral and physical laws, and not from the basis of established usage or long-continued recognition."⁴⁰⁰ To base the statute-books on evolution would be, according to Morse, to place the statute-books on solid ground.

Morse was not alone in feeling the growing authority of science in public life. J. Lawrence Smith, President of the American Association for the Advancement of Science in 1872, claimed that "science at the present day commands the respect of the world; nations, looking up to it, seek its advice at all times, and move in no material enterprises without

³⁹⁹ *Ibid.*, p. 170.

⁴⁰⁰ *Ibid.*, p. 176.

consulting its oracles.”⁴⁰¹ Smith argued that scientists now had strong bearings on the physical, mental, and spiritual world, and even the political world. The people and their representatives, Smith claimed, would judge American science by its “practical bearings,” and its ability to produce the “raw material out of which all the progress of modern nations is constructed.” As he put it, the “Government is fully alive to the value of well-directed scientific labors.”⁴⁰² The American people would judge science pragmatically, and would consider its truths in relation to its effects on their daily lives. The paleontologist Othniel C. Marsh argued, the year after Morse spoke, that the scientific backing for evolution had raised it above other rival explanations of the origins of life: “But I am sure I need offer here no argument for evolution; since to doubt evolution to-day is to doubt science, and science is only another name for truth.”⁴⁰³

Darwinian evolution fit neatly into an already existing strain of natural history, which said that science had demonstrated that all the human races shared a common origin and brotherhood, which was exemplified by the work of Alexander von Humboldt. Darwin admired Humboldt, the great 19th century German naturalist, and both shared a view on the United States shaped by their hatred of slavery. Humboldt stated that he could describe himself as no more than “half American,” stating that while he agreed with the desires and aspirations of America, he disagreed with its politics because “the influence of Slavery is increasing, I fear.”⁴⁰⁴ Darwin and Humboldt shared a deep and abiding hatred of slavery, and both Darwin and Humboldt rooted their hatred of slavery in their understanding of

⁴⁰¹ J. Lawrence Smith, “President’s Address,” *Proceedings of the American Association for the Advancement of Science, 1873 (22nd)*, (Salem, MA: Frederic W. Putnam, 1874), p. 5.

⁴⁰² *Ibid.*, p. 5-7.

⁴⁰³ Othniel Charles Marsh, “Address of Professor O. C. Marsh, Vice President, Section B,” *Proceedings of the American Association for the Advancement of Science, 1877 (26th)*, (Salem, MA: Frederic W. Putnam, 1878), p. 212.

⁴⁰⁴ R. W. R., “A Visit to Humboldt,” *New York Times*, (June 9, 1859).

what natural history had to say about racial type and racial variation.⁴⁰⁵ Humboldt, like Darwin, disagreed with the idea that there were multiple species of humans, and he thought that the belief in a vast difference between skin types led many to believe that blacks were not even the same species as whites, and by implication not deserving of the same political rights and protections as whites. “As long as attention was directed solely to the extremes in the varieties of color and of form, and to the vividness of the first impression of the senses, the observer was naturally disposed to regards races rather as originally different species than as mere varieties.” In addition to maintaining the unity of humanity, Humboldt argued against the “depressing assumption of superior and inferior races of men....All are in like degree designed for freedom...” According to Humboldt natural history had the power to overcome racial differences by teaching humans their common origins. Quoting his brother, Wilhelm Humboldt, he said:

if we could indicate an idea which throughout the whole course of history, has ever more and more widely extended the empire, or which more than any other, testifies to the much contested and still more decidedly misunderstood perfectibility of the whole human race, it is that of establishing our common humanity—of striving to remove the barriers which prejudice and limited views of every kind have erected amongst men, and to treat all mankind without reference to religion, nation, or color, as one fraternity, one great community...

He continued: “Thus deeply rooted in the innermost nature of man, and even enjoined upon him by the highest tendencies,—the recognition of the bond of humanity becomes one of the noblest leading principles in the history of mankind.”⁴⁰⁶ Natural history could teach that all the human races were “a man and a brother.”

⁴⁰⁵ Adrian Desmond and James Moore, *Darwin's Sacred Cause: Race, Slavery, and the Quest for Human Origins*. (Chicago: The University of Chicago Press, 2009).

⁴⁰⁶ Alexander von Humboldt, *Cosmos: a Sketch of a Physical Description of the Universe*, Vol. I, (New York: Harper & Brothers, 1866 [1845-62]), p. 355-9.

Writing after the publication of *Origin of Species*, the antislavery French naturalist Armand de Quatrefages also recognized the link between natural history's understanding of the unity of the human species and the social and political ramifications arising from this recognition. De Quatrefages described the social import of natural history thusly: "Every thing leads to the conclusion which we had already reached in our earlier lectures; and we can repeat with redoubled certainty: the differences among human groups are characters of race, and not of species; there exists only one human species; and, consequently, all men are brothers—all ought to be treated as such, whatever the origin, the blood, the color, the race."⁴⁰⁷ Highlighting the overlapping concern of the white supremacists about both evolution's and miscegenation's power to weaken the social power of race, de Quatrefages points out that interracial marriage is the clearest demonstration of the brotherhood of man: "When you have two different vegetables, or two different animals, and wish to know whether they belong to two *different species*, or only to *two races of the same species*, marry them."⁴⁰⁸

Similarly, the American journalist David Goodman Croly proposed miscegenation as the clearest proof of human unity: "It is Miscegenation—the blending of the various races of men—the practical recognition of the brotherhood of all the children of the common father."⁴⁰⁹ The German anthropologist Hermann Schaaffhausen argued that "natural science has overthrown error and prejudice" even though there were still some who denounced the argument that blacks were as capable of civilization as whites as mere "philanthropic enthusiasm." For Schaaffhausen used scientific authority to assert the right to social

⁴⁰⁷ De Quatrefages, "Physical Characters of the Human Races," *Natural History of Man*. (1875), p. 109.

⁴⁰⁸ Jean Louis Armand de Quatrefages, de Bréau, "The Unity of Human Species," *The Natural History of Man; A Course of Elementary Lectures*. Trans. Eliza A Youmans, (New York: D. Appleton and Co., 1875), p. 26.

⁴⁰⁹ David Goodman Croly, *Miscegenation: The Theory of the Blending of the Races, Applied to the American White Man and Negro*. (New York: H. Dexter, Hamilton & Co., 1864), p. 1.

equality: “I must here protest against the assertion, and proclaim, in the name of science, equal rights for all human races, in the noblest sense of the word.”⁴¹⁰ Schaaffhausen, like Croly, also held upsetting views (for white supremacists) about racial intermixture, which he called “one of the great means which nature employs for the improvement of the species...”⁴¹¹ The implication of Darwinian evolution and science’s proof of the unity of the human species seemed to be equal rights and miscegenation.

Darwin’s personal politics and his scientific theories were thus politically challenging to southern slaveholders. Darwin felt strongly about slavery. In fact, it is better to say that he was *fiercely* anti-slavery.⁴¹² While traveling in South America, Darwin witnessed the brutal treatment meted out to slaves and recoiled. Darwin nearly lost his position on the ship after arguing with Captain FitzRoy over slavery.⁴¹³ In a letter home he wrote:

How steadily the general feeling, as shown at elections, has been rising against Slavery. What a proud thing for England if she is the first European nation which utterly abolishes it! I was told before leaving England that after living in slave countries all my opinions would be altered; the only alteration I am aware of is forming a much higher estimate of the negro character.⁴¹⁴

His feelings were strong and life-long. In 1865 after the suppression of the Morant Bay rebellion (400 blacks executed, 600 flogged, 1000 suspect houses razed) by Governor Eyre of Jamaica, Darwin joined the Jamaica Committee along with other evolutionists like Alfred Russel Wallace, T. H. Huxley, Herbert Spencer, and other anti-slavery radicals and liberal politicians to prosecute Eyre, though the Eyre escaped without charges.⁴¹⁵ Darwin’s hatred

⁴¹⁰ Hermann Schaaffhausen, “On the Development of the Human Species, and the Perfectibility of Its Races,” *Anthropological Review*. Vol. 7, No. 27 (Oct., 1869), pp. 366-7.

⁴¹¹ *Ibid.*, p.373.

⁴¹² Desmond and Moore (2009).

⁴¹³ Darwin (1839), *Voyage of the Beagle*, p. 74.

⁴¹⁴ Darwin, Francis, ed. *The Life and Letters of Charles Darwin, including an Autobiographical Chapter*, 3 vols. (Murray, 1887), p. 246.

⁴¹⁵ Charles Lyell would also join the Jamaica Committee.

of slavery colored his thoughts on the animals he would make his life's study. "Animals—whom we have made our slaves we do not like to consider our equals. Do not slave holders wish to make the black man other kind?"⁴¹⁶ Darwinian science in America would come to take on the political associations of anti-slavery, progressive, northern Republicanism that represented a clear political challenge to the social and political mores of southern life regarding race, identity, and slavery. By 1875 nearly all American scientists accepted Darwinian evolution and a unitary theory of human origins, but Southerners would remain uniquely hostile to this scientific consensus.

The scientific battle lines over the science of Darwinism reflected the real battle lines of the American political system. In 1860, on the eve of the Civil War, Louis Agassiz and William Barton Rogers engaged in a debate in Boston on the new Darwinian science sponsored by the Boston Society of Natural History. Louis Agassiz argued against the idea of evolution by natural selection, while Rogers argued the case for Darwinism. Agassiz's views on race and slavery are well known, and Rogers's anti-slavery opinions were discussed earlier in the chapter. Yale's James Dwight Dana was a friend to Agassiz but an opponent of slavery. While Dana had originally worried about the religious objections to evolution, Darwin was able to cultivate Dana successfully on the question of evolution, in large part by appealing to their shared anti-slavery views.⁴¹⁷

Abolitionist transcendentalists like Ralph Waldo Emerson, Henry David Thoreau, and Theodore Parker all embraced Darwinian evolution.⁴¹⁸ Emerson saw Darwin as but part

⁴¹⁶ Quoted in Desmond (1989), p. 407.

⁴¹⁷ Desmond and Moore (2009), pp. 276-79; for more on Dana's religious position on development see his *Science and the Bible; a Review of 'The Six Days of Creation' of Prof. Tayler Lewis*. (Andover: Warren F. Draper, 1856).

⁴¹⁸ John B. Wilson, "Darwin and the Transcendentalists," *Journal of the History of Ideas*, Vol. 26, No. 2 (Apr.-Jun., 1965), pp. 286-90.

of a long line of developmental naturalists, and had no problem assimilating his work.⁴¹⁹ In fact, he seems to have anticipated him in his little poem that served as an epigraph to his essay “Nature”: “And, striving to be man, the worm/ Mounts through all the spires of form.” Thoreau read *Origin of Species* within weeks of its London publication, and was copying extracts from it into his notebooks by early the next year.⁴²⁰ A Unitarian preacher, Parker enthusiastically embraced Darwin’s theory, and even claimed to have anticipated Darwin’s theory in what he called his “Darwin sermons.”⁴²¹ The transcendentalists found ideological company amongst the natural historians that would become the face of Darwinian evolution in America.

After Darwin, evolution became associated with northern industrialists, monogenists, abolitionists, and racial egalitarians. While this was a varied crew, they all shared a belief in scientific progress, which informed their belief in social and political progress, as well. The US Senator, Carl Schurz, for example, was antislavery and a Spencerian. He was also a monogenist, free trader, and a northern general during the Civil War. Schurz identified the ideals of Darwin and Spencer with northern politics. He claimed that if southerners had read Spencer, “there would never have been any war for the preservation of slavery.”⁴²² *The New York Times’s* Civil War correspondent, abolitionist, and social reformer Charles Loring Brace was deeply moved by Darwin’s *Origin of Species* and was said to have read it thirteen times.⁴²³ Brace called “unjust prejudice against race or colour” a “disgrace” and when Brace

⁴¹⁹ Laura Dassow Walls, *Emerson’s Life in Science: The Culture of Truth*. (Ithaca, NY: Cornell University Press, 2003), p. 176.

⁴²⁰ Laura Dassow Walls, *Seeing New Worlds: Henry David Thoreau and Nineteenth-Century Natural Science*. (Madison, WI: The University of Wisconsin Press, 1995), p. 194.

⁴²¹ George Willis Cooke, “Notes,” in Theodore Parker, *The World of Matter and the Spirit of Man: Latest Discourses of Religion*. Ed. George Willis Cooke (Boston: American Unitarian Association, 1907), p. 421.

⁴²² Werth (2009), p. 284.

⁴²³ Stephen O’Connor, *Orphan Trains: The Story of Charles Loring Brace and the Children He Saved and Failed*. (Chicago: University of Chicago Press, 2001), p. 80.

wrote an ethnology called *The Races of the Old World*, he argued from a Darwinian point of view that the unity of humanity was assured and that there was little difference between the races.⁴²⁴ As he put it, “it is to be expected that the varieties which spring from the original stock would be distinguished from one another with great difficulty, and that a definite race-mark would be a thing not easily found....Scarcely any marks of a human variety are permanent.”⁴²⁵ The northern preacher Henry Ward Beecher was an abolitionist, a proponent of capitalism, and an evolutionist. Beecher was one of the most famous preachers in America, and he used his perch to bring attention to the cause of racial equality by inviting abolitionists like Sojourner Truth and Frederick Douglass to speak at his church. Beecher even went so far as to finance John Brown’s insurrection in Kansas—Brown’s rifles were called “Beecher Bibles.”

Similarly Herbert Spencer’s American promoter, Edward Youmans, hoped that Beecher might use his powerful perch and hold over innumerable American ears to lead American clergy to accept the doctrine of evolution, which Beecher did.⁴²⁶ Youmans, founder of *Popular Science Monthly*, argued that the political process depended upon an informed citizenry with an adequate knowledge of the workings of nature.⁴²⁷ Youmans lamented that so many politicians, teachers, and preachers who guided the ship of state were ignorant of a scientific basis for their understanding of human nature.⁴²⁸ Through writings and lectures, Youmans sought to spread scientific knowledge to the American people both to teach them science and to make them better citizens. His *Popular Science* would help to

⁴²⁴ Charles Loring Brace, *The Races of the Old World: A Manual of Ethnology*. (London: John Murray, 1863), p. 257.

⁴²⁵ *Ibid.*, p. 394-5.

⁴²⁶ Edward Youmans, “Letter to Herbert Spencer from Edward Youmans, September 3, 1883,” in John Fiske, *Edward Livingston Youmans, Interpreter of Science for the People*. (New York: D. Appleton and Co., 1894), p. 379.

⁴²⁷ Edward Youmans, “Preface,” *The Culture Demanded by Modern Life: A Series of Addresses and Arguments on the Claims of Scientific Education*. Ed. Edward Youmans. (Akron, OH: The Werner Company, 1869), p. vi.

⁴²⁸ Edward Youmans, “On the Scientific Study of Human Nature,” (1869), p. 374.

spread the “status and independence of scientists” and, in particular, Youmans’s belief in evolution and Herbert Spencer.⁴²⁹ Like other prominent proponents of evolution in America, Youmans was a firm believer in the antislavery cause, which his sister claimed he had imbibed from his abolitionist father (“Vincent Youmans was the first man in his town to declare himself an abolitionist”) from a young age.⁴³⁰ “Science,” argued Youmans, “engages naturally with those great subjects of public interest which are no longer to be postponed or evaded.”⁴³¹ Among the subjects Youmans listed that science had something to teach the public was the issue of the relations between the races.

The most famous evolutionists in America were, like the NAS naturalists, politically unpalatable to white supremacists, and this was never more the case than with the most famous defender of Darwin in America, Louis Agassiz’s colleague at Harvard, Asa Gray. Gray was a botany professor and an orthodox Christian, and in his person he demonstrates the non-necessity of the science-religion conflict, because Gray sought to bridge the gap between religion and science on the question of human origins. Darwin even used Gray as an example to prove why it was absurd not to think that “a man may be an ardent Theist & an evolutionist.”⁴³² Gray was an intense and orthodox Christian, yet he became Darwin’s greatest champion in America. Gray argued, like many had before, that science and religion occupied separate spheres of knowledge and that while science was unable to establish the existence of God and the rightness of the Christian faith, it was “equally unable to

⁴²⁹ Robert V. Bruce. *The Launching of Modern American Science, 1846-1876*. (Ithaca: Cornell University Press, 1987), p. 354.

⁴³⁰ John Fiske, *Edward Livingston Youmans: Interpreter of Science for the People*. (New York: D. Appleton and Co., 1894), p. 30; Eliza Ann Youmans, “Sketch of Edward L. Youmans,” *Popular Science Monthly*. Vol. 30 (Mar., 1887), p. 689-90.

⁴³¹ Youmans, “Introduction—On Mental Discipline in Education,” (1869), p. 54.

⁴³² Charles Darwin, “Charles Darwin to John Fordyce, May 7th, 1879,” Darwin Correspondence Database, <http://www.darwinproject.ac.uk/entry-12041>.

overthrow” that faith.⁴³³ Gray was one of a number of American scientists, who, like Benjamin Silliman, Edward Hitchcock, and James Dwight Dana, believed that evolution did not contradict the scriptural accounts in Genesis of human origins.⁴³⁴

Gray was also anti-slavery and his feeling influenced his work. In 1836, Gray stated in a letter to his father that he had immediately declined an offer of employment in the state of Louisiana, saying “I do not like the Southern States.”⁴³⁵ Asa Gray’s most famous work was his *Manual on Botany*, which went through a large number of editions. Gray claims that he purposefully limited the geographic scope of his book to the northern states to “make the ‘Manual’ keep clear of slavery,—New Jersey, Pennsylvania (if little Delaware manumits perhaps I can find a corner for it), Ohio, Indiana or not as the case may be, leave out Illinois, which has too many Mississippi plants...”⁴³⁶ During the Civil War, Gray ardently took up the Union cause joining a company of those too old to fight, or otherwise incapacitated, that drilled and guarded the State Arsenal in Massachusetts. Gray’s correspondence with Darwin during this time reflected their shared belief in the Northern cause and the end of slavery, as well as their collaboration on spreading the word about Darwin’s theory. In 1861 Darwin wrote Gray that while war was a misfortune, he “should not regret it so much, if I could persuade myself that Slavery would be annihilated.”⁴³⁷ For Darwin if slavery was abolished,

⁴³³ Asa Gray, (1880), p. 9.

⁴³⁴ Howe (2007), p. 465-6.

⁴³⁵ Asa Gray, “Letter to His Father, October 8, 1836,” *Letters of Asa Gray*, Vol. I. ed. Jane Loring Gray (Boston and New York: Houghton, Mifflin and Co, 1894), p. 62

⁴³⁶ Gray (1894), pp. 346-7.

⁴³⁷ Charles Darwin, “Charles Darwin to Asa Gray, July 21, 1861,” Darwin Correspondence Database, <http://www.darwinproject.ac.uk/entry-3216>. Asa Gray, “Asa Gray to Charles Darwin, May 15, 1865,” Darwin Correspondence Database, <http://www.darwinproject.ac.uk/entry-4833>.

then even “a million horrid deaths would be amply repaid in the cause of humanity,” and Gray later proudly proclaimed after the war that “slavery is thoroughly dead.”⁴³⁸

Gray’s political beliefs influenced his reception of Darwin’s ideas. In fact Darwin’s biographer, James Moore, claims that Gray saw the *Origin of Species* as being primarily about man—in fact “everybody did.”⁴³⁹ After reading the *Origin of Species*, Gray realized what Darwin meant when he claimed that his theory could shed some “little light” on the “differences between the races of man.”⁴⁴⁰ In Gray’s 1860 *Atlantic Monthly* review of *Origin of Species*, Gray knew that Darwinian evolution would spell the death knell of the scientific theory of human pluralism. Evolution meant that humankind was one family, and that as one travels back along the family tree,

the lines converge as they recede into the geological ages, and point to conclusions which, upon the theory, are inevitable, but by no means welcome. The very first step backwards makes the Negro and the Hottentot our blood-relations; — not that reason or Scripture objects to that, though pride may.⁴⁴¹

The question of species was of particular interest because of the debates over the unity of the human species, as well as the fight over the ending of slavery only a few years before. For Gray, mundane questions of botanical description gain “interest” when looked at “in view of the question of *species*.”⁴⁴² As Gray understatedly put it, “what this term *species* means, or should mean, in natural history, what the limits of species...their origin, and their destiny—these are questions which surge up from time to time; and now and then in the

⁴³⁸ Charles Darwin, “C. Darwin to A. Gray, June 5, 1861,” *The Life and Letters of Charles Darwin: Including an Autobiographical Chapter*, Vol. II, ed. Francis Darwin (New York and London: D. Appleton and Co., 1911), p. 166.

⁴³⁹ James Moore, “Darwin’s Progress and the Problem of Slavery,” *Progress in Human Geography*, Vol. 34, No. 5 (Oct., 2010), p. 571.

⁴⁴⁰ 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), p. 199.

⁴⁴¹ Asa Gray, “Darwin on the Origin of Species,” *The Atlantic Monthly*, (Jul., 1860).

⁴⁴² Asa Gray, “Species as to Variation, Geographical Distribution, and Succession,” *American Journal of Science and Arts*, (May, 1863), p. 431-2.

progress of science they come to assume a new and hopeful interest.” Gray declared Darwin’s decimation of the polygenist argument espoused by Agassiz and the Southern cohort of Nott, Gliddon, and Morton to be a positive development resulting from the theory of evolution by natural selection. Once the “races of men” are established to be of one species, then it is established that they “are of one *origin*,” which means that although the races are “strongly-marked” and “persistent varieties,” they can hardly be maintained to be groupings that are “primordial and supernatural in the ordinary sense of the word.”⁴⁴³ Gray felt that what natural history taught ought to have influence on the distribution of political rights. It was here, according to Gray, that “where the ‘touch of Nature makes the whole world kin,’ we reach the sensitive point.”⁴⁴⁴ Gray even went so far as to claim that now that humans understood their shared connection with nonhuman animals they ought to change their behavior towards nonhuman life: “I fancy that human beings may be more humane when they realize that, as their dependent associates live a life in which man has a share, so they have rights which man is bound to respect.”⁴⁴⁵ For Gray, the fact of evolution changes the nature of racial identity from something fixed and necessary to something fluid and contingent.

Overwhelmingly, the greatest and most famous proponents of Darwin’s theory of evolution in the United States were antislavery men like Gray, while Darwin’s opponents were sympathizers with the slave system of the South. The historian Sidney Ratner argued that Gray, William Barton Rogers, and Theophilus Parsons were the initial vanguard who

⁴⁴³ “One good effect is already manifest; its enabling the advocates of the hypothesis of a multiplicity of human species to perceive the double insecurity of their ground.” Asa Gray, “Natural Selection Not Inconsistent with Natural Theology,” *Darwiniana: Essays and Reviews Pertaining to Darwinism*. (New York: D. Appleton and Co., 1876), p. 176.

⁴⁴⁴ Asa Gray, *Natural Science and Religion*. (New York: Charles Scribner’s Sons, 1880), p. 54.

⁴⁴⁵ Gray (1880), p. 54.

showed the most “rare courage and ability” to defend Darwin.⁴⁴⁶ All three were strongly anti-slavery, and all of them found evolution to be compatible with their religious beliefs. The political opinions of both Gray and Rogers have been discussed, but Parsons was no less adamant about the issue even going so far to write an antislavery pamphlet in 1863, at the same time that he was defending Darwin.⁴⁴⁷ Like Asa Gray, Parsons did not see his support of the new evolutionary theory as challenging his Christian faith, but rather asked “may not God act as well through this ‘struggle for life’ as through any other of his laws?”⁴⁴⁸ Parsons recognized that Darwin’s theory challenged Agassiz’s belief in separate creations and that much of the criticism of Darwin’s work came from the way that it had made fluid the nature of race and species. “What do we gain in real knowledge, when we insist that the word “species” *must* mean this or that, when it *may* mean anything...And as to the question of difference or identity, do we know enough about it to be very positive on any point, except our ignorance?” It was not religious objection that Parsons thought would prove the most difficult for people, but the question “which related to man himself.”⁴⁴⁹

The French philosopher Antoine Augustin Cournot writing in the *Anthropological Review* during the American Civil War explicitly argued that “scientific impartiality” would not be enough to separate the political questions around race from the scientific study of the unity and origin of humankind, even if religious and humanitarian concerns also legislated for a belief in the consanguinity of man: “Not that so much importance exactly is attached to

⁴⁴⁶ Sidney Ratner, “Evolution and the Rise of the Scientific Spirit in America,” *Philosophy of Science*, Vol. 3, No. 1 (Jan., 1936), p. 107.

⁴⁴⁷ Theophilus Parsons, “Slavery. Its Origin, Influence, and Destiny,” (Boston: William Carter and Brother, 1863).

⁴⁴⁸ He continues, “If we regard it as an instrument, by means of which he works out universal, inevitable, and never ending improvement, incorporating this law with the nature and essence of every thing that lives, or can live, may we not see in this also, at once his infinite love and his infinite wisdom?” Theophilus Parsons, “Review of *On the Origin of Species*,” *The American Journal of Science and Arts*, 2nd Series, Vol. 30, No. 88. (Jul, 1860), p. 8.

⁴⁴⁹ Parsons (1860), p. 9.

the scientific formula of the unity of the species, as because there is mentally associated with it another idea, which can be easily comprehended even by those most destitute of scientific education; namely, the idea of the descent from a single pair.”⁴⁵⁰ Cournot argued that if it could be shown that all humans were but part of a “brotherhood of man” then “this would be at once a sufficient physical foundation for the sacred idea of humanity, such as would tend to increase the influence of those religious and moral opinions which are most worthy of our attention.”⁴⁵¹ The effects of science need not be impartial, and what naturalists had to say on this issue challenged the Southern tradition of ascribing rights based upon the “natural” category of race. As Cournot and others recognized, it was impossible for Darwinian evolution to remain free from such influences.

The Opposition to Darwinism

As we have argued, Christianity and science were used as dual, mutually supportive bulwarks for slavery before the Civil War and also to justify a political framework of organic, hierarchical conservatism in the American South. Two great modes of human intellectual achievement and authority, religion and science, were used to support the configuration of the antebellum social order as ordained by both God and Nature. This organic conservatism rested on the idea that the secular order which exists was blessed by and created by God, and a close (scientific) study of the world could demonstrate that hierarchies were both inherent and necessary in nature. If the South’s social system was proper and superior and both

⁴⁵⁰ Antoine Augustin Cournot, “On the Ideas of Species and Race Applied to Man and Human Society: On Anthropology and Ethnology,” *Anthropological Review*, Vol. 2, No. 7 (Nov., 1864), pp. 268-9, originally published as “Traité de l’Enchaînement des Idées Fondamentales dans les Sciences et dans l’Histoire,” (Paris: 1861).

⁴⁵¹ *Ibid.*, p. 269-70.

revelation and reason proved it, when these underpinnings were challenged southerners reacted.

Certainly there were some who opposed Darwinism for upsetting the social order in ways not having to do with race—the philosopher Francis Bowen argued that Darwinism led to nihilism and pessimism, for example.⁴⁵² The English writer Francis William Newman argued that Darwinism led to a belief in determinism, which would lead children to be taught that “every action is determined, and that they have no free-will to choose right or wrong, but are necessarily the slaves of desire,” which was “a most corrupting education.”⁴⁵³ Both Bowen and Newman’s complaints shared a heritage with anti-materialist complaints stretching back to those against Thomas Hobbes—that Darwinism denied humanity’s free-will. What was different about the complaints about Darwinism was that Darwinism changed natural history’s understanding of human identity, which had important ramifications for scientific justifications of the racial hierarchy.

More common than worries about nihilism and determinism were arguments against Darwinism such as those presented by George Clinton Swallow, Missouri’s state geologist until the start of the Civil War, during which time he was twice arrested for disloyalty to the Union.⁴⁵⁴ For Swallow the real barrier to accepting Darwinism, the “insuperable barrier” as he called it, was evolution’s claim that there was a connection between lower animals and man. Swallow argued that while it was possible for there to have been a physical connection

⁴⁵² Francis Bowen, “Malthusianism, Darwinism, and Pessimism,” *North American Review*, Vol. 129, No. 276 (Nov., 1879), pp. 447-473.

⁴⁵³ Francis William Newman, “The Atheistic Controversy,” *The Contemporary Review*, Vol. 33, (Oct., 1878), pp. 496-7.

⁴⁵⁴ George Clinton Swallow, “On the Origin of Species,” *Proceedings of the American Association for the Advancement of Science, 1873 (22nd)*, (Salem, MA: Frederic W. Putnam, 1874), p. 396-407; Leroy E. Page, “George Clinton Swallow, the Other Kansas State Geologist,” *Transactions of the Kansas Academy of Science (1903-)*, Vol. 99, No. 3/4 (Dec., 1996), pp. 134-145.

between humans and nonhumans, it was impossible to equate the moral and intellectual sense of a monkey with a human, unless it could be said that “a savage has no more moral sense than a monkey.” In which case there remained an “impassable barrier...between the savage and man.”⁴⁵⁵ For Swallow this impassable barrier was too great, though Darwin would have tried to make “a hybrid between a Chimpanzee lady and a Bushman.”⁴⁵⁶ Southern chemist, J. Lawrence Smith, echoed Swallow and argued that Darwin was a philosopher whose imagination transcended his knowledge of animal and vegetable life, and that Darwin uses not “logical and inductive reasoning” but an embarrassing type of logic when he “touched the confines of man.” While rejecting Darwin, Smith referred positively to Agassiz and to the idea that Darwin must acknowledge that some “creative force” implanted man’s moral sentiment.⁴⁵⁷

Darwinian evolution was altogether different from other regnant theories of human diversity, because it implied that races and species were mutable, and that the differences between the races were less permanent, less “natural”, and less necessary than the racial theories of Southern social order assumed. The natural order of a strictly separated color line wobbled when confronted with the notion of evolutionary development. What William Freehling said about mixed race children in the minds of Southerners applied to evolution as well. Evolution “made a dubious natural distinction altogether unnatural” and was as threatening to the social and political realities of southern life as the presence of Mulatto children.⁴⁵⁸ Illiberal ideas about a fixed political order in the American South were shared by

⁴⁵⁵ Swallow (1874), p. 400.

⁴⁵⁶ *Ibid.*, p. 406.

⁴⁵⁷ Smith (1874), p. 12-5.

⁴⁵⁸ William Freehling, *The Road to Disunion: Secessionists at Bay, 1776-1854*. (New York and Oxford: Oxford University Press, 1990), p. 54. For more on the challenge that miscegenation to the Southern worldview see Joel Williamson, *New People: Miscegenation and Mulattoes in the United States* (New York: The Free Press, 1980).

landed aristocrats in England as well, where the old orders felt politically challenged by scientific notions of progress and development. Anti-evolution drives were associated with larger political trends, and the science of Darwinian evolution was thought to be a harbinger of political change. W. J. Cash puts it well:

The anti-evolution organizations were everywhere closely associated with those others which quite explicitly were engaged in attempting to wipe out all the new knowledge in the schools, to clear all modern books out of the libraries. “Yankee infidelity” and “European depravity” and “alien ideas” were their standard rallying-cries. They warned constantly and definitely that evolution was certain to breed Communism. Just as clearly and as constantly, they warned that it was breaking down Southern morals—destroying the ideal of Southern Womanhood. One of the most stressed notions which went around was that evolution made a Negro as good as a white man—that is, threatened White Supremacy. And always, as what I already say indicates, they came back to the idea of saving the South, appealed to and spoke in the name of exactly the old potent patriotism of the region.⁴⁵⁹

Attitudes towards scientific theories could not be separated from larger political movements, especially when these scientific theories touched on areas of crucial American political concern like race, identity, and progress.

In fact, an illustrative example of the way that racial politics and the war over slavery could drive scientific work can be seen by looking at the dispute that arose in the United Kingdom between the Ethnological Society of London (ESL) and the Anthropological Society of London (ASL). The ESL was a British learned society dedicated to studying the various peoples of the world, but its roots lay in an earlier organization called the “Aborigines Protection Society” whose mission was “protecting the defenceless, and promoting the advancement of uncivilized tribes.”⁴⁶⁰ The Aborigines Protection Society, had been founded by Evangelical and Quaker philanthropists who had tried to stop the

⁴⁵⁹ W. J. Cash, *The Mind of the South*. (New York: Vintage Books, 1991 [1941]), pp. 338-9.

⁴⁶⁰ George W. Stocking, Jr., “What’s in a Name? The Origins of the Royal Anthropological Institute (1837-71),” *Man*, New Series, Vol. 6, No. 3 (Sep., 1971), p. 369.

African slave trade and slavery in British colonies. The original “scientific” mission of these groups was subservient to the humanitarian mission. The ethnology performed was done to aid the mission of influencing public opinion in Great Britain, and demonstrating to the public “what measure ought to be adopted with respect to the Native Tribes, in order to secure to them the due observance of justice and the protection of their rights; to promote the spread of Civilization among them, and to lead them to the peaceful and voluntary reception of the Christian Religion.”⁴⁶¹ The anthropological work that was done by the Society was meant to demonstrate the unity of human species and actively combat the polygenist science being done at the time—the motto of the APS was *ab uno sanguine* (“of one blood”). Over time the scientific work that was being done was separated from the humanitarian work with the founding of the Ethnological Society of London. Though the new ESL no longer had an explicit humanitarian mission, its roots remained in the makeup of the scientists in the group and their field of inquiry.

The ESL rose in prominence amongst learned Britons and attracted scientific members who wished to share in the “study of man,” although some of them did not share the egalitarian presumptions of the original membership. These new members were convinced by the increasing scientific clout of polygeny in the 1850s and believed that science had demonstrated that racial equality was false. By the late 1850s, these differing political agendas began to create tension over questions of race, and after the publication of Darwin’s *Origin of Species* political differences led to the creation of an offshoot group called the Anthropological Society of London. The scientific differences between anthropology and ethnology were small enough that many were unsure of how the fields of inquiry for the

⁴⁶¹ Quoted in Stocking (1971), p. 369.

groups even differed. However, while their field of inquiry differed little, their reaction to new scientific developments and political developments differed greatly. According to the ESL, the ASL existed for the “free discussion of the various exciting questions which [the American Civil War] were bringing into prominence.”⁴⁶² Certainly James Hunt, the founder of the ASL, wanted to discuss those “exciting questions.” Hunt was an anthropologist, polygenist, anti-Darwinian, Confederate-sympathizer. In his opening address to the new institution, Hunt argued that:

whatever may be the conclusion to which our scientific inquiries may lead us, we should always remember, that by whatever means the Negro, for instance, acquired his present physical, mental, and moral character, whether he has risen from an ape or descended from a perfect man, we still know that the Races of Europe have now much in their mental and moral nature which the races of Africa have not got.⁴⁶³

In his speech, Hunt defensively recognized but rejected the notion that polygenists were motivated by racism: “A serious charge has been made against the American School of Anthropology, when it is affirmed that their interest in keeping up slavery induced the scientific men of that country to advocate a distinct origin for the African race.” Hunt went on to say that he hoped that interests and political bias would be absent from the new institution but that at the same time “we must not shrink from the candid avowal of what we believe to be the real place in nature, or in society, of the African or any other race.”⁴⁶⁴ Hunt laid out exactly where he thought the African’s place in nature was in his book, *On the Negro’s Place in Nature*.⁴⁶⁵ Hunt’s ASL published pieces on various topics included “Slavery,” which

⁴⁶² Ethnological Society of London, “Ethnology and Anthropology: Are they Distinct Sciences, or one and the Same Science Under Different Names?” *The Ethnological Journal*. (Jul., 1865), p. 4.

⁴⁶³ James Hunt, “Introductory Address on the Study of Anthropology, Delivered Before the Anthropological Society of London, February 24th, 1863,” *The Anthropological Review*. (May, 1863), p. 3.

⁴⁶⁴ Hunt (1863), p. 4

⁴⁶⁵ James Hunt, “On the Negro’s Place in Nature,” *Memoirs Read Before the Anthropological Society of London, 1863-4*, Vol. I (London: Trubner and Co., 1865), p. 1-64.

argued that nature demonstrated that all men were not born equal, "the Negro as a Soldier," which explained that Negroes made excellent drill marchers because of their "well known imitative faculty" and their "natural fondness for rhythmical movement," and "On the Weight of the Brain in the Negro" which explained that Negroes had significantly lighter brains than whites.⁴⁶⁶ Whether or not Hunt desired his organization to be free from political influence, it was clear that it was differences over the "Negro Question" that caused the ASL to split from the ESL.

These two societies also differed in their reactions to Darwin's theory of natural selection and the claim that Darwin had ended the controversy over the plurality of the human species in favor of unity. The ASL rejected Darwinism, and the Darwinians, like Alfred Wallace and Thomas Huxley, would reject the ASL. Huxley called the ASL a "nest of imposters," while the *Ethnological Journal* claimed for itself "many of the most eminent of the Darwinians."⁴⁶⁷ The ESL recognized that the Darwinian case for natural selection overwhelmingly demonstrated the unity of species which had long been the goal of their organization.⁴⁶⁸ To Hunt, the proponents of Darwin's theories were like religious zealots.⁴⁶⁹ Hunt described Huxley as "our most deadly, and sometimes even our most bitter, foe" and declared that his journal had "teemed with objections to the Darwinian theory of the origin

⁴⁶⁶ James Reddie, "Slavery," *Anthropological Review*. Vol. 2, No. 7 (Nov., 1864), pp. 280-293; Sanford B. Hunt, "The Negro as a Soldier," *Anthropological Review*. Vol. 7, No. 24 (Jan., 1869), pp. 40-54; J. Barnard Davis, "On the Weight of the Brain in the Negro," *Anthropological Review*. Vol. 7, No. 25 (Apr., 1869), pp. 190-2.

⁴⁶⁷ Stocking (1971), p. 377; Ethnological Society of London, "The Ethnological Journal," *The Ethnological Journal*. (Oct., 1865), p. 194.

⁴⁶⁸ James Crawford, "Lubbock on the Unity of Man and Natural Selection," *The Ethnological Journal*. (Jul., 1865), p. 17-21.

⁴⁶⁹ Once again the irony is shown that the polygenists whom Darwin opposed often attacked Darwinism as being religious nonsense, and claimed for themselves the mantle of courageous truth-seekers unafraid of offending religious sensibilities. "But here we see the difference between a disciple of Darwin and a disciple of Moses—one calls in natural selection with unlimited power, and the other calls in a Deity provided in the same manner." James Hunt, "On the Doctrine of Continuity Applied to Anthropology," *Anthropological Review*, Vol. 5, No. 16 (Jan., 1867), p. 116.

of man.”⁴⁷⁰ Hunt rejected the Darwinian explanation for humanity’s origins because Darwinism implied common descent for all races, which he called his “fundamental objection” to the application of Darwinism to the study of man.⁴⁷¹ Hunt, like other creationists who rejected Darwinian evolution, took many of his cues from Louis Agassiz. Hunt quotes Agassiz as saying “I am prepared to show the differences existing between the races of men are of the same kind as the differences observed between the various families, genera, and species of monkeys or other animals; and that these different species of animals differ in the same degree one from another as the races of men—nay, the differences between distinct races are often greater than those distinguishing species of animals one from another” and “are of the same kind and even greater than those upon which the anthropoid monkeys are considered as distinct species.”⁴⁷² Agassiz’s and Hunt’s rejection of Darwinism cannot be separated from their rejection of the unity of species and the social implications of doing so.

The rejection of Darwinism because it implied the unity of humanity was not limited to the *Anthropological Review*. Within about ten years, Darwin had shattered the scientific respectability of the plural theory of human origins, but the polygenist racial hypothesis persisted amongst a group of people supporting the pre-Adamite hypothesis. The pre-Adamites argued, contrary to both elite science and mainstream Christian theology, that humans did not derive from a single pair of individuals. They argued that while Adam may have been the original ancestor of the white race, the African race was descended from a

⁴⁷⁰ James Hunt, “The Dundee Anthropological Conference,” *Anthropological Review*. Vol. 6, No. 20 (Jan., 1868), p. 77.

⁴⁷¹ “Anthropology offers...nothing to support Darwinism, or what at least is passed off to the public as such. A fundamental objection to the application of Darwinism to anthropology is to be found in the fact that it is supposed to support a unity of the origin of mankind.” James Hunt (1867), p. 118.

⁴⁷² James Hunt, “On the Application of the Principle of Natural Selection to Anthropology,” *Anthropological Review*. Vol. 4, No. 15 (Oct., 1866), p. 323.

group of “pre-Adamic” ancestors, possibly apes. By connecting non-White races to the lower forms of animals, the pre-Adamites attempted to maintain a simulacrum of scientific raiment, and perhaps even an acceptance of Darwinian evolution for non-White humans and animals, while maintaining the special, fixed status of white identity. Tennessee’s Buckner Payne wrote a pre-Adamite book called *The Negro: What is His Ethnological Status?*, in which he argued that the African race was descended from the monkey, and was “the noblest of the beast creation,” whereas the white race was created in the divine image of God.⁴⁷³ Payne acknowledged that there was, at least, one important difference between monkeys and black people: “The difference between these higher orders of the monkey and the negro, is very slight, and consists mainly in this one thing: the negro can utter sounds that can be imitated; hence he could talk with Adam and Eve, for they could imitate his sounds.”⁴⁷⁴

There were others who argued along similar lines. A. Hoyle Lester’s *The Pre-Adamite, or Who Tempted Eve?*, William Campbell’s *Anthropology for the People: A Refutation of the Theory of the Adamic Origin of All Races*, and Charles Carroll’s *The Negro a Beast* are three prominent examples.⁴⁷⁵ White supremacists, such as the pre-Adamites, recognized the racial implications of the common descent implied by Darwinian evolution. Campbell described the “unity of the origin of the human race” as implied by Darwinian evolution as having “been the source of a fanaticism which has brought an incalculable amount of sin and suffering on the world, and threatens much more.” What worried Campbell was that “many scientists give their authority to this dangerous delusion, and the assertion may be safely

⁴⁷³ Buckner Payne, “The Negro: What is His Ethnological Status?,” 2nd. Ed. (Cincinnati: 1867), p. 23.

⁴⁷⁴ *Ibid.*, p. 23.

⁴⁷⁵ A. Hoyle Lester, *The Pre-Adamite, or Who Tempted Eve?* (Philadelphia: J. B. Lippincott & Co., 1875); William Campbell, *Anthropology for the People: A Refutation of the Theory of the Adamic Origin of All Races*. (Richmond, VA: Everett Wadley Co., 1891); Charles Carroll, “*The Negro a Beast*” or “*In the Image of God.*” (St. Louis, MO: American Book and Bible House, 1900).

ventured that on no subject has more nonsense been published to the world, labeled ‘science,’ and received as oracular wisdom by the credulous multitude.” What was the delusion and fanaticism to which evolutionary scientists were lending their authority? It was “the unfounded and debasing error that all races of men were alike created in God’s image, and constitute one brotherhood, capable of attaining the same intellectual and moral level; and that, hence, all racial diversities should be disregarded and obliterated....A more cunning and dangerous lie, and a more palpable one, than the genetic equality and unity of the human race, the evil one never intended.”⁴⁷⁶

Carroll too saw his attempt to combat Darwinism as an attempt to combat political leveling between the races. In fact, Carroll argued that the degree to which African-Americans had enjoyed any improvements in social and political equality by the end of the 19th century was due to the influence of evolution: “our present social, political and religious systems, so far as our relations to the Negro are concerned, are based solely on the atheistic theory of evolution.”⁴⁷⁷ Carroll claims that the racial egalitarianism of the evolutionary scientists and their desire to view whites and blacks as of the same blood drove them to declare a connection between humans and nonhuman animals: “All scientific investigation of the subject proves the Negro to be an ape; and that he simply stands at the head of the ape family, as the lion stands at the head of the cat family....This being true, it follows that the Negro is the only anthropoid, or man-like ape; and the gibbon, ourang, chimpanzee and gorilla are merely negro-like apes. Hence, to recognize the Negro as a “man and a brother,” they were compelled to declare man an ape.”⁴⁷⁸ For Carroll the theory of evolution was responsible for enhancing the social status of Negroes: “when the scriptural teaching of

⁴⁷⁶ Campbell (1891), pp. 3-4.

⁴⁷⁷ Carroll (1900), p. 81.

⁴⁷⁸ *Ibid.*, p. 87.

Divine Creation is accepted in its entirety, and the atheistic Theory of Development, which first introduced the Negro into the family of man, and which keeps him there, as one of the lower “races of men” is repudiated, the Negro will make his exit from the Adamic family with it, and will resume his proper position with the apes.”⁴⁷⁹ Evolutionary science gave scientific backing to the notion that black racial identity contained as much or as little dignity as white racial identity.

The pre-Adamite rejection of a common humanity between blacks and whites attempted to reconcile a fixed and eternal conception of white identity, a separate and lower existence for African-Americans, while still accepting as much of the new scientific consensus towards evolution as possible. This “move” was a reaction to the new scientific consensus around evolution in the second half of the 19th century and an attempt to maintain a veneer of scientific respectability, without rejecting a pre-Darwinian conception of fixed racial type and a special, scientifically credible status for white supremacy. While there are still white-supremacist groups in 21st century America that espouse pre-Adamite views, such as the Christian Identity movement, the pre-Adamite movement has been largely relegated to the fringes of American life.

In areas where science did not interact with political concerns over race or slavery, even where there was the potential for real interactions with religion, southern attitudes toward science were quite different. This can be seen in the southern attitude towards the geology of Charles Lyell. Lyell was Darwin’s friend, and would, like him, develop an important theory of geological science that would change the way that people thought about the historical development of the world. Published from 1830-1833, Lyell’s book *Principles of*

⁴⁷⁹ *Ibid.*, p. 89-90.

Geology popularized the theory of Uniformitarianism, which had been developed previously by James Hutton, and for which Lyell became the theory's most prominent adherent and proponent. Like Darwin's theory of evolution by natural selection, Uniformitarianism successfully challenged a reigning scientific theory in a way that seemed to contradict Biblical revelation. Lyell argued that the geological formations present on the Earth today arose as a result of the slow, gradual accumulation of processes still observable in the world.⁴⁸⁰ The clear implication of Uniformitarianism was that the world had to have a much longer history than revelation seemed to imply. By contradicting the prior reigning geological theory, Catastrophism, Lyell also made it harder for geological science to comport with belief in miracles or divine interventions. Catastrophism, like the special creation of biological species, necessitated an active God, who worked his hand on the development of the world. Catastrophic floods, such as the account of Noah in *Genesis* fit comfortably with the prior theory in a way they did not with Uniformitarianism. So, while it seems that nineteenth century geological debates would have proved challenging to the idea of natural theology and biblical revelation in the same ways that Darwin's theory, and thus have provoked a religious backlash, in fact "most divines were continuing to deny any contradiction between religion and science".⁴⁸¹ Lyell and other geologists found the South a much more congenial place than would adherents of Darwinian evolution.

So, why were Southerners not as resistant to Lyell as to Darwin? Almost certainly politics played a role. The politics of biology and geology in America were quite different, since geologists had little to say about politically salient questions about the color line. Lyell

⁴⁸⁰ Charles Lyell, *Principles of Geology: Being an Attempt to Explain the Former Changes of the Earth's Surface, by Reference to Causes Now in Operation*, 3 Vols. (London: John Murray, 1830-3).

⁴⁸¹ Elizabeth Fox-Genovese and Eugene D. Genovese, *The Mind of the Master Class: History and Faith in the Southern Slaveholders' Worldview* (Cambridge: Cambridge University Press, 2005), p. 537.

was not making an argument about the developmental evolution of species or human ancestry. In fact, when Lyell did venture outside his wheelhouse to offer an explanation for the origin of species, he stoutly rejected the idea of the progressive evolution of biological life on Earth.⁴⁸² As the historian William Coleman put it, “a major aim of the *Principles of Geology* was to destroy totally the theory of the successive development of organic creation.”⁴⁸³ Here is Lyell in his own words: “it appears that the species have a real existence in nature, and that each was endowed, at the time of its creation, with the attributes and organization by which it is now distinguished.”⁴⁸⁴ On this point Lyell was in complete agreement with Louis Agassiz, evolution’s primary opponent in America in the 19th century.⁴⁸⁵ When Robert Chambers argued in favor of transmutation (evolution) in his *Vestiges of the Natural History of Creation* in 1844, Lyell, along with other geologists like the American Edward Hitchcock, rejected Chambers’ argument as being both wrong and unscientific.⁴⁸⁶

Though Lyell would later join an anti-slavery society, he did not attack slavery when he visited the American South before the Civil War. Lyell told Josiah Nott, the polygenist slavery apologist, that he hoped that slavery would be able to civilize the Negro, who could be “brought up to the Caucasian standard.”⁴⁸⁷ Though Lyell came to America with some feeling against slavery, he found that his prejudices had been altered: “After the accounts I had read of the sufferings of slaves, I was agreeably surprised to find them, in general, so remarkably cheerful and light-hearted.” In addition to being cheerful and free from care,

⁴⁸² Walter F. Cannon, “The Uniformitarian-Catastrophist Debate,” *Isis*, Vol. 51, No. 1 (Mar. 1960), pp. 38-9.

⁴⁸³ William Coleman, “Lyell and the “Reality” of Species: 1830-1833,” *Isis*, Vol. 53, No. 3 (Sep., 1962), p. 329.

⁴⁸⁴ Charles Lyell, *Principles of Geology*, Vol. II (London: 1832), p. 65.

⁴⁸⁵ William Stanton, *The Leopard’s Spots: Scientific Attitudes Toward Race in America, 1815-1859* (Chicago and London: The University of Chicago Press, 1960), p. 139.

⁴⁸⁶ Guralnick (1972), p. 533.

⁴⁸⁷ Quoted in Stanton (1960), p. 80.

Lyell described the slaves as “better fed than a large part of the laboring class of Europe,” and he “found it impossible to feel a painful degree of commiseration for persons so exceedingly well satisfied with themselves.”⁴⁸⁸ When Lyell traveled through the South on another trip in the late 1840s, he spoke with a Northerner who condemned slavery, and rather than take the Northerner’s feelings as genuine, Lyell felt that the man had merely “seen what was bad in the system” through a “magnifying and distorting medium...and had imbibed a strong anti-negro feeling, which he endeavoured to conceal from himself, under the cloak of a love of freedom and progress.”⁴⁸⁹ The southerners whom Lyell met did not find him to be personally disagreeable to their peculiar institution, and Lyell found the southerners to be hospitable and obliging. Neither Lyell’s geology nor his personal politics particularly challenged Southerners who were exquisitely sensitive about slavery.

Southerners extended a welcome to the geological sciences, even when it contradicted biblical literalism, in a way that they would not for Darwin’s evolutionary ideas. North Carolina Congressman and Confederate General Thomas Clingman lectured on the compatibility of science and religion when it came to the idea of prior geological epochs, while at the same time he rejected biological evolution.⁴⁹⁰ Slaveowner, farmer, and Fire-Eater Edmund Ruffin also welcomed the new geological sciences even though it seemed to contradict biblical literalism. In addition to firing the first shot of the Civil War and defending slavery, Ruffin found time to write scientific treatises discussing the geological

⁴⁸⁸ Charles Lyell, *Travels in North America in the Years 1841-2 with Geological Observations of The United States, Canada, and Nova Scotia*, Vol. I (New York: Wiley and Putnam, 1845), pp. 144-5

⁴⁸⁹ Charles Lyell, *A Second Visit to the United States of North America*, Vol. II (London: John Murray, 1849), p. 40.

⁴⁹⁰ Thomas Lanier Clingman, “Huxley, Darwin and Tyndall; Or the Theory of Evolution.” *Selections from the Speeches and Writings of Hon. Thomas L. Clingman, of North Carolina, with Additions and Explanatory Notes*. (Raleigh, NC: John Nichols, 1877), pp. 60-8. Irrelevant side note: Clingmans Dome in Smoky Mountains National Park is named after Thomas Clingman.

phenomena of his area.⁴⁹¹ Ruffin welcomed the geologist Hugh Miller's *Testimony of the Rocks*, which argued for a great age of the Earth, but rejected the development of species.⁴⁹² Other proslavery Southerners like William Gilmore Simms and John Reuben Thompson welcomed Miller's geological work, as well.⁴⁹³

Support for Republican politics amongst white southerners was minimal (to say the least) as northern carpetbaggers and radical Republicans attempted to alter the South's power structure. After the Civil War, the Solid South reacted to these northern scientific ideals with hostile resistance that was both political and religious.⁴⁹⁴ Though the resistance was couched in terms of religious objections, these religious objections cannot be separated from the political objections. It was the politicization of Darwinian science that raised the salience of this particular scientific doctrine to such a degree that it would be treated differently than had evolutionary theories prior to Darwin or the geological sciences, both of which have the same potential for religious resistance and hostility. Rather than a flexible religious adaptation to this particular scientific enterprise, religious southerners reacted differently than religious northerners or religious Englishmen. Darwinian science was associated with the politics of racial egalitarianism, and the implication that race was contingent variety rather than fixed species politicized southern reaction to evolution.

⁴⁹¹ Edmund Ruffin, *Agricultural, Geological, and Descriptive Sketches of Lower North Carolina, and the Similar Adjacent Lands*. (Raleigh, NC: Institution for the Deaf & Dumb & the Blind, 1861).

⁴⁹² Hugh Miller, *The Testimony of the Rocks; Or, Geology in its Bearings on the Two Theologies, Natural and Revealed*. (Boston, MA: Gould & Lincoln, 1857).

⁴⁹³ Fox-Genovese & Genovese (2005), p. 537-8.

⁴⁹⁴ "Neither learning nor literature of the secular sort could compare with religion in power and influence over the mind and spirit of the South. The exuberant religiosity of the Southern people, the conservative orthodoxy of the dominant sects, and the overwhelming Protestantism of all but a few parts of the region were forces that persisted powerfully in the twentieth century. They were a large element in the homogeneity of the people and the readiness with which they responded to common impulses. They explained much of the survival of a distinctive regional culture, and they went far toward justifying the remark that the South was solid religiously as well as politically." C. Vann Woodward, *Origins of the New South, 1877-1913*. revised edition (Baton Rouge, LA: Louisiana State University Press, 1972 [1951]), p. 448.

Evolutionary ideas before Darwin were predominately Lamarckian and consistent with polygenist natural history. Lamarckian evolution held that human races did not share a common ancestry, but this version of evolution was supplanted after 1859. As this happened, the politics of evolution in the United States, as in England, came to mirror the politics of Darwin and those closest to him. Darwin's impact was not in introducing the world to evolution, but rather in doing it so well that he was able to take evolution out of the service of some and place it in the hands of those who matched his views on race and slavery.

Darwin and Class

Darwin's politics were not to the left. Marx recognized this and was ambivalent about Darwin's work; Marx considered it to be a reflection of bourgeois thinking.⁴⁹⁵ "It is remarkable how Darwin recognizes among beasts and plants his English society with its division of labour, competition, opening up of new markets, inventions, and the Malthusian 'struggle for existence.' His [nature] is Hobbes' *bellum omnium contra omnes*..."⁴⁹⁶ Darwin represented a "crude English" theorist to Marx because he read into nature laissez-faire Manchesterism and misjudged the extent to which human purposes have been incorporated into natural processes.⁴⁹⁷

Darwin's politics were similar to the scientific, industrialist milieu in which Darwin's family had long been active. Societies such as Birmingham's Lunar Society saw men such as Matthew Boulton, Josiah Wedgwood, Benjamin Franklin, and James Watt exchanging papers

⁴⁹⁵ Ralph Colp, "The myth of the Darwin-Marx letter," in *History of Political Economy*, Vol. 14, No. 4 (1982), p. 461-482.

⁴⁹⁶ Marx to Engels, June 18, 1862, *Marx-Engels Selected Correspondence*. (Moscow: Progress Publishers, 1975), p. 120

⁴⁹⁷ Terence Ball, "Marx and Darwin: A Reconsideration," in *Political Theory*, Vol. 7, No. 4 (Nov., 1979), p. 473.

on chemical breakthroughs, electricity, and bourgeois theories of government and economics.⁴⁹⁸ Darwin's grandfather, the industrialist Josiah Wedgwood, was close friends with the naturalist Erasmus Darwin (Charles' other grandfather), Watt, and Joseph Priestley as well.⁴⁹⁹ Scientists such as Priestley and Erasmus Darwin were associated with theories of free trade and republican government. "These societies bound science ever closer to the new world of profit and power, the world that Burke would characterize as that of sophistry, economy, and calculation."⁵⁰⁰ This was a tightly knit world binding together industry and bourgeois science.

When Darwin published *Origin of Species*, evolution was associated with radical politics and revolutionary France. Darwin was no friend to either the radicals or the French. Though Robert Grant had been an early mentor, Darwin avoided Grant because of his radicalism.⁵⁰¹ Darwin's lifestyle was entirely divorced from the reality of Grant's existence with his "union activities, medical leveling, and guinea-grabbing teaching occupation..."⁵⁰² Darwin retained the belief in transmutation he had gained from Grant, but of a Malthusian not a modified Lamarckian variety. Darwin was a 'thorough Liberal' and believed in the self-help values of Victorian author Samuel Smiles. Politically Darwin leavened his bourgeois political beliefs in free-trade and anti-unionism with a paternalistic bent.⁵⁰³ Darwin was a

⁴⁹⁸ Alan Houston, *Benjamin Franklin and the Politics of Improvement* (New Haven and London: Yale University Press, 2008), p. 144.

⁴⁹⁹ Silvan S Schweber, "Darwin and the Political Economists: Divergence of Character," in *the Journal of the History of Biology*, Vol. 13, No. 2 (Autumn, 1980), p. 258.

⁵⁰⁰ Isaac Kramnick, "Religion and Radicalism: English Political Theory in the Age of Revolution," in *Political Theory*, Vol. 5, No. 4 (Nov., 1977), pp. 522.

⁵⁰¹ Desmond & Moore, *Darwin*. P 203.

⁵⁰² Adrian Desmond, *The Politics of Evolution: Morphology, Medicine, and Reform in Radical London*. (Chicago: The University of Chicago Press, 1989), p. 404.

⁵⁰³ Darwin often hesitated to forthrightly proclaim that evolution implied much for human society, for example in Charles Darwin to Hugo Thiel, 25 Feb. 1869, in *The Life and Letters of Charles Darwin*, ed. Francis Darwin, 2 vols. (New York: Appleton, 1919), pp. 293-94, Darwin claims that it did not "occur to me formerly that my views could be extended to such widely different, and most important subjects." However, elsewhere it did

major landowner, the product of an Oxbridge education, and enjoyed playing the role of country paternalist in Downe, the village south of London where he lived. Wealth and comfort allowed Darwin to pursue his research without having to lecture or write for pay. As we shall see, Darwin was instrumental in removing the radical cast that colored the English view of evolutionary biology.

For a comparison we can look at the history of Darwinism's reception in the United Kingdom, another English-speaking, Protestant, capitalist, industrial democracy. As we shall see, economic, religious, and political forces in Victorian England caused Darwin's theory to be viewed as both terrifically important and terribly scandalous, but the absence of a significant racially-motivated political cleavage meant that evolution's story turned out quite differently in England than in America.

Why did Darwin's biological theory scandalize and impact Victorian society enough to force its social and political movements to think in terms of "Darwinisms"? In the words of historian, K. Theodore Hoppen:

In the case of mid- and late Victorian Britain the ambiguous and slippery notion of 'evolution' generated perhaps the most striking cluster of concepts around which the governing ideas of the time were put together and assessed. Indeed, the appearance of views of society constructed out of an engagement with certain kinds of evolutionary analysis constitutes a division between the later Victorian period and what had gone before at least as significant as the movement towards electoral democracy or the development of the party system.⁵⁰⁴

occur to Darwin that his views could be so extended. A year after the publication of *Descent of Man*, in 1872, Darwin sent a letter to Heinrich Fick, a law professor at the University of Zurich, in which he speculated about the potential harms to society caused by a unionized workforce. The letter says that unions are opposed "in short to all competition. I fear that Cooperative Societies, which many look at as the main hope for the future, likewise exclude competition. This seems to me a great evil for the future progress of mankind." Found in Richard Weikart's, "A Recently Discovered Darwin Letter on Social Darwinism," *Isis*, Vol. 86, No. 4 (Dec., 1995), p. 611.

⁵⁰⁴ K. Theodore Hoppen, *The Mid-Victorian Generation: 1846-1886*. (Oxford: Clarendon Press, 1998), p.472.

Reaction to Darwin's theory spanned a wide spectrum of English society, partly because an evolutionary conception of humanity's place in the natural world was tied to social movements remaking nineteenth century English political and economic life.

There were numerous axes upon which debates over evolution turned in England, but the politically dominant one was that of class. In the latter part of the eighteenth century, a rising middle class of industrialists, bankers, and merchants sought political power commensurate with their new economic strength. Electoral reform and the ending of privileges for landed wealth and the Church of England were goals for many in this emergent middle class. Industrialization also left Great Britain more urban, more industrial, and more proletarian, a process which created a politically conscious working class, as well. Workers were prepared to defend their interests, and the rise of the Chartist movement was representative of a newly assertive labor movement. The comfortable status quo that had linked land, church, Oxbridge, and Toryism faced social and political challenge from both labor and capital, and natural history would play an important role.

Rival Versions of Natural History: Establishment and Radical

Natural history helped to situate eighteenth and nineteenth century hierarchies by analogy to the natural world. Politically, natural history was used in two different ways. Mainstream natural history at Oxford and Cambridge demonstrated the fixed order of nature, and by analogy, society. Innumerable country parsons were as comfortable studying William Paley's *Natural Theology*⁵⁰⁵ as they were collecting beetles. Understanding nature was as important as understanding theology, because together they both demonstrated God's

⁵⁰⁵ William Paley, *Natural Theology, or Evidences of the Existence and Attributes of the Deity collected from the Appearances of Nature* (1802).

plan for creation. The “Great Chain of Being” firmly situated humans’ place in a fixed hierarchy stretching from brute animal life down below up to humans and up still farther to the world of spirit inhabited by the angels. This firmly situated natural hierarchy situated human social and political hierarchies, as well. It is anachronistic to imagine an inevitable conflict between science and religion in the nineteenth century. On the contrary, most natural historians before Darwin were not foes but friends of the Church.

There was another, more radical, side to natural history. Before Darwin, evolution (more commonly called “transmutation”) was associated with radical materialism and the French Revolution. In Britain transmutation was supported by an underground of radical thinkers, many in the medical profession, who pushed a materialist philosophy and saw transmutation as an outgrowth of their ideas.⁵⁰⁶ These free-thinkers at Edinburgh University, the University of London, and various medical schools included men like Robert Grant (1793-1874) who hoped to use theories of the transmutation of species to demonstrate the need for social reform to benefit the English working class.

The early ‘evolutionist’ Robert Grant was a Scottish MD, a naturalist, a progressive radical, and a strong, early influence upon a young Charles Darwin. Grant was a follower of the evolutionary ideas of the naturalist Étienne Geoffroy Saint-Hilaire, a colleague of Jean-Baptiste Lamarck. Lamarck’s evolutionism found a home within radical philosophy in France. Grant gave his support to both radical and democratic causes, as well as movements aiming to professionalize scientific and medical work. Grant supported the reformer Wakley, the journal *The Lancet*, and the British Medical Association—all considered reformist

⁵⁰⁶ Adrian Desmond, *The Politics of Evolution: Morphology, Medicine, and Reform in Radical London*. (The University of Chicago Press: Chicago, 1989)

at the time. He was also widely held to be a materialist and an atheist, because it seemed that there was no place for the supernatural in his scientific theories of transmutation.

Evolution carried associations that colored it as anti-church and anti-establishment, and to many English the association with France meant materialism, revolution, anarchy, and bloodshed. Darwin knew that the reception of his evolutionary theory would be controversial, and in order to avoid aiding the radical cause, Darwin delayed publication of the *Origin of Species* for almost twenty years until 1859. Darwin kept his theory of evolution secret, because he feared treatment similar to that which followed the publication of Robert Chambers' anonymously published *Vestiges of the Natural History of Creation* in 1844.

When Chambers published *Vestiges* it produced a sensation, in large part because this was not science written for specialists but for a wider audience. Chambers' work was seen as a type of Jacobin Lamarckism that argued from evolutionary principles that society must progress to a state of full cooperation.⁵⁰⁷ It sold well and garnered some praise, but it also provoked denunciation from mainstream naturalists who saw it as both scientifically unsound and politically provocative.⁵⁰⁸ Rev. Adam Sedgwick feared the social implications if humans were viewed as byproducts of changeable evolution. Sedgwick wrote to the geologist Charles Lyell that "...If [*Vestiges*] be true, the labours of sober induction are in vain; religion is a lie; human law is a mass of folly, and a base injustice; morality is moonshine; our labours for the black people of Africa were works of madmen; and man and woman are only

⁵⁰⁷ Adrian Desmond, "Artisan Resistance and Evolution in Britain, 1819-1848," in *Osiris*, 2nd Series, Vol. 3 (1987), pp. 79-85.

⁵⁰⁸ James Secord, *Victorian Sensation: The Extraordinary Publication, Reception, and Secret Authorship of Vestiges of the Natural History of Creation*. (Chicago and London: University of Chicago Press, 2001).

better beasts!”⁵⁰⁹ For Sedgwick the social and political implications of evolution were as important as the religious.

After Darwin: Reaction and Acceptance

The fear of radicalism lingered. Perhaps Darwin’s most famous English opponent was Richard Owen (1804-1892), English biologist and coiner of the term “Dinosaur”. In the 1830s, Owen had campaigned against radical naturalists, and he then sought to destroy the ability of Darwin’s ideas to gain adherents. Owen argued that the *Origin of Species* symbolized an ‘abuse of science,’ and was reminiscent of something ‘to which a neighbouring nation, some seventy years since, owed its temporary degradation.’⁵¹⁰ After *Descent of Man* was published in 1871, the London *Times* book review charged Darwin with “a very mischievous influence,” and argued that his views would cause morality to lose all “elements of stable authority.” Undermining the moral foundations of society was bad enough, but was even worse if the 1871 Paris Commune shows what an undermined morality might look like. “There is much reason to fear that loose philosophy, stimulated by an irrational religion, had done not a little to weaken the force of these principles in France, and that this is, at all events, one potent element in the disorganization of French society.”⁵¹¹

Before 1859 evolution was associated with radical politics, but after Darwin it was possible to be both an evolutionist and a capitalist. Darwinian evolution was no longer seen as a challenge to property and capital, and “Social Darwinism” became associated with laissez faire and the politics of industrialists, capitalists, free traders, and Victorian English

⁵⁰⁹ "Letter of Adam Sedgwick to Charles Lyell", April 9, 1845, *The Life and Letters of the Rev. Adam Sedgwick* vol. 2 (1890), pg. 84.

⁵¹⁰ Desmond & Moore. (1991), p. 491.

⁵¹¹ “Mr. Darwin on the Descent of Man,” *The Times*, (April 8, 1871), p. 5.

liberals. Darwin expanded the political spectrum that could lay claim to the mantle of evolutionary ideas. Unlike in debates over race, where Darwinism became associated with one side, widely divergent economic theories could appeal to Darwinian evolution for justification.

The scientific consensus supporting evolution in the United Kingdom did not face the amount of resistance it would in the United States, because all sides felt that they could use Darwinism's legacy. New Liberals formed a counter-current to evolution's use by free-trade, laissez faire capitalists. T. H. Green claimed that biological theories of evolution provided 'empirical' evidence of the movement towards collectivism.⁵¹² L.T. Hobhouse and J. A. Hobson used biological and evolutionary ideas and were in bitter conflict with the views of the social Darwinists.⁵¹³

Darwin's great achievement was to show for the first time, by means of the theory of Natural Selection, that the Evolution principle might be made to harmonise and illuminate a vast mass of otherwise disconnected and unintelligible facts of organic life. Spencer's achievement was to show that the same principle could be made the connecting link of all the sciences, and in particular of all the sciences that deal with living beings, and by its aid to construct a philosophy not, as philosophy too often is, opposed to science, but itself the sum or synthesis of the sciences.⁵¹⁴

Even before Darwin's death, disputes over the interpretation of evolution's meaning had begun. Social Darwinists were sure that natural selection endorsed their view that competition could make the poor thrifty, upright, and virtuous; while others argued that evolution demonstrated the need for social reform and cooperative coexistence. For example: "the law underlying the evolutionary process makes for collectivism, and there is a deeper significance in the old saying that man is a 'social animal' than we have as yet

⁵¹² Ibid., p. 471.

⁵¹³ Michael Freedon, "Biological and Evolutionary Roots of the New Liberalism in England," in *Political Theory*, Vol. 4, No. 4 (Nov., 1976), pp. 471-490.

⁵¹⁴ L. T. Hobhouse, "Leader", *Manchester Guardian*, September 12, 1903.

realized.”⁵¹⁵ Scientists influenced the politics of evolution through their work. The French zoologist Alphonse Milne-Edwards (1835-1900) argued that the solidarity of cells within living organisms demonstrated that cooperation not individualism was the ‘law of nature’.⁵¹⁶ Darwinism ceased to divide politically, because it was not a cudgel for one side but rather a vision of society to which all sides laid claim.

Darwin died in 1882 and was buried in Westminster Abbey, alongside Isaac Newton, as a scientific native son. The staunch Anglican Lord Salisbury, Tory Prime Minister and chancellor of the University of Oxford, put Darwin’s disciple Joseph Hooker’s name up for a knighthood, and he recognized T. H. Huxley’s eminence in the world of science by making him privy councillor.⁵¹⁷ Both the Anglican and the Catholic Church in England showed little hostility to evolutionary ideas. When the American Fundamentalist geologist George McCready Price came to England in 1925 to debate the evolutionist Joseph McCabe, he received so much heckling that the debate turned into a fiasco. One member of the conservative Victoria Institute in London “rebuked Price for attempting ‘to drive a wedge between Christians and scientists,’ as had been done in America.”⁵¹⁸ The inevitable conflict between religion and science that is supposed to have dominated the reception of evolution in America showed few signs in the United Kingdom.

Conclusion

⁵¹⁵ R. Didden, “Individualism or Collectivism? Which Way Does Evolution Point?,” in *Westminster Review*, Vol. 149 (Jun., 1898), 660-661.

⁵¹⁶ Theodore Zeldin, *France 1848-1945: Volume I: Ambition, Love and Politics*. The Oxford History of Modern Europe, edited by Alan Bullock and F. W. D. Deakin (Oxford: Clarendon Press, 1973), p. 656.

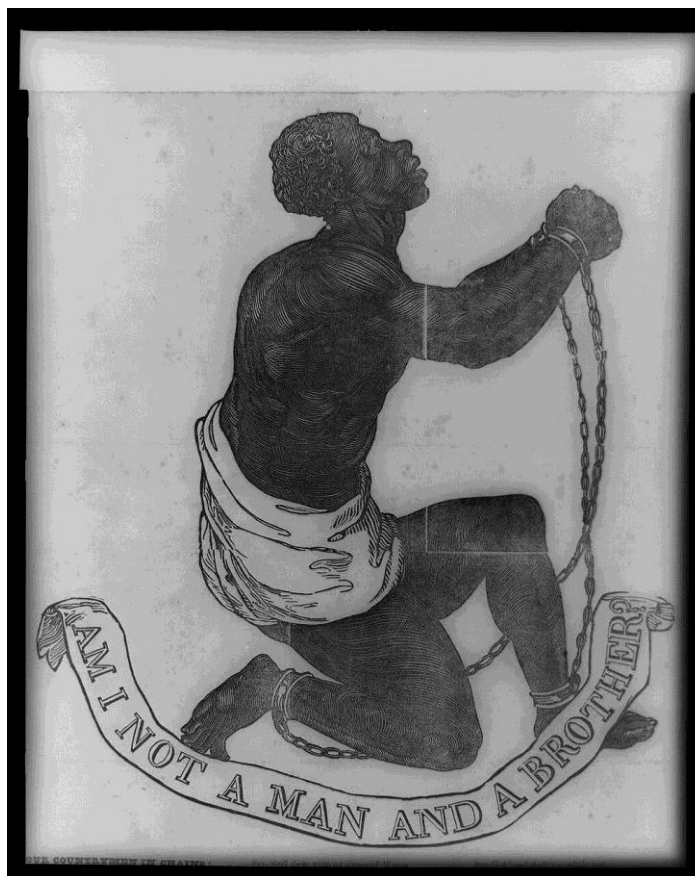
⁵¹⁷ James Moore, “Deconstructing Darwinism: The Politics of Evolution in the 1860s,” in *the Journal of the History of Biology*, Vol. 24, No. 3 (Autumn, 1991), p. 354.

⁵¹⁸ Numbers (1998), p. 103.

The abolition movement in the 18th and 19th centuries argued that the rights of African slaves to live free was secured by their dignity as human beings and the evil of enslaving a fellow man. The powerful question "am I not a Man and a Brother?" sought to establish the political and social rights of an oppressed racial minority on the shared humanity of the enslaved African. For polygenists who sought to deny the common humanity of whites and blacks, and for white supremacists who sought to establish white supremacy on a firm foundation of an eternal racial identity, Darwinism's implications for the scientific understanding of race were politically threatening. The growing power and authority of science in the middle of the 19th century, and the overwhelming support of elite scientists for both evolution and an end to slavery meant that evolutionary science could not be viewed as having been created by, and promoted by, impartial and disinterested scientists, but instead was viewed as being part of an ideological campaign to definitively establish the black slave as a man and a brother. Political tradition in the form of the Southern nationalism and white supremacy, not religious reaction, politicized the debates around Darwinism in America.

Appendix

Figure 4-3: "Am I Not a Man and a Brother"



Complete list of naturalists who joined the National Academy of Sciences between 1863-1900, organized by scientific opinion of evolution and political opinion of racial equality. (Source for scientists' opinions of evolution from Numbers (1997); opinions on racial equality compiled by author.)

Table 4-4: Evolutionists' Beliefs about White Supremacy (45/80)

NAS Naturalist	Born	Died	Born In	Evolution	Inequality
Spencer Fullerton Baird	1823	1887	Reading, PA	For	Against
Franz Boas	1858	1942	Minden, Germany	For	Against
Charles-Edouard Brown-Sequard	1817	1894	Port Louis, Mauritius	For	Against
Elliott Coues	1842	1899	Portsmouth, NH	For	Against
William Healey Dall	1845	1927	Boston, MA	For	Against
James Dwight Dana	1813	1895	Utica, NY	For	Against
Asa Gray	1810	1888	Paris, NY	For	Against

Table 4-4, cont: Evolutionists Beliefs about White Supremacy (45/80)

NAS Naturalist	Born	Died	Born In	Evolution	Inequality
Arnold Henri Guyot	1807	1884	Boudevilliers, Switz.	For	Against
Ferdinand Vandever Hayden	1829	1887	Westfield, MA	For	Against
Clarence Rivers King	1842	1901	Newport, RI	For	Against
John Lawrence LeConte	1825	1883	New York, NY	For	Against
Joseph LeConte	1823	1901	Liberty Co., GA	For	Against
Joseph Leidy	1823	1891	Philadelphia, PA	For	Against
Leo Lesquereux	1806	1889	Fleurier, Switz.	For	Against
Lewis Henry Morgan	1818	1881	Aurora, NY	For	Against
John Wesley Powell	1834	1902	Mount Morris, NY	For	Against
William Barton Rogers	1804	1882	Philadelphia, PA	For	Against
John Torrey	1796	1873	New York, NY	For	Against
Addison Emery Verrill	1839	1926	Greenwood, ME	For	Against
Charles Doolittle Walcott	1850	1927	New York Mills, NY	For	Against
Josiah Dwight Whitney	1819	1896	Northampton, MA	For	Against
Joseph Janvier Woodward	1833	1884	Philadelphia, PA	For	Against
Jeffries Wyman	1814	1874	Chelmsford, MA	For	Against
Eugene Woldemar Hilgard	1833	1916	Zweibrücken, Bav.	For	For
Henry Fairfield Osborn	1857	1935	Fairfield, CT	For	For
Alexander Agassiz	1835	1910	Neuchâtel, Switz.	For	Unclear
William Keith Brooks	1848	1908	Cleveland, OH	For	Unclear
Henry James Clark	1826	1873	Easton, MA	For	Unclear
William Gilson Farlow	1844	1919	Boston, MA	For	Unclear
Grove Karl Gilbert	1843	1918	Rochester, NY	For	Unclear
Theodore Nicholas Gill	1837	1914	New York, NY	For	Unclear
George Lincoln Goodale	1839	1923	Saco, ME	For	Unclear
George Brown Goode	1851	1896	New Albany, IN	For	Unclear
Othniel Charles Marsh	1831	1899	Lockport, NY	For	Unclear
Charles Sedgwick Minot	1852	1914	Roxbury, MA	For	Unclear
Edward Sylvester Morse	1838	1925	Portland, ME	For	Unclear
Frederic Ward Putnam	1839	1915	Salem, MA	For	Unclear
Samuel Hubbard Scudder	1837	1911	Boston, MA	For	Unclear
Sidney Irving Smith	1843	1926	Norway, ME	For	Unclear
William Stimpson	1832	1872	Boston, MA	For	Unclear
William Henry Welch	1850	1934	Norfolk, CT	For	Unclear
Charles Abiathar White	1826	1910	North Dighton, MA	For	Unclear
Charles Otis Whitman	1842	1910	Woodstock, ME	For	Unclear
Edmund Beecher Wilson	1856	1939	Geneva, IL	For	Unclear
Amos Henry Worthen	1813	1888	Bradford, VT	For	Unclear

Table 4-5: Neo-Lamarckians' Beliefs about White Supremacy (7/80)

NAS Naturalist	Born	Died	Born In	Evolution	Inequality
Alpheus Spring Packard, Jr.	1839	1905	Brunswick, ME	Neo-Lam.	Against

Table 4-5, cont: Neo-Lamarckians' Beliefs about White Supremacy (7/80)

NAS Naturalist	Born	Died	Born In	Evolution	Inequality
Edward Drinker Cope	1840	1897	Philadelphia, PA	Neo-Lam.	For
Alpheus Hyatt	1838	1902	Washington, D.C.	Neo-Lam.	For
Joel Asaph Allen	1838	1921	Springfield, MA	Neo-Lam.	Unclear
Charles Emerson Beecher	1856	1904	Dunkirk, NY	Neo-Lam.	Unclear
William Henry Brewer	1828	1910	Poughkeepsie, NY	Neo-Lam.	Unclear
Clarence Edward Dutton	1841	1921	Wallingford, CT	Neo-Lam.	Unclear

Table 4-6: Creationists' Beliefs about White Supremacy (8/80)

NAS Naturalist	Born	Died	Born In	Evolution	Inequality
Edward Hitchcock	1793	1864	Deerfield, MA	Against	Against
John Peter Lesley	1819	1903	Philadelphia, PA	Against	Against
Benjamin Silliman, Sr.	1779	1864	Trumbull, CT	Against	Against
Louis Agassiz	1807	1873	Môtier, Switz.	Against	For
George Engelmann	1809	1884	Frankfurt, Germany	Against	For
Augustus Addison Gould	1805	1866	New Ipswich, NH	Against	For
Thomas Sterry Hunt	1826	1892	Norwich, CT	Against	Unclear
John Strong Newberry	1822	1892	Windsor, CT	Against	Unclear

Table 4-7: Unknowns' beliefs about White Supremacy (20/80)

NAS Naturalist	Born	Died	Born In	Evolution	Inequality
Henry Pickering Bowditch	1840	1911	Boston, MA	Unknown	Against
Samuel Franklin Emmons	1841	1911	Boston, MA	Unknown	Against
Jared Potter Kirtland	1793	1877	Wallingford, CT	Unknown	Against
Silas Weir Mitchell	1829	1914	Philadelphia, PA	Unknown	Against
Sereno Watson	1826	1892	E. Windsor Hill, CT	Unknown	Against
Horatio C Wood	1841	1920	Philadelphia, PA	Unknown	Against
Samuel Stehman Haldeman	1812	1880	Lancaster Co., PA	Unknown	For
John Edwards Holbrook	1794	1871	Beaufort, SC	Unknown	For
John Shaw Billings	1838	1913	Allensville, IN	Unknown	Unclear
George Hammell Cook	1818	1889	Hanover, NJ	Unknown	Unclear
John Call Dalton, Jr.	1825	1889	Chelmsford, MA	Unknown	Unclear
William More Gabb	1839	1878	Philadelphia, PA	Unknown	Unclear
Arnold Hague	1840	1917	Boston, MA	Unknown	Unclear
James Hall	1811	1898	Hingham, MA	Unknown	Unclear
Fielding Bradford Meek	1817	1876	Madison, IN	Unknown	Unclear
Louis Francois de Pourtalès	1824	1880	Neuchâtel, Switz.	Unknown	Unclear
Raphael Pumpelly	1837	1923	Owego, NY	Unknown	Unclear
Charles Sprague Sargent	1841	1927	Brookline, MA	Unknown	Unclear
William Starling Sullivant	1803	1873	Franklinton, OH	Unknown	Unclear
Edward Tuckerman	1817	1886	Boston, MA	Unknown	Unclear

Progress, Social Darwinism, and Eugenics

Biology and the Bible agree that 'God hath made of one blood all nations of men.'...When I reflect upon the resemblances between all men and the differences which separate man from all other animals I think I can understand the words of a prayer which I used to hear when I was a boy: 'We thank thee, Lord, that thou has made us men.'⁵¹⁹

-Edwin Grant Conklin (1919)

We are nearer the goal of universal brotherhood, I feel, today than we were a century ago, largely, because the pursuit of science has developed a larger sympathy among men, by teaching them that they are truly of one flesh, with a common parentage.'⁵²⁰

-Thomas Wyatt Turner (1924)

Introduction

During the 50 years prior to the anti-evolution movement of the 1920s, Darwinian evolution most prominently manifested in political discourse in the laissez-faire capitalist doctrines of the social Darwinists and the push for hereditary improvement made by progressive eugenicists. Many social Darwinists and eugenicists were inspired by the idea that natural selection and evolutionary competition led to social progress. The social Darwinists argued that capitalism replicated the competitive patterns that uplifted species in nature, while eugenicists warned that social reformers would need to actively select for genetic “fitness” in modern society, because natural selective pressures that kept the “unfit” from breeding were absent in modern civilization. Both of these groups are largely

⁵¹⁹ Edwin Grant Conklin, “Biology and Democracy,” *Scribner’s Magazine*, Vol. 65, No. 4 (Apr., 1919), p. 408.

⁵²⁰ Thomas Wyatt Turner, “The Biological Laboratory and Human Welfare,” *Howard University Record* (Jan., 1924), p. 7.

unpopular today for different reasons, but one of the most prominent is the feeling that these doctrines were tools of white supremacy and racial inequality.

The notion that racial animus is inherent in social Darwinism and the eugenics movement challenges this dissertation's thesis, which has argued that evolution has proven politically challenging to white supremacy and threatening to the Southern political tradition of ascribing rights based upon racial identity. Indeed, I argue that evolution's association with racial egalitarianism has made Darwinism controversial and unpopular amongst those patrolling the "color line." Darwinian evolution is inescapably bound to political ideology in America because of the crucial relationship between natural history and racial identity, but in this chapter I show that the idea that social Darwinists and eugenicists used theories about biological evolution on behalf of racial hierarchy is false and incomplete. For the most part, white supremacists and supporters of Jim Crow laws in the American South supported neither social Darwinism nor the eugenics movement. Though social Darwinists and eugenicists sometimes justified and perpetuated racism, these two ideological groups' belief in the possibility of social progress was distinct from the rigid, fixed notion of racial hierarchy favored by evolution's opponents in the American South.

Charles Darwin's theory of evolution by natural selection was not only a powerful theory of biology, but proved efficacious for political and social theories, as well. Scientific authority, like religious authority, is capable of strengthening arguments about the way that the political world should work. Of the many tropes associated with Darwinian evolution, one of the most politically salient has been the idea that evolution implies progress in the natural world. If biological progress is natural, even necessary, then perhaps social progress

is also natural, even necessary.⁵²¹ Such implications were paralleled in the United Kingdom, where evolution was associated with the radical leftism of the French Revolution and the industrial capitalists of the new British middle classes, while being shunned by the upholders of the traditional order as upsetting to proper moral order. That Darwinian evolution has been associated with progress and change has often endeared it to social reformers, who have argued for the naturalness and necessity of social change as evidenced by its presence in the natural world. For example, in the late-19th and early-20th centuries, African-American writers like Booker T. Washington recognized the link between Darwinism and progress, even when they were unsure about the biological validity of Darwin's thesis. When asked about his opinion of biological evolution, Washington's answer acknowledged evolution's association with progress: "As to the general ideas of the progress of mankind, which have been associated with the name of Darwin in most of our minds, I confess that I share them..."⁵²² Of course, even if evolution means progress, progress means different things to different people. In fact, the political ideal of "progress" is so broad and potentially contestable, that coalitions with completely different views about economic or racial "progress" have been able to accept Darwinian thinking and the lessons that Darwinian evolution is supposed to be able to teach society. Despite the popular notion that social

⁵²¹ The idea that biological evolution is actually "progressive" is controversial, since it is unclear that the evolution of life has actually had any goal towards which to progress. However, the uncertainty about whether or not life has actually been progressing did not stop biologists from speaking as if it did, and it did not stop non-biologists from interpreting evolution to be mean progressive change. We can discern this when animals are classified as "higher" or "lower" and when natural selection is described as leading to "improvements." Even Charles Darwin talked about evolution as a progressive force: "And as natural selection works solely by and for the good of each being, all corporeal and mental endowments will tend to progress towards perfection." (*Origin of Species*, 1859, p. 489). Social thinkers who applied Darwinian ideas to society, especially Herbert Spencer, were even less shy about attributing progress to evolution. For more on the mixing of progressive ideas and evolution see Matthew H. Nitecki, ed. *Evolutionary Progress*. (Chicago and London: University of Chicago Press, 1988); J. C. Greene, "Progress, Science, and Value: A Biological Dilemma," *Biology and Philosophy*, Vol. 6, No. 1 (Jan., 1991), pp. 99-106; Michael T. Ghiselin, "Perspective: Darwin, Progress, and Economic Principles," *Evolution*, Vol. 49, No. 6 (Dec., 1995), pp. 1029-1037.

⁵²² Booker T. Washington, "Letter to Elmer Kneale", November 29, 1911. *The Booker T. Washington Papers*, Vol. 11: 1911-12, (Champaign, IL: University of Illinois Press, 1981), p. 378.

Darwinism and the eugenics movement were inherently racist, the reality is that Southern whites were less amenable to social Darwinism, eugenics, and the fact of human evolution, because they were less amenable to the idea of racial progress.

The central argument of this dissertation is that the intimate connection between natural history, race, and politics has meant that it has been impossible for a biological theory with clear implications for the nature of racial identity to remain “apolitical”. America’s particular racial history has meant that Darwin’s theory of evolution *had* to be seen in relation to its racial implications. Though some have made the claim that scientists can provide a useful set of “non-political” facts that can inform and aid political discourse, the salience of Darwinian evolution to racial identity has meant that evolutionary scientists are not seen as theoretically objective arbiters in the partisan process, but as active players in the long struggle between the American political traditions of liberal egalitarianism and white supremacy. This was as true during America’s Gilded Age and Progressive Era as it was in the mid-18th century when Darwin published the *Origin of Species*. The defense of the racial privilege and the color line politicized scientific notions of race. When scientific authority was thought to challenge the color line, scientific authority was viewed through the lens of an adverse political ideology by the color line’s defenders. Here is how Frederick Douglass described the color line’s power to shape beliefs: “Everything against the person with the hated color is promptly taken for granted; while everything in his favor is received with suspicion and doubt.”⁵²³ The “politicization” of evolution damaged the perceived disinterestedness of Darwinists and made it less likely that people would defer to the scientific consensus on this issue.

⁵²³ Frederick Douglass, “The Color Line,” *North American Review*, Vol. 132, No. 295 (Jun., 1881), pp. 569.

Though industrialists and socialists were ideologically opposed to one another, they both felt comfortable appealing to the emerging biological consensus that evolutionary change was inherent in nature. This is in stark contrast to the landed aristocratic conservatism of the United Kingdom, and its closest cousin in the United States, the landed slaveholding aristocracy of the American South. Change, progress, and improvement were not amenable ideas to a political order prefaced upon organic, static hierarchy, and it was difficult to deny that Darwinian evolution most definitely implied change. Darwin himself often stated that the success of natural selection was an argument against primogeniture.⁵²⁴ In the states of the North, Midwest, and West the political disputes over social Darwinism and eugenics shared much with similar disputes over the political meaning of evolution in the United Kingdom in the latter half of the 19th century and the early parts of the 20th century. Such disputes were dominated by questions of economics and class interests between industrialists and reformers seeking to curtail the often harsh realities of “laissez faire” capitalism. Though race has mattered everywhere in the United States, struggles over racial domination have especially shaped political tradition in the South. Because the color line was prefaced upon an immutable and unchangeable nature of racial fixity, evolution was politically horrifying to Southern white identity.

The idea of miscegenation proved similarly threatening, because both implied the common origins of all races and the mutability of racial type, and as we shall see below the work of evolutionists would play an important role in removing the legal framework barring interracial marriage. During the Civil War, a journalist named David Goodman Croly, who was opposed to racial mixing, exploited Southern fears of miscegenation to satirize

⁵²⁴ James Allen Rogers, “Darwinism and Social Darwinism,” *Journal of the History of Ideas*. Vol. 33, No. 2 (Apr. – Jun., 1972), pp. 273-4.

abolitionists. It was Croly who coined the word “miscegenation”, and he described its implications thus: “The word is spoken at last. It is Miscegenation—the blending of the various races of men—the practical recognition of the brotherhood of all the children of the common father.”⁵²⁵ At the end of his pamphlet, Croly concludes that the teaching of science has demonstrated that “the whole human race is of one family, it follows that there should be no distinction in political or social rights on account of color, race, or nativity, in a republic.”⁵²⁶ The power structure that existed to privilege white supremacy rejected the idea that race was mutable and contingent, rather than permanent and natural. Both Darwinian evolution and miscegenation presented similar challenges to the defenders of the Southern racial order, and like miscegenation, a belief in evolution would be seen not merely as a matter of private belief or private behavior, but as a public action against prevailing racial norms and a marker of one's identity as a white Southerner.

This chapter addresses the ways that Darwinism influenced political ideologies from 1880-1920, similar to how Darwinian evolution had previously played into disputes over southern slavery before the Civil War. The two prominent political and ideological movements that influenced social and economic policy in the United States that drew upon biological analogy, gilded-age social Darwinism and Progressive-era eugenics, are often joined together under the term “scientific racism.” But social Darwinism and the eugenics movement were distinct ideological movements whose goals and adherents were neither coterminous with one another nor with defenders of white supremacy.⁵²⁷

⁵²⁵ David Goodman Croly, *Miscegenation; the Theory of the Blending of the Races, Applied to the American White Man and Negro*. (New York: H. Dexter, Hamilton & Co., 1864), p. 1.

⁵²⁶ *Ibid.*, p. 64.

⁵²⁷ Thomas C. Leonard, “Mistaking Eugenics for Social Darwinism,” *History of Political Economy*, Vol. 37, Supp. 1 (2005), pp. 200-233.

Social Darwinism, Eugenics, and Scientific Racism

Writing near the end of the nineteenth century, Max Nordau reiterated a common claim about Darwin's influence when he said that "the greatest authority of all advocates of war is Darwin."⁵²⁸ Benjamin Kidd claimed that the German war machine of the early twentieth century was rooted in Darwin, and William Jennings Bryan claimed that the success of Darwinian science had led to the atrocities of the First World War: "The same science that manufactured poisonous gases to suffocate soldiers is preaching that man has a brute ancestry and eliminating the miraculous and the supernatural from the Bible."⁵²⁹ The creationist George McCready Price thought that World War I was when Germany had put "the ruthless ethics of Darwinism...into actual practice."⁵³⁰ Sometimes the claim of Darwinism's responsibility for atrocities is made explicitly and hyperbolically, such as Dennis Rutledge's claim that "the philosophical and political underpinnings of ideas associated with racial superiority and inferiority were first given scientific legitimacy and credence with the publication of Charles Darwin's (1859) revolutionary book, *The Origin of Species*."⁵³¹ The historian Richard Weikert even claims that Darwinian science led to the racial atrocities of Nazism, though this is not generally held to be true.⁵³² As Robert J. Richards has observed, "it can only be a tendentious and dogmatically driven assessment that would condemn

⁵²⁸ Max Nordau, "Philosophy and Morals of War," *The North American Review*, Vol. 169, No. 517 (Dec., 1899), p. 794.

⁵²⁹ Benjamin Kidd, *The Science of Power*. (London: Methuen & Co, Ltd, 1918), pp. 32, 48, 53, 57 ;W. J. Bryan to Johnnie Baldwin, March 27, 1923, Box 37, W. J. Bryan Papers, Library of Congress; Quoted in Ronald L. Numbers, *The Creationists: From Scientific Creationism to Intelligent Design*, expanded ed. (Berkeley and Los Angeles: University of California Press, 2006), p. 41.

⁵³⁰ Quoted in Numbers, (2006), p. 86.

⁵³¹ Dennis Rutledge, "Social Darwinism, Scientific Racism, and the Metaphysics of Race," *Journal of Negro Education*. Vol. 64, No. 3 (1995), p. 243.

⁵³² Richard Weikert, *From Darwin to Hitler, Evolutionary Ethics, Eugenics and Racism in Germany*. (New York: Palgrave Macmillan, 2004).

Darwin for the crimes of the Nazis.”⁵³³ However, more moderate descriptions of the relationship between Darwin and racism are common.

For example, there is Richard Hofstadter’s claim that “the Darwinian mood sustained the belief in Anglo-Saxon racial superiority which obsessed many American thinkers in the latter half of the nineteenth century.”⁵³⁴ George Frederickson claimed that Darwin’s publication of the *Origin of Species* gave “new impetus and greater respectability” to prophets of race wars and black population decline and that Darwin’s theories had “obvious attraction for those who believed that some human races had a more exalted destiny than others.”⁵³⁵ Harvard’s Derrick A. Bell, Jr., one of the originators of critical race theory, has said that “Charles Darwin, Herbert Spencer, William Graham Sumner, and other influential social scientists combined to champion a system that supported natural rights and racial purity and that equated wealth and power with virtue.”⁵³⁶ We can also see the supposed inherent racism in social Darwinism by the way that figures have been excluded from the ranks of the social Darwinists, because they did not ascribe to the supposed racial ideas of a social Darwinist. Josiah Strong had been considered a social Darwinist, because he was “an advocate of Anglo-Saxon imperialism based on the Darwinian idea of competition among nations and races ensuring survival of the fittest and, if necessary, involving the dispossessing of weaker peoples.”⁵³⁷ But because Strong thought that competition and

⁵³³ Robert J. Richards, “The Moral Grammar of Narratives in History of Biology—The Case of Haeckel and Nazi Biology,” *Cambridge Companion to the Philosophy of Biology*, ed. Michael Ruse and David Hull (Cambridge: Cambridge University Press, 2007), p. 451.

⁵³⁴ Richard Hofstadter, *Social Darwinism in American Thought*. (Philadelphia: University of Pennsylvania Press, 1944), pp. 172-3.

⁵³⁵ George Frederickson, *The Black Image in the White Mind: The Debate on Afro-American Character and Destiny, 1817-1914*. (Hanover, NH: Wesleyan University Press, 1987 [1971]), p. 230.

⁵³⁶ Derrick A. Bell, Jr., “The Racial Imperative in American Law,” *The Age of Segregation: Race Relations in the South, 1890-1945*. ed. Robert Haws (Jackson, MS: University Press of Mississippi, 1978), p. 7.

⁵³⁷ Dorothea R. Muller, “Josiah Strong and American Nationalism: A Reevaluation,” *The Journal of American History*, Vol. 53, No. 3 (Dec., 1966), p. 488.

survival of the fittest among races was “a necessary step in the evolution toward a cooperative world-society,” Dorothea Muller argued that he should not be considered a social Darwinist.⁵³⁸ The tendency to exclude such individuals from the “social Darwinist group” necessarily narrowed the definition of what social Darwinism was. This is something that shall be addressed below.

Some social Darwinists did use the idea of a “struggle for existence” as a prop for the subjugation of non-white peoples by Europeans. The eugenicist Karl Pearson, for example, advocated European imperialism for humanity's progress like this: “you may hope for a time when the sword shall be turned into the plowshare...when the white man and the dark shall share the soil between them, and each till as he lists. But, believe me, when that day comes mankind will no longer progress... There is a struggle of race against race and of nation against nation.”⁵³⁹ Benjamin Kidd, author of *Social Evolution*, argued that progress came through natural competition and struggle of the strong against the weak, and that “wherever a superior race comes into close competition with an inferior race, the result seems to be much the same...”⁵⁴⁰ Kidd considered racial struggle inevitable, and thought that “our common-sense, which has to deal with materials as they exist, refuses to honour” the idea of a society “without distinction of race or colour”.⁵⁴¹ Pearson and Kidd’s writings certainly lend some credence to the idea that social Darwinism is inextricably linked with racism, but the writings of other social Darwinists reveal a broader and less hierarchical understanding of race and inequality.

⁵³⁸ *Ibid.*, p. 494.

⁵³⁹ Karl Pearson, *National Life from the Standpoint of Science*. (London: Adam and Charles Black, 1905), pp. 26-7, 36.

⁵⁴⁰ Benjamin Kidd, *Social Evolution*. (New York: Macmillan and Co., 1894), pp. 48.

⁵⁴¹ *Ibid.*, p. 211.

Social Darwinism, as exemplified by Herbert Spencer and William Graham Sumner, argued that individual competition led to social progress. Spencer's phrase "the survival of the fittest" illustrated the laissez faire economic doctrine of the Gilded Age, which argued that the struggle between economic competitors allowed the best individuals and businesses to flourish and thereby improved human society. The eugenics movement, on the other hand, argued explicitly not for a laissez faire approach, but for a guided approach that reversed what the eugenicists saw as the destructive tendencies of unguided heredity and childbirth. Like the progressive reformers who felt that capitalism needed to be channeled by government regulation, the eugenicists argued that the future of human welfare depended upon an active program of governmental control to guide human reproduction. Despite these differences in approach, these late 19th century/ early 20th century movements both found greater success outside of the American South than within it, and they were both movements where opinion would be divided along class lines rather than racial ones. While the differences between social Darwinism and the eugenics movement were often substantial, they both primarily reflected ideologies of northern, industrial America and its economic, class-based concerns. It is no paradox that William Jennings Bryan, champion of western populism and southern white supremacy, opposed both industrialist social Darwinism and progressive eugenics.

Social Darwinism and Darwin in America

The social Darwinists were a varied lot. On the right, William Graham Sumner and Andrew Carnegie analogized free market capitalism to nature "red in tooth and claw." While on the left, Henry Demarest Lloyd and Henry George used evolution to rail against tycoon

greed and for state ownership of monopolies. Some used social Darwinism to justify imperialism, while others desired progress, improvement, and education for recently freed slaves in the American South. Between about 1870 and 1920, Darwinian evolution was often used to justify a complicated, and often contradictory, set of political arguments about issues like economics and race.

Darwin did not create social Darwinism—in fact, Darwin claimed (somewhat falsely) that he had never even thought to apply his biological theories to social life—but the concord between the "survival of the fittest" idea and the business practices of industrial capitalists has made it seem so. The idea that laissez faire was "natural" appealed to businessmen like Andrew Carnegie and John D. Rockefeller. As Charles Peirce put it, “the extraordinarily favorable reception it met with was plainly owing, in large measure, to its ideas being those toward which the age was favorably disposed, especially, because of the encouragement it gave to the greed-philosophy.”⁵⁴²

Right-wing social Darwinism held that society ought to mimic nature's inherent competition. If struggle makes nature bountiful, then it can make an economy bountiful, too. Rockefeller compared the origins of a successful business to that of a rose: “The growth of a large business is merely a survival of the fittest.... The American Beauty rose can be produced in the splendor and fragrance which bring cheer to its beholder only by sacrificing the early buds which grow up around it. This is not an evil tendency in business. It is merely the working out of a law of nature and a law of God.”⁵⁴³ Sumner argued that

⁵⁴² Charles Peirce, “Evolutionary Love,” *Writings of Charles S. Peirce: A Chronological Edition. Vol. 8 1890-1892.* (Indiana University Press, 2009).

⁵⁴³ Quoted in William James Ghent. *Our Benevolent Feudalism.* (New York: The Macmillan Company, 1902), p. 29.

human life was a struggle for existence, and in that struggle individuals owed nothing to one another besides good will.⁵⁴⁴ Since life is a contest, then to the victor go the spoils.

Unsurprisingly, many resisted the idea that inequality was natural and society ought not to intervene. William Jennings Bryan viscerally opposed the “survival of the fittest” implications of Social Darwinism and his campaigns against bankers and gold bugs railed against the acceptance of inequality implied by social Darwinism. Perhaps unsurprisingly, Bryan’s most conspicuous opponent on the issue of bimetallism was America’s most conspicuous proponent of social Darwinism, William Graham Sumner.⁵⁴⁵ Not only did Bryan and Sumner disagree on monetary policy, but they disagreed on what the social classes owed to one another. Bryan said that the foundation of politics should not be the triumph of the fit over the unfit, but the eleventh commandment: “Thou shalt love thy neighbor as thyself.”⁵⁴⁶ Yet, to oppose social Darwinism did not make one a racial egalitarian. On the contrary, Bryan’s campaigns on behalf of America’s laborers excluded its nonwhite ones.

There were many who supported social cooperation and opposed the “the devil take the hindmost” ethos, and were equally willing to argue that Darwinian evolution implied that their vision for society was “natural.” This was a vein of ideology that Eric Goldman has called “reform Darwinism.”⁵⁴⁷ Although the Spencerian social Darwinists are more famous today, the left-wing’s political use of biological evolution is older than even the publication of the *Origin of Species*.⁵⁴⁸ The reform Darwinists agreed with the Spencerians that biological

⁵⁴⁴ William Graham Sumner. *What Social Classes Owe to Each Other*. (New York: Harper and Bros., 1883).

⁵⁴⁵ William Graham Sumner, “Prosperity Strangled by Gold?” *Leslie’s Weekly*, (Aug. 20, 1896), which can be found in *The Forgotten Man: and Other Essays*. Ed. Albert Galloway Keller (New Haven, CT: Yale University Press, 1907), pp. 140-145.

⁵⁴⁶ Quoted in Willard H. Smith, “William Jennings Bryan and the Social Gospel,” *The Journal of American History*, Vol. 53, No. 1 (Jun., 1966), pp. 42-3.

⁵⁴⁷ Eric Goldman. *Rendezvous with Destiny*. (New York: 1952), pp. 97-100.

⁵⁴⁸ See, for example, Adrian Desmond’s *The Politics of Evolution: Morphology, Medicine, and Reform in Radical London*. (Chicago, IL: University of Chicago Press, 1989).

evolution had important lessons for human society, but they disagreed about the nature of those lessons. The reform Darwinists argued that mutual aid and cooperation were necessary to improve human society, and they argued that examples of the progressive evolution of cooperation in nature, like cells in a human organ or ants in a colony, showed that governmental programs and industrial regulation can be superior to *laissez faire* “survival of the fittest.” The historian Howard Gruber explains:

It would be entirely in harmony with [Darwin’s] thinking to insist that the struggle for survival of the human species must be, in the years to come, a struggle to develop social forms that enhance cooperation and rational, long-term planning for collective ends rather than shortsighted, individualistic efforts for private gain.⁵⁴⁹

Darwin’s “Bulldog”, Thomas Henry Huxley, agreed with this assessment. Addressing Herbert Spencer’s extreme individualism, Huxley asked his readers to “suppose every separate cell left free to follow its own ‘interests,’ and *laissez faire*, Lord of all, what would become of the body physiological?” Huxley answered his own question by claiming that “if the analogy of the body politic with the body physiological counts for any thing, it seems to me to be in favor of a much larger amount of governmental interference than exists at present, or than I, for one, at all desire to see.”⁵⁵⁰ After all, nature shows us, according to Huxley, that “the societies of Bees and Ants exhibit socialism *in excelsis*.”⁵⁵¹

In 1902 Peter Kropotkin, a zoologist and anarcho-communist, published *Mutual Aid: A Factor of Evolution*, probably the most famous left-wing economic appropriation of Darwinian science.⁵⁵² In his book, Kropotkin stressed the evolutionary importance of social cooperation and mutual aid, which he argued were as important as competition for species’

⁵⁴⁹ Howard Gruber, *Darwin on Man: A Psychological Study of Scientific Creativity* (London: Wildwood House, 1974), p. 240.

⁵⁵⁰ Thomas Henry Huxley, “Administrative Nihilism”, *More Criticisms on Darwin and Administrative Nihilism*. (New York: D. Appleton & Co., 1872), p. 72.

⁵⁵¹ Huxley quoted in Rogers (1972), p. 272.

⁵⁵² Peter Kropotkin, *Mutual Aid: A Factor of Evolution*. (New York: McClure Phillips & Co., 1902).

success, and therefore mutual aid was as natural and necessary as mutual struggle. Kropotkin argued that human society had advanced beyond a stage in which pure competition could suffice for social progress, and as in any complex organism, cooperation amongst its constituent parts was necessary. The American biologist Edwin Conklin picked up this theme when he argued that evolutionary history showed that cooperation was successful and that “unquestionably the further evolution of society must lie in the direction of greater co-operation and any system of organization which exalts individual freedom to the detriment of social union must go under in the struggle for existence.”⁵⁵³

Alfred Russel Wallace, who independently formulated a theory of natural selection, argued that natural selection worked differently amongst animals than amongst humans. Wallace claimed that animals are “self-dependent” and live in “isolation” providing “no mutual assistance” to one another, while humans are “social and sympathetic.” Such qualities, Wallace claimed:

[H]ave become the subjects of ‘natural selection.’ For it is evident that such qualities would be for the well-being of man; would guard him against external enemies, against internal dissensions, and against the effects of inclement seasons and impending famine, more surely than could any merely physical modification.⁵⁵⁴

These ideas filtered into the larger world of social and political thought. The progressive journalist Henry Demarest Lloyd railed against the survival of the fittest attitude amongst the business tycoons of his day, and attributed Darwinian ideas to Gilded Age capitalists.⁵⁵⁵ The populist political economist Henry George, who favored state ownership of monopolies and argued that land belonged equally to all humanity, used evolutionary arguments to justify his

⁵⁵³ Conklin (1919), p. 407.

⁵⁵⁴ Alfred Russel Wallace, *Contributions to the Theory of Natural Selection: A Series of Essays*. 2nd ed. (New York: MacMillan & Co., 1871), pp. 311-3.

⁵⁵⁵ Henry Demarest Lloyd, *Wealth against Commonwealth*. (New York and London: Harper & Brothers Publishers, 1894), p. 496.

economic theories.⁵⁵⁶ Wallace wrote to Darwin expressing his admiration for Henry George's *Progress and Poverty* and said that he had never been so impressed with a book. Darwin replied that he would certainly order it himself.⁵⁵⁷

Both the left-wing and the right-wing appealed to evolutionary theory. In one interesting case both sides did at once. During the Anthracite Coal Commission Hearings of 1902, George F. Baer, the President of the Philadelphia and Reading Coal and Iron Company, explicitly argued on behalf of the operating corporation against the striking coal miners by appealing to social Darwinian arguments.⁵⁵⁸ Baer claimed that "it is generally conceded that the marvelous progress of the past century is due to the general acceptance of the theory that under the action of individual liberty maximum efficiency and justice have been secured."⁵⁵⁹ When presenting the Corporation's case, Baer cited Herbert Spencer as an authority on the rights of labor and he made the case that competition was the best method to ensure progress. Two of Mr. Baer's opponents before the commission were Henry Demarest Lloyd, the Progressive "reform Darwinist" and Clarence Darrow, who would later argue on behalf of John Scopes' right to teach evolution in Tennessee. All three (Baer, Lloyd, and Darrow) had very different views about labor unions, capitalism, and the relevance of "survival of the fittest" for the economy, but all three found value in appealing to evolutionary theory.

One of the more common charges made against Social Darwinism is that of racism. Indeed, the connection between race and the evolutionary theories of Darwin and Spencer's

⁵⁵⁶ Henry George, *Progress and Poverty* (1879).

⁵⁵⁷ John Laurent, "Henry George: Evolutionary Economist?," in *Henry George's Legacy in Economic Thought*, ed. John Laurent (Edward Elgar Publishing, 2005), p. 73.

⁵⁵⁸ Dimitra Doukas, "Corporate Capitalism on Trial: The Hearings of the Anthracite Coal Strike Commission, 1902-1903," *Identities: Global Studies in Culture and Power*, Vol. 3, No. 3 (1997), pp. 367-398.

⁵⁵⁹ George F. Baer. *Argument of George F. Baer, Esq., President of the Philadelphia and Reading Coal and Iron Company*. (Philadelphia, PA., February 12th, 1903), p. 1.

“survival of the fittest” was even remarked upon at the time. Joseph Le Conte had this to say:

[T]he recent introduction of the idea of evolution by Darwin, and its extension by Spencer to every department of Nature, has revolutionized the philosophy and methods of every department of thought, especially that of sociology. . . . The laws determining the effects of contact of species, races, varieties, etc., among animals may be summed up under the formula ‘The struggle for life and the survival of the fittest.’ It is vain to deny that the same law is applicable to the races of man also. All the factors of organic evolution are carried forward into human evolution, only they are motivated by an additional and higher factor, Reason, in proportion to the dominance of that factor – i.e., in proportion to civilization.⁵⁶⁰

Some racists did use the language of social Darwinism and the trope of the “survival of the fittest” to justify white supremacy. Thomas Dixon, Jr., the author of such books as *The Clansman: An Historical Romance of the Ku Klux Klan* and *The Leopard’s Spots: A Romance of the White Man’s Burden*, borrowed this metaphor in his description of the relationship between white and blacks in the American South after the withdrawal of Northern troops:

When the white men elected were sworn in, the guards went to the woods and told the terrified and half starving negroes they could return to their homes, a competent police force was organised, and the volunteer organisation disbanded. Negro refugees and their associates once more filled the ear of the national government with clamour for the return of the army to the South to uphold Negro power, but for the first time since 1867, it fell on deaf ears. The Anglo-Saxon race had been reunited. The Negro was no longer the ward of the Republic. Henceforth, he must stand or fall on his own worth and pass under the law of the survival of the fittest.⁵⁶¹

However, such writings did not represent the mainstream of social Darwinist thought.

Herbert Spencer is often linked with the defense of white supremacy, and some of his writings can sound similar to Southern white supremacists. For example, when Spencer says that:

⁵⁶⁰ Joseph LeConte. *The Race Problem in the South*. (New York: D. Appleton and Company, 1892), p. 351, 359.

⁵⁶¹ Thomas Dixon, Jr. *The Leopard’s Spots: A Romance of the White Man’s Burden - 1865-1900*. (New York: Doubleday, Page & Co, 1902), p. 414.

Whilst the continuance of the old predatory instinct after the fulfillment of its original purpose, has retarded civilization by giving rise to conditions at variance with those of social life, it has subserved civilization by clearing the earth of inferior races of men. The force which are working out the great scheme of perfect happiness, taking no account of incidental suffering, exterminate such sections of mankind as stand in their way, with the same sternness that they exterminate beasts of prey and herds of useless ruminants. Be he human being, or be he brute, the hindrance must be got rid of. Just as the savage has taken the place of lower creatures, so must he, if he have remained too long a savage, give place to his superior.⁵⁶²

It is difficult to read this without thinking that Spencer is a champion of the most virulent form of racism possible, yet as Spencer goes on to say, “let not the reader be alarmed.” A closer look reveals that Spencer is not advocating “new invasions and new oppressions.” Nor is he advocating that “any one who fancies himself called upon to take Nature’s part in this matter, by providing discipline for idle negroes or others, suppose that these dealings of the past will serve for precedents.” Spencer argues that the phase of civilization where the “forcible supplantings of the weak by the strong” are advantageous ended with the evolution of moral feeling amongst and between human beings. The progress of civilization has lifted humans out of an “unconsciousness that there is any thing wrong” in oppression and rapine. Spencer continues to argue that as civilization has progressed, humanity’s moral sense has progressed as well and the old, primitive way in which humans treated one another will, must, and should end. To act in the old ways would be disastrous and would diminish society, materially and morally. “Before a forced servitude could be again established for the industrial discipline of eight hundred thousand Jamaica blacks, the thirty millions of English whites who established it would have to retrograde in all things—in truthfulness, fidelity, generosity, honesty, and even in material condition; for to diminish men’s moral sense is to

⁵⁶² Herbert Spencer, *Social Statics; or the Conditions Essential to Human Happiness Specified, and the First of them Developed*. (New York: D. Appleton & Co., 1883 [1851]), pp. 454-5.

diminish their fitness for acting together, and, therefore, to render the best producing and distributing organizations impracticable.”⁵⁶³

To be sure, Herbert Spencer was a racist, but his theories of racial inequality are more nuanced than is often assumed and do not seek to prevent progressive moral changes that would eliminate oppressive factors undergirding white supremacy, such as Jim Crow laws in the American South. During the Supreme Court’s *Lochner* era, governmental intervention into the economy was sharply limited. In Oliver Wendell Holmes’ dissent from the *Lochner* case, he argued that the court was wrong to declare unconstitutional New York’s regulation of baker’s working hours, because the “the Fourteenth Amendment does not enact Mr. Herbert Spencer’s *Social Statics*...”⁵⁶⁴ On matters of race, however, the Supreme Court was much more willing to allow for the intervention of the state into the affairs of private businesses. The most famous example of this is *Plessy v. Ferguson* (1896), which validated a Louisiana state law requiring private railway companies to provide separate cars for blacks and whites. In *Berea College v. Kentucky*, the Supreme Court upheld a Kentucky law that prevented private educational institutions from admitting both black and white students. The Supreme Court declared the use of the state’s police power to intervene into the business decisions of private railroads and colleges legitimate when done to protect segregation. As legal scholar Richard A. Epstein has pointed out, “Mr. Herbert Spencer’s *Social Statics* is just the right antidote to Jim Crow.”⁵⁶⁵ One needn’t share Epstein’s anti-interventionism to see that Spencerian social Darwinism and the Southern status quo were based on different principles. Southern white supremacists did not think, as Spencer did,

⁵⁶³ *Ibid.*, p. 456-8

⁵⁶⁴ Oliver Wendell Holmes, dissent, *Lochner v. New York*, 198 U.S. 45 (1905).

⁵⁶⁵ Richard A. Epstein, *Forbidden Grounds: The Case Against Employment Discrimination Laws*. (Cambridge, MA: Harvard University Press, 1995), p. 99.

that society ought to be structured so that unfettered competition could lead, through social evolution, to a better civilization. Rather, they believed that racial identity was real, natural, and fixed, and that state power ought to be used to advantage one race and to disadvantage another. The police power of the state was to be used by whites for whites. As one commentator has put it, “in an era of black political powerlessness, state regulation was unlikely to advantage blacks.”⁵⁶⁶ Jim Crow laws did not depend solely on state power—social mores and extralegal violence were also important—but state intervention played an important role in supporting segregation and the American South’s racial hierarchy.

Social Darwinism made the claim that the winners in the competition of life deserved their winnings, and that the competitive spirit improved human society. Often they argued that white people would be triumphant over other races, and that this triumph was probably inevitable, but only justified if used to better civilization. Rudyard Kipling’s poem “The White Man’s Burden” exemplifies this spirit:

Take up the White Man's burden--
Send forth the best ye breed--
Go bind your sons to exile
To serve your captives' need;⁵⁶⁷

Social Darwinists didn’t argue that white people deserved to win because they were white; they argued that the triumph of the white race was an inevitable byproduct of their superior ability. Superior ability, not racial identity, justified the spoils system. This is different than Southern segregationists, who argued that white people deserved their spoils because of their racial identity.

⁵⁶⁶ Michael J. Klarman, *From Jim Crow to Civil Rights: The Supreme Court and the Struggle for Racial Equality*. (Oxford: Oxford University Press, 2004), p. 82.

⁵⁶⁷ Rudyard Kipling, “White Man’s Burden” (1899), lines 1-4.

This is not merely a distinction without a difference, but a distinction that points to an important difference in attitudes towards progress, improvement, and the color line. The possibility for improvement and progress meant that many who were friendly to the African-American community could believe that Darwinian evolution had great relevance for human society, and even call themselves social Darwinists. Andrew Carnegie, the famous cutthroat capitalist, was a major funder of Booker T. Washington's Tuskegee Institute and called Washington "one of the greatest living men."⁵⁶⁸ In 1907, Carnegie delivered an address called "The Negro in America," in which he lauded the ending of slavery in America and extolled the clear improvement of African-Americans since the end of slavery. Carnegie argued that real improvement was possible for African-Americans: "All the signs are encouraging, never so much so as to-day. One is quite justified in being sanguine that the result is to be a respectable, educated, intelligent race of colored citizens, increasing in numbers, possess of all civil rights..."⁵⁶⁹ This improvement was a sign of Negro "fitness." Carnegie's belief in the progress of African-Americans in the South outraged the white Georgian Populist Tom Watson, who after a failed attempt to unite poor whites and blacks in the South made an explicit turn towards white supremacy.⁵⁷⁰ Fourteen years after serving as William Jennings Bryan's Populist Party Vice-Presidential Candidate, Watson railed against Andrew Carnegie and in a *New York Times* article "denounced the iron master as a 'despicable creature,' 'an ass,' and a defamer of the Scotch" for saying that the "lowest negro

⁵⁶⁸ "\$600,000 for Tuskegee and B. T. Washington," *The New York Times*, April 24, 1903.

⁵⁶⁹ Andrew Carnegie. *The Negro in America: An Address Delivered before the Philosophical Institution of Edinburgh, 16th October 1907*. (Cheyney, PA: Committee of Twelve for the Advancement of the Interests of the Negro Race, 1907), p. 30.

⁵⁷⁰ C. Vann Woodward, *Tom Watson: Agrarian Rebel*. (New York: Macmillan, 1938).

of the South is more advanced than were his (Carnegie's) ancestors in Scotland two hundred years ago."⁵⁷¹

Another Spencerian tycoon, John D. Rockefeller, provided major funding for a college for African-American women, which would go on to become Spelman College, and in addition Rockefeller gave \$180 million to the General Education Board, which focused on funding education in the South, particularly focusing on the support of schools for black children in the South.⁵⁷² Rockefeller was himself an abolitionist, and the Spelman name is in honor of his wife, Laura Spelman, whose family were Congregationalist abolitionists from Ohio. The Republican Congressman Samuel June Barrows, a believer in the relevance of evolutionary theory to human society, an advocate for women's suffrage and the rights of African-Americans, also believed in the possibility and reality of progress for African-Americans, and, like Rockefeller and Carnegie, thought that progress came through industry and education. "When the slave became a freed man two great evolutionary forces were free to operate upon him as they had not been before. One was industrial, the other educational....Of these great evolutionary forces and methods, the industrial one is that which as yet is the most far-reaching and effective."⁵⁷³ Those who thought in "evolutionary" terms looked forward to the potential for progress and improvement.

Of course, this is not to say that all or even most people who subscribed to Social Darwinism or "reform Darwinism" were enlightened souls on the issue of race in America—far from it. Many of them were imperialists and elitists who viewed the natural tendency of society to favor strong individuals and nations, which would disproportionately

⁵⁷¹ Quoted in David Nasaw. *Andrew Carnegie*. (New York: Penguin Books, 2007), p. 715.

⁵⁷² *Encyclopedia of African-American Education*. Ed. Faustine C. Jones-Wilson, et al. (Westport, CT: Greenwood Press, 1996), p. 184.

⁵⁷³ Samuel June Barrows. *The Evolution of the Afric-American*. (New York: D. Appleton and Company, 1892), p. 323-4.

be white. However, what all of those who appealed to Darwinian justification for their economic and social beliefs shared was the belief in the possibility of progress and improvement. Whether that improvement came through competition, cooperation, or education the reality of human evolution consistently encouraged the notion that humans could evolve socially as well. Progress and improvement were far more threatening notions to a political and social order that was prefaced upon conservative, organic hierarchy and a fixed racial color line such as was supported by the Southern civil religion. The former slave-owners of the South doubted that progress for African-Americans was desirable, and as Andrew Carnegie described them, they held “the belief that the end striven for is unattainable. Once a slave, always a slave, so far as the negro race is concerned, is their natural conclusion.”⁵⁷⁴

Eugenics and Darwin in America

Another area in which political ideology interacted with race, science, and inequality in this era was the eugenics movement. Eugenics was a movement for genetic improvement that sought to encourage the proliferation of socially desirable hereditary traits and the reduction of anti-social ones. The eugenics movement was rooted in the belief that experts could make better decisions about America’s genetic makeup than the aggregated decisions of individual families. Eugenacists had faith in scientific and medical experts’ ability to improve human life but doubt in ordinary people’s ability to make wise political and social decisions. As historian Mark Haller has observed, the eugenics movement was “a scientific

⁵⁷⁴ Carnegie. (1907), p. 4.

reform in an age of reform.”⁵⁷⁵ Eugenics’ methods ranged from “Fitter Family” contests at county fairs to the coerced sterilization of the mentally ill. Eugenics became popular at the beginning of the twentieth century, peaked in popularity during the 1920s and 30s, and gradually faded into relative obscurity after World War II and was part of the suite of progressive reforms initiated to improve public health in areas like sanitation, vaccination, and nutrition. However, rather than improving the environment in which humans lived, eugenics was meant to improve humans themselves. Eugenicist W. B. Hardman considered eugenics:

the medical gospel of the twentieth century....so that the creature of the future may be a better specimen of manhood and womanhood; that there may be fewer inebriates and cripples, that our alms houses, hospitals, penitentiaries, chain gangs and asylums may have fewer inmates, and that our streets may be free of beggars and perverts.⁵⁷⁶

Public health efforts sought to use medical and scientific expertise to ameliorate the chronic illnesses in dense inner cities and to preserve the supposedly superior vitality of America’s native stock. Progressives believed that “good government” reforms could alleviate the corruption of local and state governments, and because they saw urban political corruption and social chaos as an impenetrable obstacle to social improvement, they proposed reforms to bypass urban machines and self-interested individualism to empower technical experts and professionals to guide public policy.⁵⁷⁷ The major industrial cities of the north and west, with their large communities of poor immigrants, were the primary grounds for progressive reforms like the eugenics movement.

⁵⁷⁵ Mark Haller. *Eugenics: Hereditarian Attitudes in American Thought*. (New Brunswick, NJ: Rutgers University Press, 1963), p. 5.

⁵⁷⁶ W. B. Hardman, “The Medical Gospel of the Twentieth Century,” *Journal of MAG*, Vol. 4 (1914), pp. 72-73; Quoted in Edward J. Larson. *Sex, Race, and Science: Eugenics in the Deep South*. (Baltimore & London: The Johns Hopkins University Press, 1995), p. 52.

⁵⁷⁷ See Robert Wiebe. *The Search for Order: 1877-1920*. (New York: Hill and Wang, 1966).

We can see this particularly well in California, where progressives instituted a wide-range of governmental reforms as well as the most extensive eugenics program in America.⁵⁷⁸ To counteract corrupt legislators, party bosses, and special interests like the Southern Pacific Railroad, progressive reformers sought to improve government and society by giving power to the “best” sorts of people. In 1911, Hiram Johnson and his Progressive allies established the initiative, the referendum, and the recall which gave to Californians a greater ability to bypass corrupt officials than any other state in America. Johnson and the Progressives also passed Proposition 4 giving women the right to vote. But alongside these “enlightened” reforms, great effort was made to ensure that only the “right” sort of people participated in California politics. There was the “Chinese Exclusion Act of 1882”, which prohibited Chinese immigration to California, and there was the “California Alien Land Law of 1913”, which prohibited immigrant farmers, especially Japanese farmers, from owning or having long-term leases on land in California. The Progressives also instituted literacy tests used to exclude Spanish speaking Latinos from voting and used restrictive development covenants to prevent Jews and African-Americans from living in many parts of California. At the same time, California developers sought to encourage WASP immigration to California by advertising in Midwestern states like Ohio, Indiana, and Illinois. In addition to trying to control the influx and efflux of California migrants, Progressives hoped that eugenics could improve California's native racial stock. In 1913 Johnson signed the “Second Sterilization Law of California”, expanding a previous sterilization law from four years before, and California would go on to perform more sterilizations than any other state in America (over 1/3 of all eugenic sterilizations were in California). Progressives’ desire to

⁵⁷⁸ William Fulton. *The Reluctant Metropolis: The Politics of Urban Growth in Los Angeles*. (Baltimore, MD: The Johns Hopkins University Press, 2001 [1997]).

reform and limit the power of corrupt legislators and large corporations was coupled with elitism and nativism.

Buck v. Bell (1927) famously determined eugenics' legality. This 8-1 opinion validated a Virginia statute authorizing the compulsory sterilization of a woman named Carrie Buck. In the majority's opinion, Oliver Wendell Holmes wrote the famous lines justifying Ms. Buck's sterilization: "three generations of imbeciles are enough."⁵⁷⁹ Holmes makes clear the assumptions and goals of the eugenics movement: that heredity was linked with feeble-mindedness, drunkenness, and criminality, and that the future of the public's health and welfare could be improved by eliminating "defectives" from the gene pool. Justice Holmes exemplifies the politics of the eugenics movement. Holmes wrote the majority opinion in *Buck v. Bell* (1927) as well as the dissent to *Lochner v. New York* (1905), in which Holmes opposed the instantiation of Herbert Spencer's Social Darwinism in the U. S. Constitution. Holmes was a northern Progressive who believed in evolution, and whose arguments focused on the need to intervene in the "laissez faire" economy and the "laissez faire" evolution at work in human society.

The eugenicists shared an ideological affinity with the "reform Darwinists", who held that conscious control was necessary to guide the economy. The American biologist and eugenicist, Edwin Grant Conklin, complained of the failures of natural selection to continue improving the American people and proposed eugenics instead:

If God had only continued to sift the nations for our benefit, or if our fathers had exercised only reasonable caution in sifting out those who were to form the American nation, we might have had here only the choicest blood and the highest types of culture of all lands, we might have replaced

⁵⁷⁹ *Buck v. Bell*, 274 U. S. 200 (1927).

the slow and wasteful methods of natural selection by intelligent selection and thus have enormously advanced and hastened human evolution.⁵⁸⁰

While Darwin's theory of evolution saw fitness as the outcome of a selection process, eugenicists sought to determine what fitness was and make that the basis for initiating a selection process. Many promoted eugenics *because* they thought natural selection had failed, and that regulation and intervention were necessary to correct the failures of “free market” genetic sorting. As the logo from the Second International Eugenics Conference put it, “Eugenics is the self direction of human evolution.”

In the main, the ideological roots of eugenics was not the Social Darwinism of Herbert Spencer and William Graham Sumner. Eugenics owed more to social thinkers like Lester Ward, who believed that nature was profligate and wasteful and that society should try not to imitate nature but to improve it. Thus Ward promoted eugenics while opposing social Darwinism. As eugenics historian Daniel Kevles describes it, “the left mixed its eugenics with the socialist reconstruction of society.”⁵⁸¹ In Edward Bellamy’s *Looking Backward*, the gilded-age era narrator awakens from a slumber to find himself in a socialist, utopian paradise where the problems of the late 19th century have been solved. In addition to advanced technology and political arrangements, the people of the year 2000 have biologically advanced over those living 100 years before. In the utopia of the future,

for the first time in human history the principle of sexual selection, with its tendency to preserve and transmit the better types of the race, and let the inferior types drop out, has unhindered operation.... Every generation is sifted through a little finer mesh than the last. The attributes that human nature admires are preserved, those that repel it are left behind....Perhaps more important than any of the causes I mentioned then as tending to race

⁵⁸⁰ Edwin Grant Conklin, “Some Biological Aspects of Immigration,” *Scribner’s Magazine*, Vol. 69 (Jan., 1921), p. 358.

⁵⁸¹ Daniel Kevles. *In the Name of Eugenics: Genetics and the uses of Human Heredity*. (Cambridge, MA: Harvard University Press, 1995 [1985]), p. 174.

purification, has been the effect of untrammelled sexual selection upon the quality of two or three successive generations.”⁵⁸²

According to Bellamy, the future welfare of humanity and the solution to its pressing social problems was not simply moral and political improvement, but hereditary improvement.

Richard Hofstadter’s *Social Darwinism in American Thought* makes the argument that Darwinism was the main influence upon the eugenics movement though this is, basically, wrong.⁵⁸³ The eugenics movement’s origins owe less to Darwin’s writings on evolution than to Francis Galton’s writing on genetics; it was Galton who was the “founder of the faith” and coined the term “eugenics.”⁵⁸⁴ And it was Galton who laid out the movement’s core idea in the 1860s when he claimed that it would be “quite practicable to produce a highly gifted race of men by judicious marriages during several consecutive generations.”⁵⁸⁵

Though Darwin sympathized with the idea that letting “weak members of civilized societies propagate their kind” might seem undesirable, he detested the consequences that eugenic intervention would have on those “weak members” of society. Here is how Darwin described the idea of eugenics in his *Descent of Man*:

The aid which we feel impelled to give to the helpless is mainly an incidental result of the instinct of sympathy, which was originally acquired as part of the social instincts, but subsequently rendered...more tender and more widely diffused. Nor could we check our sympathy, if so urged by hard reason, without deterioration in the noblest part of our nature. The surgeon may harden himself while performing an operation, for he knows that he is acting for the good of his patient; but if we were intentionally to neglect the weak

⁵⁸² Edward Bellamy. *Looking Backward: 2000-1887*. (Boston and New York: Houghton, Mifflin and Company, 1888), pp. 376-7.

⁵⁸³ Richard Hofstadter. *Social Darwinism in American Thought: 1860-1915*. (Philadelphia, PA: University of Pennsylvania Press, 1944).

⁵⁸⁴ There are many books on the history of eugenics. Three good ones are Daniel J. Kevles, *In the Name of Eugenics: Genetics and the Uses of Human Heredity*. (Berkeley and Los Angeles: University of California Press, 1985); Diane B. Paul, *Controlling Human Heredity: 1865 to the Present*. (Humanities Press, 1995); Elof Axel Carlson, *The Unfit: A History of a Bad Idea*. (Cold Spring Harbor, NY: Cold Spring Harbor Press, 2001).

⁵⁸⁵ Francis Galton, *Hereditary Genius: An Inquiry into its Laws and Consequences* (London: Macmillan, 1869), p. 1.

and helpless, it could only be for a contingent benefit, with a certain and great present evil.⁵⁸⁶

Darwin's co-discoverer of evolution by natural selection, Alfred Russel Wallace, felt similarly. Wallace strongly disagreed with calls for trained specialists to control society's fertility. Speaking of a eugenics program in a popular science magazine, Wallace said, "of this proposal and all of the same character we may say, that nothing can possibly be more objectionable, even if we admit that they might be effectual in securing the object aimed at."⁵⁸⁷

Furthermore, during the height of eugenics' popularity geneticists were skeptical that natural selection was as powerful as Darwin had implied. It was only after the creation of the so-called "modern synthesis", during the 1930s, that Darwinism and the scientific study of genetics were joined together as the foundation of modern biology. As Thomas Leonard put: "The modern understanding of Darwinism is the product of the evolutionary synthesis begun in the 1930s and 1940s, wherein Darwin's leading idea, natural selection, was joined to the theory of population genetics."⁵⁸⁸ To the degree that eugenicists did operate under evolutionary assumptions, they tended to hold neo-Lamarckian beliefs about evolutionary fitness, which is to say that they believed that a person's behavior after birth could affect the heritability of mental and physical disorders. Lamarckians and eugenicists both thought that environmental changes could be transmitted to progeny--this is one of the reasons that eugenicists were so concerned with alcoholism. They thought that a father's drinking could

⁵⁸⁶ Charles Darwin, *The Descent of Man and Selection in Relation to Sex*. (New York: D. Appleton & Co., 1871), pp. 162.

⁵⁸⁷ "Of this proposal and all of the same character we may say, that nothing can possibly be more objectionable, even if we admit that they might be effectual in securing the object aimed at. But even this is more than doubtful; and it is quite certain that any such interference with personal freedom in matters so deeply affecting individual happiness will never be adopted by the majority of any nation, or if adopted would never be submitted to by the minority without a life-and-death struggle." Alfred Russel Wallace, "Human Selection," *Popular Science*, Vol. 38, No. 1 (Nov., 1890), p. 97.

⁵⁸⁸ Leonard (2005), p. 219.

poison his "germ plasm," which could be transmitted to his children. At the time Darwinian evolutionists were somewhat outside the mainstream of biology. Though we usually associate eugenics with the "harsh," "cruel," and "unfeeling" imperialism and laissez faire capitalism of Spencer and Sumner, it was the reform Darwinists who sought progress and social improvement through state-driven, expert control that are the real heritage of the eugenics movement.

While eugenicist's biological hierarchy often mapped onto traditional racial prejudices, and natural selection was sometimes used to explain and justify racial hierarchies, the eugenics movement was not primarily associated with race. It is true that most eugenicists concentrated on the perceived heritability of intelligence and criminality, and for many eugenicists their racial prejudices associated these qualities with the genetic, racial heritage of these factors. Writers like Lothrop Stoddard popularized the notion that eugenics could be used to ensure the survival of the white race, which, he argued, was surely about to be swamped by growing hordes of black and brown babies.⁵⁸⁹

The biological superiority of certain types of "fit" people implied by the eugenics movement seemed to be in concordance with racism and white supremacy, which seems to contradict the central thesis of this dissertation that Darwinian evolution was politically unpalatable to slaveholders before the Civil War and to segregationists and Southern white supremacists after the Civil War. But, as we shall see, though eugenics is often associated with racism, the real target of eugenics was a broader category of "unfit" people across racial types. While African-Americans and foreign immigrants were sterilized at higher rates than others, this reflects their higher rate of institutionalization rather than their specific

⁵⁸⁹ Lothrop Stoddard. *The Rising Tide of Color Against White World-Supremacy*. (New York: Charles Scribner's Sons, 1920).

targeting.⁵⁹⁰ Eugenics implied the possibility of racial improvement regardless of a person's race, which was quite different than a traditional notion of racial hierarchy prefaced upon the fixity of racial types and racial quality. In fact, the possibility for racial improvement encouraged the growth of a black eugenics movement alongside the white eugenics movement, with many of the same goals for racial improvement. If eugenics was a tool of white supremacy, then we would expect its greatest use to have been in the American South, however eugenic reformers generally found their most difficult inroads to lie in Dixie. Rural southerners resisted progressive reformers that tried to transform their communities, including on issues of blood and heredity.⁵⁹¹

Edwin Conklin summarizes the mainstream of eugenicist thought about the mixing of races and the importance of racial eugenics. Conklin argued that it was not the race of the parents that mattered for the quality of the resulting child, rather “the result depends not so much upon race or color as upon the qualities of the individual parents.”⁵⁹² When it comes to the mixture of various European nationalities, Conklin said it that it was clear that “it is not the mixture of the blood of different European races in this country that should cause concern, but rather the amalgamation of superior hereditary types with those of inferior physical, mental, and social traits, from whatever country or race they may have come.” While Conklin is less confident that the “superior hereditary types” will be found as often amongst non-white peoples he argues that eugenics should determine quality on an

⁵⁹⁰ *Ibid.*, p. 38.

⁵⁹¹ William A. Link, *The Paradox of Southern Progressivism, 1880-1930*. (Chapel Hill, NC: The University of North Carolina Press, 1993).

⁵⁹² Conklin (1921), p. 358. All quotes in this paragraph from same location.

individual basis rather than along color lines.⁵⁹³ Superior breeding should occur wherever it is found.

Progressive whites tended to come from the professional classes, and many of their policies were class-oriented. This was also true amongst progressive blacks. Many progressive African-American reformers saw in the eugenics movement the same sorts of possibilities for racial improvement as white progressives. The poet Alice Dunbar-Nelson, one of the prominent African-American writers of the Harlem Renaissance, worried that the “educated and intelligent classes” of Negro women were not having children.⁵⁹⁴ By 1912, Howard University offered eugenics in several courses, including “Sex Hygiene,” “Biology and Education,” and “Social Biology.”⁵⁹⁵ America’s most famous African-American biologist, Dr. Ernest E. Just, was interested in teaching eugenics at Howard, and another Howard University professor, Kelly Miller, worried that Negroes faced a potential future in which a diminishing percentage of the race was made up of “negroes belonging to the professional class.”⁵⁹⁶ According to Miller, eugenics showed great potential for the improvement of the “Negro race” because “the future welfare of society depends very largely upon perpetuating and carrying forward the best characteristics derivable from physical heredity and social environment.”⁵⁹⁷

The African-American biologist Thomas Wyatt Turner was an American civil rights activist and a founding member of the NAACP. Turner taught at a number of different

⁵⁹³ “The white race assumes, that in all respects it is superior to other races. But no race has a monopoly of good or bad qualities; all that can be said is that certain traits are more frequently found in one race than in another.” Conklin. (1921), p. 358.

⁵⁹⁴ Alice Dunbar-Nelson, “Woman’s Most Serious Problem,” *Messenger* (Mar., 1927), p. 76.

⁵⁹⁵ Gregory Michael Dorr. *Segregation’s Science: Eugenics and Society in Virginia*. (Charlottesville and London: University of Virginia Press, 2008), p. 98.

⁵⁹⁶ *Ibid.*, p. 99.

⁵⁹⁷ Kelly Miller, “Eugenics of the Negro Race,” *Scientific Monthly*, Vol. 5 (July 1917), pp. 57-59.

institutions of higher education, including the Tuskegee Institute, Cornell University, and Howard University, and he organized the Virginia Conference of College Science Teachers in 1931. Turner thought that Darwinian biology was a powerful force for the ending of racial inequality in America: “We are nearer the goal of universal brotherhood, I feel, today than we were a century ago, largely, because the pursuit of science has developed a larger sympathy among men, by teaching them that they are truly of one flesh, with a common parentage.”⁵⁹⁸ Turner learned genetics and eugenics from the prominent eugenicist Charles Davenport at the Long Island Biological Laboratory, and he took those lessons with him to the classroom where he taught that feeble-mindedness and “fitness” were not qualities of races but individuals.⁵⁹⁹ Turner argued that biology had an important role to play in the social reform and improvement of society for all “fit” people, white and black, and he argued that biologist’s success should be measured by the degree to which they have “contributed to making men better, to giving greater respect for their fellows, to making them more useful in improving the condition of mankind,” and Turner thought that

⁵⁹⁸ Dorr. (2008), p. 102-3; Thomas Wyatt Turner, “The Biological Laboratory and Human Welfare,” *Howard University Record* (Jan., 1924), p. 7. Compare Turner’s quote about the implications of Darwinian science with the quotes of black South African children upon learning about the racial implications of evolution. The concept of a single ancestor was significant to them. They enjoyed the fact that ‘blacks and white people are from the same person’ (Moir Mabuya, Grade 5), and that skin colour is simply an adaptation to environmental conditions: ‘I learned that we a one human being child, our skin changes from the wether’ (Cynthia, Grade 5).” One of the steps taken after apartheid was to modify the curriculum to introduce human evolution to history classes for the first time. Students recognized the racial component to evolution right away. “For black children, for example, the issue of whether early humans were black or white was of importance. (Esterhuysen, Amanda; Jeannette Smith. “Evolution: ‘the forbidden word’?, in *South African Archaeological Bulletin*, Vol. 53 (1998), pp. 135-137). The ruling apartheid-era whites in South Africa resisted the teaching of evolution, which was seen as politically inconsistent with the doctrines of the ruling South African Christian National party’s pro-Apartheid stance. South African students were taught the CN perspective through curriculum which omitted ‘anti-biblical’ concepts like evolution. South African whites were taught a version of history which, “omitted, distorted or vilified the role of blacks, ‘coloureds’ and Asians in the country’s past”. (Dean, J. & Sieborger, R. “After Apartheid: the outlook for history,” in *Teaching History*, Vol. 79 (1995), pp. 35-38) The post-apartheid ANC has altered the curriculum to “rid the education and training system of a legacy of racism, dogmatism, and outmoded teaching practices.” (African National Congress. *A Policy Framework for Education and Training*. (Johannesburg: 1994), pp. 10-11).

⁵⁹⁹ Dorr. (2008), p. 100-1.

eugenics offered the greatest chance for social improvement.⁶⁰⁰ Turner felt that eugenics was a tool that could be used to improve race relations and ensure that African-Americans were equal to whites in every way, and while Turner retained the class bias of eugenic thought, he also retained the promise of eugenics to allow science to improve social policy for all races.

Like Kelly Miller and Thomas W. Turner, W. E. B. Du Bois thought that eugenics had the potential to improve the future welfare of the Negro race, and like Miller and Turner, Du Bois's belief in the power of eugenics was class based. "Birth control is science and sense applied to the bringing of children into the world, and of all who need it we Negroes are first. We in America are becoming sharply divided into the mass who have endless children and the class who through long postponement of marriage have few or none."⁶⁰¹ Du Bois argued that Negroes had suffered because slavery had prevented them from engaging in proper breeding practices, which would have promoted positive traits, and instead the Negro had been left "unbred." Negroes, Du Bois argued, find themselves "surrounded in the modern world by men who have been bred for brains, for efficiency, for beauty" and they must now "train and breed for the same purposes in varying proportions." Du Bois saw Negro eugenics as a method for self-improvement that was opposed by those who sought to prevent Negro advancement: "Whatever the world and America may say, even the blindest realize that in time efficiency and brain and beauty are going to be well-bred in the American Negro race. The advance is irresistible, clear, unquestionable. In a part of the country the opposition to this, born in slavery, is strong and implacable. What kind of a land would this be, says the South, with Negroes as Men—self-guiding, efficient,

⁶⁰⁰ *Ibid.*, p. 101-4; Turner. (1924), p. 4, 5.

⁶⁰¹ W. E. B. Du Bois, "Birth," *The Crisis*, Vol. 24, No. 6 (Oct., 1922), pp. 248-250.

keen and self-respecting men?⁶⁰² Du Bois's use of eugenics was consistent with other African-Americans who saw in it the promise of racial uplift through the expansion of the numbers of the African-American "talented tenth."

The fact that eugenics was amenable to black racial improvement was part of the reason that the eugenics movement was weakest in the American South—the historian Gregory Dorr describes eugenics in the Deep South as “a flash in the public policy pan”—but was most well developed in places like New York and California.⁶⁰³ This might be surprising when one remembers the extreme importance that the Deep South region put on bloodlines and heredity—as Edward J. Larson puts it, this “should have predisposed them to accept eugenic concepts.”⁶⁰⁴ It might also be additionally surprising when we remember that eugenics, in an era of Jim Crow laws and racial segregation, was unlikely to strike southern legislators as an important abridgment of a minority's constitutional rights.⁶⁰⁵ This isn't to say that eugenics was universally rejected in the South—it wasn't. Virginia, for example, did have a significant eugenics movement, but this is the exception that proves the rule. The politics of progressivism, eugenics, and evolution were different in the “New South” border state of Virginia than they were elsewhere in the former confederacy: “Indeed, Virginians' embrace of eugenics and evolutionary biology set them apart from every other southern state.”⁶⁰⁶ Scopes would not have been prosecuted if he had taught in Virginia, which was the only southern state whose legislature did not consider an anti-evolution bill in the 1920s.

⁶⁰² W. E. B. Du Bois, “Opinion,” *The Crisis*, Vol. 24, No. 4 (Aug., 1922), pp. 152-3.

⁶⁰³ Larson (1995); Gregory Michael Dorr. *Segregation's Science: Eugenics and Society in Virginia*. (Charlottesville and London: University of Virginia Press, 2008), p. 17.

⁶⁰⁴ *Ibid.*, p. 10.

⁶⁰⁵ *Ibid.*, p. 83.

⁶⁰⁶ Dorr. (2008), p. 10.

The politics of antievolutionism and opposition to eugenics were closely related, and the peak of the movement for eugenic restrictions occurred in the 1920s along with the peak of the antievolutionary movement. Many of the same people who objected to one objected to the other. The prominent eugenicist A. E. Wiggam saw a link between opposition to evolution and opposition to eugenics, and he argued that ‘until we can convince the common man of the *fact* of evolution...I fear we cannot convince him of the profound ethical and religious significance of the thing we call eugenics.’⁶⁰⁷ Biology textbooks courted controversy when they discussed either eugenics or evolution as George William Hunter’s *Civic Biology* did:

When people marry there are certain things that the individual as well as the race should demand. The most important of these is freedom from germ diseases which might be handed down to those offspring...If such people were lower animals, we would probably kill them off to prevent them from spreading. Humanity will not allow this, but we do have the remedy of separating the sexes in asylums or other places and in various ways preventing intermarriage and the possibility of perpetuating such a low and degenerate race.⁶⁰⁸

It was not just the evolution, which Scopes was supposed to have taught, that upset people in Tennessee.

William Jennings Bryan called the eugenics movement ‘brutal,’ and he said that the evolutionary support for eugenics was one of the reasons to prohibit the teaching of evolution.⁶⁰⁹ In 1920, Bryan said that “the doctrine, commonly known as the Darwinian theory, that traces man’s ancestry back to the brute is the most paralyzing influence with

⁶⁰⁷ Edward J. Larson. *The Summer for the Gods: The Scopes Trial and America’s Continuing Debate Over Science and Religion*. (New York: Basic Books, 1997), p. 28.

⁶⁰⁸ George William Hunter. *A Civic Biology: Presented in Problems*. (New York: American Book Company, 1914), pp. 261, 263.

⁶⁰⁹ William Jennings Bryan. *In His Image*. (New York: Fleming H. Revell Company, 1922), p. 108-9.

which civilization has had to contend during the last century.”⁶¹⁰ Edward J. Larson describes how opinion of eugenics was intertwined with opinion about human evolution.

Everywhere the public debate over eugenics colored people’s thinking about the theory of human evolution. Popular evangelist Billy Sunday, for example, repeatedly linked eugenics with teaching evolution during his 1925 Memphis crusade, which coincided with legislative consideration of the Tennessee antievolution bill. ‘Let your scientific consolation enter a room where the mother has lost her child. Try your doctrine of the survival of the fittest,’ Sunday proclaimed at one point. ‘And when you have gotten through with your scientific, philosophical, psychological, eugenic, social service, evolution, protoplasm and fortuitous concurrence of atoms, if she is not crazed by it, I will go to her and after one-half hour of prayer and the reading of the Scripture promises, the tears will be wiped away.’⁶¹¹

Part of Sunday and Bryan’s argument against Darwinism and eugenics is based not upon the presumed truth or falsity of the science itself (although Bryan does dispute that too), but rather against the presumed social and political effects of these scientific theories. Bryan argues that evolution and eugenics should be rejected because they are brutal and cruel: “Can that doctrine be accepted as scientific when its author admits that we cannot apply it ‘without deterioration in the noblest part of our nature?’ On the contrary, civilization is measured by the moral revolt against the cruel doctrine developed by Darwin.”⁶¹² The nature of identity was wrapped tightly with the politics of evolution and eugenics, and Bryan’s crusade against Darwinism and eugenics sounded similar notes about protecting the weak against the strong as his white populist crusade on behalf of farmers against bankers.

Eugenics was a tool used by elitists against the powerless, but it was not a tool for white supremacy. Eugenics was most commonly arrayed against the “unfit” of all races, not because of their racial identity but because of other factors like their presumed intelligence, criminality, alcoholism, and their perceived hereditary predilection to need public assistance.

⁶¹⁰ William Jennings Bryan, “Brother or Brute?,” *Commoner*, (Nov., 1, 1920), p. 11.

⁶¹¹ Larson (1997), pp. 27-8.

⁶¹² *Ibid.*, p. 109.

Eugenics was less a racial ideology than a class-based ideology that favored the successful hereditary “elite” and “fit” over the “feeble-minded” and “unfit” of all races.

Conclusion

Social Darwinism and eugenics are the two most prominent ideological movements of the late 19th and early 20th century that so clearly related the biological science of Darwinian evolution and human heredity to human social relations, but they both operated in ways that were incompatible with the Southern civil religion. The social Darwinists and eugenicists tended towards elitism and a belief in racial inequality, and this is a commonly how the relationship between Darwinism and the politics of the era is presented today. But we must remember that there are different types of racism, and that one can be both an actual racist and be considered a dangerous racial egalitarian by contemporaries. Because the political salience of racial identity has shaped the reception to Darwinism in America, it may seem a paradox that both social Darwinism and eugenics were more prominent movements in the North than in the South.

But I don't think that this is such a paradox after all. Both social Darwinism and eugenics dealt with issues of class and race that more closely reflected the political disputes that occurred in the more urban, more industrial, and more capitalist North, and both were quite ready to believe in the possibility of progress for African-Americans. Neither social Darwinism nor the eugenics movement reflected the political proclivities of the older, aristocratic slave-owning elite that asserted that racial identity was eternally fixed and rigid and believed that blacks were incapable of equality with whites. It was quite possible for left-wing “reform Darwinists” to agree with right-wing Spencerians that Darwinian evolution

had something relevant to say about human society, while at the same time completely disagreeing with the political ramifications of that relevance. It was also quite possible for eugenicists to believe both that eugenics was useful for the improvement of the “white race,” and that eugenics was useful for the improvement of African-Americans as well. Neither the social Darwinists nor the eugenicists depended upon a theory of racial identity in which racial identity was fixed and the color line was rigid. The application of evolutionary progress to economic doctrine and to human breeding was often congenial to some people’s ideas of racial hierarchy, but it was also perfectly comfortable to philanthropists who funded African-American education in the South, Northern integrationists, and even men like Booker T. Washington, W. E. B. Du Bois, and other prominent African-Americans of the era. Social Darwinism and eugenics were often used to justify cruel and heartless treatment towards powerless individuals, but they were not explicit policies for the preservation of white privilege. The belief in progress and improvement, which was implied by evolutionary theories and had since the 18th century, appealed more to Northern industrialists and progressives than to former slaveholders and white Southern populists.

Anti-Evolutionism, White Supremacy, and the Power in the Blood

Science has become the arbiter of this generation's thought, until to call even a prophet and a seer scientific is to cap the climax of praise.

-Harry Emerson Fosdick (1932)

The Tennessee legislators who passed the law making it a crime to teach Darwinism in that state probably have never read the text themselves and all they know about the subject is that the entire human race is supposed to have started from a common origin. Therein lies their difficulty. Admit that premise and they will have to admit that there is no fundamental difference between themselves and the race they pretend to despise. Such admission would, of course, play havoc with the existing standards of living in the South.

-Chicago Defender (May 23, 1925)

Introduction

This chapter analyzes the famous Scopes “Monkey Trial” of 1925 that took place in Dayton, Tennessee as well as the larger anti-evolution movement of which it was a part, and it does so in light of the previous chapters of the dissertation. This chapter argues that most, but not all, previous scholars that have looked at the Scopes Trial, and the anti-evolution movement of the 1920s, have missed a major piece of the analytical puzzle. Scholars and other onlookers have emphasized one or more of the four traditional frames identified in the first chapter of this dissertation to explain the Scopes Trial, while failing to understand the importance of the politics of white supremacy and the overriding importance of racial identity, both white and black. Most scholars and other commentators have argued that the anti-evolution movement was a product of religious reaction, educative failure, cultural backwardness, or economic class interest. It is not the case that the four traditional

narratives are irrelevant to understanding the Scopes Trial, but rather that they paint incomplete pictures of the historical context surrounding the anti-evolution movement.

By and large, commenters in the 1920s and since have viewed the Scopes Trial through the prism of the primarily white, non-Southerners who journeyed from elsewhere to visit Dayton, Tennessee or who commented on the trial from outside of the South entirely. For them the Scopes Trial was an example of aggressive backwardness or religious bigotry, and the prominent narrative frame which was built up about the trial was that of science versus religion. Most commenters have not fully appreciated the ways in which the larger political and social ramifications of white supremacy saturated the American South's reception to Darwinian Evolution. Southern whites and African-American writers, on the other hand, who were much closer to the race issue in America had a different perspective on Scopes. White Southerners often spoke about race in ways that were different than Northern whites who did not appreciate the fuller context in which remarks were made, and African-Americans who did understand the coded language and fuller context in which the anti-evolution movement was discussed were not usually included within the mainstream of American discussion on the topic.⁶¹³ At a time of national reconciliation over the race issue, to view the Scopes Trial as an example of Southern backwardness rather than a plank within the defense of white supremacy was more congenial to preconceptions that Northern whites had about the South, and fed into cultural tropes about Northern enlightenment. Race wasn't as big of a live issue in the North for whites than it was for Southern Whites and for African-Americans who had a better understanding of the issue, but it was the narratives of

⁶¹³ This type of phenomenon where coded language is used to send different messages to different groups is often called "dog-whistle politics."

northern Whites that has shaped the cultural and historical understanding of the Scopes Trial and the anti-evolution movement.

Though the language used to oppose the teaching of evolution in southern public schools struck an obviously religious tone, and was portrayed as a defense of southern Protestantism, it must be remembered that the political involvement of southern Protestantism cannot be easily separated from the political defense of white supremacy. The southern “civil religion” was an important part of the political solidarity that bolstered support amongst southern whites for a political defense of racial hierarchy, and any interpretation of the “religious” opposition to the teaching of evolution must be viewed with this in mind. One scholar who does not miss the important links between race and the anti-evolution movement is historian Jeffrey Moran. While Moran correctly identifies the important role that race played in the particular way in which evolution was politicized, he fails to connect the anti-evolution movement to deeper trends in American history, which I shall do here.

Scholars have, by and large, argued that religious reaction and Protestant fundamentalism drove the anti-evolution movement of the 1920s. While this narrative fits preconceived notions about the antipathy of religion to science, as well as being bolstered by the religiously inflected language which the anti-evolution movement used to oppose the teaching of evolution in public schools across the American South, it fails to explain the particularity of the religious antipathy towards Darwinian evolution. One cannot simply ask why there was general religious antipathy towards a scientific theory, but must ask, rather, why religious antipathy coalesced around this particular scientific debate at this particular time in this particular place by a particular set of people. The explanation for this particular

opposition lies in the distinctness of southern religion, which cannot be separated so easily from the system of white supremacy that continued to exist after the Civil War. This religious and political system fused together after the War, southern religion and southern “Dixie” values after the War to form what is now called the “southern civil religion.” As Charles Reagan Wilson puts it, “in the years after the Civil War a pervasive southern civil religion emerged. This common religion of the South, which grew out of Confederate defeat in the Civil War, had an identifiable mythology, ritual, and organization.”⁶¹⁴ This “Lost Cause” civil religion was a vital driving force behind the anti-evolution movement during the 1920s. It was not a singularly strong and explicitly religious feeling in the American South that drove the anti-evolution movement but rather the larger historical connections of the “southern civil religion,” which linked religious and spiritual expressions that venerated the “Christian virtue” of a mythological southern, heroic past to racial animosity and the desire to protect legally- and socially-sanctioned white supremacy. In the South, the civil religion and Christianity actively supported one another.⁶¹⁵

This chapter focuses primarily on the political and religious views of American Protestants during the 1920s, who were almost exclusively the intellectual and political forces shaping the resistance to Darwinian evolution. Though America’s Catholics and Jews also shared a theological interest in the creation stories of the book of *Genesis*, their support for the anti-evolution movement was very small. American Jews have been and are today nearly unanimously accepting of Darwinian evolution, and while there were a significant number of individual Catholics who opposed evolution, the Catholic Church took no active stance for or against the scientific teaching of Darwinism and few Catholics were actively engaged in

⁶¹⁴ Charles Reagan Wilson, “The Religion of the Lost Cause: Ritual and Organization of the Southern Civil Religion, 1865-1920,” *The Journal of Southern History*, Vol. 46, No. 2 (May, 1980), p. 219.

⁶¹⁵ *Ibid.*, p. 232.

the anti-evolution movement. In part this is because there were few Catholics living in the South where the anti-evolution movement was most popular, but also because Catholics were often actively excluded from many of the anti-evolution movements, such as the Ku Klux Klan, whose ecumenism was by and large restricted to Protestant denominations.

In this chapter I argue that the anti-evolution movement of the early twentieth century cannot be understood without reference to the particular implications that evolutionary science had for understanding racial identity, and the overriding importance of race in American history and politics.

Mencken and the Backwardness of Southern Culture

When attempting to explain a distinctive phenomenon of the American South, it makes sense to look at a distinctive cultural or political feature of the South, such as attitudes towards race. However, while issues of race were fraught with greater urgency and imbued with greater political import in the South than elsewhere in the United States, race was not the only distinctive cultural trait ascribed to that region. There are other distinctions capable of lending themselves as explanations for the anti-evolution movement, such as the presence of a distinctive southern culture antipathetic towards science, scientific doctrine, and the academic freedom of science teachers. If a backward, anti-modern, anti-science culture can explain why the anti-evolution movement found its greatest and most lasting success in the South, it would weaken the case that white supremacy found evolution threatening or that white supremacy is necessary to explain the regional variation that we observe. Perhaps white supremacy and the anti-evolution movement might both coincidentally result from the same “backward” culture, which is the real explanation for both observed phenomenon. In

this case, white supremacy would not be the cause of the anti-evolution movement but would merely arise from the same cultural pathology. A cultural explanation hinging upon Southern backwardness might also imply that southerners merely failed to understand evolution, and that their opinions about Darwinism might be changed through better schools and more frequent public lectures. As we shall see however, anti-evolutionists were not simply confused about evolution (although certainly some were), but rather that they understood evolution and found it politically and socially distasteful. This is a quite different basis for the objections. Campaigns of public awareness and education will do little to change the opinions of those who understand and are still actively opposed to the teaching of evolution in public schools.

The southern anti-evolution movement that prosecuted John Thomas Scopes under Tennessee's Butler Act is often perceived as an inevitable byproduct of a distinctively Southern combination of huxterism, dogmatism, and backwardness. For contemporary, Northern urbanites like H. L. Mencken, the Scopes Trial was an exhibition of the species *homo boobiens*, and evidence that "enlightenment, among mankind, is very narrowly dispersed."⁶¹⁶ The South was a place of "worn-out farms, shoddy cities and paralyzed cerebrums..." where there is a "culture that, at bottom, is but little removed from savagery."⁶¹⁷ Clarence Darrow argued during the Scopes trial, that Scopes was prosecuted because "the fundamentalists are after everybody that thinks."⁶¹⁸ The movie *Inherit the Wind* colors the understanding of many Americans about Dayton, Tennessee as a place where

⁶¹⁶ H. L. Mencken, "Homo Neanderthalensis," *The Baltimore Evening Sun*. (June 29, 1925).

⁶¹⁷ H. L. Mencken, "The Sahara of the Bozart," *New York Evening Mail*, Nov. 13, 1917.

⁶¹⁸ "Darrow's Arraignment of the Act, Day Two: Transcript of the Scopes Trial, Monday July 13, 1925," *The World's Most Famous Court Trial: Tennessee Evolution Case: a Complete Stenographic Report of the Famous Court Test of the Tennessee Anti-Evolution Act, at Dayton, July 10 to 21, 1925, Including Speeches and Arguments of Attorneys*. (Cincinnati, OH: National Book Company, 1925), p. 79.

“there’s only one man in this town who thinks at all, and he’s in jail.”⁶¹⁹ Such a place seems like a suitable environment for anti-modern traditionalism and anti-science political reaction.

In 1925, New York City’s *The Nation* magazine was unsurprised that the Scopes Trial occurred in a Southern state and speculated that the reason that the anti-evolution movement was primarily the product of the South and West was that these areas were particularly prone to “manifestations of superstition and ignorance.”⁶²⁰ William Jennings Bryan, the most famous leader of the anti-evolution movement and the lead prosecutor at the Scopes Trial, was often described then, and is often described now, as an ignorant sort of person who led ignorant sorts of people. W. E. B. Du Bois thought that an ignorant culture was at least partially responsible for the Scopes Trial: “The truth is and we know it: Dayton, Tennessee, is America: a great, ignorant, simple-minded land.”⁶²¹ In this way of thinking, Tennessee and the other Southern states possessed an anti-intellectual culture, which feared the teaching of evolution and a backward culture that distrusted learning and education and felt little desire to protect the rights of teachers and scientists. Bumpkins, yokels, and hillbillies were less welcoming to evolution than urbane, educated, Northern sophisticates, because they lacked the capacity to properly understand modern scientific doctrines like evolution.

But, why evolution? Even if we grant the assumptions about Southern anti-intellectualism, the cultural explanation fails to explain why evolution, in particular, was

⁶¹⁹ *Inherit the Wind*. Dir. Stanley Kramer. United Artists, 1960.

⁶²⁰ “Why the South and West? Merely because those sections are primarily rural and the anti-evolution movement has its springs in the small towns and the back blocks. Its champions are mostly among our much-praised native-American stock. They are the people who are generally held up as the safe-deposit vault of our ancient national virtues, but actually—all too often—a people bled white by the migration of their best individuals to the great cities. They distrust schools which are better than their own. They have been deprived of the vigor they brought into the world and left without leadership, a fine soil for fundamentalism, the Ku Klux Klan, and other manifestations of superstition and ignorance.” “Editorial,” *The Nation*. Vol. 121, No. 3131 (Jul. 8, 1925), p. 58.

⁶²¹ W. E. B. Du Bois, “Scopes,” *Crisis*, Vol. 30 (Sep., 1925), p. 218.

singled out for particular political opposition in the South rather than any other of a myriad of modern, scientific doctrines which could have been the focus of political opposition. Certainly the anti-evolutionists claimed that they were not anti-science. During the Scopes Trial, the Mississippi-born preacher T. T. Martin roamed the streets of Dayton, Tennessee selling his anti-evolution pamphlets and confronting H. L. Mencken about converting to Christianity (see image #1). In Martin's best-selling book *Hell and the High Schools*, Martin claimed that he had no animosity towards science generally, but rather that he opposed evolution specifically. It was to evolution he objected and not to other scientific fields. William Jennings Bryan echoed Martin: "it is not scientific truth to which Christians object, for true science is classified knowledge, and nothing therefore can be scientific unless it is true."⁶²² This pattern is common and consistent amongst anti-evolutionists since the publication of the *Origin of Species*. As Martin puts it, "It is not a fight against Science. Where is the church or the preacher who fights against real science? Where is the church or the preacher who fights against the science of astronomy? The science of chemistry, physics, physiology, electricity?"⁶²³ Martin is quite right in his assessment of the specificity with which Protestant fundamentalists challenged evolution, while ignoring similarly "problematic" sciences like geology, for example. While a general diagnosis of "backwardness" might account for a general anti-science attitude in the South it fails to provide an explanation as to why Darwinian evolution was singled out. The cultural explanation also fails to provide a rationale for why anti-evolution statutes were unsuccessful in other predominantly rural and religious states, such as in the Midwest, where

⁶²² William Jennings Bryan, "Text of Bryan's Proposed Address in Scopes Case," *Scopes Trial Transcript*, Day 8, (1925), p. 323.

⁶²³ Thomas Theodore Martin, *Hell and the High Schools*. (Kansas City, MO: The Western Baptist Publishing Co., 1923), pp. 71-2.

traditionalism and distance from urban life were similarly prevalent. To explain the anti-evolution movement's focused fervor on Darwinian evolution we need another salient variable, which can explain "why evolution?" and "why the South?" These two questions must be answered to arrive at a satisfactory explanation.

Similarly, we cannot explain the southern anti-evolution movement by appeal to the idea that the South was less committed to the preservation of academic freedom or because it held a deeper interest in local control over the curriculum of local schools. Certainly, questions of academic freedom and local control over public schools were at the heart of the Scopes Trial and the larger anti-evolution movement. One of the arguments levied against the Butler Act (which banned the teaching of evolution in Tennessee's public schools) is that it was a violation of academic freedom. By limiting the rights of teachers, like John Scopes, to teach evolution in public schools, this argument said, Tennessee limited the possibility of scientific advancement and infringed upon the protection of free speech. Scopes's defense team argued (but was overruled) that the Butler Act was unconstitutional, because it infringed on teachers' rights of conscience and free speech, as well as contradicting Tennessee's constitutional imperative to "cherish literature and science."⁶²⁴ If education and free inquiry were less esteemed in the South than elsewhere, then the Butler Act and the anti-evolution movement's strength in the Southern states might need no further explanation.

Certainly, academic freedom was not the highest priority for many anti-evolutionists. Bryan considered a teacher to be merely a "hired man" who should teach not what he or she thinks right but rather what taxpayers think is right; as Bryan put it: "the hand that writes the

⁶²⁴ *Scopes Trial Transcript*, Day 2, pp. 47-52.

pay check rules the school.”⁶²⁵ T. T. Martin expressed the same feeling, “Should teachers be allowed ‘academic freedom’ to teach the anarchistic-communistic proletariat, ‘Down with the Church! Down with the State! Down with private property!’? That teaching could only damn the body; the teaching of Evolution damns the soul....In the nature of the case, the limitations must be drawn by those who pay for the teaching: where else can the line be drawn?”⁶²⁶ This charge is thought to be especially apt against the Southern states that eventually did outlaw the teaching of evolution in public schools: Tennessee, Oklahoma, Arkansas, Texas, and states where anti-evolution laws narrowly failed: South Carolina and Kentucky. There were also northern states that had debates over the outlawing of evolution in public schools, such as Iowa and Minnesota, but in such places the bills were overwhelmingly defeated. William Bell Riley, who founded the Anti-Evolution League, led a charge to outlaw the teaching of evolution in Minnesota, but saw his bill be voted down in the state legislature, 55-to-7. The historian William Vance Trollinger attributes the failure of Riley’s anti-evolution movement in Minnesota to a firmer wall protecting academic freedom from religious intrusion. According to Trollinger, “the Minnesota experience proved that, outside the South, there was little enthusiasm for legislation on the order of Riley’s bill; to many folks such a law seemed a grave threat to the separation of church and state.”⁶²⁷ In the largely rural and religious state of Minnesota, church leaders failed to ban evolution from public schools. If the rural, religious Southern states were intellectual backwaters with an

⁶²⁵ William Jennings Bryan, “Darwinism in Public Schools,” *Commoner*, (Jan. 1923), p. 2; Bryan, “The Modern Arena,” *Commoner*, (Jun., 1921), p. 3.

⁶²⁶ Martin (1922), p. 15.

⁶²⁷ William Vance Trollinger, Jr., “Introduction,” *Creationism in Twentieth-Century America: A Ten-Volume Anthology of Documents, 1903-1961. Volume 4: The Antievolution Pamphlets of William Bell Riley*, ed. by William Vance Trollinger, Jr., Series ed. Ronald L. Numbers. (New York & London: Garland Publishing, 1995), p. xvii.

antipathy to education and learning, then this might explain the relative success of the anti-evolution movement in these states.

However, there are two significant problems with this explanation, 1: We must delineate between political limits placed on academic freedom in general, and political limits restricting the teaching of Darwinism and evolution. In other words, why evolution? And 2: Many non-Southern states also passed laws limiting academic freedom at the same time, so it is difficult to point to restrictions on academic freedom as a distinctively Southern phenomenon in this era. The state of Nebraska, for instance, gained notoriety for its so-called Siman Law, which was passed in 1919 immediately after the First World War and which said that “No person, individually or as a teacher, shall, in any private, denominational, parochial or public school, teach any subject to any person in any language other than the English language.” Nebraska even outlawed the teaching of any foreign languages to children in the 8th grade or younger. Iowa and Ohio, as well as other states and local entities, passed similar laws, which were overturned by the U.S. Supreme Court after the end of the War.⁶²⁸ The States of New York, Wisconsin, and Oregon passed bills outlawing textbooks that were seen as defamatory towards the Founding Fathers, and the state of New York operated under the “Lusk Laws” in the early 1920s, which mandated that teachers receive certificates testifying to their loyalty to the government and conservative political views.⁶²⁹ The state of California passed restrictions on Japanese language schools in the early 1920s out of fears that instruction in Japanese led to un-American values and

⁶²⁸ Meyer v. Nebraska, 262 U.S. 390 (1923); Bartels v. Iowa, 262 U.S. 404 (1923).

⁶²⁹ Norman F. Furniss. *The Fundamentalist Controversy, 1918-1931*. (Hamden, CT: Archon Books, 1963 [1954]), pp. 76-7.

unassimilated foreign individuals.⁶³⁰ It seems difficult to argue that the Scopes Trial, and the anti-evolution movement in general, is merely representative of a uniquely Southern antipathy to academic freedom, when other states were also willing to restrict academic freedom in public schools. Rather, we must seek to explain why this particular infringement of the academic freedom to teach evolution occurred where it did and why it took the nature that it did, and simply claiming that there was a lack of academic freedom in the American South fails to do this.

Religion and the Anti-Evolution Movement

Of course, religion is most commonly used to explain southern antipathy towards evolution, but it misleads rather than illuminates when the Scopes Trial is viewed as a skirmish in a larger war between religion and science. To view the trial as a necessary byproduct of religious bigotry towards science hides the unique circumstances that led to the creation of the movement to ban the teaching of evolution and its culmination in a Dayton, Tennessee courtroom. There was nothing necessary about a religious conflict over the teaching of evolution, which is clear when one remembers that many Christians did not view Christianity and Darwin as mutually exclusive. It distorts the nature of the opposition to say that “Christians” opposed the teaching of evolution, when in fact almost all organized opposition consisted exclusively of “American Protestants.” Though there were Catholics who doubted that Darwinian evolution was true, there were few who sought to ban the teaching of evolution, and there was no official Catholic dogma against it. H. L. Mencken considered the response of the Catholic Church to be advantageous when compared to that

⁶³⁰ Noriko Asato, *Teaching Mikadoism: The Attack on Japanese Language Schools in Hawaii, California, and Washington, 1919-1927*. (Honolulu, HI: University of Hawai'i Press, 2005).

of the evangelical Protestants and the "Ku Klux Klergy," as he called them: "Their advantage lies in the simple fact that they do not have to decide either for Evolution or against it. Authority has not spoken upon the subject; hence it puts no burden upon conscience, and may be discussed realistically and without prejudice."⁶³¹ While the Catholic Church did not endorse or deny evolution, it did state that there would be no theological contradiction if evolution, even of the human body, turned out to be true, so long as it was maintained that the human "soul" arose from God's immediate creation.⁶³² Furthermore, there were many American Protestants in the early twentieth century who were able to incorporate Darwinian science into their theology like the Catholic Church had, but these Protestants were overwhelmingly located outside of the South. Protestants have had a long of history of distinguishing between Biblical and scientific descriptions of nature. From John Calvin in the 16th century to Episcopalians and the vast majority of other mainline Protestants in the 21st century, many prominent Protestants have described the book of *Genesis* as a nonscientific work that one should not look to for a description of the natural world.⁶³³ The

⁶³¹ H. L. Mencken, "The Tennessee Circus," *The Baltimore Evening Sun*, (Jun. 15, 1925).

⁶³² Officially the Catholic Church made no judgment of the truth or falsity of the scientific arguments for or against evolution, but maintained that there was no theological contradiction to a scientific claim that the human body evolved from other forms of life over millions of years. However, the Catholic Church did maintain that while the body may have evolved over time, the creation of the human "soul" was a direct creation by God. For example, see the encyclical on evolution by Pope Pius XII: "For these reasons the Teaching Authority of the Church does not forbid that, in conformity with the present state of human sciences and sacred theology, research and discussions, on the part of men experienced in both fields, take place with regard to the doctrine of evolution, in as far as it inquires into the origin of the human body as coming from pre-existent and living matter - for the Catholic faith obliges us to hold that souls are immediately created by God." Pius XII, Encyclical Letter, *Humani generis*. 12 Aug. 1950.

⁶³³ John Calvin: "To my mind, this is a certain principle, that nothing is here treated of but the visible form of the world. He who would learn astronomy and other recondite arts, let him go elsewhere." John Calvin, *Commentaries on the First Book of Moses called Genesis*. Vol. I. Trans. Rev. John King. (Grand Rapids, MI: Christian Classics Ethereal Library), p. 41-2. Episcopal Church: "*Resolved*, the House of Bishops concurring, That this 67th General Convention affirm its belief in the glorious ability of God to create in any manner, and in this affirmation reject the rigid dogmatism of the "Creationist" movement; and be it further *Resolved*, That we affirm our support of the scientists, educators, and theologians in the search for truth in this creation that God has given and entrusted to us." General Convention, *Journal of the General Convention of...The Episcopal Church, New Orleans, 1982* (New York: General Convention, 1983), p. C-161. According to a recent Pew Research poll, only 15% of white mainline Protestants believed that "Humans existed in present form since beginning" versus 78%

organized movement to ban the teaching that humans evolved from “lower forms of animals” in public schools was almost entirely a product of Southern American Protestantism specifically, rather than Christianity, or even Protestantism, generally.

In addition to the exceptional status of the Southern Protestant response to evolution within Christianity, it is important to remember that the Scopes Trial was also viewed as exceptional. It was not the Scopes Trial’s necessity that interested the larger public in Dayton, Tennessee—far from it. The Scopes Trial was called the “Trial of the Century” and was covered by national and international journalists, because it was considered to be such an *unusual* occurrence commencing under exceptional circumstances and imbued with great import. When Oxford Professor Gilbert Murray described the Scopes Trial (with extreme hyperbole) as the “most serious setback in civilization in all history” he was most assuredly not describing an event that he took to be common or natural in countries with large Christian populations, which would, of course, have included almost the entire western world at the time. Southern American Protestants stood out for the vehemence and consistency with which they opposed evolution. Not only did they preach against it, but they sought to ban its promulgation under force of law. The anti-evolution movement of the 1920s was not a fight of religion against science, but a fight which required a particular set of people to interpret a religious doctrine and a scientific one as contradicting and then to believe that this particular contradiction was politically salient enough to use the state’s police power to outlaw the teaching of evolution, but not to ban other contradictory scientific doctrines. To show that religion explains the anti-evolution

who believed that "Humans have evolved over time." www.pewforum.org/2013/12/30/publics-view-on-human-evolution.

movement of the 1920s requires one to demonstrate why American Southerners, *in particular*, sought to ban the teaching of this scientific doctrine, *in particular*.

Of all the instances in which science and religion have had the potential for conflict, the vast majority have not spurred an American political movement devoted to banning, or even disputing, the promulgation of scientific findings that supposedly contradicted religion. There was no successful political campaign to outlaw the teaching of a round-Earth though it contradicts *Daniel* 4:10-11, nor was there a successful political campaign to outlaw the teaching of heliocentrism though it contradicts *1 Chronicles* 16:30 and *Joshua* 10:12-13.⁶³⁴ Religious objection culminating in political opposition to the teaching of evolution was unusual. Even the Scopes Trial, and the anti-evolution movement more generally, did not dispute all scientific findings that contradicted a literal reading of the creation story presented in the book of *Genesis*. At the height of the anti-evolution fervor in the 1920s, Fundamentalists sought to outlaw neither geology nor astronomy nor were they even particularly interested in outlawing the teaching of evolution amongst non-human animals. The anti-evolutionists sought to use the political process to outlaw the teaching of one *specific* scientific claim—that humans have a “blood relationship to any other form of life.”

The success of the anti-evolution movement cannot be explained as a mere religious reaction, specifically a Protestant Fundamentalist reaction against the supposed antipathy of Darwin to the seven-day creation story in *Genesis*. The religious reaction to Darwinian

⁶³⁴ (*Daniel* 4:10-11) “Upon my bed this is what I saw; there was a tree at the centre of the earth, and its height was great. The tree grew great and strong, its top reached to heaven, and it was visible to the ends of the whole earth.”

(*1 Chronicles* 16:30) “...tremble before him, all the earth. The world is firmly established; it shall never be moved.”

(*Joshua* 10:12-13) “On the day when the Lord gave the Amorites over to the Israelites, Joshua spoke to the Lord; and he said in the sight of Israel, ‘Sun, stand still at Gibeon, and Moon, in the valley of Aijalon.’ And the sun stood still, and the moon stopped, until the nation took vengeance on their enemies. Is this not written in the Book of Jashar? The sun stopped in mid-heaven, and did not hurry to set for about a whole day.”

evolution in the South was more narrowly focused. The modern image of the creationist anti-evolution movement opposing modern science does not accurately describe the flexibility of Protestant Fundamentalism in the early part of the twentieth century. Understanding the specificity of the religious objection by some, but not all, Fundamentalists is important to understanding why the South, in particular, became a site for “religious” reaction to Darwinism whereas other areas did not.

It was certainly possible to be a Protestant and to accept evolution in the 1920s; in fact, it was even possible to be a “Fundamentalist” and accept evolution and the implications of evolutionary science, with the important exception of the blood relationship between humans and lower forms of life. Foundational documents of the fundamentalist revival at the beginning of the 20th century testify to this fact. Defenses and apologetics for evolution can be found there, such as in the articles written in the twelve volumes called, fittingly, *The Fundamentals: A Testimony to the Truth*.⁶³⁵ *The Fundamentals* sought to defend conservative Protestantism and laid out the core fundamentalist beliefs in biblical inerrancy, a rejection of German higher criticism, and conservative Christianity. Out of 90 articles in this collection, six dealt with questions about the relationship between evolution and Christianity. Of those six, four argued that evolution was compatible with Christianity in some way or another. Most of these authors did not claim that a belief in Christianity necessitated a rejection of evolution, or at least not most of it. Contrary to many creationists of the late-twentieth century, Fundamentalist authors in the early-twentieth century did not insist that evolution necessitated an un-Biblically long Earth history, but instead argued that it was reasonable to interpret the six days of creation in *Genesis* as “aeonic” days representing vast quantities of

⁶³⁵ *The Fundamentals: A Testimony To The Truth*, ed. by A. C. Dixon (Los Angeles: The Bible Institute of Los Angeles, 1910-1915).

time, and not necessarily 24-hour periods, or alternatively that there were “gaps” of indeterminate length that are unaccounted for and unmentioned by the Bible. Such interpretations of the *Genesis* creation story were common even amongst fundamentalists who believed in biblical inerrancy.

The mainstream of fundamentalist reception to modern science within conservative Protestantism was presented in *The Fundamentals* by James Orr, the Scottish fundamentalist theologian and prominent critic of theological liberalism, whom the Mississippi preacher T. T. Martin called “probably the most learned man on the earth.”⁶³⁶ In his article “Science and the Christian Faith,” Orr argues that all of modern science is compatible within fundamentalist theology, with one important exception.⁶³⁷ Orr disparages the viewpoint that science and religion are necessarily hostile as presented in contemporary books like Draper’s *Conflict Between Religion and Science* or White’s *Warfare of Science with Theology in Christendom*, and he makes the claim that there is nothing about astronomy, geology, and almost all of biology that contradicts Biblical teaching.⁶³⁸ Rather than competitors, Orr presents science and faith as mutually reinforcing quests for truth.

In regards to astronomy, Orr claims that scientific discoveries of the vastness of the universe and the non-centrality of the Earth do not threaten Christianity, and the triumph of Galileo’s science was the triumph of truth, because “it was soon perceived that the Bible, using the language of appearances, was no more committed to the literal moving of the sun round the earth than our modern almanacs, which employ the same forms of speech.”⁶³⁹ Orr even implies that Christianity needn’t find it damaging if astronomers were to find signs

⁶³⁶ Martin, (1922), p. 6.

⁶³⁷ James Orr, “Science and the Christian Faith,” *The Fundamentals: A Testimony to the Truth*, Vol. IV. (Chicago, Ill: Testimony Publishing Company, 1910-1915), p. 91-104.

⁶³⁸ Ibid, p. 91.

⁶³⁹ Ibid., p. 98.

of life beyond Earth, because “Man was never thought of as the only intelligence in creation.”⁶⁴⁰ As for the implications of uniformitarian geology that implies the Earth is of a great antiquity, Orr sees no objection. As Orr puts it:

If the intention of the first chapter of Genesis was really to give us the “date” of the creation of the earth and heavens, the objection would be unanswerable. But things, as in the case of astronomy, are now better understood, and few are disquieted in reading their Bibles because it is made certain that the world is immensely older than the 6,000 years which the older chronology gave it....There is no violence done to the narrative in substituting in thought “aeonic” days-vast cosmic periods-for “days” on our narrower, sun-measured scale.⁶⁴¹

And Orr is also able to accommodate biological discoveries within his theological framework almost completely. He concedes that “there seems a growing appreciation of the strength of the evidence for the fact of some form of evolutionary origin of species—that is, of some genetic connection of higher with lower forms.”⁶⁴² For Orr, and many other “theistic evolutionists”, it was certainly possible to attribute creation to God while still believing in evolutionary processes. For them evolution became merely the method by which God did the work of creation: “‘Evolution,’ in short, is coming to be recognized as but a new name for ‘creation,’ only that the creative power now works from *within*, instead of, as in the old conception, in an *external*, plastic fashion. It is, however, creation none the less.”⁶⁴³ This “theistic evolution” argued that evolution was and is real but had been guided by God towards a predetermined end. This was a quite common interpretation that synchronized *Genesis* with modern scientific knowledge, and for fundamentalists this was an acceptable, orthodox opinion so long as one insisted on special, immediate creation for humankind.

⁶⁴⁰ Ibid., p. 100.

⁶⁴¹ Ibid., p. 100-1.

⁶⁴² Ibid., p. 102.

⁶⁴³ Ibid., p. 103.

Thus it was possible for an orthodox “fundamentalist” to accept evolution for all species of life but human life. To this Orr maintained his objection. Darwinian evolution could not account for the rise of rational humans and science must accept the “special act of the Creator.”

If this new evolutionary conception is accepted, most of the difficulties which beset the Darwinian theory fall away. 1. For one thing, man need no longer be thought of as a *slow development* from the animal stage—an ascent through brutishness and savagery from an ape-like form. His origin may be as sudden as Genesis represents. 2. The need for assuming an enormous *antiquity* of man to allow for the slow development is no longer felt. And (3), the need of assuming man's *original condition* to have been one of brutal passion and subjection to natural impulse disappears.⁶⁴⁴

Though he finds a number of different scientific theories to be compatible with fundamentalist doctrine, Orr is not able to accommodate “an ascent through brutishness and savagery from an ape-like form.” On this point, the flexibility of interpretation is abandoned and a rigid objection is maintained.

A similar stance is taken in the popular fundamentalist study Bible, the *Scofield Reference Bible*, which along with the *Fundamentals* helped to establish the core working ideas of Protestant fundamentalism. Originally published in 1909 and a massive best-seller, the *Scofield Reference Bible* was a central force in the shaping of a fundamentalist Christianity that learned about and accepted both or either the “long day” and “gap theory” interpretation of creation as compatible with a literal belief in the Bible. Like Orr, the *Scofield Reference Bible* considered modern scientific doctrines, including evolution, to be compatible with conservative Protestantism, except for any sort of evolution of humans: “The revealed facts are: (1) Man was created not evolved. This is (a) expressly declared, and the declaration is

⁶⁴⁴ Ibid., p. 103-4.

confirmed by Christ....”⁶⁴⁵ The *Scofield* Bible agreed that the evolutionary processes that scientists claimed had been responsible for life on earth might be true, and if so they were merely the tools by which God had instantiated his creation. In this sense the Protestant fundamentalists raised on the *Scofield* Bible considered theistic evolution to be compatible with theological orthodoxy, as did the Catholic Church, but whereas the Catholic Church claimed only that the human soul must assuredly have been instantly created by God, the fundamentalists demanded that the blood and body of man had been as well.

Like the editors of the *Scofield* Bible and the authors of *The Fundamentals*, the official Southern Baptist objection to evolution also focused not on chronology but on humankind’s ancestry. The Southern Baptists (the South’s single largest Protestant denomination) described their position on evolution in the “Tull Resolution” at the Southern Baptist Convention of 1926: “This convention accepts *Genesis* as teaching that man was a special creation of God and rejects every theory, evolution or otherwise, which teaches that man originated or came by way of a lower and animal ancestor.”⁶⁴⁶ Once again the objection is specifically the implied ancestry of humanity rather than questions of dating or the ordering of creation.

The most famous anti-evolutionist of the 20th century, William Jennings Bryan, also did not insist in biblical literalism in all things. Like Orr, Bryan did not hold to the literal six days of creation in *Genesis*. Responding to the claim that he did believe in these six days, Bryan said:

He charges me with believing that the world was made in six days,—evidently meaning days of twenty-four hours each. I do not know why he should have made such an assertion when I have never, in writing or in my speeches, said

⁶⁴⁵ From the notes on *Genesis* 1:26 “make man in our image” in the 1917 edition of the *Scofield Reference Bible*.

⁶⁴⁶ Selsus Estol Tull, “Oral Memoirs of Selsus Estol Tull,” interview by Robert Andrew Baker, transcript, 1965, Texas Baptist Project, Baylor University Institute for Oral History, p. 36.

anything to justify such a charge. According to the interpretation placed upon it by orthodox Christians, the day mentioned in the account of creation was of indefinite duration. The only persons who talk about twenty-four-hour day in this connection do so for the purpose of objecting to it; they build up a straw man to make the attack easier, as they do when they accuse orthodox Christians of denying the roundness of the earth, and the law of gravitation.⁶⁴⁷

During the Scopes Trial, Bryan reiterated, like Orr and the *Scofield Reference Bible*, that the six days of creation were "not six days of twenty-four hours."⁶⁴⁸ For Bryan, the significant fact about Darwinism was not that it implied an ancient Earth, but that evolution "robs man of the dignity conferred upon him by separate creation..." since Darwinism is "the hypothesis that links man to the lower forms of life and makes him a lineal descendant of the brute..."⁶⁴⁹

Bryan's theological position on evolution was the same as that of other Protestant fundamentalists such as that found in *The Fundamentals*, the *Scofield Reference Bible*, and the Southern Baptist Convention, which together defined the mainstream of the anti-evolution movement. The mainstream of the anti-evolution movement was not interested in combating the spread of scientific doctrines writ large, or even of evolutionary theories in general. Their theological position was focused specifically on the implication that man's dignity would be undermined by the teaching that he developed from brute creation. They all agreed that the only specific evolutionary claim that was incompatible with orthodox, conservative Protestantism was that humans shared a blood connection to lower forms of life.

In Bryan's discussions of evolution, though he often refers to God, there is little mention of any particular Christian doctrines, and his discussions of Biblical scripture are

⁶⁴⁷ William Jennings Bryan, "Letter to the Editor," *Forum*, Vol. 70. (Aug., 1923), p. 1852.

⁶⁴⁸ Scopes Trial Transcript, Day 7, (1925), p. 299.

⁶⁴⁹ William Jennings Bryan, *In His Image*. (New York: Fleming H. Revell Co., 1922), p. 88.

cursory, at best. Bryan makes it quite clear during the Scopes Trial that he is uninterested in questions of Biblical chronology and their relation to modern science. When Darrow asks Bryan on the witness stand, "You don't care how old the earth is, how old man is and how long the animals have been here?," Bryan's response sums up his attitude towards the subject: "I am not so much interested in that."⁶⁵⁰ In the Address which Bryan wrote for the Scopes Trial, he spends little time discussing theological objections to Darwinian evolution but a great deal of time discussing the moral corruption that Darwinian evolution has on the young, which he claims is as corrupting as the philosophy of Friedrich Nietzsche.⁶⁵¹ Though Bryan frames his objections in terms of Christianity, his real and most significant objections are almost entirely nonreligious.

Bryan's focal objection is that evolutionists connect humanity to lower forms of life, which Bryan considers to be an affront to the dignity of man. After pointing out that evolutionists locate humanity's ancestors amongst the gorillas and chimpanzees of Africa, Bryan says, "if we could divide the human race into two distinct groups we might allow evolutionists to worship brutes as ancestors but they insist on connecting *all* mankind with the jungle."⁶⁵² Bryan's belief that a connection to the "jungle" and brute nature is an insult to the human species is not rooted in his religiosity. Indeed Bryan responds to this "connection" not by insisting that we have a right to protect our religion, but that "we have a right to protect our family tree."⁶⁵³ For Bryan, to protect and preserve the biblical story of creation is not valuable for its own sake, but because it maintains the special dignity of man created "in His image." According to Bryan "every evolutionist who applies the evolutionary

⁶⁵⁰ Scopes Trial Transcript, Day 7, (1925), p. 294.

⁶⁵¹ *Ibid.*, p. 321-339.

⁶⁵² Bryan, (1922), p. 91.

⁶⁵³ *Ibid.*, p. 91.

hypothesis to man believes that man, instead of being created by the Almighty, has in him the blood of the brute or the blood of a lower form of life...”⁶⁵⁴ As Bryan himself says, “our chief concern is in protecting man from the demoralization involved in accepting a brute ancestry...”⁶⁵⁵ Shortly before his death in 1925, Bryan said to a friend that he had no objection to “evolution before man but for the fact that a concession as to the truth of evolution up to man furnishes our opponents with an argument which they are quick to use, namely, if evolution accounts for all the species up to man, does it not raise a presumption in behalf of evolution to include man?”⁶⁵⁶ Bryan’s concern, like that of mainstream Southern Protestantism’s, concern about Darwinism was focused specifically here.

Indeed even the official laws that were passed or proposed to ban evolution share a highly specific focus on the implication that humans are blood relations of lower forms of life. The most famous of these laws was, of course, Tennessee’s “Butler Act” of 1925. This law, under which Scopes was prosecuted, did not prohibit the teaching of all science that contradicted the Bible, nor even all theories of evolution, but specifically made it

“unlawful for any teacher in any of the Universities, Normals and all other public schools of the State which are supported in whole or in part by the public school funds of the State, to teach any theory that denies the story of the Divine Creation of man as taught in the Bible, and teach instead that *man has descended from a lower order of animals.*”⁶⁵⁷

When asked by the author Marcet Haldeman-Julius why he had proposed the anti-evolution law the Butler Act's author, John Butler, argued that he and the vast majority of his constituency agreed that it was the evolution of man specifically that they found problematic.

⁶⁵⁴ William Jennings Bryan, “Darwinism in the Schools,” *Commoner*, Vol. 22, No. 2 (Feb., 1922), p. 6.

⁶⁵⁵ Bryan, *In His Image*. (1922), p. 104.

⁶⁵⁶ Quoted in Ronald Numbers, *The Creationists: From Scientific Creationism to Intelligent Design, expanded ed.* (Cambridge, MA: Harvard University Press, 2006), p. 58.

⁶⁵⁷ Public Acts of the State of Tennessee Passed by the Sixty-Fourth General Assembly, 1925. Chapter No. 27, House Bill No. 185. My italics.

According to Haldeman-Julius, Butler said, "Ninety-nine people out of a hundred in my district thought just like I did, too," he explained. "I say ninety-nine out of a hundred because there may be some hold different from what I think they do, but so far as I know there isn't a one in the whole district that thinks evolution--of man, that is--can be the way the scientists tell it."⁶⁵⁸ According to the prosecution, John Scopes had broken the law by teaching a theory which contradicted the specific belief "that man was created, complete by God."⁶⁵⁹ Such a teaching was against the Bible, according to the prosecution, because "the Christian believes man came from above, but the evolutionist believes he must have come from below."⁶⁶⁰

That the law was focused on preventing the teaching of such a blood connection was made clear when Scopes's defense team attempted to argue that John Scopes had not broken the law by teaching evolution, because evolution did not contradict the Bible. Clarence Darrow invited a number of scientists and Bible experts to testify that teaching evolution did not contradict the Bible and that there were plenty of interpretations of *Genesis* made by professing and orthodox Christians with which Darwinism was compatible. The prosecution and the court argued that the defense's expert witnesses could not testify, because the Butler Act did not depend upon experts' interpretations of what the Bible meant. Rather, all the prosecution needed to show was that Scopes had taught that "man has descended from a lower order of animals," which was not a question for which scientists and theologians had relevant testimony. According to the prosecution, Scopes's real offense was not to contradict the Bible, rather "the real offense provided against in the act is to teach

⁶⁵⁸ Marcet Haldeman-Julius, *Clarence Darrow's Two Great Trials: Reports of the Scopes Anti-evolution Case and the Dr. Sweet Negro Trial*, (Haldeman-Julius: Girard, Kansas, 1927), p. 18.

⁶⁵⁹ *Scopes Trial Transcript*, Day 5, (1925), p. 166.

⁶⁶⁰ *Ibid.*, p. 174.

that man descended from a lower order of animals, and that when this is accomplished by a fair interpretation and by legal implication, the whole offense is proven.”⁶⁶¹ The court agreed with this assessment of the law and excluded the expert testimony arguing that intent of the legislature was to prohibit the teaching that man is connected with lower forms of life and that “the ordinary, non-expert mind can comprehend the simple language, ‘descended from a lower order of animals.’”⁶⁶² According to the court, whether or not evolution actually contradicted the Bible was irrelevant to the case, even going so far as to say, “the issues in this case, as they have been finally determined by this court, is whether or not it is unlawful to teach that man descended from a lower order of animals. I do not understand that issue involved the Bible.”⁶⁶³ The law, the law’s maker, and the courts construed the law not as protecting Biblical literalism, but as banning a particular teaching relating to the ancestry of humankind.

Similar laws in other states were written the same way. For example, in May 1923, Florida passed a resolution against the teaching of evolution in public schools, specifically arguing that it

is improper and subversive to the best interest of the people of this State for any professor, teacher or instructor in the public schools and colleges of this State, supported in whole or in part by public taxation, to teach or permit to be taught atheism, or agnosticism, or to teach as true Darwinism, or any other hypothesis that *links man in blood relationship to any other form of life*.⁶⁶⁴

Note that Florida too did not condemn other scientific theories like, say, geology or astronomy, but only the teaching of theories that dealt with a “blood relationship to any other form of life.”

⁶⁶¹ *Scopes Trial Transcript*, Day 6, (1925), p. 202.

⁶⁶² *Ibid.*, p. 203.

⁶⁶³ *Scopes Trial Transcript*, Day 7, p. 282.

⁶⁶⁴ House Concurrent Resolution No. 7 (Florida, 1923). My italics.

In North Carolina in 1925, the anti-evolution “Poole Bill” was introduced with similar language:

That it is the sense of the General Assembly of North Carolina that it is injurious to the welfare of the people of the State of North Carolina for any official or teacher in the State, paid wholly or in part by taxation, to teach or permit to be taught, as a fact, either *Darwinism or any other evolutionary hypotheses that links man in blood relationship with any lower form or life.*⁶⁶⁵

While there is no mention of the Bible or religious contradiction, once again the language of blood relationships is repeated. Political campaign literature focused on this question and exploited the supposed offensiveness of man’s kinship with lower forms of life to animate the cause (see image #2 for an example). The North Carolina bill was narrowly defeated in the legislature but shared the consistent language of other state bills prohibiting the teaching of evolution.

In 1926, Mississippi followed Tennessee’s example by passing an anti-evolution law that made it a crime for a public school teacher “to teach that mankind ascended or descended from a lower order of animals.” Similarly, Arkansas’s anti-evolution law of 1928 did not seek to outlaw teachings contrary to a literal reading of the Bible. In fact, it did not even prohibit the teaching that nonhuman animals evolved over time due to natural selection, but only the very specific teaching that humans evolved from lower species of animals.

It shall be unlawful for any teacher or other instructor in any University, College, Normal, Public School, or other institution of the State, which is supported in whole or part from public funds derived by State and local taxation to teach the theory or doctrine that **mankind ascended or descended from a lower order of animals...**

⁶⁶⁵ North Carolina General Assembly, "Joint Resolution Restricting the Teaching of Darwinism in the Public Schools of North Carolina," 1925.

Beyond a small sect of Seventh-Day Adventists, fundamentalist Protestants objected only to a very specific implication of evolution, and though they often framed their objection in terms of theology, their narrow theological focus demonstrates the high degree of specificity with which they objected to Darwinian evolution.

The Southerners who passed the Butler Act, and others like it, and sought to prevent the teaching of evolution did not merely misunderstand evolution, rather they disliked a specific portion of Darwinian evolution. They knew what it said (at least enough), and they objected to what it said. That there was religious objection to this “distasteful” element is undeniable, but the objection was specific and consistent enough to demand further explanation. Why was Darwinism’s conclusion that humanity was linked with the rest of the animal kingdom, in particular, the point of objection for Southern Protestants, even though so many others, Protestants included, did not find this so troubling? In addition, we must remember that the Southern Protestants found this point so objectionable that they formed a movement, which sought not only to oppose evolution through writing and preaching but also to use the police power of the state to eliminate its propagation. There are two alternative explanations that might account for why the implication that humans have blood relations with lower forms of life would have significant political salience, both of which will be explored in the next sections.

The Social Gospel and the Anti-Evolution Movement

It is not enough to see the anti-evolution movement as a byproduct of ignorance, religion, or anti-educational fervor. Certainly for someone like William Jennings Bryan, it was not. The conflict at the Scopes Trial is interesting not only because of the nature of the

conflict, i.e. a conflict about the teaching of biological evolution in public schools, but also because it was adjudicated in legislatures and courts. The fight over evolution was not just a fight, or at least not primarily, about whether evolution was true, if it had been then it could have been safely left to scientists and interested lay-people, but was also a fight over political power. This political fight was channeled by and through religious language and inspiration, just as the abolitionist movement of the mid-nineteenth century had been and the civil rights movement of the mid-twentieth century would be, and though these movements drew on the language and mien of religious feeling they remained very much political disputes over the balance of political power in the South. It is often difficult to disaggregate whether a dispute is primarily political, religious, or both, and this is no less true of the anti-evolution movement in the period of the Scopes Trial, which tapped into and was channeled by a “Southern civil religion” which blended religious belief, civic life, and white solidarity in an intricate and mutually reinforcing ideological pattern.

The political coalition that backed William Jennings Bryan’s campaigns for the Presidency in 1896, 1900, and 1908 was an early example of what would be known later as the Democratic “New Deal Coalition,” but without the large number of Black voters that Franklin Roosevelt would add to the Democratic coalition in the 1930s. They were a motley mix of Northern anti-business reformers, prairie radicals, urban immigrants, and southern white supremacists. On race, the Democratic coalition contained an odd mixture of both anti-segregation advocates like Clarence Darrow and white supremacist terrorist organizations like the Ku Klux Klan. While Bryan’s coalition in the North and South shared political affinities on economic and business issues, they were divided on the question of

race—a division which would continue to grow within the Democratic Party during the 20th century.

One argument that has been made about Bryan's support for the anti-evolution movement is that Bryan, and the political coalition that supported him, had political considerations in mind. It has been argued that the anti-evolution movement opposed the teaching of Darwinian evolution in public schools because of its desire to overcome the social Darwinian industrialism of the late 19th century. However, as we shall see, when it comes to the teaching of evolution in public schools not all of Bryan's coalition supported him. The anti-evolution movement that Bryan led was primarily supported by the southern white supremacists who had also backed his presidential campaigns but not the Northern urbanites and social reformers that had made up such a significant portion of his political coalition. In fact, the most prominent supporters of political reforms on behalf of the poor, people like Walter Rauschenbusch, Charles Sheldon, and, most famously, Clarence Darrow, all actively opposed Bryan's desire to restrict the teaching of evolution in public schools, while also opposing the racial politics of the southern white supremacists.

The economic historian Robert Fogel has argued that the political and economic reforms of the Progressive and New Deal eras rested on changing Protestant attitudes during the "Third Great Awakening."⁶⁶⁶ Whereas prior to this period, most American Protestants had believed that "poverty was the wages of sin," an increasing number at the end of the 19th century began to argue that Jesus had called Christians to aid the distressed and to reform society on behalf of the poor and downtrodden here on Earth—to remember

⁶⁶⁶ Robert William Fogel. *The Fourth Great Awakening & the Future of Egalitarianism*. (Chicago: University of Chicago Press, 2000).

that “in fact, the kingdom of God is among you.”⁶⁶⁷ The influence of this new social Protestantism was most keenly felt in the cities of the industrial Northeast and Midwest, although not exclusively so. This new reform Christianity began calling for a new reform politics to instantiate these teachings of the social Gospel. Bryan’s biographer, Lawrence Levine, argued that Bryan’s political work on behalf of reform derived from his belief in this “*social* Christianity,” which argued that “the message of Christ was not merely preparation for the future world but a mandate for this world as well.”⁶⁶⁸ Bryan himself frequently and consistently argued that the great “menace of Darwinism” was its detrimental impact on the weak among us. Bryan claimed that evolution destroyed man’s belief in the inherent dignity of humankind by implying that humans were mere animals, rather than beings created in the image of God.⁶⁶⁹ For Bryan, Darwinism implied an amoral, purposeless universe and destroyed man’s humane instincts towards his fellows that involved his most firmly held beliefs in politics and religion. Bryan’s religious objections to Darwinism cannot be easily separated from his political objections, which were often intertwined, overlapping, and mutually reinforcing.

For many years scholars viewed Bryan’s involvement with the anti-evolution movement, and his presence at the Scopes Trial, as an embarrassment to his legacy and inconsistent with his previous political life, although scholars no longer do so. Bryan’s biographers now argue that his passionate opposition to Darwinian evolution was not only consistent with his political populism and reformism, but that Bryan’s opposition to

⁶⁶⁷ *Ibid.*, p. 22-3; *Luke* 17:21 (New Revised Standard Version).

⁶⁶⁸ Lawrence Levine, *Defender of the Faith: William Jennings Bryan, the Last Decade, 1915-1925*. (Oxford: Oxford University Press, 1965), p. 358.

⁶⁶⁹ William Jennings Bryan, *In His Image*. (New York: Fleming H. Revell Co., 1922).

evolution actually derived from his political work and vice versa.⁶⁷⁰ Certainly Bryan thought so: “If you would be entirely accurate you should represent me as using a double-barreled shotgun, firing one barrel at the elephant as he tries to enter the treasury and another at Darwinism—the monkey—as he tries to enter the schoolroom.”⁶⁷¹ Bryan’s conservative religious beliefs and progressive political beliefs seemed an odd pairing to some. Bryan addressed this shortly before the Scopes Trial: “People often ask me why I can be a progressive in politics and a fundamentalist in religion. The answer is easy. Government is man made and therefore imperfect....If Christ is the final word, how may any one be progressive in religion? I am satisfied with the God we have, with the Bible and with Christ.”⁶⁷² According to Bryan, both radical politics and conservative religious beliefs compelled him to oppose Darwinian evolution.

Bryan argued that evolution undermined human solidarity, and justified gilded age industrial capitalism as a natural process of struggle, and provided scientific blessing and prestige to the strong, while denigrating the weak as nature’s losers and painting reformers as weak-minded. According to Bryan, if the evolutionary hypothesis were “taken seriously and made the basis of a philosophy of life, it would eliminate love and carry man back to a struggle of tooth and claw.”⁶⁷³ To say that religion was immaterial to Bryan’s objections to evolution would be both absurd and incorrect—Bryan’s deeply held religious beliefs vitally informed his objections to evolution—but they fail to explain his objection fully. Bryan objected to Darwinian evolution, because it contradicted the Biblical account of creation in a

⁶⁷⁰ Levine, (1965); Paolo E. Coletta, *William Jennings Bryan, Vol. III: Political Puritan, 1915-1925*. (Lincoln: University of Nebraska Press, 1969); Stephen Jay Gould, “William Jennings Bryan’s Last Campaign,” *Bully for Brontosaurus: Reflections in Natural History*. (New York: W. W. Norton & Co., 1991), pp. 416-31; Michael Kazin, *A Godly Hero: The Life of William Jennings Bryan*. (New York: Alfred A. Knopf, 2006).

⁶⁷¹ Quoted in Levine (1965), p. 274.

⁶⁷² “Bryan, Radical in Politics, Standpat in Religion, Tells Why,” *Chicago Daily Tribune*, (May 28, 1925), p. 5

⁶⁷³ Bryan, “Supplement—Bryan on Evolution,” *Scopes Trial Transcript*, Day 8, (1925), p. 335.

manner that he felt would have social and political consequences. He feared that teaching evolution to children would create a crueler society, which would be detrimental to the weak and the poor.⁶⁷⁴ Bryan argued that “all dealings between man and man are based upon one theory or the other—they are either brotherly or brutal; there is no middle ground.”⁶⁷⁵ Bryan makes it clear that he denies Darwinian evolution because of its social and political implications rather than its logical content. Such implications prevented Bryan from accepting “theistic evolution” as had so many other Christians who squared their belief in divinely inspired order with the scientific conclusion that evolutionary processes had shaped the history of life on Earth. For Bryan, it was true that if God “could make man as he is” he could also have “made him by the long-drawn-out process suggested by Darwin.” Either method required an infinite God with abilities beyond comprehension, yet Bryan denied divinely-guided evolution because he worried about “the *natural tendency* of Darwin’s doctrine?”⁶⁷⁶

Bryan and other leaders of the social gospel were part of what religious scholar Martin Marty has called the “public party” of American Protestants, who sought to create the “Kingdom of God on this earth.”⁶⁷⁷ The “social gospel” movement of the early 20th century was opposed to social Darwinism and sought to create a kinder, gentler society that would protect its weakest members. The social gospelers wanted to constrain the competitive, dog-eat-dog social Darwinists like Andrew Carnegie and William Graham Sumner who argued that charity and reform on behalf of the poor were counterproductive. Their political opposition was rooted in their Christianity.

⁶⁷⁴ Matthew J. Tontonoz, “The Scopes Trial Revisited: Social Darwinism versus Social Gospel,” *Science as Culture*, Vol. 17, No. 2 (Jun., 2008), pp. 121-143.

⁶⁷⁵ William Jennings Bryan, “Brother or Brute?,” *The Commoner*, (Nov., 1920), p. 11

⁶⁷⁶ Bryan (1922), p. 110-1.

⁶⁷⁷ Martin E. Marty, *Righteous Empire: The Protestant Experience in America*. (New York: Dial Press, 1970).

The Protestant preachers and reformers who helped to create the social gospel movement sounded like Bryan on the issue of reform for the poor. The Congregationalist minister, Charles Sheldon, most well-known today for having invented the phrase “What Would Jesus Do?” and writing the book *In His Steps*, lobbied for the downtrodden and argued that a more just and humane society would rectify the worst deprivations that the poor faced, and like Bryan, his politics were rooted in his Christianity. Another Congregationalist pastor and prominent social gospeler, Washington Gladden, author of the hymn “O Master, Let Me Walk With Thee” supported many of the political reforms that Bryan championed. In fact, Gladden sounds very like Bryan when he wrote:

The farmers of the United States are up in arms. They are the bone and sinew of the nation; they produce the largest share of its wealth; but they are getting, they say, the smallest share for themselves. The American farmer is steadily losing ground. His burdens are heavier every year and his gains are more meager; he is beginning to fear that he may be sinking into a servile condition. He has waited long for the redress of his grievances; he purposes to wait no longer....⁶⁷⁸

Gladden was one of the first religious figures to support unionization in the United States, and he was an early leader of the social gospel movement.⁶⁷⁹ Other founders of the social gospel like Walter Rauschenbusch and Shailer Matthews also believed, like Bryan, Sheldon, and Gladden, that Christianity commanded social reform on behalf of working people and the poor.⁶⁸⁰

However, while Bryan shared an ideological affinity towards the poor with the social gospel movement, he also disagreed with them on two prominent political issues of the day, the anti-evolution movement and white supremacy. Because the roots of the social gospel

⁶⁷⁸ Washington Gladden, “The Embattled Farmers,” *Forum*, Vol. 10 (Nov., 1890), pp. 314-5.

⁶⁷⁹ See Washington Gladden, *Working People and their Employers*. (Boston: Houghton Mifflin, 1876) and *Applied Christianity: Moral Aspects of Social Questions*. (Boston: Houghton Mifflin, 1887).

⁶⁸⁰ Walter Rauschenbusch, *Christianity and the Social Crisis*. (New York: Macmillan Company, 1907).

were religious, and because they opposed social Darwinism, chroniclers of the age have tended to act as if it was natural for practitioners of the social gospel to oppose Darwinian evolution.⁶⁸¹ However, with the important exception of Bryan, they almost entirely did not. Even the Mississippi anti-evolutionist T. T. Martin acknowledged that the proponents of the social gospel seemed to be the same people supporting evolution. Martin argued that Darwinian evolution eliminated the moral imperative for compassion and humanity, yet he acknowledged that it was not the creationists but the evolutionists who were associated with the social gospel: “Evolution says: ‘Let them die.’ Yet Evolutionists now are insistent on the ‘social gospel,’ helping the poor, the sick, etc. *When did Evolution reverse itself?*”⁶⁸²

In addition to disagreeing over evolution, Bryan and the social gospellers disagreed over white supremacy. While Bryan and the social gospellers shared a desire to use social and political reform to help the poor and working classes, the social gospellers thought that that reform ought to benefit the poor of all races, whereas Bryan did not. For example, on the issue of evolution, Charles Sheldon’s biographer said this about him: “Theologically, there is no way to classify Sheldon other than as a liberal . . . Nowhere in his writings is there to be found a comment on the Scopes trial, for example, or on Harry Emerson Fosdick’s polemics, although he believed in evolution and was not far from Fosdick on many issues.”⁶⁸³ Unlike Bryan, Sheldon also opposed racial segregation and believed in evolution. Washington Gladden and Bryan also differed over issues of racial equality and white supremacy. Gladden supported the ending of racial segregation; Bryan did not. As Gladden himself put it, “when one law is made for black men and another for white men, the injustice

⁶⁸¹ For example, Tontonoz (2008).

⁶⁸² Martin (1922), p. 132.

⁶⁸³ Timothy Miller, *Following In His Steps: A Biography of Charles M. Sheldon*. (Knoxville, TN: University of Tennessee Press, 1987), p. xiii.

is so glaring that it cannot endure.”⁶⁸⁴ Similarly, while Gladden thought that theology ought to accommodate Darwinism, Bryan did not. In *Who Wrote the Bible?*, Gladden argued that the Bible was not infallible and that “it is idle to try to force the narrative of Genesis into an exact correspondence with geological science” which was “not intended to give us the scientific history of Creation, and the attempt to make it bear this construction is highly injudicious.”⁶⁸⁵ In regards to evolution, Gladden argued “that Mr. Darwin’s theory of the evolution of the eye furnishes a proof of intelligence far more impressive than any that Paley ever dreamed of.”⁶⁸⁶ Rauschenbusch and Mathews, too, opposed racial segregation and accepted Darwinism, while Shailer Mathews even incorporated evolutionary theory into his religious views, noting that the two were not mutually exclusive.⁶⁸⁷

Prominent social gospelers like Rauschenbusch, Sheldon, Gladden, Fosdick, and Mathews accepted modern scientific discoveries like evolution and the new higher criticism coming from Germany. Though they were politically opposed to the social Darwinists, they were not opposed to scientific Darwinism. Mathews was even cited by Scopes’s defense team as a theological expert to argue that Scopes had not contradicted the Bible by teaching evolution.⁶⁸⁸ Mathews, a co-founder of the Northern Baptist Convention and Dean of the University of Chicago divinity school, was literally on the opposite side of the Scopes Trial

⁶⁸⁴ Washington Gladden, “Even These Least,” sermon, Jan. 9, 1916, Gladden Papers. Quoted in Gary Dorrien, *The Making of American Liberal Theology: Imagining Progressive Religion, 1805-1900*. (Louisville, KY: Westminster John Knox Press, 2001), p. 328.

⁶⁸⁵ Washington Gladden. *Who Wrote the Bible?* (Boston: Houghton Mifflin, 1894), p. 351-2.

⁶⁸⁶ Washington Gladden. *Burning Questions of the Life That Now Is, and of That Which is to Come* (New York: The Century Company, 1891), p. 17.

⁶⁸⁷ On Rauschenbusch and race see Ronald C. White, Jr., *Liberty and Justice for All: Racial Reform and the Southern Gospel (1877-1925)*. (Louisville, KY: Westminster John Knox Press, 1990), pp. 208-11. Shailer Mathews, “Introduction,” *Contributions of Science to Religion*. (New York: D. Appleton and Co., 1924), pp. 1-13.

⁶⁸⁸ “We expect to prove by Dr. Shailer Mathews, dean of the Divinity school of the University of Chicago, and one of the leading American authorities on the Bible, author of the book on ‘Contribution of Science to Religion,’ that ‘a correct understanding of Genesis shows that its account of creation is no more denied by evolution than it is by the laws of light, electricity and gravitation. The Bible deals with religion.” Statement of Mr. Hays, *Scopes Trial Transcript*, Day 7, p. 224.

from Bryan and on the question of the compatibility of Christianity and evolution, even though they shared some common political beliefs towards the working poor. However, Bryan's distinctiveness amongst the social gospelers shows that this was neither necessary, nor even particularly common. It is difficult to claim that "Applied Christianity" or the "Social Gospel" was at the heart of the anti-evolution movement and the prosecution of John T. Scopes when most members of the social gospel did not, in fact, favor the prohibition of teaching evolution.

In fact, when it came to the issues of evolution and race, the northern, liberal Protestants of the social gospel movement were more closely aligned with radicals like Bryan's Scopes trial opponent, Clarence Darrow, than with Bryan. The agnostic Darrow also quite passionately supported the same political causes on behalf of the "producing masses" and "toilers everywhere." Darrow had supported Bryan starting in 1896 during Bryan's first presidential campaign, after hearing Bryan's famous "Cross of Gold" speech at the Democratic National Convention in Chicago, where Bryan spoke "in defense of a cause as holy as the cause of liberty—the cause of humanity."⁶⁸⁹ Though Darrow was a freethinker and disapproved of Bryan's religiosity, he was such an enthusiastic supporter of Bryan's campaign for President that Darrow neglected his own political campaign in the same year.⁶⁹⁰ Radicals, like Darrow and Eugene Debs, supported Bryan's political ambitions precisely because of his political ideology regarding issues of economics and class, yet they were entirely opposed to Bryan on the issue of evolution. It was not the northern reform coalition of Bryan's Presidential campaigns that supported Bryan's quest to ban the teaching of evolution, so it is difficult to see how the antievolution movement in general, and the

⁶⁸⁹ William Jennings Bryan, "Cross of Gold Speech," *A Populist Reader: Selections from the Works of American Populist Leaders*, ed. George Brown Tindall (New York: Harper & Row, 1966), p. 203.

⁶⁹⁰ Andrew Kersten, *Clarence Darrow: American Iconoclast*. (New York: Hill and Wang, 2011), p. 86

Scopes Trial specifically, could be viewed as a manifestation of anti-industrialist, anti-capitalist political protest when most reform-minded, progressive people were not opponents of the right of teachers to teach evolutionary theories in public schools but rather supporters.

Adherents of both social Darwinism and the social gospel felt comfortable aligning evolutionary theories with their agendas for economic reform. While Social Darwinists used Darwinian analogies to justify their belief in industrial progress, this use did not bar their political opponents from also incorporating evolutionary ideas. Biological theories of evolution were not particularly “useful” in arbitrating the disputes between these groups, because both sides had intellectual histories of incorporating scientific discoveries with regards to evolution, and neither side had any particular incentive to seek a political remedy to outlaw the teaching of evolution.

Race and the Anti-Evolution Movement

There were some who objected that Darwinism contradicted a literal reading of the Bible, but they were much rarer and much less influential than the mainstream fundamentalist Protestant objection to Darwinian evolution. But even those who objected to evolution because Darwinian evolution challenged a literal interpretation of the Biblical story of creation focused a great deal on evolution’s implications about human ancestry. Bryan mentions the creationist works of George McCready Price, the forerunner of the creationist movement of the mid-20th century. Price was a geologist and white supremacist and was cited as an authority on geology by Bryan during the Scopes Trial. Though it was unusual in the 1920s, Price did insist that the Earth was less than 10,000 years old, and it was

Price that was largely responsible for the later creationist belief in the catastrophism of “flood geology” as an alternative to the uniformitarianism of Charles Lyell.⁶⁹¹ The creationist insistence that the universe was created in six literal days only gained some mainstream acceptance amongst anti-evolutionists in the 1960s.⁶⁹² Price was in large part responsible for that shift, along with others, such as his protégé Frank Lloyd Marsh, who helped to found the Creation Research Society in 1963.

Price and Marsh, along with almost every young-earth creationist before the 1960s were members of the Seventh-Day Adventist Church, which unlike other Protestant churches, *did* have a religious objection to any interpretation that the creation took longer than six literal days. They placed great stock in the religious writings of Ellen G. White, one of the founders of Seventh-Day Adventism, who, unusually for Christians, held that the Sabbath was to be celebrated on a Saturday as the culmination of the literal six-day creation of the Earth. White argued that:

the infidel supposition, that the events of the first week required seven vast, indefinite periods for their accomplishment, strikes directly at the fourth commandment. It makes indefinite and obscure that which God had made very plain. It is the worst kind of infidelity; for with many who profess to believe the record of creation, it is infidelity in disguise. It charges God with commanding men to observe the week of seven literal days in commemoration of seven indefinite periods, which is unlike his dealings with mortals, and is an impeachment of his wisdom.⁶⁹³

Unlike other Protestants at the time, the Adventists objected to the religious implications of an “old Earth”, and for that reason they also went farther than other Protestants and objected to “infidel geologists” in addition to biological evolution. When there was a

⁶⁹¹ See, for example, George McCready Price, *Evolutionary Geology and the New Catastrophism*. (Oakland, CA: Pacific Press, 1926).

⁶⁹² The best explication of this shift in the creationist movement in the United States towards an insistence on a young-earth and a quick creation can be found in Numbers (2006).

⁶⁹³ Ellen G. White, *Important Facts of Faith, in connection with the History of Holy Men of Old: Spiritual Gifts*, Vol. III (Battle Creek, MI: Steam Press, 1864), p. 91-2.

particular “religious” objection, they objected, unlike most anti-evolutionists whose focus was only on the “blood” relationship of humans to “brutes.”

The Adventists, Price and Marsh, did object to biological evolution as well as to geological uniformitarianism, and like mainstream anti-evolutionists, they objected to the biological implication of common origins for different races. Price, in *The Phantom of Organic Evolution*, objects to the idea that “man is a developed ape.” Price argues that though there are physical resemblances between “man and the anthropoid apes” their mental, moral, and spiritual capacities are too different to suppose that humans descend from them. Rather than men being evolved apes, it is more likely that “apes are degenerate men,” and that “these present-day anthropoid apes may be just as much a product of modern conditions as are the *negroid* or the *Mongolian* types of mankind.”⁶⁹⁴ Price was unsure of the origins of the human races and thought that the various human races might be different species though they were “cross-fertile.” Here’s Price: “Probably a dozen or more characters could be enumerated in respect to which the negro differs from the white man. True, these races prove to be cross-fertile; but so do great numbers of natural species among plants and animals. In many other respects also the races of mankind greatly resemble the best marked Linnaean species among animals and plants.”⁶⁹⁵ According to Price, either nonwhite races degenerated from the originally created “man”, or “the races of mankind arose suddenly.”⁶⁹⁶

Price even expanded on his theories of the origins of the “negroid” race in a poem:

The poor little fellow who went to the south,
Got lost in the forests dank;
His skin grew black, as the fierce sun beat

⁶⁹⁴ George McCready Price, *The Phantom of Organic Evolution*. (New York: Fleming H. Revell Co., 1924), pp. 209-12 in *Creationism in Twentieth-Century America: Selected Works of George McCready Price*. Ed. Ronald L. Numbers. (New York: Garland Publishing, Inc., 1995), pp. 445-8.

⁶⁹⁵ Price (1924), p. 103-4.

⁶⁹⁶ *Ibid.*, pp. 103, 210.

And scorched his hair with its tropic heat,
And his mind became a blank.⁶⁹⁷

Marsh, Price's protégé, also shared these theories.

Like Price, Marsh relied heavily on the theological writings of Ellen G. White when making his scientific case about the origins of humankind. White had argued that "since the flood there has been amalgamation of man and beast, as may be seen in the almost endless varieties of species of animals, and in *certain races of men*."⁶⁹⁸ In *Fundamental Biology*, Marsh argued that modern nonwhite human races are degenerate forms of the first-created man.⁶⁹⁹ This degeneration arose when the master geneticist, Satan, used amalgamation and hybridization to destroy the harmony of things by building "up within the kinds, different races, strains, and types which look quite unrelated to other members of the kind." Marsh viewed dark skin color as having arisen in this way.⁷⁰⁰ Perhaps unsurprisingly, the Adventists, like most other anti-evolutionists, supported segregation.

Race, Religion, and the Southern Civil Religion

To understand why racial concerns are so important for explaining the anti-evolution movement, yet were so often couched in religious language and objected to by Southern clergymen, we must understand the importance and development of "Southern civil religion." Robert Bellah and Martin Marty have developed the concept of American civil religion, which binds together Americans in support of common ideas and institutions

⁶⁹⁷ Quoted in Numbers (2006), p. 102.

⁶⁹⁸ White (1864), p. 75

⁶⁹⁹ Frank Lewis Marsh, *Fundamental Biology*. (Lincoln, NE: the author, 1941) in *Creationism in Twentieth-Century America: The Early Writings of Harold W. Clark and Frank Lewis Marsh*. Ed. Ronald L. Numbers. (New York: Garland Publishing, Inc., 1995).

⁷⁰⁰ Ronald Numbers, "Ironic Heresy: How Young-Earth Creationists Came to Embrace Rapid Microevolution by Means of Natural Selection", *Darwinian Heresies*, ed. by Abigail Lustig, Robert J. Richards, and Michael Ruse (Cambridge: Cambridge University Press, 2004), p. 92.

through a sort of non-denominational religious sacralization of the “American Way of Life.”⁷⁰¹ While the language that is used in American civil religion is steeped in religious overtones, it serves to strengthen secular ties between the American people and to bind them to a set of social and political ideas, deviation from which becomes an act of un-American heresy. As Bellah puts it, the civil religion establishes a “criterion of right and wrong” separate from the will of the people that can be used to judge the will of the people.⁷⁰² A separate and regionally-based southern civil religion has, similarly, worked to bind together Southern whites towards one another as a people and towards common ideas and institutions.⁷⁰³ After the Civil War, religious leaders in the South began to construct a narrative that justified the South’s actions during the War, and justified Southern whites in their defense of slavery and white supremacy. The Southern civil religion and the myths of the Christian knights of the Lost Cause palliated Southerners during their defeat, helped to rebuild a new Southern regional identity within the Union, and acted as a purveyor of Southern tradition after the overthrow of slavery. The religious tradition of the South became part of the political redemption of the South, and acted as a type of civil religion that bound Southern whites together in defense of white racial privilege and White control of Southern social and political life.

The intellectual movement of the “Lost Cause” united white Southerners together in solidarity in commemoration of and honor towards the fallen soldiers of the War, and for the preservation of the memory of the valiant martyrdom of the defenders of the Southern way-of-life. In such a way, Robert E. Lee became not merely a great general but a “Christian

⁷⁰¹ Robert Bellah, “Civil Religion in America,” *Daedalus*, Vol. 96, No. 1 (Winter 1967), pp. 1-21; Martin E. Marty, *Righteous Empire: The Protestant Experience in America* (New York: Harper and Row, 1970).

⁷⁰² Bellah (1967), p. 4.

⁷⁰³ Charles Reagan Wilson, “The Religion of the Lost Cause: Ritual and Organization of the Southern Civil Religion, 1865-1920,” *The Journal of Southern History*, Vol. 46, No. 2 (May 1980), pp. 219-38.

knight,” a gentle Christian man embodying the virtues of the old South.⁷⁰⁴ The “Christian knights” of the South united to defend the purity of white womanhood, segregation, and Christian values, as their forefathers had defended slavery and Southern lands against what they considered to be fanatical, irreligious Northerners. Conservative Protestantism became a defining trait of Southern identity, and it was Southern preachers who created, nurtured, and led the burgeoning myths and ideals of the Southern civil religion. Religious language in the south was intimately tied to the lost cause, the “southern way of life,” and the protection of white supremacy.⁷⁰⁵ Though the discourse was imbued with religious overtones and was cast in a religious light, the context in which the discourse of the Lost Cause emerged and the way in which the Southern civil religion was deployed showed that both covert and non-covert concerns over Confederate veneration, regional identity, and white supremacy underlay the religiosity.

Religious language was often used by the Ku Klux Klan in defense of white supremacy, but they were used in defense not of mere religion but of Southern Protestantism's core place at the heart of Southern white identity. In this sense, religious concerns became racial concerns. For example, when a Ku Klux supporter says “God drew the color line and man should let it remain,” the message was clearly racially motivated even though the discourse deployed religious language.⁷⁰⁶ The color line was imbued with permanence and authority through its sacralization. The language of the “Lost Cause” consistently invoked religious feeling to create a sense of spiritual mythos around the figures

⁷⁰⁴ Wilson, *Baptized in Blood* (1980), p. 48-50.

⁷⁰⁵ Charles Reagan Wilson, *Baptized in Blood: The Religion of the Lost Cause, 1865-1920*. (Athens, GA: The University of Georgia Press, 1980); Gaines M. Foster, *Ghosts of the Confederacy: Defeat, the Lost Cause, and the Emergence of the New South* (New York: Oxford University Press, 1987); Daniel W. Stowell, *Rebuilding Zion: The Religious Reconstruction of the South, 1863-1877*. (New York: Oxford University Press, 1998).

⁷⁰⁶ Alma White, *Heroes of the Fiery Cross*, (Zarephath, NJ: Pillar of Fire, 1928), p. 187.

of southern culture, and as historian Charles Reagan Wilson put it, “the Klan, in truth, was a vital organization of the religion of the Lost Cause.”⁷⁰⁷ They did this to unite southern whites together both politically and culturally on behalf of “the southern way of life” against northerners, radical Republicans, and freed blacks attempting to assert their equal rights in the post-Civil War South.

Important for the establishment of the myth of the Lost Cause were preachers like Albert Taylor Bledsoe, whom historians Eugene Genovese, David W. Blight, and Charles Reagan Wilson have all called one of the prime creators and sustainers of southern nationalism after the South's defeat in the Civil War. Bledsoe was an Episcopalian minister, former Confederate soldier, and a prominent apologist for the South's desire for war and the South's way of life.⁷⁰⁸ He founded the *Southern Review* in the 1860s, which became a prime intellectual channel through which the Southern civil religion was shaped and nurtured in the 2nd half of the 19th century. The Lost Cause mythology, which tied Southern whites to a glorious, martyred past whose failure proved its worth, also bound successive generations of white Southerners in adulation of the romantic, heroic struggles of the Confederate cause and the Confederate dead. For Bledsoe, the specter of northern reformers and German materialism was a menace for Southerners to combat, and part of this anti-Southern menace was the new science of Darwinism, which he attacked in his journal.⁷⁰⁹ Bledsoe helped to shape the sacralization of the new rituals and myths of the New South, which tied religious sentiment and feeling to the preservation of the Southern way of life, and allowed Southern Jeremiahs to teach their fellows that the failures of the South did not arise from a failure to

⁷⁰⁷ Wilson (1980), p. 111.

⁷⁰⁸ Terry A. Barnhart, *Albert Taylor Bledsoe: Defender of the Old South and Architect of the Lost Cause*, (Baton Rouge, LA: Louisiana State University, 2011).

⁷⁰⁹ Albert Taylor Bledsoe, "Darwinism," *Southern Review*, Vol. 12, No. 25 (Apr., 1873), pp. 406-423; "Philosophy versus Darwinism," *Southern Review*, Vol. 14, No. 28 (Oct., 1873), pp. 253-273.

adapt to a new world, but from a failure to cherish and preserve the traditions and heritage of which they were a part.

Though the Lost Cause mythology was regionally based, the Southerners, ironically, saw themselves as protectors of traditional American values as well as traditional Confederate values. White Southerners saw themselves as the last bastion of Anglo-Saxon Protestantism, which, they argued, was being eroded and erased in the industrial North and Midwest through the influx of Catholic and Jewish immigrants from Southern and Eastern Europe. Historian David M. Chalmers has said that for the Ku Klux Klan the “greatest selling point was the protection of traditional American values.” These values were “to be found in the bosoms and communities of white, native-born, Anglo-Saxon Protestants, whether in the small towns or transplanted into a newly minted urban America.”⁷¹⁰ When the Negro spiritual “old-time religion” was copied down by a white man named Charles Davis Tillman in Lexington, South Carolina in the 1890s it became a staple of Southern gospel music for white Southerners.⁷¹¹ As the song says, "Give me that old time religion,/It's good enough for me." It was featured in the movie, “Inherit the Wind,” and the lyrics evoke the manner in which religion and the southern civic religion overlapped to create a sense that reform and northern ideas were anathema to traditional social relations in the south.

⁷¹⁰ David Chalmers, *Hooded Americanism: The History of the Ku Klux Klan*, 3rd. ed. (Durham, NC: Duke University Press, 1987), p. 2.

⁷¹¹ Selected Lyrics:

Give me that old time religion,
Give me that old time religion,
Give me that old time religion,
It's good enough for me.

It has saved our fathers.
It has saved our fathers.
It has saved our fathers.
It's good enough for me.

Throughout the South preachers presided over Confederate memorials and compared “the sacrificial, redemptive deaths of the Confederates to the passion of Christ.”⁷¹² Sanctifying the heroic lost cause through religious feeling and reaffirming ones faith in Christianity and southern values reaffirmed one’s belief in and place within the Southern worldview and allowed for the expression of solidarity with fellow Southern Whites. In so doing it sanctified and protected Southern White supremacy. In *Religion and the Solid South*, Samuel S. Hill, Jr. wondered how to explain the paradoxical mix of Southern Christianity with Southern racism. He wondered how a people that “can be said to owe supreme loyalty to a religious faith which accentuates love of God and neighbor” can also believe in white supremacy. He was puzzled by this “paradox of southern churchmanship” whereby there is the “shocking contradiction that generous, benevolent, and amiable Christians are racists.”⁷¹³ But there is no contradiction. Southern Protestantism often acted as a force that did not moderate White supremacy, but rather acted as sacred tie binding Southern Whites together in defense of the status quo racial order. William J. Simmons, the founder and first Imperial Wizard of the 2nd Ku Klux Klan, was himself a former minister, and the new Klan was explicitly established as a Christian fraternity rather than a secular one. Unlike the first Klan, members were required to be Protestants, and the new Klan explicitly incorporated Christian symbols, such as the burning cross. Though the Klan’s goals were racially-motivated, religion became the centerpiece of their platform.⁷¹⁴ We must therefore understand the context in which the religious and the spiritual are used in the defense of White supremacy,

⁷¹² *Ibid.*, p. 44-5.

⁷¹³ Samuel S. Hill, Jr. *Religion and the Solid South*. (Nashville, TN: Abingdon Press, 1972), pp. 24-6.

⁷¹⁴ Kelly J. Baker, *Gospel According to the Klan: the KKK’s appeal to Protestant America, 1915-1930* (Lawrence, KS: The University of Kansas Press, 2011).

and in that context come to better understand why the anti-evolution movement emerges to defend humanity against the “sacrilegious” claim that man has the “blood of the brute.”

What we see when we look at the language used on behalf of the anti-evolution movement is not merely religious language, but religious language deployed on behalf of white supremacy and racial animosity, and led by the same Southern preachers and ministers who had cultivated the Southern civil religion of the Lost Cause. That the membership of the Ku Klux Klan drew heavily from the same group of white Anglo-Saxon Protestants as did the anti-evolution movement was not mere coincidence (as it is usually portrayed), or an unfortunate byproduct of Southern "backwardness," but rather resulted from the deep connection that existed between the Southern civil religion and the threat that evolution posed to White supremacy. The extreme focus of the anti-evolution movement on ancestry and blood connections to brutes and beasts of the jungle, reveals the true “religious” transgression of Darwinian evolution, not against mere theological doctrine, but against the fusion of Southern Protestantism and White Supremacy that manifests as the Southern civil religion. That is, the anti-evolution movement was an attempt to use conservative Protestantism to maintain the social order and to reject the threat to Southern White identity represented by the claim that the blood of White men is tainted and shares a connection with “brutes.” It was this specific fear, and not a more general concern that Darwinian evolution contradicted the chronology of *Genesis* that animated the movement.

By denying racial essentialism and teaching that all humans, black or white, shared a common ancestor and were one giant family, evolution challenged the rigid and fixed notion of White identity. The Southern civil religion reacted in the form of the anti-evolution movement to reaffirm the racial status quo and to argue that mankind has no blood relations

to other forms of life and that race is a static, natural fact of existence that has not changed over time.

It is not that the metaphor and image of blood cannot have religious connotations separated from race, but the particular use to which it is put by anti-evolution crusaders shows that they are not concerned with the blood of Christ, but a blood connection to other animals, but specifically non-white “animals.”

Fundamentalism, Race, and the Anti-Evolution Movement

While the rise of Christian fundamentalism predated the rise of the anti-evolutionary fervor of the 1920s, the resurgence of the KKK rose and fell almost exactly in line with it. Sixty years before the Scopes Trial, Asa Gray had recognized that Darwin’s theory of evolution implied a familial relationship between all humans and that some may find this “by no means welcome. The very first step backwards makes the Negro and the Hottentot our blood-relations...”⁷¹⁵ The Ku Klux Klan did not welcome such an implication. Both the Ku Klux Klan and the anti-evolution movement were linked movements that sought to protect white supremacy and to resist reforms that would invite social equality between whites and blacks. The white Southerners who made up both of these groups resisted northern reformers and evolutionists because of what Darwinian evolution implied about the racial hierarchy underlying political white supremacy.

In addition to serving as a vital part of the Anglo-Saxon Protestant identity, the defense of traditional American religion also served as a convenient rationale with which to approach the organized opposition to evolution. Even in the early 20th century in the United

⁷¹⁵ Asa Gray, “Darwin on the Origin of Species,” in *the Atlantic Monthly*, (July 1860).

States, appeals to religious conscience were more easily accepted as legitimate within political discourse than appeals to white supremacy by significant portions of American public life. Both norms of discourse and the 14th amendment dictated that White supremacists who sought to instantiate their privilege in the law had to be able to provide acceptable reasons for their legal and social privilege, even when those reasons were subterfuges and smoke screens. Though "separate but equal" facilities were never actually provided for black Americans under the Jim Crow regime, and though no Southern states actually intended to treat their citizens equally, the penumbra of "separate but equal" provided legislatures the space to enact laws to create what they actually wanted—not separate equality, but white supremacy. Similarly, while anti-miscegenation laws were clearly aimed at preventing racial mixing, especially that of black men and white women, the laws themselves were justified as public health ordinances that sought to prevent the unhealthy progeny of mixed unions. Similarly, religious objections to evolutionary teachings were more politically acceptable than openly racial objections from the KKK, and even religious objections had to be couched in terms of religious fairness to pass full muster. For this reason, Tennessee's Butler Act was portrayed not as an improper merging of church and state by legislators seeking to assert their religious beliefs, but rather as a protection of public schools from the anti-religious teaching of evolutionists. Though the Ku Klux Klan was at its height in the 1920s, its methods remained controversial and illegal, and were often prosecuted as such, and even though the KKK received significant popular support, it still remained the "Invisible Empire." Those who sought to preserve and strengthen White supremacy often found it advantageous to argue for other principles, such as local autonomy or religious freedom, though their true goals were something else.

The protection of racial privileges drove much of the public policy in the 1920s, and this was guided by heightened racial fears and changing scientific statements on racial identity. Racial identity has been consistently tied to notions of the biological understanding of human nature and the “naturalness” of the social construct of race, which has governed so much of American life. For this reason, it was always going to be the case that a biological theory that fundamentally changed the way that ancestry and “blood” were scientifically considered would be politically salient to those, like the Klan, who sought to shape social and political attitudes towards race and white supremacy.

Members of the Ku Klux Klan worked for the success of the anti-evolution movement. After the death of William Jennings Bryan, Edward Young Clarke, the former Imperial Wizard of the Ku Klux Klan, called himself the successor to Bryan and founded an anti-evolution movement along Klan lines called the Supreme Kingdom. Clarke claimed that within “two years, from Maine to California and from the Great Lakes to the Gulf, there will be lighted in this country countless bonfires, devouring those damnable and detestable books on evolution.”⁷¹⁶ As one newspaper editorial in the *Jackson News* of Breathitt, Kentucky put, “The professors at the state university may believe they are descended from apes and baboons, but let it be known that the good people of Breathitt are pure Anglo-Saxon.”⁷¹⁷

The most pressing objection that anti-evolutionists had about Darwinian evolution was that it made all men, white and black, “brutes” and “animals.” This was a classification that southern racial discourse had restricted to blacks in contrast to the dignity and purity of

⁷¹⁶ Quoted in Maynard Shipley, *The War on Modern Science: A Short History of the Fundamentalist Attacks on Evolution and Modernism* (New York: Alfred A. Knopf, 1927), p. 48.

⁷¹⁷ Quoted in Arthur M. Miller, “The Vote on the Evolution Bill in the Kentucky State Legislature,” *Science*, New Series, Vol. 55, No. 1421 (Mar. 24, 1922), p. 317.

white blood. Of course, it is no original insight to point out that anti-black racism spoke in terms of the importance of blood purity, and often compared non-white people to “animals”, “beasts”, and “brutes”.⁷¹⁸ Famously, Charles Carroll's book "*The Negro a Beast*" ...or..."*In the Image of God*" explicitly categorized black people as apes and brutes, and denied them the dignity that whites possessed as human beings created in the image of God, highlighting William Jennings Bryan's critique of Darwinism.⁷¹⁹ The contrast between Godliness and brutishness was often made to demonstrate that evolution was degrading to human identity, because Darwinism "links man to the lower forms of life and makes him a lineal descendant of the brute" and by doing so "robs man of the dignity conferred upon him by separate creation, when God breathed into him the breath of life and he became the first man..."⁷²⁰ The creationist Alfred McCann made the choice stark between envisioning man as godly or brutish with the title of his book *God--Or Gorilla*.⁷²¹ Southern whites had been used to employing dehumanizing language towards blacks that described them as brutes, beasts, and animals. But now imagery and language which was used to describe African-Americans as a distinct and subhuman class of monkeys and apes, seemed, because of evolution, to be implicating all human beings, black and white.

Thomas Dixon, author of *The Leopard's Spots* and *The Clansman*, represented negrophobia at its worst. Dixon portrayed a black person as “a possible beast to be feared and guarded” and as an animal who “roams at night and sleeps in the day, whose speech

⁷¹⁸ See, for example, George M. Fredrickson, *The Black Image in the White Mind: The Debate on Afro-American Character and Destiny, 1817-1914* (New York: Harper Row, 1971), especially chapter IX: "The Negro as Beast: Southern Negrophobia at the Turn of the Century".

⁷¹⁹ Charles Carroll, "*The Negro a Beast*" or "*In the Image of God*." (St. Louis, MO: American Book and Bible House, 1900).

⁷²⁰ William Jennings Bryan, *The Menace of Darwinism*. (New York: Fleming H. Revell Company, 1922), p. 17.

⁷²¹ Alfred Watterson McCann, *God--Or Gorilla: How the Monkey Theory of Evolution Exposes Its Own Methods, Refutes Its Own Principles, Denies Its Own Inferences, Disproves Its Own Case*. (New York: The Devin-Adair Company, 1922).

knows no word of love, whose passions, once aroused, are as the fury of the tiger."⁷²² The accusation that black men possessed an uncontrollable urge to rape white women was said to show the bestial nature of African-Americans, and the fear of blacks' brutish criminality was used to justify segregation in the South. The climax of Dixon's *The Clansman* was the rape of a white girl by a black man leading to a lynching by the Ku Klux Klan. The fear of black people's animal-like "sexual madness and excess" and "racial instincts" were evidence of their subhuman status. While "the Caucasian as a race is moral; the African as a distinct race is not immoral, he is unmoral, and no amount of education or training is going to change a non-existing element."⁷²³ The fear of brutish black men was said to be so great, according to University of North Carolina President George T. Winston, that "when a knock is heard at the door, [the Southern woman] shudders with nameless horror. The black brute is lurking in the dark, a monstrous beast, crazed with lust."⁷²⁴ According to the early 20th century scientist Robert Wilson Shufeldt, black crime, in particular the rape of white women, was proof of Black people's brutish nature: "you can scarcely pick up a newspaper whose pages are not blackened with an account of an unmentionable crime committed by a negro brute, and this crime, I want to impress upon you, is but the manifestation of the negro's ambition for social equality..."⁷²⁵ Kelly Miller, a Howard University sociologist, commented on the

⁷²² Thomas Dixon, *The Leopard's Spots: A Romance of the White Man's Burden--1865-1900*, (New York: Doubleday, Page & Co., 1902), p.5; *The Clansman: An Historical Romance of the Ku Klux Klan*, (New York: Doubleday, Page & Co., 1905), p. 293;

⁷²³ William Lee Howard, M. D., "The Negro as a Distinct Ethnic Factor in Civilization," *Medicine: a Monthly Record of the World's Progress in Medicine and Surgery*, Vol. IX (Jan.-Dec., 1903), p. 423-6.

⁷²⁴ George T. Winston, "The Relation of the Whites to the Negroes," *Annals of the American Academy of Political and Social Science*, Vol. 18, America's Race Problems. Addresses at the Fifth Annual Meeting of the American Academy of Political and Social Science, April 12-13, 1901 (Jul., 1901), p. 109.

⁷²⁵ Robert Wilson Shufeldt, *America's Greatest Problem: The Negro*. (Philadelphia: F. A. David Company, 1915), p. 211. The word "brute" is used six times in Shufeldt's book and always refers to a "Negro", with one exception, which is when the term "brute creation" is used. In this instance "brute" is used in a paragraph that claims that Europeans are the farthest removed from "brute creation," while the African "approaches the ape." That usage is on page 41.

tendency to paint African-Americans as beasts and brutes by the assertion that black men were violent bestial criminals with a tendency towards the baser instincts and a brutish predilection to rape white women. "The criminal propensity of the Negro is the charge that is being most widely exploited in current discussion. By fragments of fact and jugglery of argument he is made to appear a beast in human form whose vicious tendency constitutes a new social plague."⁷²⁶ Anti-evolutionists protested that Darwinism stripped morality and dignity from all humans in the same way that African-Americans had been libeled by white supremacists at precisely the same time that negrophobia was rising to its fullest height in the 1920s.

The "one-drop rule" was the codification into law of the racial coding that even just "one drop of Negro blood" was enough for a person to be considered black. The Scopes Trial took place in the middle of an era which saw the greatest extent and influence of the 2nd Ku Klux Klan, and the creation of racial laws across the country to strengthen the color line on the basis of blood admixture. Southern states began to adopt this system of racial classification beginning with Tennessee in 1910, and "Anglo-Saxon clubs" rose to prominence during this period to ensure the "purity" of white blood and to prevent racial mixing. Anti-miscegenation laws were passed, such as the Racial Integrity Act of 1924 in Virginia, pushed by Walter Ashley Plecker, which sought to make the racial lines of division more explicit, rigid, and fixed.⁷²⁷ The entire basis of evolutionary science shows the absurdity of blood and racial essentialism, when all mankind is descended from "lower forms of life," which has varied and continues to vary at all times.

⁷²⁶ Kelly Miller, "The Negro's Part in the Negro's Problem," *Race Adjustment: Essays on the Negro in America*. (New York and Washington: The Neale Publishing Company, 1908), p. 95.

⁷²⁷ Peggy Pascoe, "Miscegenation Law, Court Cases, and Ideologies of "Race" in Twentieth-Century America," *The Journal of American History*, Vol. 83, No. 1 (Jun., 1996), p. 44-69.

When Bryan asks parents of school children whether or not they will allow their children to be “detached from the throne of God and be compelled to link their ancestors with the jungle,” we must remember the larger social and political context within which this language would have been heard.⁷²⁸ Bryan pointed out during the Scopes Trial that what he called Darwin’s “brute hypothesis” of man’s origins gives humankind a lowly heritage, and that Darwin “tries to locate his first man—that is, the first man to come down out of the trees—in Africa.”⁷²⁹ According to the one-drop rule, to possess any mixture of African blood was to be tainted, and when Bryan spoke of the “blood of the brute,” it is hard not to hear the racial overtones. Many white supremacists argued that racial egalitarians not only sought equality for blacks but also that they loved and worshipped Negroes. Bryan paralleled this when he argued that evolutionists not only linked humanity to a brutish ancestry, but that evolutionists “worshipped” their brutish ancestry:

Only a small percentage of the American people believe that man is descendant of the ape, monkey, or of any other form of animal life below man; why should not those who worship brute ancestors build their own colleges, and employ their own teachers for the training of their own children for their brute doctrine?⁷³⁰

When William Jennings Bryan spoke about the implications that evolution posed for human nature in terms of “Brother or Brute?” he was tapping into common racial tropes used by white supremacists who opposed racial amalgamation, denied blacks social equality, and strengthened segregation.⁷³¹

African-American writers recognized evolution’s racial implication at the time, and the historian Jeffrey Moran has done good work in documenting African-American

⁷²⁸ Scopes Trial Transcript, Day 5, p. 175.

⁷²⁹ Bryan, “Supplement—Bryan on Evolution,” *Scopes Trial Transcript*, Day 8, (1925), p. 326.

⁷³⁰ Quoted in T. T. Martin (1923), p. 22; Bryan, “The Menace of Evolution” [Pamphlet] online at <http://law2.umkc.edu/faculty/projects/ftrials/scopes/bryanonevol.html>.

⁷³¹ William Jennings Byran, “Brother or Brute?” *Commoner*, Nov. 1920, pp. 11–12.

interpretations of Scopes and the anti-evolution movement of the 1920s. As Moran points out, many African-Americans identified with John Scopes as a fellow victim of Southern repression, and like W. J. Cash, they recognized that “antievolutionism derived much of its strength from racist assumptions that resonated with white southerners.”⁷³² Perhaps because they were more sensitive to questions of race than white intellectuals and writers in the North, African-American intellectuals viewed Scopes differently than most mainstream commentators. Rather than seeing Scopes as a victim of religious bigotry, Black writers viewed him through a lens of the racial politics of the era, and many Black writers saw anti-evolutionism clearly as an attempt to preserve racial separation and to oppose the idea of racial kinship.⁷³³ The *Chicago Defender* argued that anti-evolutionism was part of the general Southern pattern of political white supremacy, and that John Scopes was prosecuted because he taught a doctrine which “conflicts with the South’s idea of her own importance” and “anything which tends to break down her doctrine of white superiority she fights.” According to this view evolution must be suppressed because it implied “that the entire human race is supposed to have started from a common origin.” “Admit that premise and they will have to admit that there is no fundamental difference between themselves and the race they pretend to despise.”⁷³⁴ The *Pittsburgh Courier* called William Jennings Bryan a “militant disciple of color-phobia” and “race discrimination,” and in A. Philip Randolph’s journal, the *Messenger*, Bryan was described as practicing “Ku Kluxism and white domination.”⁷³⁵ White supremacists believed that racial difference was fixed and natural, but

⁷³² Jeffrey Moran, “Reading Race into the Scopes Trial: African American Elites, Science, and Fundamentalism,” *The Journal of American History*, Vol. 90, No. 3 (Dec., 2003), pp. 892.

⁷³³ *Ibid.*, p. 901.

⁷³⁴ *Chicago Defender*, May 23, 1925, part 2, [p. 10]. Quoted in Moran (2003).

⁷³⁵ *Pittsburgh Courier*, Aug. 1, 1925, p. 16. J. A. Rogers, “The Critic: Do They Tell the Truth,” *Messenger*, Vol. 7, (Jul., 1925), p. 271. Quoted in Moran (2003).

evolution challenged that notion. As Clarence Darrow put it during the Scopes Trial, if we understand evolution then we understand that “all life varies and we are creating those new variations every day.”⁷³⁶ This is quite different than the fundamental racist tenets that undergird white supremacy.

Moran also discusses the historiographical topic of “scientific racism” during the period, though he repeats a common mistake of failing to distinguish between types of racism. Though Moran does an admirable job of identifying the reaction of the African-American press to the Scopes trial, he still finds it “striking that the secular black elite in 1925 expressed tremendous confidence in the power of science and evolutionary theory to threaten white supremacy.”⁷³⁷ However, the type of scientific racism that is associated with social Darwinism and eugenics was different than that which underpinned white supremacy and segregation in the American South. Political white supremacy rested on a traditional, fixed notion of race. For those who feared racial miscegenation and racial equality, the notion of racial malleability was troubling even when couched in an overall racist worldview, because of the implications about the arbitrariness of race as a biological category. If race was not a divinely created concept, but was instead the product of arbitrary environmental changes, as Darwin and Huxley had shown, it made it more difficult to rest power on the notion that “by Divine right” some were fit to be kings, while others “by Divine curse” were born slaves. Science, as the new arbiter of nature’s laws, had the power to make and unmake popular understandings of the biological underpinnings of the “naturalness” of race. William N. Jones, a journalist and editor for the Baltimore newspaper *The Afro-American*, argued that few white men had done as much as the evolutionist T. H. Huxley to improve

⁷³⁶ Scopes Trial Transcript, Day 5, p. 189.

⁷³⁷ Moran (2003), p. 904.

race relations, and because “science won...the world, in spite of hidebound and narrow dogmas, is heading towards real brotherhood.”⁷³⁸ Indeed, scientists like Franz Boas would soon be using evolutionary arguments to rewrite the notions of the plasticity of race and challenge the usefulness of race as a biological category at all.⁷³⁹ Contemporary African-American writers were able to identify this better than contemporary northern whites and many later historians have been.

Southern whites also picked up on this connection, and it influenced them to oppose evolution more vehemently than was done elsewhere. There was significant overlap between the anti-evolution movement, the fundamentalist movement, and white supremacist politics in the early part of the twentieth century. For example, there were few more prominent American fundamentalists during the time of the Scopes Trial than A. C. Dixon, William Bell Riley, J. Frank Norris, Billy Sunday, and John Roach Straton, all of whom had ties to white supremacy. A. C. Dixon, the editor of *The Fundamentals*, was the brother of the minister Thomas Dixon, author of *The Clansman*, whom Charles Reagan Wilson has called “the Southerner who most sensationally explored in fiction this relationship between the Klan, blacks, religion, and the Confederacy.”⁷⁴⁰ William Bell Riley, the Minnesota preacher, fundamentalist creationist, and founder of the World Christian Fundamentals Association and the Anti-Evolution League of America was a racist and supporter of segregation. J. Frank Norris, the Texas Baptist Preacher whom historian George Marsden has called the “leading fundamentalist organizer in Texas,” was an opponent of evolution in the classroom

⁷³⁸ William N. Jones, *Baltimore Afro-American*, May 16, 1925, p. 11. Quoted in Moran (2003).

⁷³⁹ Boas’s writings on race are voluminous, but for an example of his early writings during this period see: Franz Boas, “Race Problems in America,” *Science*, New Series, Vol. 29, No. 752 (May 28, 1909), pp. 839-49 and “What is a Race?,” *Nation*, (Jan., 1925), pp. 89-91.

⁷⁴⁰ Wilson (1980), pp. 113-4.

and an open supporter of the Ku Klux Klan.⁷⁴¹ Norris explicitly connected the teaching of evolution to racial identity in an anti-evolution address to the Texas legislature in 1923: ‘My friends, are you willing to admit that there is any brute blood whatsoever in your veins? Some men very bitterly resent the intimation of any negro blood, yet are willing to say we have the blood of a chimpanzee.’⁷⁴² Billy Sunday, the most celebrated evangelist of the first two decades of the 20th century and a popular anti-evolutionist, took money from the Ku Klux Klan and preached to Klan meetings, though he was not himself a member of the secret organization. The Klan told Sunday that they gave him the money, because they,

desire that you accept this little token of our appreciation of the wonderful work you and your associates are doing in behalf of perpetuating the tenets of the Christian religion throughout the nation, and we wish to inform you that we stand solidly behind the teachings of the Christian religion, free speech, free press, separation of church and state, liberty, white supremacy, just laws, pursuit of happiness and, most of all, the upbuilding of our institutions and public schools, the teaching of the Holy Bible in public schools and the upholding of law and order in every sense at all times, and we desire that the world at large know our principles.⁷⁴³

For the Klan, Americanism, white supremacy, and Christianity were intimately tied, and the place where their protection was “most of all” desired was “institutions and public schools,” such as those at which Scopes had taught. Sunday claimed that after meeting the Klan he had “learned more tonight than I ever knew.”

Another preacher, John Roach Straton the famous Baptist clergyman, who had opposed evolution in Oklahoma and elsewhere, because he said it was poisonous to young minds, was asked by William Jennings Bryan to come to Dayton, Tennessee to assist him in the prosecution of John Scopes. Straton was the same man who had made the claim that

⁷⁴¹ George Marsden, *Fundamentalism and American Culture*, 2nd ed. (Oxford and New York: Oxford University Press, 2006 [1980]), p. 190.

⁷⁴² J. Frank Norris, “Address on Evolution Before the Texas Legislature,” *The Searchlight*. Vol. 6, No. 15, (1923), p. 4.

⁷⁴³ “Ku Klux Klan Gives \$50 to Billy Sunday,” *Miami Herald* (May 18, 1922).

efforts to “improve” African-Americans were doomed to failure because of Negroes’ inherent “tendency to immorality and crime.”⁷⁴⁴ Straton spent a good deal of time proselytizing to the Klan at chapter meetings across the South where he voiced support for Klan principles and worked to unite the anti-evolution movement and the Klan together towards a common agenda.⁷⁴⁵ Straton’s Calvary Baptist Church in Manhattan was known as a “hot-bed of Klan activity” and was accused of distributing Klan literature from the church (Straton would go on to oppose the candidacy of Al Smith in 1928 and popularized the phrase that Smith was the candidate of “rum, Romanism, and rebellion”). Straton attempted to paint the fight against evolution in patriotic hues, echoing the Klan’s language of “Americanism,” involving native Protestant Americans in a patriotic fight to protect traditional American values. As Straton put it, “the time is coming when the American people ...are going to wake up to the fact that this fight goes even deeper and is not merely religious, but is patriotic.”⁷⁴⁶ The most prominent of anti-evolution evangelists in America were supported by the most prominent of white supremacist groups in America.

W. J. Cash wrote in his classic *Mind of the South* that “one of the most stressed notions which went around was that evolution made a Negro as good as a white man—that is, threatened White Supremacy.”⁷⁴⁷ A Texas state legislator named J. T. Stroder championed an anti-evolution bill because of what Darwinian evolution implied for human ancestry. Stroder argued that Darwinism was that “vicious and infamous doctrine...that mankind sprang from pollywog, to a frog, to an ape, to a monkey, to a baboon, to a Jap, to a

⁷⁴⁴ John Roach Straton, “Will Education Solve the Race Problem?,” *The North American Review*, Vol. 170, No. 523 (Jun., 1900), pp. 785-802.

⁷⁴⁵ Michael Lienesch, *In the Beginning: Fundamentalism, the Scopes Trial, and the Making of the Antievolution Movement*. (Chapel Hill, NC: The University of North Carolina Press, 2009), p. 183.

⁷⁴⁶ “Dr. J. Roach Straton Challenges Clarence Darrow,” *Chicago Daily News*, (Aug. 18, 1925). Quoted in Lienesch (2009), p. 183.

⁷⁴⁷ W. J. Cash. *The Mind of the South*. (1941), p. 339.

negro, to a Chinaman, to a man.”⁷⁴⁸ The Ku Klux Klan made a point of mobilizing to help pass antievolution bills in state legislatures. Leaders of the Klan boasted of their success in leading the anti-evolution movement and the movement to ban the teaching of evolution. In 1923, the State of Oklahoma passed a bill to outlaw the teaching of evolution, which passed by a single vote, and Oklahoma’s Governor, Jack C. Walton, told William Jennings Bryan that “but for the influence of the K.K.K., I doubt if it could have carried in either House.”⁷⁴⁹

Academics in the South who taught evolution were attacked both for teaching evolution and for their “progressive” racial ideas. Howard W. Odum, a sociologist at the University of North Carolina, received vitriolic attacks from both local religious groups and from the Ku Klux Klan for his Darwinian teachings and his sociological studies of African-Americans in the South, leading many to view “his activities in the field of race relations as a serious infraction of the regional code.”⁷⁵⁰ Odum’s later book *Race and Rumors of Race* was one of the first documentations of the early Civil Rights movement, where Odum identified the South’s conduct towards African-Americans as a failure to live up to the “tenets of fellowship and Christian religion,” because for Southerners “the Negro did not come within the framework of human brotherhood.”⁷⁵¹ William Louis Poteat, a leader of the Progressive Movement in the South and the President of Wake Forest University, was also attacked for teaching evolution and for his progressive views on race relations. The policing of the color

⁷⁴⁸ J. T. Stroder, *Waco News Tribune*, (Jan. 19, 1923; Mar. 4, 1923), quoted in Patsy Ledbetter, “Defense of the Faith: J. Frank Norris and Texas Fundamentalism, 1920-1929,” *Arizona and the West*, Vol. 15, No. 1 (Spring, 1973), p. 58.

⁷⁴⁹ Quoted in Kazin (2006), p. 280.

⁷⁵⁰ Willard B. Gatewood, Jr., “Embattled Scholar: Howard W. Odum and the Fundamentalists, 1925-1927,” *The Journal of Southern History*, Vol. 31, No. 4 (Nov., 1965), pp. 379.

⁷⁵¹ Howard W. Odum. *Race and Rumors of Race*. (Chapel Hill, NC: The University of North Carolina Press, 1943), p. 23.

line went hand-in-hand with the prevention of the teaching of evolution in the American South.

Evolution broke down the color line in much the same way as did racial mixing, and there was a similar fear of evolution as a destroyer of the sacred fixity of white identity as there was of miscegenation. Just as mixed race relationships threatened the power of the color line by demonstrating that race was not a permanent and fixed category of analysis on which to base an unequal power structure, many anti-evolutionists, like the KKK, opposed evolution in public schools because of their fear of racial mixing. As Michael Lienesch put it: “Even bastions of southern progressivism such as the *Atlanta Constitution* issued dire warnings that evolutionists like H. G. Wells were calling for racial intermarriage as a strategy for improving the human race.”⁷⁵² It was commonly assumed that racial mixing was a logical consequence of the teaching of evolution.

It is worthwhile to also investigate the connection between the Ku Klux Klan, the anti-evolution movement, and its most famous leader, William Jennings Bryan. Though Bryan made his life’s work in politics a crusade for the betterment of common working people, and he called himself the “Great Commoner”, African-Americans were not included in his schemes for society’s improvement. As Bryan biographer Michael Kazin puts it, “Bryan would never extend that lifelong faith in ‘the people’ to black Americans, most of whom worked at decidedly common jobs.”⁷⁵³ Bryan praised his good fortune in life for being born a “member of the greatest of all the races, the Caucasian race” and he endorsed segregation and restrictions on black voters.⁷⁵⁴ At the beginning of the 20th century, Bryan

⁷⁵² Lienesch, (2009), p. 90.

⁷⁵³ *Ibid.*, p. 277.

⁷⁵⁴ William Jennings Bryan, “Bryan Says North Would Act as South on Negro Question,” *The New York Times*, (Mar. 18, 1923), Sect. 8, p. 1.

argued in his journal, *The Commoner*, for educational qualifications in the Southern states in order to protect white supremacy, and he argued against social equality for blacks and whites.⁷⁵⁵ Over twenty years later, Bryan's arguments on behalf of white supremacy were even stronger than they had been. In 1922 Bryan opposed an anti-lynching law that was brought before Congress saying that its passage would be regretted,⁷⁵⁶ and in 1923 Bryan's remarks in front of an organization called the "Southern Society" were printed in the *New York Times*, where he argued that voting restrictions for blacks did not arise from prejudice but from necessity and that white supremacy worked to the benefit not only of "the advanced race, but for the benefit of the backward race also." Bryan even claimed that blacks had benefited by their time in slavery: "slavery among the whites was an improvement over independence in Africa. The very progress that the blacks have made, when—and only when—brought into contact with the whites, ought to be a sufficient argument in support of white supremacy..."⁷⁵⁷ After reading what Bryan had said in the *New York Times*, Marcus Garvey summarized Bryan's attitudes as holding to "his idea of white supremacy and his belief that government should only be in the hands of the white man because white men are best able to interpret the needs of humanity."⁷⁵⁸ We may not be able to say for certain why

⁷⁵⁵ On education qualifications and white supremacy: "In some of the southern states educational qualifications have been prescribed with a view to securing white supremacy in the state and local governments....No argument will justify one race in invading the territory of another race in order to force upon that race an alien government and the evils of a colonial system, but when conditions force the two races to live under the same government in the same country the more advanced race never has consented, and probably never will consent, to be dominated by the less advanced." On social equality and intermarriage: "There can be co-operation and helpfulness without intermarriage. Each race can recognize the natural rights of the other and both can contribute as far as is within their power, to the strength and development of the nation. The advocacy of social equality will tend to throw the white and the black races into greater antagonism and conflict rather than to bring them together, and the wiser members of the negro race know this." William Jennings Bryan, "The Negro Question," *The Commoner*, (Nov.1, 1901), pp. 1-3.

⁷⁵⁶ *Christian Science Monitor*, Jan. 24, 1922.

⁷⁵⁷ "Bryan Says North Would Act As South On Negro Question," *The New York Times*, (Mar. 18, 1923), p. XXI.

⁷⁵⁸ Marcus Garvey, "'Speech by Marcus Garvey' at Liberty Hall, New York, March 18, 1923," *The Marcus Garvey and Universal Negro Improvement Association Papers*, Vol. V (Sep. 1922- Aug. 1924), ed. by Robert A. Hill. (Berkeley and Los Angeles: University of California Press, 1986), pp. 277-283.

Bryan excluded African-Americans from the benefits of the reforms for which he advocated on behalf of white farmers and the white working class, but it is notable and significant that the greatest share of his political support came from the South where political support for white supremacy was an absolute necessity.⁷⁵⁹

The racial prejudice that Bryan harbored has to be taken into account when interpreting his writings on evolution. Bryan's writings emphasize what he calls the dehumanizing impact of evolutionary theory, and the way that it removes Man from his place as a being created in the image of God.⁷⁶⁰ According to the "Great Commoner" the evolutionist "drags mankind down to the level of the brute." Bryan emphasized that evolution establishes "man's blood relationship with the brute" and that a bestial appetite of poison "throbs forever in the blood of the brute's descendants" and that "when there is poison in the blood, no one knows on what part of the body it will break out, but we can be sure that it will continue to break out until the blood is purified."⁷⁶¹

Though there is no indication that Bryan was a member of the Ku Klux Klan, he was often that organization's defender, and the KKK supported Bryan in return. In 1924, the Democratic Party was considering a measure to denounce the Ku Klux Klan by name, and a heated debate broke out over this issue at that year's Democratic National Convention. Bryan defended the Klan and gave a speech opposing the measure saying that

⁷⁵⁹ The historian Willard H. Smith argued that Bryan's racism did not derive from his desire for political support because Bryan was "known as one to follow what he considered right regardless of the consequences." Willard H. Smith, "Willam Jennings Bryan and Racism," *The Journal of Negro History*, Vol. 54, No. 2 (Apr., 1969), p. 146. Perhaps Smith is right and Bryan's racism was not a cynical ploy to gain white support in the segregated South, but was instead a sincerely held belief, but either way Bryan consistently and steadfastly defended the South's quest for segregation and continued white supremacy.

⁷⁶⁰ William Jennings Bryan, "Brother or Brute?" *Commoner*, Nov. 1920, pp. 11–12.

⁷⁶¹ William Jennings Bryan, "Text of the Closing Statement of William Jennings Bryan at the trial of John Scopes, Dayton, Tennessee, 1925", found at <http://www.csudh.edu/oliver/smt310-handouts/wjb-last/wjb-last.htm>

“it requires more courage to fight the Republican party than to fight the KKK...”⁷⁶² Marcus Garvey considered Bryan to be the Klan’s defender and said that “William Jennings Bryan is as big a Klansman as the Imperial Wizard himself...”⁷⁶³ After Bryan’s death in 1925, shortly after the end of the Scopes Trial, groups of Klan members held rallies in Bryan’s honor where they displayed signs saying “In memory of William Jennings Bryan, the greatest Klansman of our time.”⁷⁶⁴ Certainly, it was a good deal more common to support (or at least not oppose) the Ku Klux Klan than it would be today, but this was a political point that Bryan did not share with the Social Gospelers like Rauschenberg, Sheldon, or Gladden or with John Scopes’ defense team led by Darrow.

In fact, the most obvious and consistent political disagreement between the defense and the prosecution at the Scopes Trial was over the issue of race. There were four lawyers in Dayton, Tennessee defending John Scopes’s right to teach evolution: Clarence Darrow, John R. Neal, Arthur Garfield Hays, and Dudley Field Malone—all advocates of civil liberties for African-Americans. Clarence Darrow famously spent a large portion of his public career in the courtroom defending the rights of African-Americans. Most of this history is fairly well known, so I will simply note that one of Darrow’s biographers, historian Andrew Kersten, says that Darrow’s work as an outspoken supporter of African American civil rights was “fundamental to his outlook” and that Darrow “time and again” came to the

⁷⁶² Robert K. Murray, *The 103rd Ballot: Democrats and the Disaster in Madison Square Garden*. (New York: Harper & Row, 1976), pp. 148-62.

⁷⁶³ Marcus Garvey, “Speech by Marcus Garvey’ at Liberty Hall, New York, March 18, 1923,” *The Marcus Garvey and Universal Negro Improvement Association Papers*, Vol. V (Sep. 1922- Aug. 1924), ed. by Robert A. Hill. (Berkeley and Los Angeles: University of California Press, 1986), p. 281.

⁷⁶⁴ <http://scr.stparchive.com/Archive/SCR/SCR08221925p06.php>

aid of black Americans who had “been denied basic freedoms and liberties,” and who argued that “race was a social construct that meant ‘nothing’ serving only to separate people.”⁷⁶⁵

The other three defense lawyers are less well-known, but all had held similar feelings towards white supremacy, which did not win them friends amongst the Southerners in Dayton, Tennessee. John R. Neal grew up in Jim Crow Tennessee as the son of a Confederate War Captain, but he was considered to be an eccentric and oddball by those who knew him. In addition to slovenly and inattentive personal habits, Neal’s social and political beliefs left him at odds with the dominant cultural and social expectations of his native Tennessee. One writer described Neal as “the Great Objector.”⁷⁶⁶ Neal was known as a supporter of civil rights, and his doctoral dissertation included a chapter on “Ku-Klux Outrages,” which did not speak favorably of the Klan’s activities.⁷⁶⁷ Years later, during the middle of the rise of the anti-evolution movement Neal was fired from the University of Tennessee, along with several others, which Neal attributed to their defense of evolution. Another member of the defense team, Dudley Field Malone, was a supporter of the NAACP and formed in 1919 the “League of Oppressed Peoples” which sought, as he described it in a letter to W. E. B. Du Bois, to “protest against continued imperialist adventures on the part of certain great powers.”⁷⁶⁸ Malone also helped to organize a strike led by Marcus Garvey where both Irish and African-American longshoremen collaborated.⁷⁶⁹

⁷⁶⁵ Kersten. (2011), p. 212.

⁷⁶⁶ Bobby Hicks, "The Great Objector: The Life and Career of Dr. John Randolph Neal," East Tennessee Historical Society *Publications*, Vol. 41 (1969), pp. 33-66.

⁷⁶⁷ John Randolph Neal, *Disunion and Restoration in Tennessee*. (Doctoral dissertation) (Columbia University, 1899).

⁷⁶⁸ League of Oppressed Peoples. *Letter from League of Oppressed Peoples to W. E. B. Du Bois, November 3, 1919*. *W. E. B. Du Bois Papers* (MS 312). Special Collections and University Archives, University of Massachusetts Amherst Libraries.

⁷⁶⁹ Matthew Pratt Guterl, *The Color of Race in America, 1900-1940*. (Cambridge, MA: Harvard University Press, 2009), p. 90.

The fourth defense lawyer, Arthur Garfield Hays, became general counsel of the American Civil Liberties Union in 1920, and in addition to other causes, fought for the racial equality of African-Americans in and out of the court room. Most famously Hays served on the defense in the famous “Scottsboro case”, where eight black men (actually they were really boys aged 13-19) were tried, convicted, and sentenced to death by an all-white jury in Alabama for allegedly attacking two white women.⁷⁷⁰ Hays shared with Harry Emerson Fosdick, the prominent proponent of social gospel Christianity, a strong antipathy towards the Ku Klux Klan and strong support for justice for the Scottsboro boys.⁷⁷¹ In 1933, Fosdick persuaded Ruby Bates, one of the two accusers in the Scottsboro case, to admit that she had perjured herself during the trial against the young black men that had been accused of sexual assault.⁷⁷² Fosdick also shared with Hays a low opinion of the scientific views of William Jennings Bryan, going so far as to say that Bryan was “guilty of a sophistry so shallow and palpable that one wonders at his hardihood in risking it” and that his opinions on evolution were “obviously and demonstrably mistaken.” Fosdick also identified Bryan’s most critical interest that led him to hate the evolutionary theory as “the fear that it will deprecate the dignity of man” and he wonders why it is preferable to be suddenly created out of the dust of the earth than to have arisen by “slow gradations out of lower forms of life” and a “bestial heritage.”⁷⁷³ Incidentally, Clarence Darrow, Arthur Garfield Hays, Dudley Field Malone, Harry Emerson Fosdick, and W. E. B. Du Bois all shared the fate of being

⁷⁷⁰ For more on the Scottsboro case see Dan Carter, *Scottsboro: A Tragedy of the American South*. (Baton Rouge: Louisiana State University Press, 1979); James Haskins, *The Scottsboro Boys*. (New York: Henry Holt, 1994); James R. Acker, *Scottsboro and Its Legacy: The Cases that Challenged American Legal and Social Justice*. (New York: Praeger, 2007).

⁷⁷¹ “Ku Klux Denounced from Many Pulpits,” *New York Times*, Dec. 1, 1922.

⁷⁷² Robert Moats Miller, *Harry Emerson Fosdick: Preacher, Pastor, Prophet*. (Oxford: Oxford University Press, 1985), p. 264.

⁷⁷³ Harry Emerson Fosdick, “A Reply to Mr. Bryan in the Name of Religion,” *New York Times*, March 12, 1922.

termed “Doubtful Speakers” by the Daughters of the American Revolution in 1928, which of course has had a long troubled history with race and segregation.

Conclusion

The furor that broke out in Dayton, Tennessee in 1925 did not arise only out of religious reaction, cultural backwardness, educative failure, or class interest, nor was it an isolated event. The politicized nature of human origins has had a long heritage going back before Charles Darwin to the first settlement of North America and was part of a larger political movement to protect white supremacy.

The Second Ku Klux Klan and the anti-evolution movement rose to their greatest heights at the same time in the mid-1920s, and both movements had largely retreated by the 1930s. The 1920s was a time when a changing America threatened the social structure upon which the status quo power of white Anglo-Saxon Protestantism rested, and the politics of the 1920s was dominated by contests over the nature of “Americanism,” which included issues of both racial and religious identity. Fundamentalists and the KKK reacted particularly strongly to the teaching of Darwinism in public schools, because of the way that evolution undercut the notion of an eternal fixity of race and implied a common origin for all humanity, and because of their desire to protect “that old-time religion,” which formed a unifying force for nativist politics. In attacking evolution, the anti-evolutionists were both suppressing a potential threat to white supremacy and acting on behalf of the southern civil religion that fused conservative Protestantism with a defense of traditional, Southern values. The anti-evolution movement was not simply a “religious” movement that might have happened anywhere that conservative Christians lived, but arose from the particular

contingent historical context that had linked Southern white supremacy and Lost Cause mythology with the Protestant preachers who were the most important influence on the myths, organizations, and rituals that linked Whites together politically and socially in the Jim Crow South.

By the 20th century, scientific arguments had become a powerful source of authority that was potentially threatening in a time and place where scientific authority could be used to bolster or diminish political power. As Frederick Lewis Allen put it in his chronicle of the 1920s, *Only Yesterday*, “the word science had become a shibboleth. To preface a statement with ‘Science teaches us’ was enough to silence argument. If a sales manager wanted to put over a promotion scheme or a clergyman to recommend a charity, they both hastened to say that it was scientific.”⁷⁷⁴ Or as Harry Emerson Fosdick put it, “the men of faith might claim for their positions ancient tradition, practical usefulness, and spiritual desirability, but one query could prick all such bubbles: Is it scientific?...Science has become the arbiter of this generation’s thought, until to call even a prophet and a seer scientific is to cap the climax of praise.”⁷⁷⁵

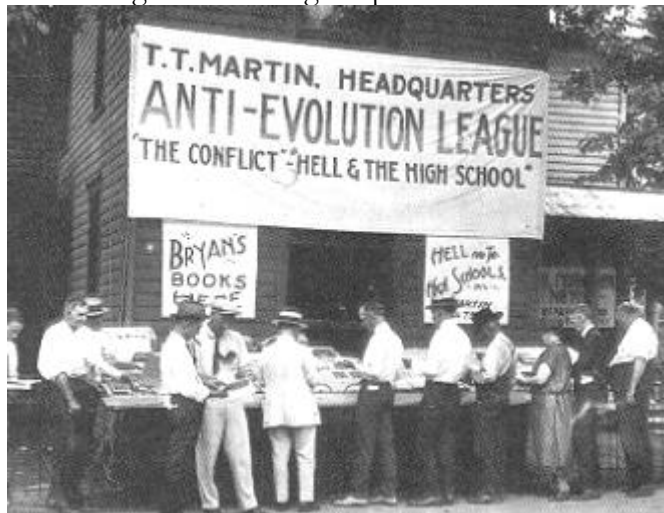
The power of scientific authority, the historical associations between natural history/biology and racial identity in the United States, and the political force of white supremacy gave Darwinian evolution a particularly threatening edge in the American South that it did not have in many other places. The intimate ties between conservative Protestantism, “Americanism,” and white supremacy charged the debates over evolution with a powerful political importance and provided a ready made corps of Southern

⁷⁷⁴ Frederick Lewis Allen, *Only Yesterday: An Informal History of the 1920s*. First Perennial Classics edition. (New York: HarperCollins Publishers, 2000 [1931]), p. 172.

⁷⁷⁵ Harry Emerson Fosdick, *As I See Religion*. (New York: Harper, 1932), pp. 123-4.


Protestants that were prepared to mobilize in defense of their values and privilege. These particular facts about this particular scientific theory shaped the public's response.

Figure 6-1: T.T. Martin selling books during Scopes Trial



Source: "Dayton's 'Amazing' Trial," *Literary Digest*, Vol. 86, (Jul. 25, 1925), p. 7.

Figure 6-2: Political advertisement for anti-evolution candidate

Did Not Come From HIM 
NEITHER DID YOU!

I May Look Like Him, But
I Refuse to Claim Kin

On This I Stand!

J. Sherwood Upchurch

They are Going to Talk About Him in the Next
LEGISLATURE
So They Say
I WANT TO BE THERE!

For House of Representatives
DEMOCRATIC PRIMARY
SATURDAY, JUNE 5TH

If you will vote for me, in return I will give you
action. 14 years Member Board of Aldermen; 2
years City Auditor; 3 years in charge of Sanitary
Department, City of Raleigh. During the 14
years as Alderman I never cast one vote against
the people. I will thank you for your support.

J. Sherwood Upchurch
P.S.—I am positively against the Salary and
Slave Commission.

p 13194

Michell Printing Co., Raleigh, N. C.

Source: North Carolina Collection, University of North Carolina at Chapel Hill/Documenting the American South

Figure 6-3: Political cartoon on Scopes in African-American newspaper

Disbelievers In the Evolution Theory



Source: *Chicago Defender*, June 13, 1925

Figure 6-4: Anti-evolutionist cartoon



Source: Cartoon from the Moody Bible Institute, by Urban Sereno Abell, March 1922.

Science, the Nature of Race, and the Road to *Loving*

Almighty God created the races white, black, yellow, Malay and red, and He placed them on separate continents. And but for the interference with His arrangement there would be no cause for such marriages. The fact that He separated the races shows that He did not intend for the races to mix.

-Caroline County (Va.) Court (1958)

It is simply not possible for a state law to be valid under our Constitution which makes the criminality of an act depend upon the race of the actor.

-The Supreme Court of the United States (1967)

Pure Races and Unnatural Unions

Though the biological lens through which Americans have "seen" race may have shifted, the idea that race should be understood as a "natural" category has remained a preeminent feature of American public discourse alongside the countervailing idea that race is but a fluid social, or environmental, creation. Since Darwinian evolution touched at the heart of the debate over race and species classification, and therefore racial identity, it was inextricably bound to social and political disputes. The work of natural historians and biologists has been influenced and judged, in large part, by the political and social implications of that work. Racial categorization as a scientific enterprise has carried with it inherent and inseparable political and social consequences, and though scientists form but one part of the ideological struggle over the nature of race, their part has been an important one. The rhetoric of ascriptive Americanism was woven through the American legal system, which reflected not a consensus American creed of liberal egalitarianism but was a site of struggle

between multiple American political traditions. For 80 years after the Civil War, the judicial system mirrored the ideology of the Southern civil religion, and bans on race mixing were justified by appealing to the exact discursive tradition that Southern nationalists used to maintain social inequality in the South. Science had shown that blacks were inferior, they claimed, and that God had decreed the races to be kept separate, and so upstanding Americans and their political representatives had a vested interest in seeing such ideals enforced. Southern nationalists viewed evolutionary scientists as political opponents and radical egalitarians seeking to undermine white supremacy, and indeed the scientists themselves often saw their work as part of the political struggle to end racial oppression. Indeed, evolutionary biology and other fields influenced by evolutionary biology, like anthropology and ethnology, would play a critical role in removing the ideological support and legal rationale behind anti-miscegenation laws—the epitome of America's Jim Crow-era racial caste system—by undermining the scientific consensus in support of the "natural" basis of racial classification.

Before, but especially after the Civil War, laws sprouted up to prevent people from crossing the boundaries of these "natural" categories through interracial marriage. Anti-miscegenation laws outlawed marriages between Whites and Blacks, and the ideological rationales used to justify these laws spanned the rhetorical arsenal of the 19th century. Victorian-era Americans used religion, science, public opinion, and history to argue that race mixing should be illegal because it was, above all else, unnatural. Preventing interracial unions not only stymied individual romantic inclinations but also served as a powerful support for the economic, legal, and social subjugation of Black Americans and the legal foundation of White supremacy. According to historian Peggy Pascoe, miscegenation law

was the “foundation for the larger racial projects of white supremacy and white purity,” and it rested on “three animating fictions—one constitutional, one scientific, and one popular—which together served as the obvious, seemingly natural foundation of white supremacy.”⁷⁷⁶ While scientific opinions on the subject of pure races was not the only support for miscegenation laws in the United States, they played a vital role in the constellation of ideas that “naturalized” the ban on interracial marriage.

While these miscegenation laws were being established, they were challenged as unconstitutional barriers to equality by newly freed Blacks, but also by some white men who felt that miscegenation laws infringed on the traditional right of white men to choose their own wife, order their own households, and dispose of property and filial inheritances as they saw fit. In court, the law was challenged as a violation of the Equal Protection Clause of the new 14th amendment, but courts generally upheld the state's right to regulate interracial marriage with the exception of a few, eventually overturned, rulings during Reconstruction. The courts reasoned that anti-miscegenation laws were constitutional because they fell on both Blacks and Whites equally, and because the preservation of “racial health” was a valid interest for the state's police power.⁷⁷⁷ The desire of white men to protect their traditional familial privileges was sacrificed to the desire to strengthen white supremacy through the legal proscription of racial mixing. In support of these bans, both religious and scientific arguments were deployed. Courts argued that science had shown that miscegenation led to degraded offspring who were weaker, less healthy, and less fertile than “pure” race children, and religious arguments were used to claim that God had laid down this natural law for the

⁷⁷⁶ Peggy Pascoe, *What Comes Naturally: Miscegenation Law and the Making of Race in America*, (Oxford: Oxford University Press, 2010), pp. 6-7.

⁷⁷⁷ Peter Wallenstein, “Race, Marriage, and the Supreme Court from *Pace v. Alabama* (1883) to *Loving v. Virginia* (1967),” *Journal of Supreme Court History*, Vol. 23, No. 2 (Dec., 1998), pp. 65-86.

very purpose of preserving such racial purity. This form of argumentation was used by the Georgia Supreme Court in 1869:

The amalgamation of the races is not only unnatural, but is always productive of deplorable results. Our daily observation shows us, that the offspring of these unnatural connections are generally sickly and effeminate, and that they are inferior in physical development and strength, to the full-blood of either race.⁷⁷⁸

Similarly, in Pennsylvania in 1867:

Why the Creator made one black and the other white, we know not; but the fact is apparent, and the races distinct, each producing its own kind, and following the peculiar law of its constitution. Conceding equality, with natures as perfect and rights as sacred, yet God has made them dissimilar, with those natural instincts and feelings which He always imparts to His creatures, when He intends that they shall not overstep the natural boundaries He has assigned to them. The natural law which forbids their intermarriage and that social amalgamation which leads to a corruption of races, is as clearly divine as that which imparted to them different natures. The tendency of intimate social intermixture is to amalgamation, contrary to the law of races. The separation of the white and black races upon the surface of the globe is a fact equally apparent. Why this is so, it is not necessary to speculate; but the fact of a distribution of men by race and color is as visible in the providential arrangement of the earth as that of heat and cold. The natural separation of the races is therefore an undeniable fact, and all social organizations which lead to their amalgamation are repugnant to the law of nature. From social amalgamation it is but a step to illicit intercourse, and but another to intermarriage.⁷⁷⁹

And, in Virginia in 1878:

The public policy of this state, in preventing the intercommingling of the races by refusing to legitimate marriages between them has been illustrated by its legislature for more than a century. Every well organized society is essentially interested in the existence and harmony and decorum of all its social relations. Marriage, the most elementary and useful of all, must be regulated and controlled by the sovereign power of the state. The purity of public morals, the moral and physical development of both races, and the highest advancement of our cherished southern civilization, under which two distinct races are to work out and accomplish the destiny to which the Almighty has assigned them on this continent--all require that they should be

⁷⁷⁸ *Scott v. Georgia*, 39 Ga. 321, 323 (1869).

⁷⁷⁹ *West Chester and Philadelphia Railroad Co v. Miles*, 55 Pa. 209, 213 (1867).

kept distinct and separate, and that connections and alliances so unnatural that God and nature seem to forbid them, should be prohibited by positive law, and be subject to no evasion.⁷⁸⁰

The language used to justify these laws was common and consistent across jurisdictions and reflected the belief that racial mixing was harmful to the races, as well as reflecting the desire to protect white supremacy, even though this often meant limiting the marriage choices of some individual white men.

These anti-miscegenation laws quickly became “the ultimate sanction of the American system of white supremacy,” and protected white womanhood became a primary goal of Southern civil religion.⁷⁸¹ Anti-miscegenation laws, segregation, and white terrorism in the form of lynching and the Ku Klux Klan sought to protect white “purity” and to ensure that political and social inequality maintained white supremacy, power, and control. The creation of the Southern civil religion that supported white supremacy was a multi-faceted phenomenon, from the creation of a civil religious mythos that venerated the Southern White Protestant as the defender of traditional American values to the use of scientific authority to buttress the ideology of racial essentialism. When courts decided to uphold or overturn a state’s anti-miscegenation laws they turned to judicial precedent, legislative intent, public opinion, and also to scientific and religious authority, filtered through the lens of political ideology, on the biological necessity of preventing whites from marrying blacks.

Anti-miscegenation laws’ most important legal battle was won in 1883, when the Supreme Court upheld Alabama’s miscegenation law in the case of *Pace v. Alabama*. *Pace* served as strong judicial precedent for the constitutionality of miscegenation laws nationwide

⁷⁸⁰ *Kinney v. the Commonwealth*, 30 Gratt. 858, 71 Va. 858, (1878) WL 5945 (Va.), 32 Am.Rep. 690.

⁷⁸¹ Peggy Pascoe, “Miscegenation Law, Court Cases, and Ideologies of “Race” in Twentieth-Century America,” *The Journal of American History*, Vol. 83, No. 1 (Jun., 1996), p. 49.

for the next 60-80 years.⁷⁸² Indeed, the precedent set by *Pace* was considered so solid that it forestall any serious legal challenges to bans on interracial marriage until the 1940s. This particular case was first tried in the Alabama Supreme Court, whose verdict echoed the reasoning that other state courts had used to uphold anti-miscegenation laws. According to the Court, the law was constitutional because the punishment fell equally upon both parties to the illicit action, black and white, and though the punishment for fornication between members of different races was greater than for those of the same race, such punishment was allowed, because, in the words of the Alabama Supreme Court,

the evil tendency of the crime of living in adultery or fornication is greater when it is committed between persons of the two races, than between persons of the same race. Its result may be the amalgamation of the two races, producing a mongrel population and a degraded civilization, the prevention of which is dictated by a sound public policy affecting the highest interests of society and government.⁷⁸³

When the US Supreme Court reviewed the lower court's decision, the justices agreed with the lower courts on similar grounds.

During the 1920s, a number of states led by Virginia sought to strengthen their racial codes with new, tougher penalties on racial mixing and more demanding public recording of racial classification. Virginia's new "Racial Integrity Act," passed in 1924 at the height of the public frenzy against immigration, the waxing years of the second KKK, and the peak of Bryan-led anti-evolution statutes, and it was the most draconian anti-miscegenation law on the books. This new law established the "one-drop rule" in Virginia, and was subsequently copied in a number of other Southern states for the purposes of defining race under the law. Men like Walter Plecker, a native southerner and fundamentalist Presbyterian, who

⁷⁸² *Pace v. Alabama*, 106 U.S. 583 (1883).

⁷⁸³ *Pace & Cox v. The State*, 69 Ala. 231 (1881).

spearheaded the creation of Virginia's new law, saw interracial marriages as deeply unnatural and prohibited by God, as detrimental to public health, and as destructive of social order. The "Christian knights" who sought to secure white supremacy against the encroaching tides of Catholics, Jews, and Blacks saw the preservation of White racial integrity through the prohibition of miscegenation and the preservation of Protestant Fundamentalism through the expulsion of materialistic Darwinism as complementary elements of a political campaign designed to bolster "native" American control over the social order. Fundamentalist arguments about the permanence and naturalness of the God-created races provided powerful ideological support for the preservation of the very laws that undergirded white supremacy even as the scientific arguments, which had previously been so useful, were beginning to be removed from the rhetorical arsenal of the white supremacists. The religious argument against race mixing continued to prove potent in some courts through the mid-20th century.

It was the famous *Loving v. Virginia* case of 1967 that challenged Virginia's Racial Integrity Act, which definitively ended miscegenation laws in the United States, but before that case reached the Supreme Court of the United States, it was upheld by the Supreme Court of Virginia. The Virginia court reiterated in the 1960s the logic of the *Pace* case from the 1880s and added a creationist argument as well. As one of the Virginia judges put it: "Almighty God created the races white, black, yellow, Malay and red, and He placed them on separate continents. And but for the interference with His arrangement there would be no cause for such marriages. The fact that He separated the races shows that He did not intend for the races to mix."⁷⁸⁴ The Virginia court justified its decision to declare

⁷⁸⁴ Quoted in *Loving v. Virginia*, 388 U.S. 1 (1967).

prohibitions on interracial marriage by appealing to creationist arguments that grounded the “unnaturalness” of miscegenation in divinely sanctioned racial fixity, and in so doing echoed religiously inclined condemnations of interracial marriage that were made after the Civil War during the establishment of segregation.

By the early part of the 20th century, the scientific undergirding that supported anti-miscegenation laws began to face challenges. Part of the strategy used by civil rights activists to overturn miscegenation laws was to show that they were rooted in mere racial prejudice rather than having a “real” scientific basis, and that rather than furthering a legitimate state interest were merely tools used to protect white supremacy. When dealing with cases that potentially fell afoul of the Equal Protection clause of the 14th amendment, the Supreme Court had established that legislatures could sculpt policy that fell on only specific groups of people as long as the classifications used were reasonable and intended to further a legitimate government interest. This “rational basis test,” first articulated by the court in 1897, eventually became the method by which anti-miscegenation laws would be overturned.⁷⁸⁵ But in order to do so, civil rights lawyers and activists had to show that using racial classifications to regulate marriage failed this test and was arbitrary and prejudicial. Previous courts had upheld anti-miscegenation laws because they agreed with legislatures that there was a clear public interest in the prevention of “corruption of the blood” as well as the “degradation” of the races, but by the early part of the 20th century biologists, ethnologists, and anthropologists working alongside civil rights groups like the NAACP would begin to convince the courts that such prevention had no scientific basis.

⁷⁸⁵ “The mere fact of classification is not sufficient to relieve a statute from the reach of the equality clause of the Fourteenth Amendment, and in all cases it must appear not merely that a classification has been made, but also that it is based upon some reasonable ground -- something which bears a just and proper relation to the attempted classification, and is not a mere arbitrary selection.” *Gulf, Colorado & Santa Fe Railway Co. v. Ellis*, 165 U.S. 150 (1897).

Evolution, Science, and the Undermining of "Race"

The White-Supremacist magazine, "The American Renaissance" wrote in 1997 that the United States had been traditionally a "white nation with a white majority," but that this had changed in the 1950s and 1960s.

Once the country made the fatal assumption that race was a trivial human distinction, all else had to follow. Congress abolished not only Jim Crow and legal segregation but, with the Civil Rights Act of 1964, put an end to free association as well. The Immigration and Nationality Act Amendments of 1965, which abolished national origins quotas and opened immigration to all nations, was a grand gesture of anti-racism, a kind of civil rights law for the entire world.⁷⁸⁶

In the same issue a poll of its readers was published that purported to show a list of the top "Americans Who Have Damaged White Interests."⁷⁸⁷ Topping the list were politicians like Lyndon Johnson, Abraham Lincoln, and Earl Warren as well as Civil-Rights leaders like Martin Luther King and Jesse Jackson. Earl Warren, of course, was infamous amongst white supremacists for his role in overturning miscegenation laws, such as in *Loving v. Virginia*. According to Earl Warren, "Miscegenation statutes maintain white supremacy. They should all go down the drain."⁷⁸⁸ But alongside Warren and other famous Americans on this list was a scientist whom most Americans had never heard of named Franz Boas, and on a similar listing of "Foreigners Who Have Damaged White Interests," was listed one of Boas's protégés, Ashley Montagu. The two, Boas and Montagu, along with other scientists like Theodosius Dobzhansky would do much to change the American scientific and, ultimately, the American public consensus on the nature of race.

⁷⁸⁶ Jared Taylor, "The Myth of Diversity," *American Renaissance*. Vol. 8, No. 7 & 8 (Jul-Aug., 1997), p. 3.

⁷⁸⁷ *Ibid.*, p. 10.

⁷⁸⁸ William O. Douglas, Conference Notes, No. 395, *Loving v. Virginia* (Apr. 14, 1967) (on file with the Library of Congress, Manuscript Division, William O. Douglas Papers, Part II: Box 1402). Quoted in Rebecca Schoff, "Deciding on Doctrine: Anti-Miscegenation Statutes and the Development of Equal Protection Analysis," *Virginia Law Review*, Vol. 95, No. 3 (May, 2009), p 660.

Franz Boas was a German-American professor whose work in anthropology critically shaped that field's trajectory to such a degree that he would come to be called the "Father of American Anthropology." He would also come to be seen as the "chief villain of racial science" by conspiracy theorists and white supremacists.⁷⁸⁹ Boas, and his followers like Ashley Montagu, Margaret Mead, and Zora Neal Hurston, among others, played a vital role in undermining scientific support for the hereditarian model of race, and helped to bolster a cultural anthropological understanding of race, which downplayed the influence of race on behavior. Indeed, they would succeed at even undermined the legitimacy of the concept of race as scientifically significant. For Boas and the Boasians it was culture, not race, that was the great determinant of human behavior. Boas rejected the prevailing theories of orthogenetic cultural evolution, which argued that societies, races, and cultures progressed through sequential stages, with some higher or lower on a scale of advancement. In its place, Boas substituted theories of Darwinian evolution that postulated that cultures evolved in response to environmental pressures, through a process of natural selection, to fit into their surroundings. Boas credited his debt to Darwin: "I hope I may have succeeded in presenting to you, however imperfectly, the currents of thought due to the work of the immortal Darwin which have helped to make anthropology what it is at the present time."⁷⁹⁰ Boas's appropriation of Darwinian models of the natural world to the social world of human culture and race, and his success at generating an influential following of scholars who would reshape ethnology and anthropology, made it increasingly difficult to scientifically categorize

⁷⁸⁹ John P. Jackson, Jr., *Science for Segregation: Race, Law, and the Case against Brown v. Board of Education*. (New York and London: New York University, 2005), pp. 3-4.

⁷⁹⁰ Franz Boas, "The relation of Darwin to Anthropology", notes for a lecture; Boas papers (B/B61.5) American Philosophical Society, Philadelphia. Published on line with Herbert Lewis, "Boas, Darwin, Science and Anthropology" in *Current Anthropology* Vol. 42, No. 3 (2001), pp. 381–406 (On line version contains transcription of Boas's 1909 lecture on Darwin.).

various races as higher or lower or more advanced or less advanced in a way that was satisfactory to scientists.

While the KKK was fusing white supremacy with Protestant Fundamentalism, the NAACP was appealing to scientists to undo down the legal edifice supporting segregation and racial classification. One of the NAACP's methods to oppose anti-miscegenation laws (along with arguing for marital choice and a critique of the sexualization of miscegenation law) was to attack the idea of natural black inferiority. In so doing, W. E. B. Du Bois, the NAACP, and its journal *the Crisis* used the new race science, such as practiced by Franz Boas to show that racial differences were "differences in kind, not in value."⁷⁹¹ The partnership between Boas and Du Bois and others was of immense importance in shaping the emergent shifts in American attitudes towards race and racial ideology in the early 20th century.⁷⁹² For Boas, his anthropological work was intimately tied to his humanitarian impulses on behalf of the oppressed races in America, and Boas worked with the NAACP to spread the new science on race to civil rights activists looking to use this scholarship to overturn segregation.⁷⁹³ As Historian Vernon Williams, Jr. describes it, Boas's correspondence with

leading African American intellectuals such as Booker T. Washington, W.E.B. Du Bois, Carter G. Woodson, Alain L. Locke, George E. Haynes, Abram Harris, Charles S. Johnson, Monroe N. Work, Charles H. Thompson, and Zora Neale Hurston reveals that he not only displayed an astonishing degree of real empathy with the plight of African American intellectuals and the black masses but also performed such practical functions as assisting them in obtaining jobs and foundation support, fighting for academic

⁷⁹¹ Pascoe (2010), p. 173.

⁷⁹² Lee D. Baker, *From Savage to Negro: Anthropology and the Construction of Race, 1896-1954*. (Berkeley and Los Angeles: University of California Press, 1998), pp. 99-126.

⁷⁹³ Edward H. Beardsley, "The American Scientist as Social Activist: Franz Boas, Burt G. Wilder, and the Cause of Racial Justice, 1900-1915," *Isis*, Vol. 64, No. 1 (Mar., 1973), pp. 50-66; Herbert S. Lewis, "The Passion of Franz Boas," *American Anthropologist*, Vol. 103, No. 2 (2001), pp. 447-67; Lee D. Baker, "Franz Boas Out of the Ivory Tower," *Anthropological Theory*, Vol. 4, No. 1 (Mar., 2004), pp. 29-51; Franz Boas, "The Real Race Problem," *The Crisis*, Vol. 1, No. 2 (1910), pp. 22-25.

freedom, and nurturing studies of African American history and life in the social sciences.⁷⁹⁴

By the 1920s, the scientific consensus on the concept of race shifted towards those who saw race as a less significant factor in determining human behavior than culture, and scientific experts began to be deployed in court rooms to argue against rigid racial notions that protected white supremacy. For example, in *United States v. Bhagat Singh Thind* (1923), a South Asian man petitioned for American citizenship as a member of the white race, and ethnologists introduced evidence on behalf of Mr. Thind that he was ethnologically Aryan as a member of a high caste from the Punjab region of India.⁷⁹⁵ While scientific opinions about the historical linkages between European and Indian ethnic groups were not enough to win the case for Mr. Thind, the case began to show how elite scientific opinions about race had begun to split from those of the “common man,” which the Court appealed to in making its decision to deny citizenship and “whiteness” to Mr. Thind.

By the 1920s, scientific about race had diverged from common opinion as Franz Boas, and others like him, began to use biological and anthropological understandings of race to show that the biological concept of race made no sense.⁷⁹⁶ Part of the strategy of the scientists like Boas and civil rights activists, such as the NAACP was to use this new scientific consensus along with the Fourteenth Amendment to undermine the legal support for white supremacy.⁷⁹⁷ Just as Darwinian evolution made the traditional system of Linnean classification more difficult to square with the fluidity inherent in the Darwinian understanding of natural history, it also made it increasingly difficult to create firm, fixed

⁷⁹⁴ Vernon J. Williams, Jr. *Rethinking Race: Franz Boas and His Contemporaries*. (Lexington, KY: University of Kentucky Press, 1996), p. 37.

⁷⁹⁵ *United States v. Bhagat Singh Thind*, 261 U.S. 204 (1923).

⁷⁹⁶ Pascoe (1996), p. 53-4.

⁷⁹⁷ Baker, “Anthropology and the Fourteenth Amendment,” (1998), pp. 188-207.

boundaries of racial type that could withstand scientific scrutiny.⁷⁹⁸ Boas's ideas about the power of environment to shape human racial types echoed not only Darwinian tropes, but also 18th century American debates by Thomas Jefferson, Benjamin Rush, and others on the plasticity of human type. As Boas puts it, "The old idea of absolute stability of human types must, however, evidently be given up, and with it the belief of the hereditary superiority of certain types over others."⁷⁹⁹ The evolutionists Julian Huxley and A. C. Haddon joined Boas, and even went so far as to claim that "the term *race* as applied to human groups should be dropped from the vocabulary of science."⁸⁰⁰ These cultural biologists and anthropologists recognized that their scientific opinions had diverged considerably from the "common man," but their hope was that they would be able to use their "expertise" to reshape the law through persuasion and perseverance.⁸⁰¹

Activist scientists, like the evolutionary biologist Theodosius Dobzhansky, who along with Ashley Montagu, helped to write the UNESCO statement on race became an active part of the civil rights movement of the 20th century. Dobzhansky was one of the single most important evolutionists of the 20th century and a central figure in modern biology through his influence in creating the "modern synthesis," which definitively worked evolutionary biology into its current relationship with Mendelian genetics as the foundation of modern biology. Dobzhansky believed that his insights into the workings of evolution gave him insights into the nature of race, and he worked to demonstrate how the biological

⁷⁹⁸ Franz Boas, "What is a Race?," *Nation*, (Jan., 1925), pp. 89-91.

⁷⁹⁹ Franz Boas, "The Instability of Human Types," *Papers on Interracial Problems Communicated to the First Universal Races Congress Held at the University of London, July 26-29, 1911*, ed. Gustav Spiller (Boston: Ginn and Co., 1912), 99-103.

⁸⁰⁰ Julian Huxley and A. C. Haddon, *We Europeans: A Survey of "Racial" Problems*. (London: Jonathan Cape, 1935), p. 107.

⁸⁰¹ Gunnar Myrdal, *An American Dilemma: The Negro Problem and Modern Democracy*. (New York: 1944), pp. 91-115.

understanding of race, influenced by the new understanding of modern genetics and evolution, showed that race itself was a deeply flawed, changing, and changeable concept. Dobzhansky was critical of the idea of racial “types,” and he heavily opposed Carleton Coon’s theory of separate racial origins (a sort of 20th century revival of the 19th century’s polygenist theory of human origins).⁸⁰² According to Dobzhansky, evolutionary biology and genetics showed that “the statement that two populations are racially distinct really conveys very little information regarding the extent of the distinction,” and “the idea of a pure race is not even a legitimate abstraction: it is a subterfuge used to cloak one’s ignorance of the nature of the phenomenon of racial variation.”⁸⁰³

Ashley Montagu, who worked with Dobzhansky to craft the seminal UNESCO statement on race and was a student of Boas', attributed the growing understanding of Darwinian evolution, combined with the population genetics of the modern synthesis, to the changing notions of race in the 20th century. Montagu considered race to be a destructive myth whose ideological power had harmed millions of lives around the world.⁸⁰⁴ Here’s Montagu: “The Darwinian contribution was to show that species were not as fixed as was formerly believed, and that under the action of Natural Selection one species might give rise to another, that all animal forms might change in this way.”⁸⁰⁵ Montagu considered the days over in which

⁸⁰² Theodosius Dobzhansky, "The Race Concept in Biology," *Scientific Monthly*, Vol. 52, No. 2 (Feb., 1941), pp. 161—65; "On species and races of living and fossil man," *American Journal of Physical Anthropology*, Vol. 2 (1944), pp. 251-65; "Human races in the light of genetics," *Int.Soc.Sci.Bull.* (UNESCO). Vol. 3 (1951), pp. 660-63; "Human races". *American Journal of Human Genetics*, Vol. 13 (1961), pp. 349—50; "Race equality," *The Biological and Social Meaning of Race*. ed. R. H. Osborne (San Francisco: W. H. Freeman & Co., 1971), pp. 13—24. Carleton S. Coon, *The Origin of Races*, (New York: Alfred A. Knopf, 1962).

⁸⁰³ Dobzhansky (1941), p. 162, 164.

⁸⁰⁴ Ashley Montagu, *Man’s Most Dangerous Myth: the Fallacy of Race*. (New York: Harper, 1942).

⁸⁰⁵ Ashley Montagu, “The Concept of Race in the Human Species in the Light of Genetics,” *Journal of Heredity*, Vol. 32, No. 8 (Aug., 1941), pp. 244.

the Aristotelian conception of Species, the theological doctrine of special creation and the Natural History of the Age of Enlightenment, as represented by Cuvier's brilliant conception of Unity of Type, namely the idea that animals can be grouped and classified upon the basis of assemblages of structural characters which, more or less, they have in common...an idea which, in spite of every indication to the contrary in the years which followed, was gradually extended to the concept of race" could be held to be true.⁸⁰⁶ In fact, Montagu urged his readers to accept the "meaninglessness of the anthropological concept of race."⁸⁰⁷

By the 1960s, the idea that racial classifications were "rational" had become increasingly untenable for those who sought scientific backing for the use of such classification. People like Boas, Ashley Montagu, and Theodosius Dobzhansky had undermined scientific support for idea of racial "essences" and considered race nothing more than an average amongst genetic similars grouped together according to social convention. Anti-miscegenation laws became discredited due, to a significant degree, the changing science surrounding race, and the evolutionary theories of Darwin through his intellectual descendants were an important influence for this change. The American legal system reflected the struggle between ascriptive Americanism and the liberal egalitarianism that had long existed in American political discourse, and Darwinian evolution was enmeshed in this 20th century ideological divide, just as it had been in the 19th century. It would have been impossible for Southern nationalists not to have seen evolutionary scientists through this lens. Many scientists themselves took an active role in the public sphere by advising activists as well as through the popular press. During the time of the *Loving* trial, a number of prominent scientists argued that race and intermarriage could not be considered a biological problem and had never been "unnatural." The sociologist Gunnar Myrdal put it this way: "From a scientific point of view, there is no reason why people shouldn't marry as they please."

⁸⁰⁶ *Ibid.*, p. 244.

⁸⁰⁷ *Ibid.*, p. 247.

Brewton Berry, the author of *Almost White* a history of multiracial people in America described the naturalness of mixed race pairings this way, “in my opinion, nature doesn’t care—one way or another—about the mixing of races.”⁸⁰⁸

After the Second World War, elite and academic opinion turned decisively against the idea of fixed racial essences or racial hierarchy, due in part to the horror of the racist Nazi regime, but also due to the increasing influence of Franz Boas and his protégés. As Lee Baker puts it, “the discourse produced by scholars in anthropology, in a very literal sense, was woven into the fabric of U.S. society.”⁸⁰⁹ One important example of this new scientific consensus on race can be seen in the UNESCO statement on race from 1950, worked on by both Montagu and Dobzhansky, which quotes Charles Darwin's *Descent of Man* as an inspiration: "As man advances in civilization, and small tribes are united into larger communities, the simplest reason would tell each individual that he ought to extend his social instincts and sympathies to all the members of the same nation, though personally unknown to him. This point being one reached, there is only an artificial barrier to prevent his sympathies extending to the men of all nations and races."⁸¹⁰ According to UNESCO, science played an important role in the shaping of opinions on race, especially the time “when the great evolutionary theories were being formulated.” However, according to UNESCO, politics at that time had influenced scientific discussions on race in an unfortunate direction, but since then increasingly “psychology, biology and cultural anthropology, which have developed so remarkably during the last fifty years, have made

⁸⁰⁸ Quoted in Pascoe (2010), pp. 254-5.

⁸⁰⁹ Baker (1998), p. 207.

⁸¹⁰ Charles Darwin, *The Descent of Man*, 2nd ed. (1875), pp. 187-8. Quoted in "UNESCO and Its Programme, III: The Race Question," (1950), p. 8.

possible extensive inquiries and experimental research studies in the problem.”⁸¹¹ According to UNESCO, the results of this work showed that “it is impossible to demonstrate that there exist between ‘races’ differences of intelligence and temperament other than those produced by cultural environment,” and that racism is nothing more than the belief in an “innate and absolute superiority of an arbitrarily defined human group over other equally arbitrarily defined groups.”⁸¹² The appointed investigator and later reviser of UNESCO’s statement on race was Ashley Montagu, whose work there would be cited during the oral argument of the *Loving v. Virginia* case itself.⁸¹³

Biological expertise and opinion on race was significant in the courtroom and began to arbitrate disputes about racial classification. In *Perez v. Sharp* (1948), which challenged California's anti-miscegenation law, the anti-miscegenation law's defenders tried to convince the court that California's racial classification served a "rational basis" in the regulation of marriage laws by using statistical claims about the health of interracial children echoing arguments made in *Pace v. Alabama*, but this time the science did not support the law as it once had, and the judges were no longer convinced as they once had been. In 1948, California's anti-miscegenation law was struck down, the first time an anti-miscegenation law had been invalidated in 20th century America. Justice Roger J. Traynor wrote the opinion of the Court, and in so doing he struck a blow against the legal use of racial classification when he rejecting the discursive mode of the Southern civil religion when he wrote that "legislation infringing such rights must be based upon more than prejudice and must be free

⁸¹¹ “Unfortunately, the problem soon shifted from the purely scientific field to the field of politics. As a result, the discussions which it has provoked have rarely been free from the passions and prejudices of the moment.” *Ibid.*, p. 3.

⁸¹² *Ibid.*, p. 3.

⁸¹³ “Oral argument” *Loving v. Virginia*, 388 U.S. 1 (1967).

from oppressive discrimination to comply with the constitutional requirements of due process and equal protection of the laws."⁸¹⁴

In the California Supreme Court's Opinion, Traynor cited both Franz Boas and Gunnar Myrdal on the nature of race and race mixing to dispute the idea that race could serve as a rational classification for the regulation of marriages.⁸¹⁵ During the oral examination of the case, Justice Traynor countered Charles Stanley, who represented Los Angeles County in the anti-miscegenation law's defense, saying that anthropologists have not been able to furnish a definite definition of race, and in fact "they say generally that there is no such thing as race."⁸¹⁶ Attempting to counter Judge Traynor's skepticism about the rationale behind California's racial classification, Stanley attempted to assert a version of the previous rationale behind California's ban on interracial unions: "I do not like to say it, or to tie myself in with *Mein Kampf*, but it has been shown that the white race is superior physically and mentally to the black race, and the intermarriage of these races results in a lessening of physical vitality and mentality in their offspring."⁸¹⁷ The lawyer Dan Marshall, who was arguing to overturn the law, took advantage of the fact that the judge was interested in looking at the nature of racial classification and he "played on the gap between expert opinion and "irrational" laws based on "prejudice"⁸¹⁸ In the end, Judge Traynor and a majority of the Court agreed to overturn the law, arguing that its basis on California's racial classification was "not only too vague and uncertain to be enforceable regulations of a fundamental right, but that they violate the equal protection of the laws clause of the United States Constitution by impairing the right of individuals to marry on the basis of race alone

⁸¹⁴ *Perez v. Sharp*, 32 Cal.2d 711, 715 (1948)

⁸¹⁵ *Perez v. Sharp*, 32 Cal.2d 711 (1948)

⁸¹⁶ Oral Argument on Behalf of Respondent, October 6, 1947, pp. 3-4, *Perez v. Sharp*.

⁸¹⁷ Quoted in Pascoe (2010), p. 218.

⁸¹⁸ *Ibid.*, p. 218.

and by arbitrarily and unreasonably discriminating against certain racial groups."⁸¹⁹ The new science on race had played an important part in undermining the legal justification for one of white supremacy's primary fixations, the legal ban on interracial marriage.

After activists had been able to invalidate California's ban on interracial marriage in *Perez*, they began to turn their attention to the overturning of such laws nationally, and they had their first chance in 1964 with the case of *McLaughlin v. Florida*.⁸²⁰ Dewey McLaughlin, a black man, and Connie Hoffman, a white woman, were charged with violating Florida's law against illicit interracial sexual relations. McLaughlin and Hoffman claimed that because they were married they did not violate the law, but Florida ruled that since it was illegal for a black man and white woman to be married in Florida, the fact that they were living together was, ipso facto, proof of illegal sexual contact. The lawyer for the defendants, Grattan Graves, echoed the argument that had succeeded in overturning California's anti-miscegenation law in *Perez*, and he argued that Florida had failed to show that "any valid governmental purpose is furthered by depriving individuals of the privacy of their homes and a marital relationship solely because the mate they have chosen is of a different race," and that as such should be ruled unconstitutional.⁸²¹ Just as in *Perez*, the Supreme Court agreed and overturned Florida's conviction of McLaughlin and Hoffman arguing that "without such justification the racial classification contained in [Florida's cohabitation law]...is reduced to an invidious discrimination forbidden by the Equal Protection Clause."⁸²²

⁸¹⁹ *Perez v. Sharp*, 32 Cal.2d 711, 731-2 (1948).

⁸²⁰ *McLaughlin v. Florida*, 379 U.S. 184 (1964).

⁸²¹ Brief of Defendants-Appellants, 16-17, *McLaughlin v. Florida*, 379 U.S. 184 (1964).

⁸²² *McLaughlin v. Florida*, 379 U.S. 184 (1964).

In the similar, but more famous, *Loving* case, Virginia's attorney general (who was defending the anti-miscegenation law at the Supreme Court) knew that he needed to be able to show that its use of racial classifications served a rational basis for the law to stand. Robert McIlwaine, the senior assistant attorney general for Virginia, who made the case for Virginia's miscegenation laws "struggled to find some ground on which to stand. Virginia's lawyers knew only too well that, over the course of the twentieth century, the scientific foundations of the eugenic biological argument in favor of miscegenation laws had crumbled and that their argument about the 'sociological and psychological evils which attend interracial marriage' was suspect at best."⁸²³ Nevertheless, Virginia's attorneys argued that on the question of treating interracial marriages differently than other marriages, "the scientific evidence is substantially in doubt and, consequently, this Court should defer to the wisdom of the state legislature in adopting its policy of discouraging interracial marriages."⁸²⁴ If the Courts continued to hold that treating both people, black and white, party to an interracial marriage equally satisfied the equal protection clause, then the case would hinge upon the argument that scientific opinion against miscegenation could still provide a rational basis for a state seeking to prevent it.

Unfortunately for the law's defenders, the consensus by the time of *Loving* had changed and as Justice Stewart said, "it is simply not possible for a state law to be valid under our Constitution which makes the criminality of an act depend upon the race of the actor." The scientific basis for the use of racial classification had vanished, and the crucial ideological support needed to show that the law's use of classification was reasonable no longer held sway. According to the Supreme Court, there was no more scientific/biological

⁸²³ Pascoe, (2010), p. 282.

⁸²⁴ *Loving v. Virginia*, 388 U.S. 1 (1967).

basis for treating race as an insurmountable barrier to equality and marriage, and as such “there is patently no legitimate overriding purpose independent of invidious racial discrimination which justifies this classification.” The Court struck down Virginia’s “Racial Integrity Act,” and in so doing struck down anti-miscegenation laws across the country. The Court’s new opinion on anti-miscegenation laws was that they were not based on a reasonable state interest but were merely “measures designed to maintain White Supremacy,” and as such were clearly unconstitutional.⁸²⁵

At the same time as the legal edifice supporting white supremacy was being unwound by the work of civil rights activists across the country, laws that had prevented the teaching of evolution in public schools were being overturned. The framework that had upheld the legal basis for whites supremacy as well as legal bans on the teaching of evolution fell together. The year after the *Loving* verdict, the Supreme Court took up Arkansas’s ban on the teaching of evolution in public schools in *Epperson v. Arkansas* (1968), and declared bans on the teaching of evolution in public schools to be unconstitutional.⁸²⁶ In 1965, the young woman at the center of the case, Susan Epperson, tested Arkansas’s law against the teaching of evolution in her position as biology teacher at Little Rock’s Central High School, the very school in which the 101st airborne had escorted “The Little Rock Nine” to class in order to protect them from angry white mobs. Locals considered Epperson an intellectual carpetbagger, and she received threats linking the teaching of evolution with the politics of race. “If...cocoanut-heads up there want to believe there foreFathers are monkeys, apes or gorillas, its OK, but don’t let them shove it down our throat like Johnson did the Civil

⁸²⁵ *Loving v. Virginia*, 388 U.S. 1 (1967).

⁸²⁶ *Epperson v. Arkansas*, 393 U.S. 97 (1968).

Rights law...⁸²⁷ Southern and Northern Churches, which had split over slavery, remained largely divided on sectional grounds over the teaching of evolution. The Northern-based Protestant churches, such as the Evangelical Lutheran Church in America in Chicago, or the Episcopalian Church headquartered in New York would both come out in support of evolution, while the Lutheran Church-Missouri Synod in Kirkwood, Missouri and the Southern Baptists located throughout the South continued to oppose it. For white Protestants in the South, the crumbling legal edifice that had supported Protestant fundamentalism and white supremacy were political and socially linked as threats to traditional ways of maintaining and conceptualizing public morality and social order.

Race, science, and religion continued to be intertwined late into the twentieth century and beyond, and debates over anti-miscegenation laws continued to show this. Near the end of the 20th century, during a debate in South Carolina, white Republican state legislators continued to echo the religiously grounded opposition to interracial marriage. Lanny Littlejohn of South Carolina argued that he could not vote to remove South Carolina's now-defunct anti-miscegenation law from the state Constitution because "that's not the way God meant it. He does create races of people, and He did that for a reason. From the beginning, He set the races apart." His fellow legislator, Yancey McGill, agreed saying, "as an elected official, we have to take a stand for the future. I just don't think, biblically, that's part of God's plan."⁸²⁸ However, after *Loving*, such opinions were largely irrelevant in legal disputes. Darwinian evolution, and the scientists whose work had changed public discourse on race, had succeeded in removing much of the ideological strength of creationist arguments that sought to justify the idea that pure "races" represented something that was eternal, fixed, and

⁸²⁷ Quoted in Randy Moore's, "Racism and the Public's Perception of Evolution," in *Reports of the National Center for Science Education*. Vol. 22, No. 3 (May-June, 2002), pp. 16-18, 23-25.

⁸²⁸ Littlejohn and McGill quoted in Pascoe (2009), p. 308.

natural. While a number of Fundamentalist Protestant movements, such as the Christian Identity movement, would continue to explicitly link theories of racial hierarchy with their objections to Darwinism in the 21st century, most creationists no longer knew how or why American debates over racial identity had shaped and charged so much of the religious objections to evolutionary biology.

Conclusion

Belief in evolutionary biology is lower in the United States than in other developed countries around the world, and this fact cannot be separated from the political and social historical context into which Darwinian evolution emerged and the ideological struggles in which it became enmeshed. While it is often tempting to believe that failure to "believe" a scientific doctrine stems from a simple failure to understand that doctrine, studies show that there is little to no correlation between those who claim to believe evolution and their ability to actually explain it.⁸²⁹ It also turns out that being taught evolution doesn't cause people to "believe" in it either, and that belief in evolution has little to no correlation with overall scientific literacy.⁸³⁰ Instead, "belief" in evolution often reflects who we know rather than what we know. According to Yale's Dan Kahan:

What people are doing, then, when they say they "believe" and "disbelieve" in evolution is expressing *who they are*. Evolution has a *cultural meaning*, positions on which signify membership in one or another competing group. People reliably respond to "Evolution" and "Big Bang" in a manner that

⁸²⁹ Andrew Shtulman, "Qualitative Differences Between Naive and Scientific Theories of Evolution," *Cognitive Psychology*, Vol. 52, No. 2, (Mar., 2006), pp. 170-94.

⁸³⁰ Anton E. Lawson and William A. Worsnop, "Learning about Evolution and Rejecting a Belief in Special Creation: Effects of Reflective Reasoning Skill, Prior Knowledge, Prior Belief and Religious Commitment," *Journal of Research in Science Teaching*, Vol. 29, No. 2 (1992), pp. 143-66.

signifies their identities. Moreover, many of the people for whom “false” correctly conveys their cultural identity *know* plenty of science.⁸³¹

One of the more important cultural groupings around which a belief in evolution has historically formed is that of Southern nationalism and the Southern civil religion, which saw Darwinian evolution as threatening to the ideological support for white supremacy after the Civil War. Beliefs about racial identity and the constructed myths of Southern nationalism channeled white Southern reaction against evolutionary biology in ways that boosted the religious response to the scientific threat to white supremacy and increased the feeling that evolutionary biologists were teaching a dangerous, alien doctrine that was morally and socially subversive. The rejection of evolution by many Americans, especially in the South, has often been a way to signal and police social and political group boundaries. By rejecting Darwinism, which had overthrown the scientific basis for polygeny, was supported by abolitionist New Englanders, and was charged with racially subversive undertones, and at the same time challenged the conservative, Christian justifications for white supremacy, white Southerners were not only reacting to a scientific doctrine, but were also signaling support for the prevailing racial order and acting in solidarity to create the social and political ideology that sustained the Solid South. At a certain level it is immaterial whether or not Southerners consciously molded the political response to evolution like in the former Soviet Union, where Lamarckism was declared to be required by Marxism, or like in Nazi Germany, where conservative ideas supported by non-Lamarckian ideas of heredity were attractive to those who rejected “plasticity in the genetic or ‘racial’ structure of life.”⁸³²

⁸³¹ <http://www.culturalcognition.net/blog/2013/6/19/what-does-disbelief-in-evolution-mean-what-does-belief-in-it.html>. Accessed 6/4/2014.

⁸³² On Lysenko, the Soviet Union, and evolutionary biology see, Kirill O. Rossianov, “Editing Nature: Joseph Stalin and the ‘New’ Soviet Biology,” *Isis*, Vol. 84, No. 4 (Dec., 1993), pp. 728-754; Robert Proctor, *Racial Hygiene: Medicine Under the Nazis*. (Cambridge, MA: Harvard University Press, 1990), p. 36.

Whether done purposefully or not, Southern civil religion placed Protestant Fundamentalism at the service of the defense of racial inequality and shaped Southerners political responses to evolutionary biology. It seems likely that evolution will remain controversial in the United States as long as ideological struggles over racial identity persist.

According to Anthropologist Audrey Smedley, two of the relevant elements that distinguish racial ideology from mere ethnocentrism are the belief that humans can be classified into discrete biological groups and that these racial groupings are fixed.⁸³³ According to Smedley, “*race* signifies rigidity and permanence of position and status within a ranking order that is based on what is believed to be the unalterable reality of innate biological differences.”⁸³⁴ Whether or not scientific experts spoke with authority because their methods were seen as useful and powerful, or because they were viewed as credible voices of objectivity, or simply because they were members of the American intellectual elite, scientific pronouncements on the relationship between biology/natural history and race were seen as important arbiters of public opinion on race, and they had been since the founding of the country. By the 19th century, methods of inquiry that could be described as “scientific” had gained increasing clout in public rhetoric, and the belief that scientists practiced “objectivity” made scientific opinions that challenged white Supremacy threatening. As Gordon Mitchell puts it, “advocates who can claim successfully the mantle of objectivity tend to gain the upper hand in public disputes by virtue of their ability to exploit the ethos of scientific research.”⁸³⁵ While scientists might try to employ what Thomas Nagel calls “the view from nowhere,” and Donna Haraway calls “the God trick,”

⁸³³ Audrey Smedley, *Race in North America: Origin and Evolution of a Worldview*, 4th ed. (Boulder, CO: Westview Press, 2012), pp. 27-34.

⁸³⁴ *Ibid.*, p. 31. Italics in original.

⁸³⁵ Gordon R. Mitchell, “Did Habermas Cede Nature to the Positivists?,” *Philosophy and Rhetoric*, Vol. 36, No. 1 (2003), p. 3.

white Southerners very much viewed evolutionary biologists as political actors, and they reacted to scientific pronouncements on evolution and racial identity as they would to the rhetoric of political actors.⁸³⁶ Southerners certainly did not see evolutionary biologists as objective creators or discoverers of truth.

The color-line, that quintessential factor in American life, has colored the reception to philosophical, religious, and scientific ideas, and this was no less true for Darwinism's reception in America. While some might think or wish that scientists could provide objective facts to usefully inform political and social analysis, when it comes to areas that touch on significant social and political disputes, such as global warming perhaps, the reception to Darwinian evolution points to the difficulty of science playing such a role, as well as to the degree to which groups whose political and social identity depends on resisting a scientific consensus will do so.

⁸³⁶ Thomas Nagel, *The View from Nowhere*. (New York: Oxford University Press, 1986); Donna Haraway, *Simians, Cyborgs, and Women*. (New York: Routledge, 1991), p. 193.

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