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INTELLIGENT DESIGN AND EDUCATIONAL POLICY:

THE CASE OF KANSAS

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by

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ABSTRACT

Advocates of an alternative explanation of life's origins, Intelligent Design, have lobbied hard since the 1987 *Edwards v. Aguillard* decision, which banned "creation science" from public schools, to effect educational policy change through local and state-level school boards. This study examines one such lobbying effort, the 2005 attempt to modify the Kansas Curricular Standards for Science so that biological evolution is actively challenged in the classroom, by analyzing the actions and motivations of several members of the Kansas Board of Education as well as non-Board participants through personal interviews and contemporary media reports. Board minutes from 1999 to 2007 and transcripts from the Board's May, 2005, public hearings on evolution are also analyzed.

This study asks, "what strategies have creationists developed in the wake of the 1987 *Edwards v. Aguillard* Supreme Court decision striking down creation science and how have those strategies been employed?" The question's presumption, that Intelligent Design advocates have employed new strategies to advance a creationist agenda, is validated in the study through coding the language used by the interviewees, the Board minutes, and hearings transcripts, as well as a review of contemporary media coverage. Several themes emerged: the belief of participants on each side of the debate that their opponents were attempting to oppress their views, participants on each side claiming to have the best definition of "good science," the emergence of national-level organizations such as the Discovery Institute in coordinating science-related public advocacy at the state level, evolution's importance as a state-level public policy issue, and the importance of keeping the voting public informed of science-related educational policy. This case study should be useful to state and local-level educational policymakers grappling with debates over the place of evolution in public schools.

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Chapter One

Introduction

On May 5, 2005, citizens, advocates, and journalists from around the world converged on Topeka Memorial Hall's 140-seat auditorium, filling it to near capacity in anticipation of what an Associated Press writer called a "modern-day Monkey Trial in Kansas."¹ They were in the state capital that day to witness the culmination of months of political in-fighting, policy arguments, emotional pleas, and bitter quarreling among the Kansas Board of Education's ten elected members, their constituents, and commentators from around the world.

On August 11, 1999, the Kansas Board of Education announced a six-four vote to remove evolution from statewide standardized tests. The state's 305 school districts would now decide for themselves how, or if, they would teach evolution. "The object in 1999," Board member Sue Gamble said, "was to leave the term 'evolution' in the standards but remove any reference to it... saying that it was to be decided at the local level and [that] it wasn't really important."²

The Board came under withering public fire for its decision. Then-Governor Bill Graves (R) said it was "terrible, tragic, embarrassing"³ for the state while a gubernatorial spokesman called it "a black eye for Kansas."⁴ Then-Lieutenant Governor Gary Sherrer

¹ Hanna, May 3, 2005. The Associated Press, reported in the *Lawrence Journal-World*.

² Republican Board of Education member Sue Gamble, District 2. Personal interview, August 3, 2006. Mrs. Gamble was not on the Board in 1999. She was elected in 2000, motivated to run largely by the Board's evolution decision, and began service in 2001.

³ Brauer, Forrest, & Gey, 2005, p. 106.

⁴ Kratzer, October 29, 1999, *World Business Journal* "Evolution debate in Kansas: Was it really bad for business?"

(R) told a reporter that a British firm considering doing business in Kansas changed its mind after the Board's decision made international headlines. "We compete with 49 other states for business. It would be hard to prove that this (the evolution vote) will have a negative impact on Kansas. But we have a marketing effort and anything that's perceived as negative hurts those efforts."⁵

Evolution subsequently became the primary campaign issue in the 2000 Board election. Moderate Republicans Sue Gamble and Carol Rupe were motivated to run for the Board that year in part due to the evolution controversy and won both their respective primaries and the general election.⁶

The standardized tests omitted evolution for two years until the election of Sue Gamble and Carol Rupe helped tip the political balance from conservative to moderate by a seven-three majority and reinstated evolution as a testable subject in 2001. The controversy, however, remained a heated campaign issue. Conservative newcomers Iris van Meter and Connie Morris, campaigning largely on the evolution issue⁷, defeated incumbent moderates Val DeFever and Sonny Rundell respectively in the 2002 election, leveling the Board at five-five conservative-moderate split. The 2004 election of conservative Republican Kathy Martin over incumbent Republican Bruce Wyatt returned

⁵ Ibid.

⁶ Republican Board of Education member Sue Gamble, District 2. Personal interview, August 3, 2006. Republican Board of Education member Carol Rupe, District 8. Personal Interview, August 10, 2006.

⁷ Republican Board of Education member Sue Gamble, District 2. Personal interview, August 3, 2006. Mrs. Gamble characterized Mrs. Morris as "a complete unknown, who ran on a platform creationism and 'we shouldn't have to teach these illegal aliens.' In fact, the Democrat who is currently running for that seat at that time in 2002 was the mayor of Garden City. She accused him of being illegal alien because he is Hispanic." Mrs. van Meter was not available for an interview. Due a pressing family matter, Mrs. Morris was also unavailable for an interview.

the majority to the conservatives. In each of these electoral races, evolution proved the most heated discussion point. “There is no scientific proof, in my view, that says, ‘This is how it happened,’” [Conservative Board member John] Bacon said. “Until you can say that, you have to allow other, popular theories to be discussed.”⁸

The question of popularity would prove central not only to the eventual place of evolution in the state science curriculum but ultimately to the political survival of the popularly-elected members of the state Board of Education. In no other political arena has the argument over evolution played such a central role as it did in Kansas between 1999 and 2006, culminating in three days of hearings that commenced at Topeka Memorial Hall on May 5, 2005. This dissertation is the story of the tumultuous relationship between the Kansas Board of Education and its science standards, with particular respect to the politics and emotions of the evolution/creation⁹ controversy, of the so-called “Wedge” of Intelligent Design, and the implications of the Kansas struggle for school boards throughout the United States.

To this end, this study asks and offers answers to three questions:

1. What strategies have creationists developed in the wake of the 1987 *Edwards v. Aguillard* Supreme Court decision striking down creation science and how have those strategies been employed?

⁸ Hanna, August 13, 2003, *The Topeka Capital-Journal*. “School Board to Review Evolution.”

⁹ In their interviews, Dr. Abrams and Mrs. Martin, as well as Mr. Calvert in his correspondence, asserted that creationism – the belief in the literal truth of the creation account found in the Book of Genesis – had no place in the Kansas science standards. Neither, according to Dr. Abrams, did Intelligent Design. Their political opponents on the Board disagreed and to much of the general public, evolution versus creationism was precisely the issue at hand. Given the public perception of the debate and the fact that each Board member is popularly elected, therefore, this dissertation will periodically use “evolution/creation” as shorthand for the standards issue as seen from the perspective of the voting public. The complex semantics of evolution/creation/Intelligent Design will be further discussed in this dissertation.

2. How might science educators respond to political pressure demanding a change in how evolution is taught in their classrooms?
3. What are the policy implications of the new creationist strategies for the American school system?

By examining the events in Kansas between 2004 and 2006, I hope to bring to light the evolving strategies of Intelligent Design advocates seeking to advance their agendas in American public schools. Most of the available literature on the creation/evolution debate, as I discuss in Chapter 2, focuses either on broad philosophical questions or specific incidents such as the 1981 *McLean v. Arkansas Board of Education* federal court case over the teaching of creation science. Very little existing literature studies the question from the perspective of the school board. The purpose of this study is to help fill that gap.

School boards, as I discuss in Chapters 7 and 8, are especially vulnerable to the pressures that Intelligent Design advocates are capable of exerting at the grassroots level. In 2005, local school boards in Dover, Pennsylvania, and Grantsburg, Wisconsin grappled with citizen advocates and local board members who wanted evolution challenged in science classrooms. The conflict in Dover ultimately led to federal court and a defeat for Intelligent Design advocates. The events in Kansas that year, on the other hand, culminated, at least at first, in an Intelligent Design victory.

As a political issue, arguments for and against teaching evolution are more firmly grounded in emotion than science. School board members who engage in the debate walk a path fraught with political, scientific, and theological peril. The goal of this

dissertation is to examine the issue of evolutionary politics as it affects school boards, with Kansas serving as the case study, and offer some suggestions for policymakers concerned with the question of challenging evolution in their local classrooms. Its focus is education, particularly local and state-level educational policy, not science or religion.

Broadly conceived, the case of Kansas illuminates both the vulnerability of school boards to political pressure and the success with which Intelligent Design advocates exploited that vulnerability to alter the state's science curriculum. Many school boards throughout the United States are partly or fully represented by directly-elected members rather than political appointees. Most of these school boards are local-level entities responsible for managing school districts. Individual board members often have close relationships with their constituents and regular contact with the local community. Emotional issues, therefore, resonate loudly at Board meetings and few issues are more emotional than questions of faith. This study will show how Intelligent Design advocates pressed such questions upon a sharply-divided school board and successfully brought their agenda into the public eye under the twin banners of fairness and good science.

Their arguments would ultimately find voice in the objections raised by a minority on the Kansas state science standards writing committee and in the subsequent testimony of Intelligent Design advocates at the May, 2005 hearings on standards that proposed to weaken evolution and redefine science itself. The hearings were designed in part to evoke the spirit of a then-80-year-old legal proceeding, the *Tennessee v. John Scopes* case of 1925 in which a young science teacher was charged with the violation of a state law passed earlier that year prohibiting the teaching of evolution in any state-

supported educational institution in Tennessee. The *Scopes* case has since become the most recognized symbol of the struggle between science and religion in American public education, seemingly invoked each time any controversy erupts over the challenging of evolution in public school science classrooms.

The *Scopes* case offers two parallels for this study. First, it marked the first time that evolution and religion clashed in a court of law. By organizing public hearings in Kansas, Intelligent Design Network attorney John Calvert, perhaps seeing his role as that of a modern-day William Jennings Bryan, and conservative Board of Education chairman Steve Abrams hoped to hear advocates on both sides present testimony and submit to cross-examination. By the same token, civil rights attorney Pedro Irigonegaray, representing mainstream science at the hearings, stepped into the shoes of Clarence Darrow. Interestingly, neither Mr. Irigonegaray nor Mr. Darrow called witnesses to testify on behalf of their perspective positions. In 1925, Judge John T. Raulston refused to allow any of Mr. Darrow's witnesses to testify while 80 years later, Mr. Irigonegaray elected to call no witnesses at all. Moreover, the Kansas hearings were neither a legal proceeding nor constrained by legal rules of evidence. The purpose, said Steve Abrams, was simply to establish guidelines for teaching "good science" in Kansas schools.¹⁰

Second, and more broadly, the *Scopes* trial is a touchstone of American educational history, one that directly addresses the question of who decides science curricula for public schools. Concerned about the erosion of faith among American students in his day, Democrat William Jennings Bryan devoted much of his post-political

¹⁰ Republican Board of Education member Steve Abrams, District 10. Personal interview, August 7, 2006.

life to preaching the dangers of evolution and the importance of local control over children's education. Intelligent Design advocates would echo his feelings 80 years later. "A scientific soviet," Bryan argued in 1925, "is attempting to dictate what is taught in our schools... it is the smallest, the most impudent, and the most tyrannical oligarchy that ever attempted to exercise arbitrary power."¹¹ Witnesses at the 2005 hearings said much the same, arguing that by mandating the teaching of only Darwinian evolution, scientists were being allowed to push their philosophical agendas into the homes of millions of Kansas children. It was therefore incumbent upon the Board, as the representatives of Kansas's citizens, to ensure that the will of the people be incorporated into the public school system.

In 1925, the challenge to evolution came explicitly from followers of the God of Abraham, Moses, and Jesus. In 2005, the challenge came from advocates of a vague, nameless "Designer" responsible for assembling the organizing patterns of life. In his interview, conservative Board Chairman Steve Abrams took pains to point out that Intelligent Design had nothing whatsoever to do with the state science standards. While his claim is technically accurate, it is worth noting that every one of John Calvert's twenty-two hearings witnesses were in some way actively involved in promoting Intelligent Design.

I feel confident, therefore, using "Intelligent Design advocates" as a shorthand term throughout this study for the political conservatives and handful of scientists seeking to alter the Kansas science standards in a manner that weakened the presentation of

¹¹ Edward J. Larson, *Summer for the Gods: The Scopes Trial and America's Continuing Debate over Science and Religion*, (Cambridge, MA: Harvard University Press) p. 45.

evolution. On the other side of the debate, I describe the political moderates and the scientific community at large as defenders of “mainstream science” who protested the work of Intelligent Design advocates.

Study Outline

Chapter Two reviews the existing literature and frames the issues discussed in this dissertation.

Chapter Three discusses the methods and research design used for this case study.

Chapter Four traces the history of the Kansas state educational standards from their inception in 1991 to the present day. I describe the sequence of Board elections that led to the makeup of the incumbent 2004-2006 Board and introduce the Board members themselves through media descriptions and in their own words. I discuss how the Board came to hold the May hearings, describe the Board’s science writing committee’s minority and majority reports, and analyze Board minutes and interview transcripts to provide the framework for the decision to effectively put evolution on trial.

Chapter Five offers a discussion of the hearings themselves, unpacking the testimony of the twenty-two witnesses who spoke on behalf of the minority report’s proposed revisions and discussing the reasoning behind the mainstream scientific community’s boycott of the hearings. I also describe the aftermath of the hearings and the Board’s final vote on adoption of new standards.

Chapter Six discusses the immediate aftermath of the hearings and the Board’s continued debate over the proposed standards. I analyze the policy process behind the Board’s actions, from the open policy window that called for a review of the science

standards to the idea of scientific discourse as akin to a legal proceeding in which each side has an equal say. I further examine the policy process in light of the Wedge of Intelligent Design and address Amy Gutman's question of democracy and repression.

Chapter Seven discusses the study's findings.

Chapter Eight offers lessons learned from the Kansas affair.

Chapter Two

Literature Review

The existing literature on the evolution-creation debate in public schools can be roughly divided into three streams: cultural/historical aspects, examinations of the rise of the Religious Right, and studies of its political and policy implications. I will briefly discuss the relevant literature and identify the relevant themes pertinent to this study.

Cultural and Historical Aspects

In 1944, Richard Hofstadter wrote that the theory of evolution possessed a degree of societal influence far greater than any other scientific theory in history.¹² Although Charles Darwin's *On the Origin of Species* was published in 1859, it did not gain wide readership in the United States until after the Civil War ended in 1865. Ronald Numbers writes that its influence was such that despite initial theological objections, many Christian ministers soon found an accommodationist position with evolution to be acceptable. A teleological view of evolution, that it was but a means to a divinely directed end, was common among both scientists and clerics at the time¹³ and gained new life in the 1950s when Jesuit paleontologist Pierre Teilhard de Chardin proposed his "Omega Point" of human evolution¹⁴. Jon Roberts, in his study of Protestant responses to Darwin prior to 1900, similarly argues that before 1875, Protestants believed that evolution was a "spurious interpretation of natural history"; as scientific consensus gelled around the validity of Darwin's theory in the 1870s and 1880s, however, many Protestant

¹² Hofstadter, 1955.

¹³ Numbers, 1992

¹⁴ de Chardin, 1955, 1959.

theologians “valued evolutionary rhetoric in lending credibility to their theological revisions.¹⁵” In her essay on the intellectual response to evolution up to 1912, Cynthia Russett adds that the reaction of the country’s intellectual elite was even more varied; writers, philosophers, and social theorists all responded to the social meaning of evolution in varied ways.¹⁶ The one constant was evolution’s widespread impact throughout American, and Western, culture.

Indeed, evolution’s influence on religious understanding caused a cultural backlash still extant in the modern Intelligent Design movement. Langdon Gilkey’s firsthand account of his role as an expert witness in the 1981 case challenging Arkansas’s “creation science” bill, points out that “creation science” is a modern religious response rather than a throwback to earlier fundamentalist theology and is therefore best understood in the light of modernity.¹⁷ Moreover, “creation *out of nothing*... represents what one can call the ‘essence’ of a religious idea or presupposition.”¹⁸ Gilkey later wrote of the creationists’ scientific understanding, “they seemed to think that if you marshaled empirical evidence for a theory, if it fitted and so explained ‘the facts,’ then it was scientific – even if it meanwhile appealed to a supernatural agent as [the] cause...”¹⁹

Anthropologist and legal scholar Lawrence Rosen saw the *McLean* case as a power struggle between scholars and legislators over who was permitted to establish the curriculum. “Left unresolved [by the decision], however, was whether the courts should

¹⁵ Roberts, 1988, pp. x-xi.

¹⁶ Russett, 1976.

¹⁷ Gilkey, 1985.

¹⁸ *Ibid*, p. 102., emphasis in the original.

¹⁹ Gilkey, 2001, p. 27.

be the ones to define science at all, whether it is indeed accurate to treat science as a neutral marketplace of ideas from which the truth will always emerge untainted by ideological proclivity, and precisely where the locus of power over knowledge ought in various instances to be located.”²⁰ In recent times, Intelligent Design advocates have focused on neither the courts nor the scientific community, instead targeting their activity on school boards and the general public. Historian Fritz Detwiler, in his study of fundamentalist influences on public schools, argues that the debate is a question of competing worldviews, with liberal educators on one side and conservative fundamentalists on the other and neither willing to concede ground.²¹ His analysis of school districts comes closest to my own work, but his district examples all date from the early 1990s and none deals with Intelligent Design. Philosopher Philip Kitcher was the first to state point-blank that creationists actively and deliberately misrepresent science to support their own agenda.²²

This is not to say that all scholars have been unsympathetic to the creationist position. Karen O'Connor and Gregg Ivers point out that what often begin as questions of local control often find themselves in the courts. “Historically, litigation on church/state relations has presented a no-win situation for both separationists and accommodationists.”²³ Christopher Toumey sees the struggle between creationism and

²⁰ Rosen, 1988, p. 70.

²¹ Detwiler, 1999.

²² Kitcher, 1982.

²³ O'Connor & Ivers, 1988, p. 17.

evolution as one for the moral authority of science.²⁴ Ronald Numbers points out that differences among Christian denominations in how to present the creationist message varied as they responded to the creationist revival that followed publication of *The Genesis Flood*.²⁵ In a separate article, Numbers emphasizes that Christian Pentecostals, while vocal about their faith, “have remained reluctant antievolutionists... [believing that] defending creationism remained ‘absolutely secondary’ to what Andrew Johnson called ‘the main line work of intense, soul-saving evangelism.’²⁶” Philosopher Michael Ruse, another expert witness at the *McLean* trial in Arkansas, has recently argued that the evolutionists most hostile to religion are as fundamentalist as the Christians attacking them.²⁷ Jonathan Zimmerman claims that while deeply entrenched religious differences often prevent meaningful compromise, the American ideal of religious pluralism has at least eased some of the tensions on both sides.²⁸

Rise of the Religious Right

The religious response, more so than the intellectual response, has been highly emotional but, interestingly, was the least studied until relatively recently. Stewart Cole’s 1931 *History of Fundamentalism* was the first historical study of its subject and followed shortly on the heels of the Scopes trial. Charting the rise of fundamentalism in American Protestantism and its relationship with modernity (including modern science), Cole argues that evolution was merely part of a broader cultural secularization that had

²⁴ Toumey, 1991.

²⁵ Numbers, 1992, p. 299-301.

²⁶ Numbers, 1992, pp. 149-150.

²⁷ Ruse, 2005.

²⁸ Zimmerman, 2002.

been brewing since the end of the Civil War and gained a boost after World War I.²⁹

Norman Furniss added his analysis twenty-three years later, arguing that fundamentalism in the 1920s posed a threat to intellectual freedom and lauded those who opposed its aims.³⁰ Reflecting the book's tone, one reviewer observed that "although fundamentalism could not be identified with any single geographic area, it was strongest in communities unaffected by the spread of knowledge and enlightenment."³¹

In 1993, Ernest Sandeen noted that Cole and Furniss had written the "only two book-length attempts to trace the history of [the fundamentalist] movement."³² One presumes that he is deliberately excluding works such as creationism apologist Henry Morris's rambling 1984 *History of Modern Creationism*, in which Morris marshals racism, communism, atheism, and Darwinism under the same banner and argues for the validity of Bible-based science.³³ It is interesting to note that, writing in 1931, Stewart Cole presciently lamented, "unfortunately for later students who will engage in research in this field, not a little of the literature apropos to the subject perished almost as soon as it was circulated."³⁴

Despite this lack of primary source material, the last decade has witnessed the publication of several scholarly histories of fundamentalism beginning with *The Creationists* in 1992 and followed by *Fundamentalism and Evangelicalism*, part of the

²⁹ Cole, 1931.

³⁰ Furniss, 1954.

³¹ White, June 1955, p. 146.

³² Sandeen, 1993, p. 19.

³³ Morris, 1984.

³⁴ Cole, 1931, p. xiii.

Modern American Protestantism and Its World series edited by Martin E. Marty and featuring the Sandeen article referenced above. In *The Creationists*, Ronald Numbers examines the role of George McCready Price and his 1923 text *The New Geology*, in which Price argues for the scientific validity of what has become known as young-Earth creationism. Numbers notes that as the fundamentalist movement gained greater public strength, Price quietly laid the groundwork for much of the creationist arguments that would inform the “creation science” movement some fifty years later.

Fundamentalism and Evangelicalism is a collection of articles largely concentrating on the fundamentalist Protestantism of the 1920s. Robert Garson, examining the intersection of fundamentalism and democracy, argues that fundamentalists “wished to subject knowledge and personal freedom to the scrutiny of the local community... [and] exercise closer vigilance over educational, political, and legal processes stemming from a pervasive sense of social alienation and disaffection.³⁵” Joel Carpenter argues that the rise of Bible institutes in the 1930s coupled with growing use of radio and, later, television contributed heavily to the successes of evangelicalism after World War II.³⁶

Carpenter and Numbers contributed further to the literature on fundamentalism in *Revive Us Again: The Reawakening American Fundamentalism* (1997) and *Darwinism Comes to America* (1998) respectively. Covering the era between the 1920s and the rise of Billy Graham in the 1950s, Carpenter’s primary argument echoes Numbers’s in *The*

³⁵ Garson, 1993, pp. 129-130.

³⁶ Carpenter, 1993, pp. 55-68.

Creationists, that while the fundamentalists were relatively quiet during the 1930s and 1940s, this period marked a time of intense self-examination and goal-setting that gave rise to the evangelical revival of the 1950s. Numbers himself rehashes much of his work from *The Creationists in Darwinism Comes to America* but further argues that historians have paid too little attention to “regional and denominational variations” that characterized the Christian response to evolution from the 1870s to the 1920s.³⁷ Harriett Harris, also writing in 1998, argues that instead of clarifying these variations, fundamentalists have themselves muddied the waters: “for the last 150 years evangelicals and fundamentalists have been preoccupied with defending scripture[sic], and this has resulted in distorted presentations of Christian belief.”³⁸

The Scopes “Monkey Trial” of 1925, at the heart of the 1920s fundamentalist revival, has been as much the subject of myth as well as fact. Historical studies of the Scopes trial have concentrated less on the trial itself than on its aftermath. Eugene Provenzo, Jr., claimed in 1990 that “the trial has consistently been interpreted by historians as a defeat for the fundamentalist cause in the United States”³⁹ but he cites only George Marsden’s history of the American evangelical movement. Marsden himself argues that “[once] respectable ‘evangelicals’ in the 1870s, by the 1920s they had become a laughingstock, ideological strangers in their own land,”⁴⁰ that the “fundamentalists were

³⁷ Numbers, 1998, p. 22.

³⁸ Harris, 1998, p. 167.

³⁹ Provenzo, Jr., 1990, p. 2.

⁴⁰ Marsden, 1980, p. vi.

guilty as charged.”⁴¹ Jon Roberts suggests that much of the trial’s historical scholarship has been influenced by “the unfavorable publicity attending the fundamentalist movement of the 1920s. Prior to 1970, historians frequently treated the controversy over evolution as another skirmish in the protracted confrontation between enlightenment and ignorance.”⁴²

More recent scholarship has also examined the retreat of fundamentalism after Scopes but interprets this as a voluntary separation from the mainstream rather than a sign of surrender. In his Pulitzer Prize-winning account, Edward Larson argues that the Scopes trial gave a national voice to the movement that came to be known as fundamentalism. “Indeed, *fundamentalism* became a byword in American culture as a result of the Scopes trial, and fundamentalists responded by withdrawing. They did not abandon their faith, however, but set about constructing a separate subculture with independent religious, educational, and social institutions.”⁴³ Joel Carpenter concurs, arguing that the fundamentalist “separationist impulse” from mainstream America began during the height of the First World War but accelerated following the Scopes Trial in 1925.⁴⁴ This “separationist impulse” is crucial to understanding the relationship between present-day fundamentalists and their attacks on the teaching of evolution, their desire to bring creationism into public schools, and their current emphasis on Bible-based home-schooling. Coupled with the “folk science” prevalent among the less-educated devout,

⁴¹ Ibid, p. 186.

⁴² Roberts, 1999, 148.

⁴³ Larson, 1997, p. 233, emphasis in the original.

⁴⁴ Carpenter, 1997.

Edward Davis argues that fundamentalism led to an understanding of science that was “neither true nor truly scientific, while the Bible was forced to become the scientific textbook it is not.”⁴⁵

Scholars have also examined the role of the Religious Right as it relates to politics. Green, et al, argued in 1996 that understanding voters’ religious beliefs was crucial to understanding their politics.⁴⁶ Interestingly, the authors also predicted that Pat Robertson’s 1988 presidential campaign would herald the beginning of the Christian Right’s increased involvement with the Republican Party “and perhaps the party establishment... if so, Republicans will be further identified with ‘traditional values,’ and given the secular drift of Democrats, sharper partisan conflict will ensue.”⁴⁷ Adams and van Minnen’s (eds.) 1999 *Religious and Secular Reform in America* did not mention Christian fundamentalists until the final chapter but noted, “at the centre of Evangelical thought is the concept of conversion.”⁴⁸ This concept, as Phillip Johnson made clear, lies at the heart of the Intelligent Design movement. A more popular⁴⁹ account, the Anti-Defamation League’s (1994) *The Religious Right: The Assault on Tolerance & Pluralism in America*, chronicles in warning tones the Religious Right's growing influence and political and popular clout. James Torr’s (ed.) (2006) *How Does Religion Influence Politics?* offers a more sober analysis of the role of conservative Christianity in American politics across a range of perspectives..

⁴⁵ Davis, 1995, p. 239.

⁴⁶ Green, et al, 1996.

⁴⁷ Ibid, pg. 99. This chapter of the book was originally published in the *Journal of Politics* in 1988.

⁴⁸ Schaefer, 1999, pg. 261.

⁴⁹ I use the term “popular” not to denote popularity per se but rather the book’s intended audience of general readers instead of scholars.

Policy and Politics

Biologist Niles Eldridge wrote in 2000, "on the face of it, then, creationism is a political issue – and has been at least since Clarence Darrow defended John Scopes against the prosecutorial zeal of William Jennings Bryan in Dayton, Tennessee, on July 10-21, 1925."⁵⁰ Indeed, Scholars writing about evolution and religion in the post-Sputnik era have concentrated their efforts on political and policy issues, particularly the “release time” and “creation science” education bills passed in several states. As debate over the role of religion in schools heated up again in the 1960s, Paul Blanshard studied the legal history of religious expression and religious influence in public schools and argued in 1963 that “the common people cannot always trust professional religious leaders to remain unselfish in observing the law when their ecclesiastical interests are involved.”⁵¹ As if to prove Blanshard’s point, the next year saw Jesuit priest Joseph Costanzo write in favor of allowing the people through their elected representatives, rather than the judiciary, to decide what role religion was to play in educating their children. “Not until we have fixed upon a clear and definite meaning of the relation of religious historical factors and religious moral values to the public school curriculum can we arrive at a

⁵⁰ Eldridge, 2000, p. 11. Eldridge later relates a story in which a member of the Iowa Educational Department called him in August, 1979, asking if "I really had said that I thought that it would be a good idea to teach creationism alongside of evolution in high school classrooms. I was appalled. I told him I had never said any such thing..." The Educational Department member then mentioned that Eldridge's words were in a typewritten transcript of an interview with Eldridge conducted by creationist advocate Luther Sunderland, a transcript that Eldridge was offered the opportunity to correct once it was typewritten. Sunderland, however, offered the transcript to an Iowa legislative study session before Eldridge had received the copy he was to correct, leading to the phone call from Iowa. Eldridge wrote, "... it was a valuable learning experience: I learned right then that *the entire issue of creationism* (then largely masquerading a scientific creationism) *is purely a political battle* – for the hearts and minds of the nation's youth." [Emphasis in the original] (pp. 17-18).

⁵¹ Blanshard, 1963, p. 5.

precise appreciation of the implications of governmental neutrality and partiality.⁵²”

David Beggs III and R. Bruce McQuigg edited a 1965 volume about the “release time” and “shared time” compromises that allowed public school students time off for religious instruction. Gathering together a variety of viewpoints from academics and clergy, the editors contended that the separation between church and state has the potential to be either at its narrowest or at its widest in the public schools. Finally, Herbert Kliebard wrote his 1969 “documentary history” of religion and education, a compilation of legislators and legal documents spanning nearly two centuries from the founding of the Republic to relevant court cases in the 1960s. At issue was the definition of the “neutrality” of the state in matters pertaining to religion; Kliebard argued that ultimately “neither the Supreme Court nor any other court can supply mechanical answers to great social questions... rather we find a pragmatic adaptation to disparate and sometimes competing influences.⁵³

Legal scholar Joan DeFattore takes the neutrality issue a step further, arguing that when it comes to public school policy, religion and politics have been and continue to be inextricably intertwined.⁵⁴ This is perhaps best exemplified by Louisiana state senator Bill Keith, sponsor of that state’s “Equal Time” bill mandating teaching “creation science.” As he triumphantly proclaimed upon the bill’s passage in 1982, “even though the media, the teachers[sic] organizations and the superintendent of education all strongly

⁵² Costanzo, 1964, p. 227.

⁵³ Kliebard, 1969, p. 22.

⁵⁴ DeFattore, 2004.

opposed and ridiculed creation-science, the people of the state were not swayed.⁵⁵” The Attorney General’s Office of Maryland, however, *was* swayed. When a bill comparable to Bill Keith’s was proposed in the Maryland state legislature in 1982, the Attorney General’s Office released an opinion that said in part, “the lack of scientific authority and the inherent religious nature of ‘creation-science’ has led us to conclude that requiring its teaching in the public schools would not only have the effect of advancing religion but would promote one religious belief over another... the price of religious liberty, in short, is official neutrality.”⁵⁶

Scholarly criticism of creationism in science classrooms, some of it sharp, came from several quarters in the 1970s and early 1980s. Norman Newell, addressing the the American Philosophical Society annual meeting on April 19, 1973, highlighted an issue that remains the creationists’ primary argument: “the Creationists offer the reader a choice between the ‘certainty’ which they attribute to the Book of Genesis or the uncertainty and fluidity of imperfect scientific knowledge which inevitably must be modified to incorporate new discoveries... this demand for certainty in science shows an egregious misunderstanding of the aims and methods of science...”⁵⁷” Biologist Eric Holtzman and attorney David Klasfeld state “the creationists neither understand science, nor see its overwhelming coherence and momentum.”⁵⁸”

Such demands for certainty have fueled the evolution/creation debate not just

⁵⁵ Keith, 1982, p. 41.

⁵⁶ Attorney General of the State of Maryland, 1982, pp. 45-46.

⁵⁷ Newell, 1973, p.324.

⁵⁸ Holtzman & Klasfeld, 1982, p. 95.

through a simple ignorance of science but as a result of deliberate misinterpretation by creationists seeking to bolster their claims. Books such as Duane Gish's 1976 *Evolution: The Fossils Say No!* and 1977's *Handy Dandy Evolution Refuter* by Robert Kofahl have engaged in heavy "quote mining," taking scientists' words out of context to give the impression that weaknesses in evolution can be found where none exist. Attorney Gary Crawford adds that creationists have begun adopting science as a form of apologetics for creationism. "Contrary to the expectations of creationist editors, removing explicit religious references from creationist texts does not make them constitutionally more acceptable, only less honest."⁵⁹ ACLU attorney Susan Sturm writes, "the exclusion of 'creation science' from the public schools preserves the rights of individuals to be free from the imposition of a state-sponsored orthodoxy."⁶⁰

Eugenie Scott and Henry Cole, in a meta-analysis of 135,000 scientific journal submissions between 1980 and 1983, argued against the scientific validity of "creation science" and found no published scientific articles and only 3 submissions supporting the creationist position.⁶¹ Don Melichar was the first to draw an explicit connection between the "New Right," fundamentalism, and their attacks on secular humanism as a religious position.⁶² Legal scholar Frederick Gedicks ascribes this friction to a conflict between "the reach of permissible government action (public life)... [and] the boundaries of the

⁵⁹ Crawford, 1982, p. 90.

⁶⁰ Sturm, 1982, p. 56.

⁶¹ Scott & Cole, 1985.

⁶² Melichar, 1983.

inviolable sphere of individual rights (private life).”⁶³ The fundamentalist interpretations of individual religious liberty and the dangers posed by secular humanism would be echoed seven years later in Phillip Johnson’s 1999 “Wedge Strategy” document articulating the position that became known as Intelligent Design.

One of the most impressive scholarly pieces to emerge in the early 1980s was philosopher Richard Aulie’s examination of the history of special creation and its relationship to evolution. “It is no accident of history,” he concludes, “that the theory of evolution arose in the West.”⁶⁴ He argues that special creation and evolution were born of the same cultural roots, dating to pre-Christian times. Since the theory of evolution itself is a direct descendant of the Judeo-Christian tradition, and “since the disputes about origins are symbolic of competing concerns within our society, the consequences of creationism reach far beyond the classroom.”⁶⁵

Barbara Forrest and Paul Gross apply Kitcher’s charges to Intelligent Design, creationism’s newest iteration, arguing that it is the “Trojan horse” of the creationist movement, of religion masquerading as science.⁶⁶ As early as 1997, then-Stanford Law School student Jay Wexler argued that Intelligent Design violated the Establishment Clause of the Constitution.⁶⁷ Little else was noted in the literature until the turn of the millennium. In the last five years, however, criticisms of Intelligent Design have multiplied rapidly. Niall Shanks writes that Intelligent Design threatens the

⁶³ Gedicks, 1992, p. 674.

⁶⁴ Aulie, 1983, p.447.

⁶⁵ Ibid., p. 448.

⁶⁶ Forrest & Gross, 2004.

⁶⁷ Wexler, 1997. Jay Wexler is presently an associate professor of law at Boston University.

Enlightenment values that inform both scientific endeavor and the democratic process.⁶⁸ Matt Young and Taner Edis have edited a compilation of articles from scientists across several disciplines that systemically attacks the scientific bases of Intelligent Design; “[I]et us make clear, then, that we do not consider Intelligent Design to be a legitimate scientific endeavor.⁶⁹”

Scholars have also recently begun proposing practical solutions for educators who find themselves challenged by parents and students, especially science teachers. Antolin and Herbers discuss a 1999 controversy in a Fort Collins, CO, public charter school, where new science standards presenting evolution as leading to “discussions of whether or not supernatural forces play a role in the mechanism of evolution or the origin of life”⁷⁰ concerned many district parents; the local school board eventually struck the anti-evolution language from the school’s curriculum. The authors were involved in the process and concluded from their experience that science teachers often “feel alone” and need active support from the outside, that colleges and universities can provide outstanding resources, that teachers want training in current science, that improving curricula does not need to be time-consuming, and that policymakers welcome the involvement of academics.⁷¹

Overall, the bulk of the available scholarly literature has concluded that fundamentalism represents a threat to liberal education that must not be allowed

⁶⁸ Shanks, 2004.

⁶⁹ Perakh & Young, 2004, p. 185.

⁷⁰ Antolin & Herbers, 2001, p. 2385.

⁷¹ Ibid, p.2386.

dominion over American public schools. Further, as creationists have been proven likely to bypass the scholarly press and make grass-roots appeals directly to the people through their own publishing concerns, their efforts should not be overlooked.

Frances Fowler wrote in *Policy Studies for Educational Leaders* that a policy idea “can languish on the shelf for a long time⁷²” before becoming official policy. She cited school choice as her example, first proposed in 1962 by Nobel Prize-winning economist Milton Friedman but unable to find a place on the public agenda until the late 1980s when a confluence of political factors pushed it into the national spotlight. Intelligent Design mimicked this pattern, rising from relative obscurity in the 1989 edition of the creationist biology text *Of Pandas and People* to making international headlines from Dover, Pennsylvania and from Kansas in 2005. In Dover, the publicity generated by the Seattle-based Discovery Institute⁷³, the global media coverage of a possible “Scopes II”, the rallying of the scientific community, the district science teachers’ refusal to even discuss Intelligent Design in their classrooms, and the subsequent ruling handed down by federal judge John E. Jones III⁷⁴ combined bring the Wedge of Intelligent Design onto the international stage. My analysis of the Kansas Board of Education’s decision to alter the state’s science standards will follow a no less dramatic path, complete with argumentative lawyers, political infighting, and heavy media coverage.

In this vein, Michael Kirst asserts that “local opposition frequently takes intensely

⁷² Fowler, 2004, pg. 183.

⁷³ The Discovery Institute is the leading think tank for Intelligent Design. Its Fellows and staff have published numerous critiques of evolution as well as articles and books supportive of Intelligent Design and the efforts of its Fellows, such as Michael Behe and Phillip Johnson, in challenging the place of evolution in the science curriculum.

⁷⁴ No relation to the author.

emotional form... [that regarding evolution] local people have sought to block either state directives or professionally accepted norms of ‘good’ curriculum.”⁷⁵ Opposed to this is Rick Hess’s argument that “education reform was not accelerated by local dissatisfaction with schools.”⁷⁶ Concerning the Board's decision to hold hearings about the validity of evolution, Allington and Woodside-Jiron’s assertion that “in the political use of expertise, policy advocates consolidate a monopolistic position by promoting the appearance of an external professional consensus on a policy issue... in other words, the selected expert(s) produces a friendly interpretation of the research that can be widely distributed but that cannot be easily disputed in a short period of time”⁷⁷ is especially pertinent.

Finally, and perhaps importantly, are the two Constitutional Amendments affecting science education in American public schools. The Establishment Clause of the First Amendment states, “Congress shall make no law concerning religion,” commonly interpreted the separation of church and state. An adjunct to the Establishment Clause is the *Lemon* test, a test courts use to determine the constitutionality of a proposed law. It was under the *Lemon* test that the United States Supreme Court found that a Louisiana law mandating equal treatment for both evolution and creation science to be unconstitutional in its landmark 1987 *Edwards v. Aguillard* decision.

The *Aguillard* decision ended years of creationist advocacy to advance an

⁷⁵ Kirst, 1984, p. 112.

⁷⁶ Hess, 1995. From the abstract.. Agendas, Activity, and Education Reform: Policy Diffusion and Controversy in Urban School Districts, 1992-1995. Retrieved from ERIC July 4, 2006, listed as a non-journal publication.

⁷⁷ Allington and Woodside-Jiron, 1999, p.11. “The Politics of Literacy Teaching: How “Research” Shaped Educational Policy.” *Educational Researcher*, Vol. 28 (8), pp.4-13. This line of reasoning was first suggested in Beneviniste’s (1973, 1977) *Politics of Expertise*.

explicitly fundamentalist Christian agenda in American public schools. These efforts had culminated in the 1981 passage of Senate Bill 86 in the Louisiana legislature, a bill that mandated the complementary teaching of “creation science” whenever evolution was presented.⁷⁸ Opponents of the bill filed suit and in 1987, the United State Supreme Court ruled 7-2 that the “Balanced Treatment Act” and other attempts to teach “creation science” violated the Establishment Clause of the First Amendment.

This decision hamstrung the efforts of creationists to replace or, at the very least, supplement the teaching of evolution with a religious alternative. Intelligent Design arose in the aftermath of the *Aguillard* decision, stepping back from an explicitly Christian declaration of life's origins by referring instead to a more nebulous “designer” and thereby seeking to maintain a secular neutrality. Some legal scholars, such as DeWolf et al⁷⁹, have supported Intelligent Design as a scientific alternative in keeping with the Establishment Clause. Others, most notably Jay Wexler⁸⁰, have long argued that Intelligent Design, like its “creation science” predecessor, violates the Establishment Clause.

In 2005, Intelligent Design advocates in Kansas flipped the Establishment Clause argument on its head and claimed that evolution was itself an inherently religious position. The efficacy of this strategy is questionable. Marjorie George argues that “little chance exists... that the Supreme Court will view evolution as a form of religion” while pointing out that the *Aguillard* decision “did not specifically respond to the suggestion

⁷⁸ Keith, 1982, pg. 2.

⁷⁹ DeWolf, et al, 2000.

⁸⁰ Wexler, 1997

that evolution is a religion.”⁸¹ Nonetheless, the 2005 Kansas hearings demonstrated that such arguments would at least receive a sympathetic hearing in many quarters.

The Tenth Amendment to the Constitution states “the powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.” The Constitution neither establishes a national school system nor prohibits states from developing their own schools, resulting in a highly decentralized educational system in the United States. States, and in many cases individual school districts within states, are afforded great latitude in determining curricular content and educational standards.

It is as a result of the 10th Amendment that the citizens of Kansas, through the state school board, are free to decide what their children will and will not learn in school. This decentralization, as I will argue later in the dissertation, is a mixed blessing for Intelligent Design advocates. While individual school boards are relatively easy to influence, affecting change on this basis will take considerable time and effort. Working at the state board level is therefore a much more efficient use of resources than working district by district.

Three relevant themes can be drawn from this review of the literature. First, and most important, is the fact that challenges to evolution are driven as much, if not more, by politics as by religion. Questions of origins naturally lend themselves to questions of faith and supporters of evolution are consequently engaged in the politics of the personal, where logic often loses to emotion. Creationist literature is unabashedly religious and for

⁸¹ George, 2001, pg. 863.

the most part carries a simple, straightforward message: the Bible is right, Darwin is wrong. Although Intelligent Design literature is somewhat more obtuse and often loaded with scientific jargon, it too transmits a simple, straightforward message: evidence of design exists, evolution alone is inadequate. For an American public concerned about its scientific preeminence but wanting also to preserve its faith, Intelligent Design offers the hope of reconciliation. So when Intelligent Design advocates claim that their views are being repressed by a scientific establishment willing to suppress the truth in order to stay in power, they do not have to look far for a receptive audience.

As mentioned above, scholars have offered numerous insights into the cultural impact of the conflict between evolution and Christianity. Edward Larson and Ronald Numbers, in particular, offer frameworks for understanding the *Scopes* trial and its influence on Christian fundamentalism. Events such as the *Scopes* trial and, later, the Kansas hearings served to galvanize public opinion and focused public conversation on specific aspects of science and religion as they related to the challenge to evolution. In virtually every case, from Tennessee to Louisiana to Ohio to Kansas, the conversation has had political ramifications. Defining the terms of the conversation, therefore, is crucial for success. The Kansas science hearings were a well-orchestrated attempt to define those terms and subsequently sway public opinion.

The second theme, that the cultural influence of science is such that even its detractors adopt its methods and language, is shown in the increasingly sophisticated challenges evolution has faced over the past eighty years. From Bible-based arguments, still extant today, to hypotheses grounded in science, evolution's challengers have done

little to influence scientists but have proven remarkably successful in their appeals to the voting public. The fundamental basis for all of these challenges can be found in the quest for certainty.

Biblical criticisms of evolution charge that evolution lacks the ability to make definitive statements about the origins of life. Ironically, Intelligent Design advocates accuse evolution of being *too* certain of its conclusions. At the same time, these same advocates point to the uncertainties of evolutionary theory when making claims about evidence for a Designer. Evolution alone, they argue, cannot account for everything.

The third and final theme is the location of so many of the conflicts between evolution and religion: the public school classroom. Nowhere do challenges to evolution receive more publicity, and nowhere do we see more displays of emotion, than where children are involved. The 1925 Tennessee law banning the teaching of evolution was passed primarily to protect the faith of the state's children. The 2005 Kansas state science standards were adopted so that the state's children would receive a proper science education without the interference of any religious or philosophical bias. In Tennessee, the discussion was essentially one of faith. In Kansas, it was the nature of science. In both places, it was about schools.

The Subject of This Case Study

This case study studies the case of two things. On the surface, this dissertation examines the case of Intelligent Design in Kansas school board politics. The events in Kansas offer a timely example of Intelligent Design's divide-and-conquer strategy for influencing science curricula in American schools. As noted previously, local school

districts in two other states offered similar material for a case study. Dover, Pennsylvania, in particular, mirrored events in Kansas on a smaller scale, complete with vigorous citizen advocacy and contentious Board meetings, and would certainly have been more convenient for a graduate student of limited means based at the Pennsylvania State University to study.

I chose Kansas, however, not for its geographic convenience but for the success Intelligent Design advocates had promoting and nearly implementing their agenda. Moreover, while Dover was a conflict over textbook choice, events in Kansas centered on the state's science standards and consequently carry significant implications for state and local educational policymakers in the era of No Child Left Behind.

More deeply, this case study is a study of the efficacy of Intelligent Design advocacy and its potential impact on policymakers and science educators throughout the United States. Led by Intelligent Design Network attorney John Calvert, Intelligent Design advocates in Kansas enacted a carefully-plotted, systematic strategy tailored to appeal specifically to the citizens of Kansas. The decentralized nature of Intelligent Design advocacy makes it highly adaptable to local conditions. What is important, therefore, is not the strategy itself but rather its execution: grassroots appeal to the citizenry, interaction with sympathetic board members, claims of unjust scientific oppression, arguments of fairness and good science, and declaring that the people, and not the scientists or educators, should make the ultimate decision.

By examining the execution of the Kansas strategy, I offer an analysis of its strengths, weaknesses, and public appeal. I describe the steps Intelligent Design

advocates took to lay the foundation for their goal: the alteration of the Kansas state science standards. The specific goals may differ from state to state, district to district, but the execution will remain largely the same.

Chapter Three

Research Design and Data Collection

This dissertation asks and answers the following questions:

1. What strategies have creationists developed in the wake of the 1987 *Edwards v. Aguillard* Supreme Court decision striking down creation science and how have those strategies been employed?
2. How might science educators respond to political pressure demanding a change in how evolution is taught in their classrooms?
3. What are the policy implications of the new creationist strategies for the American school system?

These questions address the way in which Intelligent Design activists have sought to change educational policy in the United States, with particular respect to teaching about evolution. Kansas in 2005 represented their greatest success to date in the wake the 1987 *Edwards v. Aguillard* Supreme Court decision. This success serves to illustrate the way in which educational policy can be crafted, advocated, and implemented over the objections of education professionals and demonstrates the vulnerability of school boards to aggressive public lobbying.

I designed this case study around four distinct data sets:

1. Personal interviews with Board members. Between August 3 and August 10, 2006, I traveled to Kansas and conducted interviews with six members of the Kansas Board of Education, including two directly involved in the May, 2005, hearings, as well

as with civil rights attorney Pedro Irigonegary.⁸² The ten-member 2004-2006 Board was composed of eight Republicans, six of whom the press labeled “conservative,” and two Democrats, who along with the two remaining Republicans were identified as “moderates.” The interviews were taperecorded, with written consent, and lasted between twenty-five minutes and three hours. The average interview was approximately forty-five minutes long. I personally transcribed each of the interviews on my PC laptop (password protected) and kept the original tapes in a secured box. Although given the option to remain anonymous, each of the interviewees consented to be named in this study and several asked to see copies of the finished product, which I promised would be made available upon completion. Upon completion and formal submission of this dissertation, those tapes will be erased and destroyed.

I followed a strict protocol of 10 open-ended questions for conducting the interviews. I asked the questions in sequence and shared my written questions with the interview subjects upon request. I also stated on the record that I was asking the same 10 questions of each interviewee in the same sequence, below. The questions sought to capture broad themes pertaining to the interviewee's actions, feelings, and thoughts of the time leading up to and during the 2005 hearings.

The interview questions were:

1. How did you first become involved in the evolution/creation discussion in Kansas?

⁸² Pedro Irigonegary of Irigonegary and Associates, a Topeka-based civil rights law firm, represented the then-existing science standards – the standards that the Board’s moderate minority wanted to preserve – that the Board ultimately changed following the May hearings.

2. How did you first hear about the challenges to evolution to that led to the Board's 2005 hearings?
3. Do you recall who most strongly supported the challenges? Who most strongly opposed them?
4. How would you describe your role in the Kansas Board of Education's decision to put evolution on trial in 2005?
5. Did other Board members attempt influence your opinion on this matter in one direction or another?
6. Were you ever contacted by lobbyists or concerned citizens about the proposed changes? What did they say? How did you respond?
7. To your recollection, how emotional was the debate?
8. The Board ultimately decided to change the state's definition of science. Following the decision, Steve Abrams said, "this is about what's good science." Who most strongly supported/opposed this decision? Did you support this decision?
9. What effect do you think this decision will have on how science is taught to the schoolchildren of Kansas? To children elsewhere? How have the students and parents responded?
10. Is there anything you would like to add that I haven't covered?

Question One and Question Two established the interviewee's level of involvement in the evolution/creation debate prior to the hearings as a Board member.

Questions Three, Four, Five, Six, and Eight pertained to both the Board debates

and the hearings themselves. These questions were designed to elicit the interviewee's reactions to the public controversy and lobbyist/constituent pressure, as well as obtain information about the Board members' relationships with one another. Although the Board was under considerable media scrutiny, Board intrigues and interpersonal relationships received almost no media coverage. I believed that understanding the personalities of the Board members and their interpersonal relationships was vital to understanding why Intelligent Design advocates executed their strategy the way they did.

Question Seven directly addressed the emotionality issue and also sought to better understand the interpersonal workings of the Board.

Question Nine spoke to the perceived classroom impact of the Intelligent Design-friendly standards.

Finally, Question Ten offered the interviewee the chance to address further issues or ask questions of me.

With one exception, I did not significantly deviate from this interview protocol. The exception was my interview with Dr. Steve Abrams, the conservative Board chairman and primary instigator of the 2005 hearings. At the conclusion of my interview, I directly asked him if he had any religious motivation for wanting to change the standards, a charge he denied. He then spoke at length about the importance of good science in the science standards and declined to ask me any questions. I broke protocol because I wanted to give him a chance to respond to allegations from two Board members I had earlier interviewed, who argued that religion was a primary motivating force behind changing standards.

How evolution, and therefore science, is defined lies at the heart of this study. The formal definition itself was the cause of most of the debate at the Board level while personal definitions of science were the driving factors behind the actions of the Board members and their respective allies. To that end, interviews with Board members were vital to fleshing out what happened to trigger such public debate, how the debate took place, and why it has occupied such a central role in Kansas politics for the better part of a decade. These interviews make up the core of this study.

2. Board meeting minutes and hearings transcripts. Minutes of the Kansas Board of Education meetings are archived online at the Kansas Board of Education's website and date back to 1994. Although these minutes are not word-for-word transcripts, they capture much of the tension during Board meetings in which evolution and the science standards were discussed. More recently, meetings have been videotaped and the tapes made available online at no charge. Unfortunately, this archive does not extend back to 2005, when most of the relevant debate took place. Hundreds of pages of transcripts of the May hearings on the science standards were also available online, offering an invaluable resource for this study. I made extensive use of both resources.

3. Media coverage. Television news programs, newspapers, and online commentators all offered their perspectives on the Board's decisions and their aftermath. While I examined the coverage of the Kansas controversy in several newspapers, I made especially extensive use of the archives of the *Lawrence (Kansas) Journal-World* since they were freely available online. The archives of the *Kansas City Star* were, unfortunately, offered online only at a cost and financial considerations prohibited me from making

much use this excellent resource.⁸³

4. Blogs. Internet web logs, or “blogs,” offered impassioned commentary on the issue from multiple perspectives. The blogs at the Discovery Institute, for example, provided a wealth of information about the goals and strategies of Intelligent Design advocates. Such sites offer more emotion than fact, however, so I made limited use of them. Nonetheless, given the emotional nature of conflicts over evolution, I believe that understanding this commentary is crucial for any policymaker answerable to the electorate.

Following completion of my research in mid-August, 2006, I reviewed the interviews, Board meeting minutes, and hearings transcripts. I was especially interested in the smaller details of the policymaking process, the details upon which larger decisions sometimes turn. A short email from moderate Board member Sue Gamble, for instance, ultimately led to the mainstream scientific community’s refusal to participate in the May, 2005, hearings on the Board’s proposed science standards. The hearings transcripts also revealed the Intelligent Design advocates’ broader strategy for persuading policymakers and the general public of the validity of their position.

Two of the descriptive codes that emerged were obvious from my initial review of the interview transcripts. Several interviewees repeatedly spoke of Intelligent Design, albeit in different ways. Moderates Bill Wagon and Sue Gamble, for instance, charged that their conservative opponents were attempting to introduce Intelligent Design into the

⁸³ The newspaper’s archives were also available free of charge at public libraries throughout Kansas City, where I stayed during my research trip, my limited time forced me to focus my efforts on preparing for, traveling to, and conducting interviews. I am grateful to the *Lawrence Journal-World* for making their archives available at no cost.

state science curriculum via the revised standards, an accusation conservatives Steve Abrams and Kathy Martin denied.

Similarly, several interviewees spoke of the need for good science but defined good science in different ways. “[The new standards are] about what is good science,” conservative Republican Board chairman Steve Abrams said. “What is empirical science, what is observable, measurable testable repeatable and falsifiable. And that’s the objective of what I have tried to accomplish.”⁸⁴ Fellow conservative Republican Kathy Martin’s assessment was blunter: “I really think that the standards are good science and having it the other way can be bad science.”⁸⁵ Their moderate opponents disagreed. The new standards, said Democrat Bill Wagnon, “that change the nature of science, talk about teaching the controversy with regard to evolution, invite extraordinary disputation to undermine science and the quality of science education.”⁸⁶ Democrat Janet Waugh added, “I resent the fact that because we support good science, we are considered atheists.”⁸⁷

My interview protocol led explicitly to other codes, specifically the descriptive codes “constituent feedback” and “outside influences,” and the analytical code of “emotionality.” I constructed the protocol to gather data about the interviewee’s direct involvement in and specific recollection of events or words that may have affected the policymaking process. To this end, I specifically asked the interviewees about

⁸⁴ Republican Board of Education member Steve Abrams, District 10. Personal interview, August 7, 2006.

⁸⁵ Republican Board of Education member Kathy Martin, District 6. Personal interview, August 9, 2006.

⁸⁶ Democratic Board of Education member Bill Wagnon, District 4. Personal interview, August 8, 2006.

⁸⁷ Democratic Board of Education member Janet Waugh, District 1. Personal interview, August 7, 2006.

communication they received from constituents, the influence of external parties such as Kansas Citizens for Science and the Seattle-based Discovery Institute, and the interviewees' subjective recollections of the emotional tenor of Board meetings and the May hearings.

With respect to emotions, I asked how emotional the Board meetings and hearings were because the written minutes and transcripts, while enormously helpful, read like a stage play: the words could carry different meanings depending upon how the actor gave them voice. I therefore wanted the interviewee's personal recollection of the expressed emotions at the time in order to gauge the interpersonal dynamic of the Board members and how that dynamic informed the policymaking process.

The descriptive codes "naturalism" and "philosophical/religious bias" first emerged in the hearings transcripts as the foundation of John Calvert's argument in favor of the proposed 2005 science standards. In his opening testimony at the May, 2005, hearings, the author of those standards, Dr. William Harris, argued that methodological naturalism "really puts blinders, I think, on the search for truth... particularly in the area of origin science."⁸⁸ When I returned to the Board minutes, interview transcripts, and primary documents with these codes in mind, I discovered that members of the Science Writing Committee Minority had laid the groundwork for this argument months before the hearings. The Kansas Science Writing Committee's eight-member minority, referred throughout this study as "the Minority," wrote to the Board in December, 2004, that their proposed definition of science "replaces a naturalistic definition used by the current

⁸⁸ William Harris, Hearings transcript, May 5, 2005

science standards. We believe science should be guided by the evidence rather than by any particular philosophy of what explanations should and should not be allowed.”⁸⁹

These codes also tied in with “good science,” to the effect that Board members’ interpretation of “good science” relied heavily on their interpretation of its philosophical underpinnings and led them to vote accordingly.

Three other analytical codes also emerged during meetings with my four-member dissertation committee. “Fairness” was the primary concern of all involved in the Kansas evolution debate, namely the fairness of teaching challenges to evolution versus the fairness of teaching only evolution as scientifically valid. While the transcripts of the interviews and hearings made little *explicit* mention of fairness, it is the primary thrust of the Intelligent Design argument. John Calvert, Steve Abrams, and the hearings witnesses stated time and again that evolution was only one side of the origins argument and that other arguments, while equally valid, were being suppressed. The attempt to change the state science standards was thus nothing more sinister than an attempt to be fair.

“Public appeal” also emerged in several places as an analytical code when I attempted to discover the purpose of the hearings. The Wedge Document specifically calls for a public debate on the merits of Intelligent Design. The Discovery Institute has issued hundreds of press releases since 2000 touting new publications and interpreting recent evolution-related findings. Of particular note is its signatory list of professionals in science who question the validity of Darwinian evolution. Intelligent Design advocates have also written extensively for the general reader, arguing that their work has

⁸⁹ Correspondence dated December 10, 2004. Retrieved from <http://www.kansasscience2005.com/LettertoKSBE121004.pdf> February 14, 2007.

merit despite the scientific community's refusal to acknowledge it.

Finally, the analytical code "argumentation" arose when I examined the way in which Intelligent Design advocates appealed to the public and how the 2005 hearings were conducted. This code was especially important when analyzing why the hearings were so important to John Calvert and the Board's conservative majority, especially after moderates, knowing they would lose, called for an immediate vote on the standards when Board Chairman Steve Abrams first floated the idea of holding hearings.

After extracting these codes from the data, I organized them as follows:

Descriptive Codes

Constituent feedback: Board members answer directly to constituents in their districts and several members reported receiving hundreds of letters and emails about the Board's evolution controversy. Moreover, each Board member, regardless of political affiliation, reported that the majority of the correspondence was supportive of his/her position.

Board discussions: the debates during Board meetings, especially the questions each side asked witnesses and each other, revealed much about the political landscape of evolution in Kansas.

Outside influences: organizations such as the Discovery Institute and the American Association for the Advancement of Science influenced some Board members' questions and answers during meetings, as well as the makeup of the witness lineup at the May hearings. Board members also received numerous letters and emails from private citizens outside Kansas, although all Board members stated that these missives did not

influence their thinking.

Naturalism: defined here as a philosophy that studies material causes to events to the exclusion of all other possible causes. Intelligent Design advocates charged that the science standards first proposed in 2005 were contained a bias towards naturalism, a charge later repeated during the May hearings.

Intelligent Design: despite the overwhelming number of Intelligent Design supporters working to affect educational policy change in Kansas, the conservative Board members maintained that Intelligent Design had nothing to do with revisions to the standards. Their opponents argued to the contrary.

Philosophical/religious bias: while naturalism was the primary philosophical position mentioned during the hearings, witnesses there and Board members at meetings spoke often of a more general religious bias they argued was promoted in teaching only evolution at the expense of scientific objectivity. This claim also lay at the core of the schism in the science writing committee that ultimately led to the formation of the group's formally identified Minority.

Good science: this was the only common theme found throughout the interviews and hearings transcript review for all involved. Each side claimed they wanted only to teach good science. The differences lay in their interpretation of the phrase.

The first three descriptive codes pertain to Board politics: correspondence from constituents, issues raised while campaigning, public debate during Board meetings, and persons or organizations to whom Board members turned for advice. Understanding the political process of influencing standards at the state board level is one of the primary

goals of this study. The selected themes thus enabled the formulation of an organizing framework from a highly diverse set of political variables.

The four remaining descriptive codes relate to the events leading up to the 2005 hearings, the hearings themselves, and the standards adopted in their wake. Specifically, they reflect witness testimony at the hearings about the “naturalistic” nature of evolution, the objections of the science standards writing committee Minority about the emphasis on evolution, Board members’ respective grasps and perceptions of the issues, and responses from the scientific community. The themes reflect the concerns of the science writing committee minority, the witnesses at the hearings, individual Board members, supporters of evolution, and especially the content of the standards themselves. This second set of themes in effect framed the discussion that informed the first set of themes.

Of the seven descriptive codes, “good science” is the most important. It was the sole common denominator among all of the participants in the hearings and on the Board of Education. As soldiers on both sides of a war often claim that God is on their side, so too did combatants on both sides of the science standards issue claim that they were advocating good science. It was from this common ground that the two sides diverged, only to meet again when sharpening their rhetorical knives.

Analytical Codes

Fairness. As described above, fairness was important to advocates on both sides of the issue, particularly with respect to political ramifications.

Public appeal. A cornerstone of the Intelligent Design strategy, appealing to the public was of vital importance to a Board composed entirely of directly-elected members.

Emotionality. For Intelligent Design advocates, the study of evolution touches directly upon questions of faith, itself a highly emotional topic. Moreover, several interviewees spoke about their respective feelings on the debate and how their emotions affected their interpretations of the issue.

Argumentation. The Board's deliberations and subsequent hearings lent themselves to a specific type of argumentation, that adopted by the courts, in which the arguments of all concerned parties are presumed to have equal validity. In so doing, Intelligent Design advocates were able to claim that their arguments were on footing equal to that of mainstream scientists.

These four codes provided the framework both for analyzing the evidence and organizing my conclusions. They represent the way in which Intelligent Design advocates conduct business with school boards, blending a mix of complex scientific arguments with simple appeals to emotion. It proved a successful formula.

This study examines the policy process that resulted in a victory for Intelligent Design advocates in Kansas when the state Board of Education altered the science curriculum to challenge the teaching of evolution. John Kingdon's problem, policy, and politics streams, leading to the opening of a policy window, provide the foundation for this study by offering a means for understanding how policy is formulated when divergent interests come together.⁹⁰ Here, Kingdon's framework is that of the problem (only evolution is taught), policy (deciding to amend the science standards regarding evolution), and politics streams (how to amend the standards in a scientific manner that

⁹⁰ Kingdon, 1984.

still permits challenging the dominance of evolution) opening the policy window (the standards were pre-scheduled for review and revision; a conservative majority serves on the Board) and making policy change in Kansas.

Kingdon describes three influences on government agendas: “the inexorable march of problems pressing in on the system... a process of gradual accumulation of knowledge and perspectives among specialists in a given policy area, and the generation of policy proposals by such specialists... [and] political processes.”⁹¹ This third influence, politics, provided an impetus for the reforms undertaken by the Board’s conservative majority, who in effect tried to solve a problem that did not exist until the solution appeared. Kingdon points out that “advocates of a new policy initiative not only take advantage of politically propitious moments but also claim that their proposal is a solution to a pressing problem.”⁹² Kansas, as discussed later in this study, served as a test case for the Wedge strategy’s desire to have a major public hearing on the question of how to teach evolution.

This framework supports the four analytical codes of “fairness,” “public appeal,” “emotionality,” and “argumentation.” The “fairness” code represents Kingdon’s problem stream in the eyes of Intelligent Design advocates. “Public appeal” and “emotionality” became the policy stream, both in process and in fact respectively, for Intelligent Design advocates and conservative members of the Board of Education. The process became one of action, of publicizing the problem and building public support for making change.

⁹¹ Ibid, pp.19-20.

⁹² Ibid., p. 211.

The fact was its role as an Intelligent Design tactic to bypass mainstream scientific objections and instead appeal to the emotions of policymakers and the general public by pointing to the “fairness” stream and decrying its existence. “Argumentation” became the politics stream, the means through which Intelligent Design advocates hoped to affect change. Ultimately, these streams indeed merged to achieve successful policy change when the Board of Education voted to alter the state’s science standards.

Amy Gutman’s discussion of democracy in education describes how the “fairness” stream could come to be. She writes:

Democratic communities are not in principle bound to teach the truth, although the wisest communities will strive to do so, but they must be bound *not* to teach false doctrines that threaten to undermine the future prospects of a common democratic education. The constitutional prohibition against the establishment of religion creates such a negative boundary, which is subsumable under the more general democratic principle of nonrepression.⁹³

This last sentence encapsulates the arguments of mainstream scientists and Intelligent Design advocates alike. Advocates on both sides of the issue claim that each is trying to repress the other. The campaign slogans, the hearings, and the final vote can all be analyzed in light of the idea that each side sees itself as acting in the most fair, open-minded, and democratic way possible.

The theoretical focus of this study is the manner in which evolution itself is represented as either a dogmatic secular religion or the exemplar of good science. Intelligent Design advocates maintain that evolution has become a religious position foisted upon scientists and the public alike. While evolution as anti-religion – and,

⁹³ Gutman, 1987, p. 103. Emphasis in the original.

specifically, anti-Christian – has long been a staple of creationist literature, evolution *as religion* is a relatively new argument that surfaced only with the Intelligent Design movement. Phillip Johnson, an attorney whom other Intelligent Design advocates call “the father of Intelligent Design,” writes, “another factor that makes evolutionary science seem a lot like religion is the evident zeal of Darwinists to evangelize the world, by insisting that even non-scientists accept the truth of their theory as a matter of moral obligation.”⁹⁴ Thus, he argues, educational policies must reflect the truth about evolution and either remove it from the curriculum or allow other religions a fair say. Here, “fairness” serves as the headwaters from which Kingdon’s other streams flow and without which they could not exist.

“Fairness” fed smoothly into the policy stream of “public appeal” and “emotionality.” “Public appeal” by itself, however, is difficult to achieve without an emotional connection. Intelligent Design advocates’ adoption of Gutman’s principle of nonrepression, with its inherent call for fairness, has an emotional resonance with great appeal to citizens in a democratic society. At the same time, “public appeal” and “emotionality” serve the purpose of politicians seeking to keep or expand their influence.

“Politicians,” writes Deborah Stone:

always have at least two goals. First is a policy goal – whatever program or proposal they would like to see accomplished or defeated, whatever problems they would like to see solved. Perhaps even more important, though, is a political goal. Politicians always want to preserve their power, or gain enough power, to be able to accomplish their policy goals.⁹⁵

⁹⁴ Johnson, 1993, p. 6.

⁹⁵ Stone, 1997, p.2.

If, she adds, losing a vote on a particular issue will gain public support for their broader aims the second time around, politicians won't hesitate to do so. The Kansas pattern suggests this course of action: it began with a drastic decision in 1999 to remove evolution from the curriculum, which led to public outcry leading reinstatement two years later, followed in 2005 by a gentler and marginally more subtle "teach both sides" approach that appeared to be a reasonable compromise. Conservative Steve Abrams, a member of 1999 Board and chair of the 2005 Board, was perfectly positioned to affect the science standards. His election as Board chair lifted the curtain on Kingdon's policy window, making the conditions ripe for change.

Such change, of course, does not, cannot exist in a vacuum. Each side of the debate appealed to the public with their story, each side trying to best the other in a war of words. In the case of Kansas, "argumentation" became the tool to appeal for public support, to claim repression and cry for fairness. Deborah Stone writes about the power of persuasion in affecting policy change, here persuading the public to support this or that side of the evolution issue. Of the five general strategies she describes, the use of "Facts" was the overwhelming choice of both sides.

In their quest to persuade the public of their objective neutrality regarding scientific inquiry, each side in Kansas managed to portray the other as emotional zealots. "Persuasion as a policy instrument," Stone writes, "has often been viewed either as a neutral instrument of science into the market, or as a dangerous weapon of totalitarian

governments.”⁹⁶ In 2005, the language of “good science” in Kansas became both sword and shield. “Each view of persuasion has its own language. ‘Information’ in one is ‘propaganda’ in the other... ‘education’ in one view is ‘brainwashing’ in the other. ‘Learning’ in one is ‘compliance’ in the other. The central debate about persuasion as a form of control in public policy concerns which of these visions is ‘correct’ and where we should draw the line between them.”⁹⁷

Giandomenico Majone argues that use of language in this manner is common in policymaking. Argumentation and persuasion, he writes, rather than strict attempts at objectivity are crucial elements in crafting policy. “It is also important to keep in mind that since policy analysis cannot produce conclusive proofs but only more or less convincing arguments, persuasion always has a role to play in increasing both the acceptability of advice and the willingness to act on less than complete evidence.”⁹⁸ Phrases such as “teach the controversy” have great resonance with policymakers and the public alike but offer little in the way of evidentiary support.

In Kansas, the May hearings represented not only the triumph of “argumentation” but also the ability of policymakers to change the system to suit their objectives by operating outside established protocols for setting educational standards. This, too, writes Majone, is not uncommon. “Far from being exceptional occurrences, attempts to modify procedural rules and other institutional constraints are so pervasive that no descriptive or prescriptive policy analysis can be complete that does not explicitly take

⁹⁶ Ibid., p. 320.

⁹⁷ Ibid., p. 306.

⁹⁸ Majone, 1989, p. 40.

institution-changing behavior into consideration.”⁹⁹

As I discuss later in this study, this is exactly the sort of behavior the citizens of Kansas witnessed at their state Board of Education.

Why This is a Case Study

This dissertation is a case study for two reasons: depth and relevance. First, a case study can examine a particular situation or event with a degree of rigor unavailable to a broader, shallower study. Due to the influence and public profile of the Board members and attorneys involved, this degree of depth is needed for a thorough, nuanced understanding of the policy process at work in the Kansas Board of Education.

Scientists, educators, and commentators of all stripes weighed in on the Board's decision to alter the science standards. Great detail is necessary, therefore, in order to understand how the Board of Education made the decisions that it did.

The story of the growing influence of Intelligent Design advocates is complicated and sometimes misunderstood. A case study permits an in-depth examination of Intelligent Design's policy mechanisms, especially with respect to nationally coordinated local action. By studying organized opposition to evolution in Kansas, this study can examine the larger story of Intelligent Design within the context of its influence on a state school board.

Second, this case study is relevant both to the case specifically discussed as well as to other districts grappling with this complex issue. Robert K. Yin noted that the case study method “may be the most appropriate [method] since the public policy literature, to

⁹⁹ Ibid, p. 114.

the extent that it is empirical, is heavily dominated by case studies.”¹⁰⁰ Robert E. Stake further argues that a case study offers a “natural basis for generalization.”¹⁰¹ “What becomes useful understanding,” he writes, “is a full and thorough knowledge of the particular, recognizing it also in new and foreign contexts. That knowledge is a form of generalization... arrived at by recognizing the similarities of objects and issues in and out of context and by sensing the natural covariations of happenings. To generalize this way is to be both intuitive and empirical...”¹⁰²

While unique in ways relative to their peer institutions, such as the direct election of all Board of Education members, Kansas presents a case relevant to other state and local school boards. The Board’s actions can be understood as much by the personalities of the Board members as by their official positions and voting records. Given the Board’s recent history, therefore, a Board member’s position on evolution can have a direct effect on his or her chances for re-election. A case study permits in-depth interviews with Board members on a manageable scale for the purposes of a dissertation while elucidating the information necessary to illuminate the policy process at the Board level. Simultaneously, analyzing the strategies of Intelligent Design advocates in Kansas enables policymakers to better understand how their own districts may be affected.

¹⁰⁰ Yin, 1975, p. 371.

¹⁰¹ Stake, 1978, p. 5.

¹⁰² Ibid, p. 6.

Chapter Four

The Emergence of the Minority

This chapter presents the political run-up to the May, 2005, hearings on the science standards. The following themes emerged through the use of the descriptive codes “constituent feedback,” “board discussions,” and “outside influences”: that evolution became the overriding political campaign issue from the 2000 election onward; that Intelligent Design advocates were determined to make themselves heard in the standards process; and that the Board was acutely aware that the general public, not scientists or science teachers, were their primary audience.

We also see the emergence of the Minority. Eight members of the Board-appointed science standards writing committee protested the standards then in place, setting in motion the events that led to the hearings and the adoption of new standards critical of evolution. The eight members, whom the moderate Board members and the press dubbed the Minority, raised questions of fairness and public appeal that later framed the debate at the hearings and at subsequent Board meetings. The analytical codes of “fairness” and “public appeal” first emerge from the evidence presented in this chapter.

Laying the Groundwork

The Kansas Board of Education is a rarity among its peer state boards. None of its members is a political appointee; each is directly elected by the public. Voters therefore have an unusually direct say on issues such as school funding and curricular standards, issues that become fodder for criticism during political campaigns.

Consequently, Board members tended to avoid controversy and campaigns historically were low-key affairs. In several cases, past Board members ran without opposition.

That changed in the wake of the Board's controversial 1999 decision to effectively remove evolution from the state's science standards. In the 2004 Board elections, every incumbent was challenged and the challengers were better organized and better financed than were any previous Board of Education challengers in the state's history. Republican Board member Sue Gamble spent a personal record \$51,000 in her 2004 re-election bid; her challenger in the Republican primary, Linda Holloway, "spent \$126,000 to lose the primary... And when you count soft money... that race was more than half a million dollars."¹⁰³

The surge in campaign spending on school board races reflects both the power of the electorate and the importance of the Kansas Board of Education to organizations such as the Discovery Institute. The majority of Kansans, moreover, are politically conservative and Protestant Christian. They are therefore more likely to be receptive to challenges to evolution, especially when such a challenge purports to offer greater local autonomy and less outside interference. In light of this, it is ironic that the goals of Intelligent Design advocates were furthered by the existence of statewide science standards.

With a sympathetic electorate, challenging evolution's dominance would be easier in Kansas than in more politically liberal states such as California or New York. Sympathy alone, however, was insufficient for significant policy change. Ultimately,

¹⁰³ Republican Board of Education member Sue Gamble, District 2. Personal interview, August 3, 2006.

several factors would need to converge to open the policy window challenging evolution at the state level: an electorate willing to nominate Intelligent Design advocates or others opposed to Darwinian evolution to run for the state Board of Education; the successful election of said advocates; the scheduled review of the science standards; members of the science writing committee willing to challenge evolution; and a majority on the Board willing to codify that challenge. The absence of any of these factors would derail attempts to rewrite the science standards.

These factors first came together in 1999, culminating in a decision that was reversed following the 2000 election. Although these same factors would converge again six years later, the 1999 evolution decision held the window open when the Board revisited the science standards in 2005. The 1999 precedent gave Board members and voters alike a bitter taste of the scathing reaction that poured in from around the world. In its wake, rhetoric was softened and evolution held up for critique instead of removal. The hope of Intelligent Design advocates was to see evolution challenged in the classroom and alternative explanations offered in its place.

Moderate Republican Board member Sue Gamble argued that many Kansas students have not been taught either side of the evolution-creation issue, let alone both. “I have talked to many, many university-level students,” she said, “who have said, I took science [but] we never discussed this. I didn’t know the word ‘evolution’ until I got to the university level.”¹⁰⁴ Under Kansas state law, local school districts had, theoretically, been exercising the prerogative to teach classroom science as they saw fit prior to the

¹⁰⁴ Ibid.

introduction of statewide standards. Upon their enactment, the standards provided the framework for the policy window through which Intelligent Design advocates sought to challenge how evolution was taught in the public schools of Kansas.¹⁰⁵

In 1995, evolution was a major component in the state's high school science standards. "As a result of activities in grades 9-12, all students should develop an understanding of... mechanisms and consequences of biological evolution [in the life sciences] ... [and the] origin and evolution of the earth system, and origin and evolution of the universe [in earth and space science]."¹⁰⁶ In 1999, those standards were re-written. Evolution was removed entirely from the life science standards while the earth and space science would discuss only the "origin and evolution of the universe" with no mention of the evolution of Earth.¹⁰⁷ The 2001 standards fully reinstated evolution in both life science and earth and space science curricula.¹⁰⁸ Those standards were due for their scheduled review in 2005, at which time they were changed again and evolution accused of being dogmatic and materialistic.

Media accounts covering the evolution debate in Kansas go as far back as 1999. As an educational policy issue, however, Susan Gamble¹⁰⁹ traces the evolution controversy's roots back to 1991. That year, the Kansas state legislature "was responding

¹⁰⁵ John Kingdon (1984) likens political "opportunities for action on given initiatives" (p. 174) to the launch window of a space vehicle. As with orbital launch windows, "once lost, the opportunity may recur, but in the interim, astronauts and space engineers must wait until the window reopens." (p. 174).

¹⁰⁶ *Kansas Curricular Standards for Science*, Revised June 14, 1995. <http://www.kcfs.org/KsSciSt1999-2001/Standards/1995.html> Retrieved January 29, 2007.

¹⁰⁷ *Kansas Curricular Standards for Science Education*, Kansas Board of Education, adopted December 7, 1999. <http://www.kcfs.org/KsSciSt1999-2001/Standards/1999-December.html> Retrieved January 29, 2007.

¹⁰⁸ *Kansas Science Education Standards*, Kansas Board of Education, adopted February 14, 2001. Retrieved January 29, 2007.

¹⁰⁹ Republican Board of Education member Sue Gamble, District 2. Personal interview, August 3, 2006.

to a lawsuit about the unconstitutionality of the previous funding formula. They were going through the entire process of a new way of funding schools so that districts would not being solely dependent upon their own property tax valuation.”¹¹⁰ Changing the statewide educational funding formula led to a reassessment of the fundamental goals of public education in Kansas, which in turn led to the development of its first statewide standards:

I’m convinced one of the reasons we have a growing level of poverty among children in this country is, their parents are undereducated therefore underemployed or unemployed because they no longer have the basic skills that allow them to compete in this information-rich economy that we have now. Kansas was addressing that in ’92. But when you begin to do that, then it becomes very competitive about deciding what it is people should know. Up until then, every single community did whatever they wanted.¹¹¹

This reorganization of the state’s educational power structure, coupled with mandatory periodic reviews of the curricular standards, provided the initial policy window for Kansas-based opponents of evolution to introduce their formerly local agendas to the entire state in a unified fashion.

Electing the Board

Individual motivations as well as external influences combined to set the stage for challenging what Intelligent Design Network attorney John Calvert describes as the lack of objectivity surrounding the discussion of the origins of life.¹¹² Moderate Republicans

¹¹⁰ Ibid.

¹¹¹ Ibid.

¹¹² John Calvert, August 22, 2006, personal correspondence. For example, Mr. Calvert expressed concern about my own objectivity while pursuing this particular line of research. I had to repeatedly assert my willingness to be objective before he would consent to speak with me. Unfortunately, he and I were unable to work out a mutually convenient time for an interview while I was in the Midwest. In an email dated August 22, 2006, he wrote:

Sue Gamble and Carol Rupe stated in interviews for this study that the evolution issue was a primary motivating factor in their decision to run for the Board of Education in 2000. The incumbents whom they unseated, Republicans Linda Holloway and Mary Douglass Brown respectively, had supported the evolution revisions adopted in 1999.¹¹³ The year 2000 also saw Republican Board member Scott Hill of District 6, also a supporter of the 1999 standards, resign from the Board after questions arose concerning the legitimacy of his Kansas residency.¹¹⁴ Moderate Republican Bruce Wyatt took his place. Mr. Scott's resignation, coupled with the election victories of Mrs. Gamble and

"I also believe that if you were to really do an objective presentation of the issue, you would never get your PhD. Your paper would not be approved. This is what has happened to Brian [sic]Leonard." [see below]

"In fact," he continued, "I think if you have a genuine interest in doing an objective job, then you ought to confront your dissertation committee now with this issue. Will they allow you genuine academic freedom in persuing [sic] the question - What about the new Kansas Standards? Are they scientifically valid and educationally appropriate? Will they let you actually persue [sic] that question as we would expect a coroner to investigate a death?"

When I first spoke to Mr. Calvert about setting up an interview, I told him – truthfully – that as a Christian with a bachelor's degree in theology, I was more sympathetic to the Intelligent Design position than he seemed to believe. This statement appeared to relieve him. As my study progressed, however, and the scientific and theological weaknesses of Intelligent Design became more apparent (as will be discussed in depth in this study), I was forced to revise my views. I regret that this dissertation will disappoint Mr. Calvert greatly.

Bryan Leonard was a former middle school science teacher and Ph.D. candidate in science education at Ohio State University in 2004. His dissertation committee chair canceled his dissertation defense when several faculty objected that none of the other committee members were faculty in the science education program – Mr. Leonard's home department – as per Ohio State regulations. Mr. Leonard's dissertation was a study of changes in student attitudes about evolution when presented with competing scientific explanations regarding its validity. The Discovery Institute protested vigorously at the cancellation, arguing in a press release dated July 11, 2005, and written by two members of the dissertation committee, that "certain persons" at Ohio State "campaigned" on blogs and in the media to discredit Mr. Leonard's work. Their motive, the authors argued, was to quash Mr. Leonard's research on the basis of its purported improper ideology rather than on its scientific merits. Mr. Leonard, an outspoken advocate of Intelligent Design and a witness at the Kansas Board hearings in 2005, has as of this writing yet to receive his Ph.D.

¹¹³ Associated Press, reported in *Lawrence Journal-World*, August 2, 2000.

¹¹⁴ Associated Press, reported in *Lawrence Journal-World*, July 13, 2000. Mr. Scott had business-related property in both Kansas and Montana and had voted in the June, 2000, Montana primaries. Already under public scrutiny due to a lawsuit over a property transfer between two school districts in which his Board vote was "crucial," Mr. Scott announced his resignation from the Board.

Mrs. Rupe, gave the Board a seven-three moderate majority. The 2001-2003 Board was sworn in on January 9, 2001 and, barely a month later, on February 14, 2001, the Board voted seven-three that science standards including evolution were to be reinstated.

Conservative victories in the 2002 Board elections leveled the balance of power. Moderate Republicans Sonny Rundell, of District 5, and Val DeFever, of District 9, had voted in favor of the 2001 reinstatement of evolution. Although evolution appeared to play little role in the primary campaigns, both lost their primary campaigns to conservative Republicans supportive of bringing back the 1999 standards.¹¹⁵ When Connie Morris and Iris van Meter, of Districts 5 and 9 respectively, were sworn into office on January 14, 2003, the Board's political balance was even at a five-five conservative-moderate split. That August, the Board voted seven-three in favor of reviewing the science standards once more.¹¹⁶ When asked about the political

¹¹⁵ Associated Press, reported in *Lawrence Journal-World*, August 7, 2002. Conservative Connie Morris won the District 5 primary while Iris Van Meter on in District 9. No Democrat ran in either election so the primary winner was also the general election winner. Mrs. Van Meter's election was the cause of some controversy during the election. The *Lawrence Journal-World* reported on August 18, 2002, that "Van Meter, a conservative Republican, filed as a candidate for State Board of Education at the last minute to face DeFever, a moderate Republican from Independence. Van Meter did little campaigning and declined to speak to most media. Then a week before the election, a new political action committee called Truth in Politics was formed and disseminated political material to voters in the board's 9th District. The material labeled DeFever as an anti-President Bush liberal supported by an atheist organization. DeFever said it was a low blow that was difficult to overcome so late in the campaign."

¹¹⁶ Kansas Board of Education meeting minutes, August 12, 2003. Retrieved from <http://www3.ksde.org/commiss/Aug03Mins.htm> February 14, 2007. The first two votes were split at five-five down the conservative-moderate divide. The first vote was on a motion by conservative Ken Willard to have an external review of the history standards, as was standard practice for standards review, but have an internal review for the science standards. The second vote was on a motion by moderate Carol Rupe to hold an external review of both sets of standards. Moderate Sue Gamble added an amendment allowing for a staggered review, science followed by history, to ease the burden on the State Department of Education's staff. Following a debate concerning the Board's ability to have both sets of standards approved in time for NCLB's 2007 mandate for yearly assessment, the Board recorded its second five-five split. Conservative Steve Abrams then moved to review the history standards first, with external review commencing in August 2003, and then review the science standards beginning in August, 2004. He argued that since the history standards were less controversial, they would take less time and put less pressure on Department

ramifications of a standards review heading into the 2004 election, moderate Bill

Wagnon told a reporter, “it's inescapable. It's going to be an issue.”¹¹⁷

Going into the 2004 campaign, Mrs. Gamble noted:

We had all anticipated that we would all have strong opposition and suddenly, the only person that was filed against for the primary was Bruce Wyatt and then Bill Wagnon [who] was a Democrat had a conservative Republican opponent in the general election. And so Kris van Meteren, interestingly enough, arrived at the Secretary of State's office a minute after twelve PM – when the filing deadline is – with two applications. One would have been in Carole Rupe's district in Wichita, one would have been in mine, and he was refused being able to file them. There has always been this controversy that, did that happen by accident? Did that happen by design? My feeling is that Kris Van Meteren is way too smart a political operative to let that happen by accident. It was by design. We will never know for sure but it is reported that Linda Holloway was going to run against me.^{118 119}

staff than would the science standards. Moderate Janet Waugh disagreed with his reasoning and she and fellow moderates Sue Gamble and Bruce Wyatt voted against the proposal. Moderates Carol Rupe and Bill Wagnon voted with the conservatives, thus setting the timetable for the standards review.

The history standards were also not without some controversy. Sue Gamble said in her interview, “They get to history/government standards, though, and suddenly Steve Abrams began to object to world history, global education, anything having to do with economics, especially on a global level. [He said] that all Kansas kids need it to know about was Kansas history and a little bit of United States history but only things that were non-controversial. The Vietnam War, we would only teach from the perspective [that] the United States [had] won and there was no controversy [about it], and any controversy they might have heard of was un-American. It was a bizarre conversation. To put it lightly, I had a shit-fit.”

¹¹⁷ Rothschild, August 13, 2003, *Lawrence Journal-World*. “Evolution Returns to State Board's Agenda.”

¹¹⁸ Republican Board of Education member Sue Gamble, District 2. Personal interview, August 3, 2006.

¹¹⁹ Kris Van Meteren probably deserves his own chapter in this story but for the sake of brevity, I will encapsulate some of his work here. He is the son of former conservative Board member Iris van Meter and former head of the Kansas Republican Assembly, an ultra-conservative wing of the state Republican Party. He also organized his mother's surprise 2002 victory over moderate Val DeFever. On August 18, 2002, the *Lawrence Journal-World* printed his statements to a reporter: “We knew we were going against an incumbent. We had heard back that she thought she was popular, and we wanted to take advantage of that mindset... It worked, and now she's crying the blues.” The same article reported, “The Kansas Republican Assembly and its political action committees provided funding to Van Meter's campaign, as it did to many candidates backed by the Republican Party's conservative wing. One of those PACs is called Free Academic Inquiry and Research Committee (FAIR), and is headed by Van Meteren. Its genesis was the fight about teaching evolution in Kansas schools... Anti-DeFever literature was put out by the Truth in Politics PAC, which spent an unknown amount of money. The spending figures are not available because the PAC was formed the day after political action committees were required to report their expenses.” He is currently the head of a political marketing firm called The Source, representing fifty to seventy-five Republican candidates across Kansas. By his own estimate in an August 1, 2004, *Topeka Capital-Journal* article, roughly half of the 2004 political campaign materials, such as posters and signs, published in 2004 were created by his firm. In its June 15, 2006 issue, the alternative Kansas City-based weekly newspaper

On August 4, 2004, Conservative Republican Kathy Martin defeated moderate Bruce Wyatt in the District 6 primary, winning his seat on the Board. When asked if evolution was a major campaign issue, she said “I really didn't start [in the evolution/creation debate in Kansas] until I was running for the state Board of Education. Because my opponent had that as his only platform issue, I had to address it also.”¹²⁰ She added, “about the time that the [1999] Board of Education was discussing evolution and the science standards when it first was changed, the president of the KATS [Kansas Association of Teachers of Science] group had written an editorial on the front of the newsletter. I read that and I thought, well, that is really a one-sided kind of editorial and I thought, gee, I don't even know if I want to belong to an organization like that. So I quit.”¹²¹ Mrs. Martin's election gave the conservatives a six-four majority heading into the science standards revisions.

Three months earlier, in May, 2004, the science standards writing committee had

The Pitch alleged that the Intelligent Design Network was also one of The Source's clients but I was unable to confirm this. Why he showed up one minute after the 2004 filing deadline with paperwork for candidates to run against Sue Gamble and Carol Rupe remains unknown.

¹²⁰ Republican Board of Education member Kathy Martin, District 6. Personal interview, August 9, 2006. At a July candidates' forum, Mrs. Martin argued that Intelligent Design ought to be taught alongside evolution, that it was “accepted by professors around the U.S.” *National Center for Science Education* “Discouraging News from Kansas.” August 4, 2004. Retrieved from http://www.ncseweb.org/resources/news/2004/KS/478_discouraging_news_from_kansas_8_4_2004.asp, October 20, 2006. The *Lawrence Journal-World* reported on September 26, 2004, that “conservative Republican Kathy Martin won the District 6 board seat in the August primary against incumbent and moderate Republican Bruce Wyatt. Martin, who will be sworn in this January, said as far as she knew, the changes in the science standards would be ‘minor.’”

¹²¹ Republican Board of Education member Kathy Martin, District 6. Personal interview, August 9, 2006. The editorial, released September 25, 1999, read in part, “The Kansas Association of Teachers of Science holds that the State Board of Education has edited critical portions of the [standards] document resulting in science education standards that are not educationally sound and do not reflect *National Science Standards* or the work of respected national organizations in the field of science.” Press release retrieved from http://www.nsta.org/pressroom&news_story_ID=45609 February 14, 2007.

been appointed after rancorous political maneuvering.

One of the processes that has been allowed for these committees is [that] Board members can make recommendations to the makeup of these committees. Most of the time, we have gone through reading, math, writing, history/government, all in this two-year period, not a single person has been recommended. We get to making up the science committee and suddenly everybody has somebody they want. And some people have as many as five or six...

Out of the recommendations, I think each board member ended up with one selection and the actual committee is actually selected by the commissioner of education. So there is this 26-member committee that was co-shared by Steve Case and Carole Williams, who just turned out to be both people that I recommended. And then John Bacon, he recommended Bill Harris, who turned out to be the head of the Minority committee and Bill Harris also happened to be the co-founder of the Intelligent Design Network with John Calvert. So here were all the players as we go into fall of 2004.¹²²

At the October 13, 2004, Board meeting, conservative Republican John Bacon raised an objection to the actions of Dr. Jack Krebs, a member of the science writing committee and the president of Kansas Citizens for Science, a pro-evolution advocacy group based in Topeka. On September 28, 2004, Dr. Krebs had spoken at a University of Kansas forum jointly sponsored by the university's Center for Science Education and several academic departments.¹²³ He had spoken out against introducing Intelligent Design into the curriculum, arguing that ID advocates' "statements are about what they say science can establish, and that is where they are wrong. It's trying to wedge people into either being for God or science."¹²⁴ Mr. Bacon's objection was two-fold: that a member of the science writing committee was speaking out of turn prior to the release of

¹²² Republican Board of Education member Sue Gamble, District 2. Personal interview, August 3, 2006.

¹²³ University of Kansas press release, September 23, 2004. Retrieved from <http://www.news.ku.edu/2004/04N/SeptNews/Sept23/krebs.html> October 20, 2004.

¹²⁴ Weld, September 29, 2004, *Lawrence Journal-World*.

any of the committee's recommendations and that Board member and moderate Democrat Bill Wagon had taken a front-row seat at the forum.¹²⁵ Mr. Bacon called for Dr. Krebs's removal from the committee. Conservative Republican Connie Morris then added "that the member she had nominated to the science standards committee had been asked to resign by the chair of the committee because he disrespected the committee."¹²⁶ Then-chairman moderate Janet Waugh "asked staff to check into the matter" but the issue remained otherwise unresolved.¹²⁷

The first draft of new standards were submitted to Board on December 7, 2004, and the co-chairs of the science writing committee, Dr. Steve Case and Mrs. Carol Williamson, formally presented their first progress report to the Board on December 14, 2004. They stated that the majority of the committee supported making "very few proposed changes" to the 2001 standards; those changes included "standardizing the format in line with other Kansas curriculum standards; improved coverage of earth science; a decrease in the amount covered in life science; the addition of teacher notes; additional specificity in the indicators; and revision of the introduction to reflect the changes."¹²⁸ Dr. Case later added that the committee had so far failed to reach a consensus on "evolution, procedures for scientific investigations and the testing of scientific hypotheses, and the history and nature of science."¹²⁹

¹²⁵ Kansas Board of Education meeting minutes, October 13, 2004. Retrieved from <http://www3.ksde.org/commiss/october2004mins.htm> February 14, 2007.

¹²⁶ Ibid.

¹²⁷ Ibid.

¹²⁸ Kansas Board of Education meeting minutes, December 14, 2004. Retrieved from <http://www3.ksde.org/commiss/dec2004boardmins.htm>, February 14, 2007.

¹²⁹ Ibid.

On December 10, 2004, eight members of the science writing committee¹³⁰ addressed a letter to the Board arguing that the Dr. Case's report failed to include any analysis of the theory of evolution. "This," they wrote, "raises two concerns."

1. Preventing critical analysis has the effect of converting biological evolution from a theory into a dogma. "Theories" that are impervious to criticism become ideologies. At a time when students are well aware that a controversy over the teaching of evolution is raging in this country, we feel that they should know about the areas of scientific disagreement.

2. Draft 1 presents a purely naturalistic perspective on a question ("Where did we come from?"), the answer to which has profound implications for ethics, religion and government. This restriction is assumed to be a means of keeping public science education free from religion. However, "religion" includes both theistic and non-theistic beliefs. The naturalistic view that physical and chemical laws plus chance are adequate to explain all natural phenomena supports non-theistic religions and belief systems, while the competing view, that some form of intelligence may be involved, supports traditional theistic beliefs. The approach reflected in Draft 1 arguably has the effect (whether intended or not) of denigrating one kind of religion while promoting another. Public education can be kept free of religion by teaching origins science objectively.¹³¹

After arguing that the school system should teach public controversies, the authors suggested two changes:

1. Reinstate a traditional definition of science: "***Science is a systematic method of continuing investigation that uses observation, hypothesis testing, measurement, experimentation, logical argument and theory building, to lead to more adequate explanations of natural phenomena.***" This replaces a naturalistic definition used by the current science standards. We believe science should be guided by the evidence rather than by any particular philosophy of what explanations should and should not be allowed.

2. Encourage students to critically analyze the theory of biological evolution. Some have argued that the teaching of intelligent design, a scientific alternative to

¹³⁰ These same eight members later authored the Minority Report enacted by the Board in 2005. They are hereafter referred to as "the Minority."

¹³¹ Correspondence dated December 10, 2004. Retrieved from <http://www.kansascience2005.com/LettertoKSBE121004.pdf> February 14, 2007.

naturalistic theories of origins, should be required. At this point in time, we do not agree with this. Rather, we suggest that teachers be allowed to address scientific alternatives at their own discretion if they sense that it is appropriate for a given class.¹³²

Here, the twin issues of fairness and public appeal first appear before the Board. By taking too narrow a view of evolution, the authors argued, the science standards first adopted in 2001 unfairly deprived the students of Kansas of competing points of view. Worse, evolution had become the metaphorical 800-pound gorilla not because no one wanted to talk about it, but because it crushed any dissent as quickly as it arose. The authors' second concern, that evolution was a form of naturalism and therefore inherently religious, laid the foundation for the evolution-as-dogma argument Intelligent Design Network attorney John Calvert would present at the May, 2005 hearings.

The Minority's proposed solutions, rewording the definition of science and allowing students to decide for themselves the validity of evolutionary theory under the guise of critical thinking, similarly echo the Intelligent Design strategy of asking for fairness and appealing to the public. The latter tactic drove the former tactic forward, allowing Intelligent Design advocates to stand before the crowd with outstretched arms asking, "is what we ask so unfair?"

The same day the letter was presented to the Board, the Intelligent Design Network (IDNet) issued a press release describing the Minority Report's initial proposals and reminding readers that the Board of Education would be soliciting comments from the public the following month. The press release sought to establish two basic points:

¹³² Ibid. Emphasis in the original.

that critical analysis of evolution was lacking in the 2001 standards and that the standards were therefore biased in favor of evolution:

“We are scientists and educators who believe that science should be objective,” said Richard Unruh a high school physics teacher. “This requires that explanations be driven by the evidence rather than religious doctrines or philosophical preconceptions such as Naturalism. Preconceptions tend to limit scientific inquiry.” John Yost, a science teacher, said: “This is a debate about whether true scientific inquiry should be applied to origins science in the same way that it is applied in other areas of science.”

“We do not believe the standards should include the teaching of intelligent design as an objective,” said Greg Lassy, a retired science teacher. “But, neither should it be prohibited. Teachers should use their discretion about that scientific alternative to evolution.”¹³³

These documents show how the Minority’s strategy was beginning to take shape.

With this initial salvo, IDNet and the Minority intended to point out what they saw as flaws in the way in which the theory of evolution was taught to Kansas students.

Moreover, by describing Intelligent Design as a “scientific alternative” to evolution, they laid the groundwork for future challenges to evolution along these lines.¹³⁴ By writing to sympathetic Board members, the Minority bypassed the committee’s established process for debate and insisted on making themselves heard. This also marked the first time in the Kansas Board of Education's history that a minority group on any standards writing subcommittee appealed directly to the public about its disagreement with other

¹³³ *Intelligent Design Network* press release, December 10, 2004. “Members of Science Standards Committee Urge Objectivity in Science Standards.” Retrieved from <http://www.intelligentdesignnetwork.org/PressRelease121004.pdf> The eight members, authors of the "minority report" ultimately adopted by the Board, were Tim Crater, William Harris, Greg Lassey, Jay Nicholson, Rick Reeser, Wayne Stringer, Richard Unruh, and John Yost.

¹³⁴ Two months earlier, on October 18, 2004, the Dover (PA) Area School Board had voted six-three in favor of including Intelligent Design in the district’s science standards. Maldonado, *The York Daily Record*, October 20, 2004.

subcommittee members.

Addressing the public is a cornerstone of the Discovery Institute’s Wedge Strategy. Despite Dr. Abrams’s protestations that Intelligent Design had no part in the science standards, the Intelligent Design Network and the Minority were reading straight out of the Discovery Institute playbook. It was especially effective in Kansas – although not quite in the way in which Intelligent Design advocates had hoped – given the voters’ ability to comment on education policy at the ballot box.

Finally, the Minority wrote to the Board:

The fundamental mission of education is to inform students and to teach critical thinking skills. Ill-informed students become citizens ill-equipped to make good decisions that affect their lives. For this reason, we urge the State Board to adopt standards that will allow a more complete scientific discussion of the data regarding origins. The education system should take the lead in helping students understand public controversies.¹³⁵

When asked why the Minority’s proposals had not been considered by the committee, Dr. Case and Mrs. Williamson “explained that the individuals had had an opportunity to have their concerns addressed but had not done so within the timeframe established. They further indicated that those proposals were some of the areas of discussion they had reported would be addressed in the development of Draft Two.”¹³⁶ John Bacon, with Ken Willard concurring, “felt it was important that the concerns of the

¹³⁵ Correspondence dated December 10, 2004. Retrieved from <http://www.kansasscience2005.com/LettertoKSBE121004.pdf> February 14, 2007.

¹³⁶ Kansas Board of Education meeting minutes, December 14, 2004. Retrieved from <http://www3.ksde.org/commiss/dec2004boardmins.htm>, February 14, 2007. The Minority Committee’s website summarized it this way: “In October 2004 authors of the proposed revisions discussed on this site presented their proposals to the Science Writing Committee for discussion and a vote. However leadership of the committee ruled the motions out of order and did not allow consideration and vote on the proposals.” Retrieved from <http://www.kansasscience2005.com/>, February 26, 2007.

minority be included in the draft brought to the public hearings.”¹³⁷ Sue Gamble noted existing rules stating that if the committee failed to reach consensus on an issue, a two-thirds majority was required for its passage. Since the Minority was composed of less than one-third of the committee, Mrs. Gamble observed that “it appeared the minority would not have the opportunity to have its concerns incorporated into any draft of the standards. She also noted that it appeared that some of the information presented in the minority letter had been mis-cited.”¹³⁸

When Kathy Martin took the oath of office on January 11, 2005, the conservatives officially regained the majority. That day, immediately following the Pledge of Allegiance, the new Board unanimously elected Steve Abrams as Chair and John Bacon as Vice-Chair.¹³⁹ During that meeting, State Senator Nick Jordan spoke about the need for rigorous science and math education in light of Kansas’s recently-established Bio-Science Authority, a legislative initiative designed to encourage bio-tech investment in Kansas.¹⁴⁰ This legislation would later become a rallying point for keeping the 2001 science standards in place.

At the February 9, 2005, Board meeting, Dr. Abrams circulated a surprise petition proposing that hearings be held to publicly debate the merits of the Minority and majority committee reports. Caught off guard, the moderates’ reaction was nonetheless swift.

¹³⁷ Ibid.

¹³⁸ Ibid. Unfortunately, it is not clear what information was allegedly mis-cited.

¹³⁹ Kansas Board of Education meeting minutes, January 11, 2005. Retrieved from http://www3.ksde.org/commiss/board_minutes_january_2005.htm, February 14, 2007.

¹⁴⁰ Part of the Kansas Economic Growth Act of April, 2004, the Bio-Science Authority is tasked with bringing corporate investment as well as “eminent scholars” in science to help stimulate the state’s economic growth. Retrieved from <http://www.kansasbioauthority.org/aboutus/kega.html>, February 15, 2007.

Republican Carol Rupe argued that the Board “should follow the policy it had established for development and revision of curriculum standards regardless of any controversy within the committee” and objected “to deciding science standards based on a popular vote, the potential for which existed by having public comments made on the Board website.” Given the request for an immediate vote on the issue, Democrat Bill Wagnon “remarked that he felt it was an extraordinary departure from Board practice to act without time to reflect on such an important issue.” Republican Sue Gamble “indicated she could not be a party to putting out information on the Department website that was inaccurate and untrue because it would compromise the Board’s integrity. She requested that if the Harris report were to be put on the website, the information refuting it which pointed out its inaccuracies also be posted.” To this, Dr. Abrams “responded that it would be good for the Harris report and others to be put up for discussion.” Democrat Janet Waugh, the Board’s fourth moderate, “suggested that the Harris report be sent for external review along with the science standards writing committee’s draft and have the external reviewers tell the Board what they thought of the report.”¹⁴¹

Speaking in defense of the petition, conservative Connie Morris “asked if the hearings would replace the external review, stating that she liked the resolution because it embraced both sides of the issue and would bring it to an elevated level of intelligence and responsibility.” In response, “Chairman Abrams stated that the hearings would be open to the public but would be [composed of] discussions between experts.”

Conservative Ken Willard “stated he felt it was important to hear from the experts and to

¹⁴¹ Kansas Board of Education meeting minutes, February 9, 2005. Retrieved from http://www3.ksde.org/commiss/february_2005_board_minutes.htm, February 26, 2007.

get the issues out into the open, including the fact that the Board is not trying to get evolution out of the standards. He added he felt it would be helpful to the Board, the public and the press.” Conservative John Bacon “stated he thought that the experts will want to come and present their case.” He then moved for an immediate vote on the petition, nominating Dr. Abrams to chair of the hearings, Mrs. Martin as vice chair, and Carol Rupe for the third seat. Mrs. Rupe refused. “I declined,” she said, “because I said that we already had science standards that had been brought to us by experts in the field and I believe that what they said stood for itself and we didn't need to have further hearings.”¹⁴² The seat was then offered to each of the moderates, who refused in turn. Conservative Connie Morris was then asked to serve and, upon her agreement and a motion to vote, the petition passed by a six-four margin with the moderates voting in opposition.¹⁴³

The petition, as adopted, read in part:

BE IT RESOLVED, that the Kansas Dept of Education is hereby directed to post not later than February 10, 2005, a copy of the Minority Report along with the current draft of the Science Writing Committee on the Department's web site, in an area that is easily accessible by the public...

BE IT FURTHER RESOLVED, that a State Board Science Hearing Committee of the KSBE is hereby established to conduct hearings focused on the areas of disagreement outlined by the majority and minority positions of the Science Writing Committee, consisting of Steve Abrams, as Chair, Kathy Martin, as Vice-Chair, and Connie Morris, with such committee hereinafter referred to as the Science Hearing Committee...

BE IT FURTHER RESOLVED, that the Science Hearing Committee shall have the authority to conduct hearings to investigate the merits of the two opposing

¹⁴² Republican Board of Education member Carol Rupe, District 8. Personal Interview, August 10, 2006.

¹⁴³ Ibid.

views offered by the Kansas Science Curriculum Writing Committee at such places and times as it deems appropriate in accordance with such rules and procedures as it may from time to time establish;

BE IT FURTHER RESOLVED, that the Science Hearing Committee is authorized to incur expenses for the reasonable travel expenses for witnesses that are called by the Science Hearing Committee to testify at the hearing, for the expenses of providing adequate facilities for its hearings, and for the services of a court reporter to record the proceedings of its hearings, with the funds for such expenses to be drawn from the general operating funds of the Kansas Department of Education.¹⁴⁴

“I don’t recall who suggested [the hearings],” Dr. Abrams later said, “but somebody said it and all at once, I picked up on it and I said oh man, I like that. To receive testimony? You bet. Let’s receive testimony. That’s a good honorable way to have a deliberative body decide, [to] make a decision. Congress does it, the legislature does it. Receiving testimony is a great way to get information.”¹⁴⁵

Pedro Irigonegary, who volunteered to serve as the attorney defending the 2001 standards, said of the committee’s authorized expenses:

At the time, I was told that the budget was going to be twenty thousand dollars per side and when I learned about the manner in which this was proceeding, I determined that our office could not accept a penny of compensation for this work. Because I saw it as theft, theft of funds that should go to the education of Kansas children and not line the pockets of the Intelligent Design movement or of my pockets or of the pockets of my office in representing mainstream science. I made many public objections and ultimately the Board of Education reduced the budget to five thousand dollars per side, which again we refused to accept...

When asked if John Calvert and the Intelligent Design witnesses accepted the five thousand dollar reimbursement, Mr. Irigonegary said:

¹⁴⁴ Kansas Board of Education meeting minutes, February 9, 2005. Retrieved from http://www3.ksde.org/commiss/february_2005_board_minutes.htm, February 26, 2007.

¹⁴⁵ Republican Board of Education member Steve Abrams, District 10. Personal interview, August 7, 2006. The Board minutes of February 9, 2005, reflect Dr. Abrams’s statement to the effect that the hearings were first proposed by Intelligent Design Network attorney John Calvert.

Absolutely. But what's not included in that are the thousands of dollars in staff expenses and the thousands of dollars involved in fees such as transcripts. And so it was by any reasonable measure an abuse of the constitutional oath to think first of Kansas children that these individuals took, and while I definitely wanted to challenge the intelligent design witnesses, I felt that it would've been very inappropriate of me to accept a penny and I did not.¹⁴⁶

Moderate Bill Wagnon later described the hearings as:

a raid on the public treasury. It was the most unconscionable action that you can imagine because we already had statewide hearings on the science standards as they were proposed by the science writing committee, we had people all over the state talking about what was good, what was bad, [and] we had the proposals that had already gone through the normal processes for deciding what was to be in the science standards.¹⁴⁷

That night, upon arriving home from the meeting, moderate Sue Gamble contacted Brown University biologist Kenneth Miller. The author of a popular high school biology textbook,¹⁴⁸ Dr. Miller has also written a popular treatment of the evolution-creation debate from the perspective of a practicing Christian¹⁴⁹ and appeared in the media on numerous occasions to discuss evolution and creationism.¹⁵⁰ He would later testify in federal court as a witness against the teaching of Intelligent Design in Dover, Pennsylvania. Mrs. Gamble sent him a brief e-mail, explaining what had happened at that day's meeting and asking him to urge other scientists to boycott the hearings if asked to testify. "The longer I have thought about the language in this resolution," she wrote:

¹⁴⁶ Pedro Irigonegary, Partner, Pedro Irigonegary and Associates. Personal interview, August 7, 2006.

¹⁴⁷ Democratic Board of Education member Bill Wagnon, District 4. Personal interview, August 8, 2006.

¹⁴⁸ Kenneth R. Miller. & Joseph S. Levine. *Biology*, Saddle River, NJ:Prentice-Hall, 2006.

¹⁴⁹ Kenneth R. Miller., *Finding Darwin's God: A Scientist's Search for Common Ground between God and Evolution*, New York, NY: HarperCollins, 1999.

¹⁵⁰ For example, he appeared on January 12, 2006 episode of Comedy Central's *The Colbert Report*.

the more I am convinced this is only going to be an attempt to showcase the board's biased views. So, here is my suggestion: Please do not participate in this activity if you are invited. Also, since you are a major player at the national level I would encourage you to ask that no legitimate scientist participate.”¹⁵¹

Dr. Miller replied:

Sue, you asked to know my views. Well, I'm a ham, and I love the spotlight (I admit this freely..... the philosopher's first command is to 'know thyself'). But I agree completely with you. This sounds like a setup (if not an ambush). And I think you're quite right in not providing them cover. I'm with you (even if it does cost me a free, all expenses paid trip to Topeka... sigh!). Thanks for the heads-up. I talked this over with Nick Matzke at NCSE, and he feels the same way. Thanks for your leadership!¹⁵²

Mrs. Gamble later said:

I remember telling [my daughter] Kelly that I did this and she said Mother, I cannot believe that you did such an arrogant thing. And I said, I don't think it's arrogant. And she said, to think that you could influence the entire scientific community and I said, all I was trying to do is influence one man. He's the one who is going to influence scientists, he's the guy with all the clout in the scientific community. What he did with it is up to him. I was just trying to influence one person. I just happen to know that he is fairly influential and he did say, your argumentation is sound.¹⁵³

Their collective efforts paid off. “After much consideration,” wrote American Association for the Advancement of Science CEO Alan Leshner on April 12, 2005:

AAAS respectfully declines to participate in this hearing out of concern that rather than contribute to science education, it will most likely serve to confuse the public about the nature of the scientific enterprise.

The fundamental structure of the hearing suggests that the theory of evolution may be debated. It implies that scientific conclusions are based on expert opinion rather than on data. The concept of evolution is well-supported by extensive evidence and accepted by virtually every scientist.¹⁵⁴

¹⁵¹ Personal correspondence, February 9, 2005.

¹⁵² Ibid. Punctuation in the original.

¹⁵³ Republican Board of Education member Sue Gamble, District 2. Personal interview, August 3, 2006.

¹⁵⁴ Leshner, Alan, personal correspondence to George Griffith, April 12, 2005. Retrieved from <http://www.aaas.org/news/releases/2005/0412kansas.pdf>, February 16, 2007.

Ultimately, not one scientist testified in defense of the majority report recommendations. Dr. Abrams was disappointed. “My contention,” he said, “is that if they have all the evidence on their side, blow us out of the water and make us look like idiots with the evidence. Not just by casting aspersions, but with the evidence. But they didn’t do it.”¹⁵⁵

The minutes of February 9 concludes with Dr. Case and Mrs. Williamson, concerned about the science writing committee’s scheduled public hearings in light of the new petition, asking:

if the science standards writing committee should refer comments dealing with the controversial issues to the Board subcommittee. Chairman Abrams replied that he would want the committee to run the public hearings as they wished and that the website could handle the overflow of comments. Mrs. Morris added that the committee’s hearing were [sic] for the public to comment and the Board hearings would be for the experts. This was echoed by Mrs. Martin who added that the website would also allow the public to have a voice.”¹⁵⁶

The science writing committee issued its second draft of the standards in March, 2005, largely unchanged from Draft One. The second draft defined science as “a human activity of systematically seeking natural explanations for what we observe in the world around us.”¹⁵⁷ The Minority responded with its own revisions, chief among them a different definition of science. “Science,” they wrote, “is a systematic method of continuing investigation, that uses observation, hypothesis testing, measurement,

¹⁵⁵ Republican Board of Education member Steve Abrams, District 10. Personal interview, August 7, 2006.

¹⁵⁶ Kansas Board of Education meeting minutes, February 9, 2005. Retrieved from http://www3.ksde.org/commiss/february_2005_board_minutes.htm, February 26, 2007.

¹⁵⁷ Kansas Science Education Standards, March 9, 2005. Retrieved from <http://www.kansasscience2005.com/> February 26, 2007.

experimentation, logical argument and theory building, to lead to more adequate explanations of natural phenomena.”¹⁵⁸ Gone was the phrase “natural explanations.” In the letter accompanying their proposed revisions, the Minority wrote:

One of our proposals was accepted and another was approved by a vote of 14 for, 3 against and 6 abstentions. The most significant, dealing with the definition of science, only narrowly failed to secure a majority by a vote of 10 for, 12 against, and one abstention.

Thus, a disagreement continues to exist within the Science Writing Committee with respect to very substantive issues relating to the inherently controversial issue of teaching students about the origin of life and its diversity. There is general agreement that standard biological evolutionary theory must be presented. However, Draft 2 continues to implicitly discourages [sic] any critical analysis of the theory that would “weaken” it. This implication is reinforced by the absence of any learning objective that would inform students of important evidence inconsistent with evolution’s critical assumptions and historical narratives. This is in spite of agreed upon standards that explicitly state that students should critically analyze all scientific theories and consider competing alternatives.¹⁵⁹

Bill Wagon was incensed:

[T]o think that the state Board of Education then... was going to decide who gets to define science was in my mind nonsense. And that’s basically what it resolved down to. Who’s going to be able to define science? It was my view and other moderates’ views that the National Science Foundation decides science, that’s not the job for me to do. The Discovery Institute kind of people are very much interested in redefining the nature of science to move it into extra-normal kinds of things, extra-natural kinds of things, metaphysical kinds of things rather than physical. So they had this kangaroo court in which they brought in all sorts of quasi-scientists saying, basically, claiming that they spoke for science and that Darwin was fundamentally a fraud and that we need to teach the controversy.¹⁶⁰

Whatever controversy existed pertaining to evolution's validity has long since

¹⁵⁸ “Proposed Revisions to Kansas Science Standards Draft 21 With Explanations.” Retrieved from <http://www.kansasscience2005.com/>, February 26, 2007.

¹⁵⁹ Harris, et al., March 29, 2005. Retrieved from <http://www.kansasscience2005.com/Cover%20letter%20for%20Proposed%20Rev%20Draft%202.pdf>, February 26, 2007.

¹⁶⁰ Democratic Board of Education member Bill Wagon, District 4. Personal interview, August 8, 2006.

faded from discussion in mainstream science.¹⁶¹ Moreover, evolution as a highly-charged educational policy issue and perceived threat to the Christian faith is relatively new phenomenon.¹⁶² Barely twenty years separated Henry Morris's founding of the Bible-based Institute for Creation Research in 1970 from Phillip Johnson's initial formulation of the theory of Intelligent Design in his 1991 book *Darwin on Trial*. Johnson's argument, that evolution as taught by scientists today is nothing more than an applied philosophy of materialism, found a loud political voice in the objections raised by the committee Minority. The members of the Minority, among them several working scientists and K-12 science teachers, maintained that true scientific objectivity demanded answering Phillip Johnson's challenge to evolution's dominance in science.

At the May, 2005 hearings, Discovery Institute Senior Fellow Jonathan Wells said of the Minority's proposal:

[T]he minority view, in my opinion, is actually putting Kansas back in the mainstream of American science education. And as a scientist myself – and I have the data here which I'll hand that [sic] to you later – as a scientist myself I hear this. I would not like to see science become an enterprise where we're told at the outset what sorts of explanations we're supposed to find. For me science is an exciting, open ended [sic] search for truth. And the way that's conducted is through hypothesis testing. And I think the minority view replacement definition here is much more in line with that than the definition of science as seeking

¹⁶¹ See, for instance, *Evolution: the Triumph of an Idea* (2001) by Carl Zimmer and *What Evolution Is* (2001) by Ernst Mayr for detailed, non-technical analyses of the mechanisms of evolution and its support by scientific consensus. Mayr writes of his book, "this volume is meant for three kinds of readers... finally, my account is directed to those creationists who want to know more about the current paradigm of evolutionary science, if for no other reason than to be able to better argue against it." Preface, XIII.

¹⁶² Peter Bowler writes, "surprising as it may seem in today's world of revived Biblical literalism, there was little opposition to Darwin's book on the grounds that it challenged the Genesis account of creation. The geological controversies in the early decades of the [nineteenth] century had convinced most educated people that the text of Genesis must be understood in a nonliteral way that would be consistent with the development of the earth over a vast period of time. The challenge of Darwinism was that it turned nature into an amoral chaos showing no evidence of design by a creator." p. 202.

natural explanations.¹⁶³

The Minority's letter concludes:

On behalf of all the patrons of Kansas public education, we thank you for this wonderful opportunity to explain why change is needed in this highly charged area of public education. The issues are exceedingly complex and laden with much misunderstanding and misinformation. For the most part *our case has had no forum* because it has been inappropriately characterized as religion in disguise. There is a religious problem, but it is one that the proposals seek to eliminate rather than to exacerbate.¹⁶⁴

In 1998, the Discovery Institute's Center for the Renewal of Science and Culture's *Wedge Strategy* document was leaked to the public.¹⁶⁵ The *Wedge Strategy* laid out five- and twenty-year master plans for the Intelligent Design movement, culminating in the establishment of Intelligent Design as "the dominant perspective in science."¹⁶⁶ Its first five-year objective was to see a "major public debate between design theorists and Darwinists (by 2003)." With the Minority's circumvention of the science writing committee's established procedures and Dr. Abrams's insistence on holding public hearings on the standards, that "major public debate" would at last take place in Kansas, albeit two years behind schedule.¹⁶⁷

¹⁶³ Transcript of the Hearings, May 6, 2005, pp. 61-2.

¹⁶⁴ Harris, et al., March 29, 2005. Retrieved from <http://www.kansasscience2005.com/Cover%20letter%20for%20Proposed%20Rev%20Draft%202.pdf>, February 26, 2007. Emphasis added.

¹⁶⁵ The Center has also since changed its name to The Center for Science and Culture.

¹⁶⁶ *The Wedge Strategy*, 1998. The Center for the Renewal of Science and Culture.

¹⁶⁷ One could argue that the public debates leading to the 2002 decision by the Ohio Department of Education that permitted individual districts to decide whether or not to teach Intelligent Design constituted the first "major public debate" on the issue. In Ohio, however, advocates on both sides directly addressed the Board about the strengths and weaknesses of theirs and their opponents' positions. The Kansas hearings would mark the first time that supporters of evolution and Intelligent Design advocates directly squared off in a trial-like setting with the chance to state their positions and cross-examine their opponents. The Kansas hearings also took place five months before the *Kitzmiller v. Dover* Intelligent Design trial was scheduled to begin in the United States District Court for the Middle District of Pennsylvania in Harrisburg.

The moderates attempted to cancel the hearings during the March, 8, 2005 Board meeting. Following a mid-morning break, Bill Wagon moved that the Board dissolve the three-member science hearings committee. Carol Rupe objected to using public money to fund the hearings while Sue Gamble noted that “because it appeared that there were six votes to pass the science standards, the Board should proceed and not try to legitimize something that couldn’t be legitimized by holding the hearings... [and that] the board science hearings would not serve the purpose they were purported to serve.”¹⁶⁸

Democrat Janet Waugh asked why John Calvert was “involved in the science hearing committee meetings since he was not part of it or of the science standards writing committee. She further asked why, if the minority had an attorney representing them, the majority did not also have legal representation.”¹⁶⁹ Dr. Abrams responded that Dr. William Harris, as the leading member of the committee Minority “had asked Mr. Calvert to speak for the minority.”¹⁷⁰ Mrs. Waugh responded that at Board meetings, “others are not allowed to sit at the table with [Board members] and that the Board should find out why the subcommittee needed legal representation.”¹⁷¹ The minutes reflect no immediate response to this question but Kathy Martin later suggested that:

perhaps Mr. Calvert has been asked to be involved because he had some expertise and interest in what the subcommittee of the Board is doing in trying to allow some critical analysis of evolution. She indicated she did not intend that intelligent design be taught or included in the standards but that there was interest in it. She said that she felt it should be allowed to be discussed in a science class

¹⁶⁸ Kansas Board of Education meeting minutes, March 8, 2005. Retrieved from http://www3.ksde.org/commiss/march_2005_board_min.htm, February 27, 2007.

¹⁶⁹ Kansas Board of Education meeting minutes, March 8, 2005. Retrieved from http://www3.ksde.org/commiss/march_2005_board_min.htm, February 27, 2007.

¹⁷⁰ Ibid.

¹⁷¹ Ibid.

if a child was interested and the teacher thought there was some interest in it, but *that it shouldn't be included as part of the curriculum*. She added that there is the potential that Kansas will be sued at some point by the ACLU or others and that Mr. Calvert's expertise in knowing what is involved could be used to advise the minority of what they might need to do or not do to be protected. She added that the Board was lucky to have legal representation because perhaps other legal issues could face them. She indicated that, if the controversy could be settled once and for all by the Kansas State Board, then perhaps other states wouldn't have to endure it as well.¹⁷²

Mrs. Martin's defense of Mr. Calvert came in direct response to two issues raised by Sue Gamble. Mrs. Gamble stated her concern about the politicization of the scientific process in general and of the Kansas science standards in particular. She also expressed suspicion of the motives of Mr. Calvert and Dr. Harris.

Mrs. Gamble stated she was confused because, while members of the Board had said they have no interest in including Intelligent Design in the science standards, and Dr. Harris had said that was not the purpose of the minority report, Dr. Harris sits on the Board of Directors of the Intelligent Design Network and Mr. Calvert organized and founded it. She said it appeared disingenuous to pretend that the object was not to include intelligent design in the standards, just as it had been said recently that the 1999 standards had not weakened evolution. She added that leaving a word in a document while removing all processes that refer to the word weakens a theory.¹⁷³

Mrs. Gamble also objected to her tax dollars being spent on such an endeavor. Conservative John Bacon retorted "that public education is funded with public money and that people in general want the ability to have set policy in play that expends their money as they believe it should be spent... [he] added that he had a problem with those who think only evolution should be taught, [just] because the Board is spending public

¹⁷² Ibid. Emphasis added.

¹⁷³ Ibid.

money.”¹⁷⁴ Conservative Ken Willard added:

there was a lot of outcry and fear in the science community about recognizing there was a debate over the issues the Board was considering. The Board [he said] would face an incredible outcry if it failed to recognize that there was a debate. He noted that no damage would be done to science in the classroom to recognize that debate...

He stated he was not being asked to make decisions about the validity of science, but the Board does have to face and accept that there is debate and handle it as effectively and positively as possible for everyone’s benefit. He noted that no one disagrees that religion shouldn’t be taught in the science classroom, but, with the debate raging around the country, it would be foolish for the Board to ignore it and force students in the classroom to ignore it, too, and not discuss it.¹⁷⁵

In response, Sue Gamble argued that the controversy mentioned by Mr. Willard was entirely manufactured by Intelligent Design advocates.

She stated it is wrong of intelligent design proponents to say there are competing theories, because intelligent design is not a theory any more than evolution is a fact. She stated that evolution was a theory that encompassed a lot of facts and has had the support of the science community over the past 150 years. She noted that there is controversy and disagreement within the science field over many things, but not whether evolution is real. She again urged the Board members who favored the minority report to use their six votes and let the Board move forward and not waste money on the hearings. Mrs. Gamble also suggested that the controversy could be addressed through teaching strategies instead of changing the definition of science.¹⁷⁶

Three times during this meeting, Sue Gamble asked the six-member majority to simply cast their votes and spare the Kansas taxpayer the expense of the hearings. Given the majority's refusal to consider her request and in light of the *Wedge Document's* desire to see a public debate on the subject, the importance of holding the hearings becomes clear. Steve Abrams said:

¹⁷⁴ Ibid.

¹⁷⁵ Ibid.

¹⁷⁶ Ibid.

we were going to have people come, as scientists, Ph.D.'s. These are for the most part people that are writing and involved with the actual evidence of creation, not creation, discovery, okay? And these people were allowing themselves be questioned. So if there was nothing to their evidence, evolutionists could have come and blown them out of the water: "that's the dumbest thing I've ever heard, there's no truth to that, that is an absolute figment of your imagination, that's a fabrication." If there was nothing to it, then have them defend it... Well, that was what I had in mind. Have them present evidence and then if there are some questions presented by the loyal opposition, defend it.¹⁷⁷

Dr. Abrams's inadvertent¹⁷⁸ use of the phrase "evidence of creation" to describe the efforts of Intelligent Design advocates is curious. He stated that the issue before the Board was:

how do you teach evolution? Do you teach it dogmatically? That is, is it the end-all-be-all or is there evidence to say that it may not be what we believe it to be? And from peer review journals and articles, I mean this is not about just pulling out Scripture, it's not that. It's about what is good science. What is empirical science, what is observable, measurable testable repeatable and falsifiable. And that's the objective of what I have tried to accomplish.¹⁷⁹

Yet, on September 29, 2005, he was quoted in the Madison (WI) Badger Herald saying, "if you read the Bible, and clearly understand those words, and if you clearly read and understand neo-Darwinian biological evolution, at some point in time you have to decide which one you believe... Personally I believe it as it's told in the Bible."¹⁸⁰ He has also made no secret of his faith. At the end of our interview, I expressed my gratitude for his willingness to speak with me:

¹⁷⁷ Republican Board of Education member Steve Abrams, District 10. Personal interview, August 7, 2006.

¹⁷⁸ One presumes.

¹⁷⁹ Ibid.

¹⁸⁰ Gendall, September 29, 2005. The Badger Herald. Retrieved from http://badgerherald.com/news/2005/09/29/kansas_leans_away_fr.php, February 27, 2007.

Jones: because I wanted your side on things. Is there any religious motivation at all or?...

Abrams: I have never denied that I am a Christian and I point-blank say it, yes.

Jones: I can turn [the tape recorder] off, too, if you would like.

Abrams: I have never denied that I'm a Christian. But at the same time, I have had a lot of science, science education and I fully understand what it takes to be a scientist. I like science and primarily, as a veterinarian, my background primarily was in the biological sciences as you might guess. So I understand what it takes to do that and I further understand that there is quite a bit of evidence that does not support the origin of evolution and we have even tried to go so far as to try and to... [pause] part of the problem is that the definition of words, words get you into a lot of problems sometimes...

I contended that if you go back to the definition of science that we have a great definition of science that is based upon empirical science. What is observable, measurable, testable, repeatable, and falsifiable. That's what makes good science.¹⁸¹

Dr. Abrams made it clear that, as a practicing veterinarian, he has no problem reconciling his faith with science on topics other than the origins of life. Evolution remains a sticking point, he contends, because it has been consistently presented dogmatically. Shortly after his election to the Kansas Board of Education in 1998, "we received a first draft [of the science standards] in '99, and that's when I said, this isn't good. I mean, as somebody that has had a lot of science, the idea that evolution was to be taught dogmatically just rather [pause]... I didn't like it. There's nothing in science that I believe ought to be taught dogmatically."¹⁸²

His contention echoes arguments made by Intelligent Design advocates such as Philip Johnson, who writes of biologists "scornfully dismissing the entire concept [of

¹⁸¹ Republican Board of Education member Steve Abrams, District 10. Personal interview, August 7, 2006.

¹⁸² Ibid. Ellipses in the original.

Intelligent Design] as ‘religion’ rather than ‘science,’”¹⁸³ and John Angus Campbell who warns that:

militant atheism is an overt and inescapable inference of the evolutionists’ case as set forth by many of evolution's most distinguished public defenders... to pretend that evolutionary science, as understood by the vast majority of its most accomplished advocates, is religiously neutral will advance neither the public understanding of science nor the public discussion of the values and assumptions that inevitably inform its teaching.¹⁸⁴

In the eyes of Kansas-based Intelligent Design advocates, it was therefore crucial to challenge the way in which evolution was presented to the state's public school students. Intelligent Design advocates have also long argued that they are not seeking to introduce creationism into public school science curricula but rather want only to be truly objective regarding the teaching of evolution. Sue Gamble’s repeated requests to simply vote and be done with it were thus doomed to failure. In an attempt to present the Minority's position as open-minded and fair, Dr. Abrams led the call for the hearings.¹⁸⁵

On April 13, 2005, members of the science writing committee addressed the board for the last time before the hearings. Speaking before the Board, committee co-chairs Dr. Steve Case and Mrs. Carol Williamson “pointed out that the consensus on Draft 2 was achieved with the understanding that instead of bringing items from the minority report to a vote again by the whole committee, some of the committee members

¹⁸³ Johnson, Phillip E. *The Wedge of Truth: Splitting the Foundations of Naturalism* (Downers Grove, IL: InterVarsity Press, 2000), 129.

¹⁸⁴ John Angus Campbell, “Intelligent Design, Darwinism, and the Philosophy of Public Education,” in *Darwinism, Design, and Public Education*, ed. John Angus Campbell and Stephen C. Meyer (East Lansing, MI: Michigan State University Press, 2003), 24.

¹⁸⁵ Personal and philosophical differences notwithstanding, none of the Board members with whom I spoke said anything negative about Dr. Abrams's leadership as Board chairman. Carol Rupe said, “I will give Steve Abrams credit, I think he is done a wonderful job with a divided board in making sure that we all were given time [to speak].”

would be submitting a Draft 2 minority report,” for whom Greg Lassey would be speaking.¹⁸⁶ When conservative Connie Morris asked why no one on the majority stepped forward to represent their views, Dr. Case:

indicated he had removed himself from the hearing process and that it was his feeling and that of the majority of the committee that their position stands as the document that has been presented to the Board in Draft 2. He noted that it was a document that represented the consensus view of the writing committee, with each member voting for their own reasons. Because of that, no one member would want to speak for what other members chose to do.

Mrs. Williamson added that the additional information being sought in the subcommittee hearings was political in nature and that the writing committee was not a political body. She suggested that perhaps it would be better for someone to speak to the subcommittee about the legal ramifications of adopting the minority report.¹⁸⁷

When Sue Gamble said “that many scientists have responded to the minority report in writing, pointing out its inaccuracies and misuse of information and their responses have been ignored,” Dr. Case:

suggested that those who wrote the minority report were confusing science with science education by stating that science was corrupted by philosophical naturalism. He noted that science education does not deal with philosophy...

he was [also] uncomfortable with the use of the word “natural” because of the way it was being used to market the controversy and would have much preferred that “matter and energy” had been used instead because they are the only things science has the tools to explore. He stated that science does not intersect with philosophical naturalism, which was outside the realm of science, though perhaps some scientists might espouse such a belief. He added that it would be inappropriate for a science educator to do so and communicate it to his students. He also noted that the writing committee members believed philosophy and religion should be discussed, in a philosophy class, not the science classroom.

¹⁸⁶ Kansas Board of Education meeting minutes, March 8, 2005. Retrieved from http://www3.ksde.org/commiss/april_2005_minutes.htm, February 27, 2007.

¹⁸⁷ Ibid.

Ms. Williamson reported that the writing committee had used the language of the scientific community to define science.¹⁸⁸

Mrs. Gamble, perhaps mindful of Dr. Abrams's objection to how evolution was taught, then asked “how one would know if something were being taught dogmatically.”

Dr. Case:

said that one would have to look for examples where someone had crossed the line into a personal belief system. He continued by saying that science deals with uncertainty, with statistics and confidence indicators. If someone were to teach that something was fixed and unchanging that would be to teach dogmatically. Dr. Case indicated that scientists are limited to matter and energy and how it is applied.¹⁸⁹

Greg Lassey, upon taking the podium, spoke at length about the Minority's work, its goals, and the criticism it had received. In so doing, he laid out to the Minority's two-pronged strategy. It was the opinion of the Minority, he said:

that students should understand both sides of the scientific controversy about evolution and should be provided with an opportunity for a neutral and unbiased discussion. In respect to the accusation that the minority was seeking to put religion into the standards, he stated that the opposite was true. They were trying to take the current one out. He explained that a naturalistic bias in the proposed standards had created a religious problem, because it only favored one side of the controversy and, thus, unavoidably impacts religion.¹⁹⁰

He argued that students should not be forced to learn about evolution “dogmatically in a way that supports a philosophical presupposition that has a major impact on religious belief.”¹⁹¹ Describing evolution as an “historical science,” Mr.

Lassey:

¹⁸⁸ Ibid.

¹⁸⁹ Ibid.

¹⁹⁰ Ibid.

¹⁹¹ Ibid.

explained the minority position that students learn the critical distinction between historical and experimental science. He pointed out that historical sciences such as evolutionary biology, paleontology and aspects of geology and anthropology deal with causes of events that were not observed, cannot be observed in the laboratory and occurred in a remote past where evidence was sparse and incomplete. He said that finding evidence supporting an historical theory does not prove the truth of the theory unless the evidence also rules out other competing theories.¹⁹²

After arguing for “the need for science to be conducted objectively, particularly in the area of origins science, where mainstream science now only allows one answer... [and] that there was much evidence that contradicts that and science should follow the evidence regardless of its philosophical or religious implications,”¹⁹³ Mr. Lassey invited Intelligent Design Network attorney John Calvert to address the Board before fielding any questions.

Mr. Calvert argued that:

focused hearings on the issues with experts was a good solution and would allow the Board to make an informed decision about how to conduct a religiously charged discussion with children. Mr. Calvert spoke to an argument that had been made that the hearings were rigged and stated that the only manipulation of the process that he was aware of was a boycott of the hearings by the majority. He said that he didn’t believe the controversy would go away until the Board critically analyzes the problems in a focused inquiry open to the public and expressed his belief that the hearings would be the best vehicle to accomplish that.¹⁹⁴

Carol Rupe asked Mr. Calvert several questions about his “apparent opposition to science” and expressed her concerns about the number of witnesses Mr. Calvert intended to call for which the Department of Education would be paying. Although Mr. Calvert responded to the issue of religion and science, arguing that “philosophical naturalism

¹⁹² Ibid.

¹⁹³ Kansas Board of Education meeting minutes, April 13, 2005. Retrieved from http://www3.ksde.org/commiss/april_2005_minutes.htm, February 27, 2007.

¹⁹⁴ Ibid.

supports atheism and that the methodological naturalism taught in the standards was worse, as the presenters at the hearings would show,” the minutes do not reflect any response on his part concerning the question of taxpayer money.¹⁹⁵

When Bill Wagnon asked why “the minority report rated special treatment,” Mr. Calvert replied “that the minority report reflects the proposals not embraced by the committee as a whole or by consensus and were substantive issues he thought should be considered by the Board and that the recommendation of the minority are to do something different than the writing committee recommends.” When Dr. Wagnon pressed him on the role of the so-called Santorum amendment as a “coordinating mechanism” for the Minority report, Mr. Calvert sidestepped the question by first disagreeing with Dr. Wagner's proposition and then “point[ing] out that the U.S. Congress embraced the advice in other parts of NCLB that is applicable to the standards that they be secular, neutral and non-ideological. He added that dogma is doctrine that only allows one perspective and can be avoided by showing both sides of the controversy.”¹⁹⁶

When Greg Lassey returned to the podium,¹⁹⁷ Dr. Wagnon asked about “his view [of] the proper definition of science and the role of philosophical naturalism in explaining these ideas.” Mr. Lassey “responded that the minority’s definition opens up science, not

¹⁹⁵ Ibid.

¹⁹⁶ Ibid.

¹⁹⁷ It is unclear from the minutes if Messrs. Calvert and Lassey stood together at the podium or if one remained seated while the other spoke.

stops it, by hearing all sides and not denigrating some other point of view.”¹⁹⁸ When Sue Gamble asked whether or not he “believed evolution was a theistic concept,” Mr. Lassey replied “that it if one makes a leap of faith to believe some if its suppositions, based on a particular faith that certain things are true, it turns evolution into a religion of its own.”¹⁹⁹

Given the Intelligent Design position and the tremendous difficulty scientists have faced attempting to disprove it, Mr. Lassey's two-pronged argument is rhetorically brilliant. First, Intelligent Design, by failing to meet the scientific burden of proof²⁰⁰, has effectively sidestepped scientific attempts to prove it wrong. Intelligent Design advocates have, to their way of thinking, put mainstream scientists in a bind: in order to disprove the Intelligent Design position, scientists would have to conclusively prove the absence of a designer. For scientists, operating from the framework that science is the study of the tangible, measurable world, this is an impossible proposition. It is also no

¹⁹⁸ Kansas Board of Education meeting minutes, April 13, 2005. Retrieved from http://www3.ksde.org/commiss/april_2005_minutes.htm, February 27, 2007.

¹⁹⁹ Ibid.

²⁰⁰ As of this writing, there has yet to appear a single Intelligent Design-based scientific article in any mainstream peer-reviewed scientific journal with one notable, and controversial, exception. In its September 24, 2004, issue, *The Chronicle of Higher Education* reported that in August, 2004, the *Proceedings of the Biological Society of Washington* had published “The Origin of Biological Information and the Higher Taxonomic Categories” by Discovery Institute Fellow and Palm Beach Atlantic University professor Stephen C. Meyer. Following complaints by some of its members, the Society's governing council issued a statement that the paper “was published without the prior knowledge of the council, which includes officers, elected councilors, and past presidents, or associate editors... [and] deemed this paper inappropriate for the pages of the Proceedings.” The Society did not, however, issue a formal retraction. (Monastersky, *The Chronicle of Higher Education*, September 24, 2004.) The then-editor of the *Proceedings*, Richard Sternberg, was accused of bypassing the standard peer-review procedure for a submitted article. On his website, Dr. Sternberg argues that “as managing editor it was my prerogative to choose the editor who would work directly on the paper, and as I was best qualified among the editors I chose myself, something I had done before in other appropriate cases... The Meyer paper underwent a standard peer review process by three qualified scientists, all of whom are evolutionary and molecular biologists teaching at well-known institutions.” He has subsequently refused, citing professional ethics, to provide the names of the three reviewers. He also chronicles, in some detail, the “retaliation and discrimination” he endured from the Smithsonian and other institutions in the wake of this controversy. Retrieved from <http://www.rsternberg.net/Procedures.htm>, March 1, 2007.

coincidence that this argument has a direct parallel to the methodology of legal argumentation.²⁰¹

Second, Intelligent Design advocates have argued in numerous forums that evidence of design is found throughout the natural world. Were it not for the bias towards naturalism found in mainstream science, they claim, theirs would be a commonly-accepted, perhaps even dominant scientific theory. The stubborn reluctance on the part of mainstream scientists to accept the validity of Intelligent Design despite overwhelming evidence to the contrary has led Intelligent Design advocates to claim that evolution, as preached and practiced by the mainstream scientific community, is as much a religious position as a scientific one.²⁰² Philip Johnson writes, “by any realistic definition naturalism *is* a religion, and an extremely dogmatic one. It rests on a basic conviction about ultimate reality that is held by a kind of faith, and it incorporates its own definitions of ‘knowledge’ and ‘reason.’”²⁰³ Thus, to the Intelligent Design advocates’ way of thinking, Intelligent Design is both scientifically unassailable and scientifically valid.

Responding to Sue Gamble's concern that Mr. Calvert was speaking on behalf of the committee when he was not himself a member, Connie Morris:

said that if it was necessary to make a motion that the Board was willing to hear from Mr. Calvert as a representative of the minority group, she would make it. Mrs. Morris moved, with a second by Mrs. Martin, that the Board welcomed the knowledge and expertise of Mr. Calvert to speak on behalf of the minority if they

²⁰¹ I will further discuss this argument in Chapter Seven.

²⁰² Since the collapse of the Intelligent Design argument at the *Kitzmiller v. Dover* trial, Intelligent Design advocates have taken up the second argument as the primary thrust of their position.

²⁰³ Johnson, Phillip E. *The Wedge of Truth: Splitting the Foundations of Naturalism* (Downers Grove, IL: InterVarsity Press, 2000), 148. Emphasis in the original.

so choose. The motion failed on a vote of 4-3-2, with Mrs. Gamble, Mrs. Rupe, and Mrs. Waugh voting “no,” and Mr. Willard and Dr. Wagon abstaining. Mr. Willard indicated he had abstained because he did not think the motion was necessary because anyone can speak to the Board at anytime.²⁰⁴

Ironically, this attempt to show support for Mr. Calvert backfired when Dr. Abrams observed that “because of the failure of the Board to approve the motion to allow Mr. Calvert to speak, he would not be able to give any further responses for the minority at the meeting.”²⁰⁵

Conservative Ken Willard then asked Dr. Steve Case about the boycott of the upcoming hearings. Dr. Case replied “that he was uncomfortable with the word boycott, but there had been a request that people respect the committee’s work and not participate. He added that he would have to say he would support such a boycott,” adding “that the science community was not known for its uniformity of view and there would be no way to enforce a boycott, yet people were still agreeing not to participate. He said he felt the surprisingly uniform response from the scientific community indicated there was not a controversy within it concerning evolutionary theory.”²⁰⁶ Mr. Willard retorted “that it was impossible for alternative theories to get a peer review if they come from outside the mainstream and that the boycott of the hearings indicated to him there was a reason for it.”²⁰⁷

Following a short break, moderate Janet Waugh asked Mr. Lassey why “he thought religious views should be discussed in science class.” In response:

²⁰⁴ Kansas Board of Education meeting minutes, April 13, 2005. Retrieved from http://www3.ksde.org/commiss/april_2005_minutes.htm, February 27, 2007.

²⁰⁵ Ibid.

²⁰⁶ Ibid.

²⁰⁷ Ibid.

Mr. Lassey, again, stated that one religious view was already being presented – philosophical naturalism. To Mrs. Waugh’s statement that evolution is not a religion according to scientists, Mr. Lassey asked why they were they afraid of opposing ideas. Mrs. Waugh pointed out that she had received many e-mails from ministers asking the Board to support the science committee because they don’t see it as it as a religion, they see it as science. Mr. Lassey said many of the ministers he has spoken with don’t have an understanding of the issue and once it is explained that the only explanations allowed are naturalistic explanations, and thus a religion, they have a better understanding.²⁰⁸

At the conclusion of the testimony:

Dr. Wagon asked Mr. Lassey why [the statement] “1 a. Biological evolution postulates an unpredictable and unguided natural process that has no discernable direction of goal; It also assumes that life arose from an unguided process” was added [to the Minority Report]. He also asked Dr. Case why it didn’t belong there. Mr. Lassey said they are just saying what evolution postulates; it is information not generally given to students; and not generally allowed for debate. Dr. Case responded that “unguided” is not a term used in science. Additionally, he said, “postulates” is not a term used as it relates to a scientific theory. Science doesn’t speak to whether something is guided or unguided; it speaks to matter and energy. Dr. Case noted that is was an inaccurate statement and a philosophical issue that doesn’t belong in science.²⁰⁹

Dr. Case's protest, and those of the Board's moderate minority, changed nothing.

Three weeks after this Board meeting, on May 5, 2005, Dr. Abrams called to order the first of three days of testimony from witnesses supporting the Minority report standards. John Calvert, assisted by Edward Sisson of the Washington, DC-based firm Arnold and Porter, represented the Minority while Pedro Irigonegary, of Topeka-based Irigonegary and Associates, represented the science writing committee's majority. The testimony offered and Mr. Irigonegary's cross-examination are discussed and analyzed in the next chapter.

²⁰⁸ Ibid.

²⁰⁹ Ibid.

Chapter Five

The Hearings

This chapter describes the May, 2005 hearings and makes extensive use of publicly available transcripts. The descriptive codes “naturalism,” “Intelligent Design,” “philosophical/religious bias,” and “good science” were used to analyze and organize the following arguments in this chapter: that Intelligent Design advocates were simultaneously presenting and acting out a three-prong “pitchfork” strategy designed to systemically pull evolution down from its pedestal; that the very act of holding the hearings was a direct result of the “Wedge Strategy”; and that Intelligent Design advocates succeeded in altering the Kansas state science standards to their specifications.

The analytical codes of “argumentation,” “fairness,” and “public appeal” are woven together throughout the chapter as two opposing attorneys and twenty-two witnesses presented their respective cases over the course of three days. The “argumentation” code does not refer to the act of arguing per se but rather to its specific nature in this instance. Board Chairman Steve Abrams deliberately constructed the hearings protocol to mirror that of a court of law, where the arguments of both sides were presumed to have equal validity. Such a presentation favored the Intelligent Design advocates. Their arguments fed the “public appeal” tactic by, first, existing at all and, second, repeatedly pressing the “fairness” button and asking only to be heard.

The Pitchfork

Memorial Hall in Topeka, Kansas, occupies most of a city block opposite the southeastern corner of the high-domed state capitol building and one block west of the

Kansas Department of Education. At 8:30 AM on May 5, 2005, Board of Education Chairman Steve Abrams formally opened the first day of hearings about the state's proposed new science standards. "The purpose of the hearings that will be held over the next several days," Dr. Abrams said, "is to assist us as board members in understanding the complex and oftentimes confusing issues regarding science education." The Wedge's "major public debate" was at last underway.

The key word in this last statement is "public," for it was through the general public and, specifically, through the ballot box that Intelligent Design advocates hoped to advance their agenda. By staging a courtroom-like debate, Mr. Calvert and Dr. Abrams intended to present a fair hearing in which both sides had an equal say. Implicit in the staging was that the arguments of both sides also had equal merit, a claim disputed by the overwhelming majority of mainstream scientists. This dispute did not deter the hearings' proponents from pressing forward.

The hearings, however, had not been set up quite as Dr. Abrams had hoped. Two months after Sue Gamble's e-mail to Brown University biologist Kenneth Miller asking him to urge a boycott among mainstream scientists, the American Association for the Advancement of Science formally declined to participate in the hearings.²¹⁰ On May 2, 2005, three days before the hearings were to begin, attorney Pedro Irigonegaray transmitted a fax to the Board's three-member standards hearings subcommittee announcing his intention to call no witnesses to testify on behalf of mainstream science. His words were terse:

²¹⁰ Alan Leshner, personal correspondence to George Griffith, April 12, 2005. Retrieved from <http://www.aaas.org/news/releases/2005/0412kansas.pdf>, February 16, 2007.

Dear Mr. Chairperson and members of the Subcommittee:

I will not call witnesses to testify in the hearings you have scheduled in Topeka, Kansas from May 5 to May 7, and from May 12 to May 14.

I will cross-examine the Minority witnesses, submit exhibits for the record and provide a closing argument.

Please reserve only May 12, 2005, for my presentation.

Cordialmente,

IRIGONEGARAY & ASSOCIATES

[signed]

Pedro L. Irigonegary²¹¹

The hearings, originally scheduled for May 5-7 and continuing May 12-14, were subsequently shortened for the offering of testimony from May 5-7 and closing statements from both attorneys on May 12. The testimony of each witness would follow a prescribed format in which time limits were strictly enforced. First, John Calvert would direct the witness's testimony. Pedro Irigonegaray would proceed with cross examination and then the Board members would have a short period at the end of the testimony for their own questions.

Business commenced quickly. After Dr. Abrams's opening statement, John Calvert called his first witness, Dr. William Harris, the primary author of the Minority

²¹¹ Pedro Irigonegaray, personal correspondence to the Board, May 2, 2005. Punctuation in the original. Retrieved from <http://www.talkorigins.org/faqs/kansas/irigonegaray.html>, March 1, 2007. Due to its discovery in a source not directly connected with Mr. Irigonegaray or his law firm, additional personal correspondence of March 3, 2007, between Mr. Irigonegaray and myself confirmed the authenticity of the fax. "I have visited the site you requested," he wrote, "the words are mine, they are an accurate representation of what I said to the Board and our fellow Kansans in regards to the insanity then confronting our educational system."

report and its chief signatory. As the first witness, he was afforded an additional ten minutes at the beginning of his testimony for opening remarks concerning the overall purpose of the collective witness testimony.

First of all, we hope to show that there is a scientific controversy over two major aspects of evolutionary theory. Chemical evolution, that is the arrival of life from nonlife, and macroevolution, which is the development of complex life forms from simple life forms. Those two issues, I think, are what's on the table.

Secondly, we want to make the point that this controversy has profound implications for religion and philosophy. If this didn't have implications to religion this room would be far emptier today. Because it impacts religion and the reason that this issue does impact religion is because we're dealing with what we call origin science. Origins, the beginnings, where did things come from, where did we come from, where did life come from. These are issues which ever major religion in the world has a story to tell.²¹²

Addressing the purpose of public education with regard to these controversies, he stated:

When the State, via public education, asserts an answer to that question [of origins] from a scientific, or whatever, point of view they have entered a religious arena. They are offering an answer that may be in harmony, that may be conflict with religious issues, religious perspectives. And because of that we now have a religious issue being in the public education system. Now, I think part of our overall goal is to remove the bias of religion that is currently in schools.

We have an obligation we think to teach origin science in the most neutral way possible without religious bias, without naturalistic, or philosophical bias and that way we can do the best science and end up neutral with respect to the constitution... So in a word our hope is that at the end of these hearings we will be allowed to teach the controversy that does exist over origins.²¹³

In these statements, Dr. Harris laid out the three prongs of Mr. Calvert's pitchfork strategy. First, they would challenge the ideological basis of evolution as presented in the

²¹² William Harris, Hearings transcript, May 5, 2005

²¹³ Ibid.

2001 Kansas standards and in mainstream science in general. Second, they would accuse this interpretation of evolution of being a religious rather than a scientific position, one lacking the requisite objectivity for good science. Finally, given the evidence supporting the first two arguments, they would conclude that public schools teaching evolution as presented by mainstream science were in effect mandating the study and acceptance of a specific religious belief.

For a government agency – the public school system – to present a religious dogma as good science was, according to the Minority report witnesses, an unconscionable breach of scientific principles. For that same government agency to then require that children accept that dogma as truth writ large was a moral violation of breathtaking audacity. With this in mind, the Minority intended to point out the purportedly religious nature of the majority's science standards not out of a desire to inject their own ideology into the standards, but rather to present to the students of Kansas a fuller, more accurate picture of contemporary science without the naturalistic bias inherent to the majority's position. In effect, they hoped that their version of the science standards would do to the majority's standards what pitchforks do to steaming heaps of compost.

Prong One: Attacking the Neo-Darwinian Paradigm

The Minority argued that the majority, with their continued endorsement of the 2001 science standards, sought to maintain the naturalistic status quo and shield mainstream evolution from any contradictory evidence. The refusal of mainstream scientists to testify at the hearings was, to the Minority, further proof that the dogma of

evolutionary science was afraid to face legitimate criticism. The Minority report standards thus represented a dramatic and desperately-needed break from the lockstep ideology of the neo-Darwinian²¹⁴ paradigm. That paradigm, as witnesses would state time and again over the next three days, was the philosophy of methodological naturalism. If the strategies Dr. Harris laid out in his opening statements were the pitchfork prongs, the Minority's criticism of naturalism was the handle that bound them together.

Dr. Harris defined methodological naturalism as the way in which:

scientists use the methods of natural investigation. They don't invoke spiritual forces to account for what they observe in the world, they look for natural causes. And that's fine to look for natural causes, but when you don't find any natural causes it's time to fess up and say we don't know instead of saying there was a natural cause, we don't know what it was, [but] we have faith that's what happened.²¹⁵

Dr. Harris then argued that methodological naturalism “really puts blinders, I think, on the search for truth... particularly in the area of origin science.” When Mr. Calvert asked why this was so, he replied:

Because that's a historical science. It doesn't get much more historical than billions of years ago. Nobody was there to know what happened. Nobody watched it. We cannot say with any certainty how anything came to be.

They have every experiment particularly in the origin of life field where they attempted to use, quote, natural environments to produce even some of the simplest chemicals of life. They consistently failed. Since the 1950s they have failed and failed and failed and failed and yet they are still in the textbooks

²¹⁴ In his testimony, Jonathan Wells defined neo-Darwinism as “Darwin's theory combined with modern genetics.” While most mainstream scientists would argue that this definition merely describes, in very simple terms, the science of modern biology, Intelligent Design advocates and other opponents of evolution have used the phrase “neo-Darwinism” to describe an inflexible and outdated scientific worldview, one they intended to challenge during the hearings.

²¹⁵ William Harris, Hearings transcript, May 5, 2005.

presented as the plausible explanation for how life arose. But those experiments have failed. Dishonest in my view to portray failures in the laboratory as successes in the textbook. So methodological naturalism forces that view, in my understanding.

He also spoke about the influence Philip Johnson had on his thinking concerning the origins of life. Mr. Johnson, he said:

made it very clear that the science [of evolution] has become a naturalistic philosophy. What I thought science was simply the unbridled search for the truth using objective means, experiments, hypotheses, the things we all know is science. But it became clear when it came to this area of Darwinian evolution, particularly chemical evolution, macroevolution, those two big pieces of evolutionary theory, that there was a tremendous lack of data and the stories were driven by a philosophy that said everything had to have a natural explanation, you can't let anything non natural get in... Johnson points out in the academy at higher levels of the universities, et cetera, that this is taken as dogma and dogmas have no place in science in my mind.²¹⁶

The hand-marked copy of the draft standards submitted by the Minority to the Board in March, 2005, had made this clear. Warning of the dangers of indoctrination in the science standards, the Minority wrote:

an indoctrination in the philosophy of Naturalism would seem to offend Constitutional principles. It causes the State of Kansas to take sides in a debate that unavoidably impacts both theistic and non-theistic religious beliefs. The antidote to all of these scientific and Constitutional problems is to present additional relevant scientific information regarding origins, evidence that tends to support and refute the competing claims, so that origins science is presented objectively and without religious or naturalistic bias and assumption. This will reflect the best of science while also putting the State in a position of Constitutional neutrality rather than that of an advocate for Naturalism, a philosophy key to non-theistic belief systems.²¹⁷

This position on methodological naturalism was echoed by subsequent witnesses.

²¹⁶ Ibid.

²¹⁷ Proposed Revisions to Kansas Science Standards Draft 2 with Explanations. Retrieved from <http://www.kansasscience2005.com/Marked%20version%20of%20Proposed%20Revisions%20to%20Draft%202.pdf> February 14, 2007.

Cornell University horticulture professor John Sanford offered the following definition. “In terms of methodological naturalism,” he said, “. . . I do believe that methodological implies science and naturalism implies philosophy. So we-- one can, in fact, use the methodology of science to study things without a materialistic or a naturalistic philosophy behind it.”²¹⁸

Asked if methodological naturalism limits scientific inquiry to unguided processes, biochemist Dr. Bruce Simat replied, “I think it has to. Methodological naturalism then, by virtue of its name, states that nature is doing this. So that, in fact, it not only is unguided, it has to be unguided because we cannot find-- we cannot find an intelligent molecule, we cannot find an intelligent force that would connect these nucleotides up to teach other.”²¹⁹

Chemist John Millam drew a clear distinction between proper science and methodological naturalism. “I’m going to show [that] my primary topic,” he said, “is, what is science and, particularly, science versus methodological naturalism. . . . Methodological naturalism is a philosophy that arose in the mid 18th century. So it is something distinct from science developing after science was well established.”²²⁰

James Barham, a Ph.D. candidate in the philosophy of science at the University of Notre Dame, described two types of naturalism. “On the one hand,” he said:

we use the word naturalism to mean that the natural world, the universe as a whole is complete and that we should not look outside of it to some transcendent realm for a causal explanation in short. Naturalism is opposed contrastably [sp]

²¹⁸ John Sanford, hearings transcript, May 6, 2005. Punctuation in the original.

²¹⁹ Bruce Simat, hearings transcript, May 5, 2006. Punctuation in the original.

²²⁰ John Millam, hearings transcript, May 6, 2006.

with the supernatural, theism. On the other hand, sometimes we use it to mean avoiding any normative language, avoiding discussing things in terms of purpose, design, intelligence, avoiding these categories which we felt not to be properly part of science. I myself am a naturalist in the first sense, but I am denying that the second sense of naturalism need be the case.²²¹

With this definition, Mr. Barham drew a further distinction between purpose, design, and intelligence on the one hand and the realm of the supernatural on the other. Intelligent Design has carefully laid out its arguments in favor of the purposeful design of biological organisms without reference to a religiously understood divine being. By delineating the work of an intelligent designer from that of a supernatural, theistic entity, Mr. Barham separated Intelligent Design from the work of a divine creator. This testimony was, in effect, a summation of the argument from design.

Two other witnesses argued during cross examination that naturalism was itself a religious position and therefore inappropriate in any scientific setting:

Pedro Irigonegary: ...you would agree with me, would you not, that there are thousands, thousands of individuals who are scientists who are able to do their scientific research and work, understand evolution for what it is and not have their religious views threatened. You would agree with that, would you not?

Edward Peltzer: No, I would not. Naturalism is a religious view and people that are basing their interpretation of science and they're doing their science on it are, in fact, practicing their religion. Those thousands of scientists are trying to impose naturalism on the rest of the public.²²²

...

Pedro Irigonegary: And you would define naturalism as a philosophy that does not allow room for a religious belief?

John Sanford: Well, naturalism is a religious belief, but it doesn't leave room for

²²¹ James Barham, hearings transcript, May 7, 2006.

²²² Edward Peltzer, hearings transcript, May 6, 2005

God.²²³

Dr. Stephen Meyer, whose CV submitted to the Board immediately prior to the hearings listed his controversial 2004 article in the *Proceedings of the Biological Society of Washington* as his most recent publication, was perhaps the most blunt in his assessment of methodological naturalism's place in science. "This idea," he said, "that... to be scientific you must limit yourself to a naturalistic explanation, the so-called principle of methodological naturalism cannot be justified by any non circular criteria of scientific method."²²⁴

The witnesses' objections to the presentation of methodological naturalism in evolutionary science focused primarily on the question of its objectivity. No scientist, they argued, could legitimately claim the mantle of scientific objectivity if he or she already had a specific answer in mind prior to beginning the process of inquiry. "If you only have one solution allowed to the question of where did we come from," Dr. Harris said, "and the answer to that question is, in broad strokes, we came by some naturalistic undirected, unguided process that essentially is an accident... That view is a naturalistic world view that presumes that undirected, unplanned causes were at work from the very beginning and what we have here today on earth is simply luck acted upon by law."²²⁵ Drawing a parallel between methodological naturalism and religion, he said, "if science weighs in with a-- one perspective only, based on a philosophy that says it had to be by

²²³ John Sanford, hearings transcript, May 6, 2005..

²²⁴ Stephen Meyer, hearing transcript, May 7, 2006. Regrettably, Dr. Meyer did not provide, nor was he asked to offer, a definition of "non circular criteria of scientific method."

²²⁵ William Harris, hearing transcript, May 5, 2006.

natural processes, otherwise it's not science, then they're presenting data that's, I think, philosophically driven, not scientific and data driven. And so that's a problem and you run into an immediate religious conflict.”²²⁶

Methodological naturalism, then, as defined by the Minority's witnesses had no place in either a science classroom or in any truly objective scientific discourse. The identification of evolution with a philosophy of naturalism was critical to the Minority's arguments. If mainstream evolution was represented by a tree of life, methodological naturalism lay at its roots providing the needed fuel for further growth. Once equipped with a map of the root structure, one could take a pitchfork to those roots and attack them steadily, methodically, and systematically, ripping them from the earth one at a time. The tree of mainstream evolution would, Intelligent Design advocates believed, subsequently lose its nurturing ideological foundation and eventually starve and collapse under its own dead weight.

Intelligent Design advocates argued that by presenting the evidence of design found in nature, and by therefore challenging the existing evolutionary paradigm, they are bringing badly-needed objectivity to science. “The mission of [the] Intelligent Design Network,” Dr. Harris said:

has, from the beginning, been seeking institutional objectivity - emphasize objectivity and institutional - in origins science. The image that we use is simply a balance. And the idea is to place the evidence for a design in one of the pans, place the evidence for undirected blind evolution or no design, which is essentially what evolution is, in this pan and see how the data weighs. And don't come to the balance with any religious preconceptions, don't come with any naturalistic preconceptions, and simply let the data fall where they will...

²²⁶ Ibid. Punctuation in the original.

...everybody has their own personal bias and you can't get around that. And scientists need to recognize their own biases and put them away when they're doing their work, but-- institutions of science too have biases. And public education is an institution, public science education is an institution and we think it should not have any biases the way origins is presented. So that's what the institutional has to do with it.²²⁷

University of Georgia biochemistry professor Russell Carlson noted that:

science includes searching for causes of the present effects, which is like how [a] bacterium is infective or virulent. And this can be investigated in the laboratory. And this is a-- often referred to as operational science. And in that-- in the search science, which includes both of these historical and operational aspects, should be driven by a-- by an objective observation of the facts and seek the most accurate explanation based on, I believe, the criteria that was stated in the revision, which is hypothesis testing, measurement, experimentation, logical argument and theory building.

In this effort, and we-- in particular with origin science, explanations of evidence have-- have medical-- metaphysical implications. And it's really inappropriate to restrict explanations to those that only support one metaphysical position, which is materialistic and naturalism [sic]. And that's the position that nature is all there is.²²⁸

Indeed, the Minority Report's language specifically targets what the Minority claims is the naturalistic bias found in the presentation of evolution.

The Minority Report does not mandate the teaching of Intelligent Design. Intelligent Design is not a code word for creationism. Teaching the arguments against evolution is not a code word for creationism. It is simply good science education. At this point, however, we do not think it's appropriate to mandate the teaching of Intelligent Design. It's a fairly new science, it's a modern science of Intelligent Design, it's a maturing science and perhaps in time it would be there, but at this point we think mandating it is inappropriate.

We do not, on the other hand, think that it should be forbidden that every student teacher feels interested or wants to bring up the issue didactically in a science setting, that should be up to them and they should be allowed to do that, if they

²²⁷ William Harris, hearing transcript, May 5, 2006.

²²⁸ Russell Carlson, hearings transcript, May 6, 2005. Punctuation in the original.

want to do that.²²⁹

Eighth grade science teacher Jill Gonzalez-Bravo, who had earlier spoken of her conversion from secular humanism to Christianity, agreed. “My faith,” she said:

has played an integral part of who and how [sic] I view my students and the respect I give them, but as a professional in the public school my job is not to present content from only my world view. This would hamper academic freedom and not foster my role as an objective educator. My job is not to change their thinking it is to encourage them to think and seek out knowledge from a variety of resources and to make informed decisions.²³⁰

When Mr. Calvert asked how the new standards in the Minority report would impact classroom teachers, she replied:

It is my opinion that the standards would lead to an environment that would allow for greater academic freedom...

I allow for academic freedom on a variety of subjects so why not evolution? So if a student showed interest into some aspect of the occult that was dealing with an area of what they perceived science to be, I would encourage them to apply the steps of scientific method and research this interest. It is at that point looking at the data, whether they could gather data or not, that the students-- they would have to gather data, but that the students would need to draw their own conclusions. I take issue with invalidating anyone's thoughts because they may derive from a world view counter to mine.²³¹

Mustafa Akyol, a Turkish science writer and a fellow of the Science Research Foundation²³², drew parallels to religious indoctrination in the Muslim world. After asking two Muslim friends in the audience to raise their hands to show support for his

²²⁹ William Harris, hearings transcript, May 5, 2005

²³⁰ Jill Gonzalez-Bravo, hearings transcript, May 6, 2005.

²³¹ Jill Gonzalez-Bravo, hearings transcript, May 6, 2005.

²³² The Science Research Foundation is described in the short biography of Mr. Akyol distributed to Board members as the “main champion of the Intelligent Design (ID) cause in Turkey.” Copy furnished by Mrs. Kathy Martin, August 9, 2006.

actions²³³ and after speaking about Muslim concerns regarding methodological naturalism, he stated that the debate over objectivity in science education “is about the whole civilization issue. And I think-- I don't mean that science education should be changed in order to change the hearts of-- in order to win the hearts and minds of Muslims. No. It should be saved from bias. It should be saved from dogmatic materialism. It should be just objective.”²³⁴

Offering his own testimony at the end of the third day of hearings, Mr. Calvert spoke of the objectivity of the Minority report.

Now, what the Minority Report seeks to do with respect to that religious controversy is to-- is to use what science calls for at its core, and which is particularly necessary in origin science and historical science, is a good measure of scientific objectivity. And when you are objective, you allow students to show evidence that supports and that does not support a particular theory.

It is important that we're talking about objectivity at the institutional level. Every scientist is going to have his own bias. It's just like when we go to a courtroom, we're looking for an unbiased adjudicator of the particular result...

What is so fascinating about that approach is that when you do an objective approach, what you do is you take the bias out.²³⁵

²³³ “I'm not just the only Muslim here thinking like this,” he said. “We have two guests. I have my two friends. Can you please show your hands? These, my friends, are living in Kansas state, in Kansas area [sic]. They're here to support the Minority Report today.” Mustafa Akyol, hearings transcript, May 7, 2005.

²³⁴ Mustafa Akyol, hearings transcript, May 7, 2005. Punctuation in the original. While the other witnesses were either practicing scientists or educators, Mr. Akyol's biography and CV – itself little more than a description of his work with the Intelligent Design movement in Turkey – revealed no formal background in science or education. He holds degrees in political science (BA) and history (MA) and works professionally as a newspaper columnist. Given the Minority's vocal protestations that Intelligent Design was neither in the proposed standards nor a motivating factor for their change, Mr. Akyol's selection as a witness in the hearings is puzzling. Mr. Irigonegaray's assessment of Mr. Akyol was less than charitable. “He was awful,” Mr. Irigonegaray said in his personal interview with the author on August 7, 2006. “This is a man that denies the slaughter of thousands of innocent people by the Turkish government, this is an individual that came to us to tell us that one way to perhaps do away with terrorism is to teach Intelligent Design our schools. The man was a fraud.”

²³⁵ John Calvert, hearings transcripts, May 7, 2005. Punctuation in the original.

“I believe,” John Sanford, professor of horticultural sciences at Cornell University, said of the proposed standards, “that the minority report where I’ve seen word-for-word comparisons and changes that have been made seems to take a small step toward greater objectivity and greater intellectual freedom for the teachers and the students, which I think is really good.”²³⁶

In a subsequent interview, conservative Kathy Martin made her feelings equally clear.

I just do feel like students ought to have an honest, objective presentation in their science classes. And what was brought home to me by the other folks that had been dealing with this issue for a long time is the idea, fact or not, that there are some folks trying to influence young people, students and even up to college, with a secular humanism type worldview. And evolution fits really good [sic] into their scheme of things which is, I suppose, that's how we all kind of do it, we use our worldview to influence how we act or what we tell other people.

But they were then using it in such a way that they were denying, or actually refusing to acknowledge, any other evidence that was brought in by other folks and they would ridicule other folks and, I would go, that's, you know, that's just not the way I operate. If there is something authentic, let it be heard and then true science will win out in the end because you have to be able to prove it and you have to be able to falsify it and you have to be able to replicate it.²³⁷

Objectivity, in other words, was the hallmark of proper scientific inquiry. In order to be truly objective, the Minority argued, scientists had to concede the potential falsifiability of any given theory, something they charge mainstream science has failed to do regarding evolution. If a scientific theory was immune from falsifiability, it followed, it then crossed the line into dogma and ceased to be objective science. Intelligent Design, on the other hand, could be falsified in what Lehigh University biochemist Michael Behe

²³⁶ John Sanford, hearings transcript, May 6, 2005.

²³⁷ Republican Board of Education member Kathy Martin, District 6. Personal interview, August 9, 2006.

described as a “pretty straightforward” manner. “Many people,” he said, “think Intelligent Design is unfalsifiable, but it turns out it isn't. And since my book²³⁸ has come out, many scientists have been attempting to falsify it. They point to a number of experiments in the literature which they say argue against it.”²³⁹ Intelligent Design, by this definition, while not explicitly advocated in the standards, nonetheless meets the definition of objective science and could therefore at some future date be incorporated into the Kansas science standards.²⁴⁰

Asked about the falsifiability of evolutionary theory, Dr. Jonathan Wells, a Senior Fellow at the Discovery Institute's Center for Science and Culture with Ph.D.'s in both religious studies (Yale) and molecular biology (Berkeley), argued:

neo-Darwinian evolution has left the realm of science. It now functions as an assumption, an underlying given, a dogma. It cannot be falsified. Nothing can

²³⁸ Michael J. Behe, *Darwin's Black Box*, (New York, NY: Simon & Schuster, 1996). Dr. Behe first advanced the argument of “irreducible complexity,” one of the pillars of the Intelligent Design argument, in this book.

²³⁹ Michael Behe, hearings transcript, May 7, 2005. One such argument, Dr. Behe noted in his testimony, came from blood-clotting expert Russell Doolittle, who “advanced an argument against my idea of irreducible complexity with respect to the blood clotting system. And it turns out his argument was incorrect because he had simply misread the paper that he thought supported his ideas.” In *Darwin's Black Box*, Behe argues that “at no step [in his description of the random process through which clotting evolved] – not even one – does Doolittle give a model that includes numbers or quantities; without numbers, there is no science... when such crucial questions are ignored we leave science and enter the world of Calvin and Hobbes.” (p. 95) Dr. Behe did not, at the time, discuss any scenarios in which criticism of his theory of irreducible complexity was justified. On page 78 of his December 20, 2005 ruling in the *Kitzmiller v. Dover (PA)* trial, United States District Judge John E. Jones III (no relation) wrote of Dr. Behe's testimony: In fact, on cross-examination, Professor Behe was questioned concerning his 1996 claim that science would never find an evolutionary explanation for the immune system. He was presented with fifty-eight peer-reviewed publications, nine books, and several immunology textbook chapters about the evolution of the immune system; however, he simply insisted that this was still not sufficient evidence of evolution, and that it was not “good enough.” (23:19 (Behe)). “We find that such evidence demonstrates that the ID argument is dependent upon setting a scientifically unreasonable burden of proof for the theory of evolution.”

²⁴⁰ When I asked about his concerns that evolution was being presented dogmatically, Dr. Abrams said, “we were able to get [the standards] presented such that it's not about picking out evolution, it's not teaching evolution. And [regarding] your premise on your question, is it about Intelligent Design, it's not about teaching Intelligent Design.” Republican Board of Education member Steve Abrams, District 10. Personal interview, August 7, 2006.

falsify it because it's a given. It does make predictions. I would argue that virtually every prediction it has made above the species level has been falsified in the sense you just described and yet the theory is still with us. And I would argue that that is evidence for nonscientific nature. Now, why should it be taught in science class? Because sociologically it is still part of science. I just think it should be taught fully.²⁴¹

“I contend,” Dr. Abrams later said, “that if you go back to the definition of science [in the Minority's proposed standards], that we have a great definition of science that is based upon empirical science. What is observable, measurable, testable, repeatable, and falsifiable. That’s what makes for good science.”²⁴²

Prong Two: Teaching Evolution as Religion

If teaching evidence of design was good science, Intelligent Design also charged that teaching neo-Darwinian evolution was both poor science and religious doctrine. Thus, the second prong in Mr. Calvert's pitchfork is the argument that the science writing committee majority’s definition of evolution, with its grounding in methodological naturalism, constituted a religious philosophy rather than an objective method of scientific inquiry. Intelligent Design literature makes similar claims. “There is...,” wrote Warren Nord:

a kind of scientific fundamentalism in which methodological naturalism functions much as does Scripture for religious fundamentalists: just as fundamentalists are not open (in principle) to scientific evidence that falsifies Scripture, so methodological naturalists are not open (in principle) to nonnaturalistic evidence, claims, or theories that might be taken to falsify established science.

... unless the nature and limitations of this methodological naturalism are themselves the subject of discussion, unless methodological naturalism is itself open to potential falsification, this commitment will be, in effect, an uncritical

²⁴¹ Jonathan Wells, hearings transcript, May 5, 2006

²⁴² Republican Board of Education member Steve Abrams, District 10. Personal interview, August 7, 2006.

faith – and surely there is some risk in uncritically trusting that all of reality can be explained in naturalistic categories.²⁴³

“If neo-Darwinism is true,” Stephen C. Meyer and Michael Newton Keas argued:

God's creative activity (whether expressed discreetly or gradually) would no longer be necessary to explain the origins of new living forms, since a strictly naturalistic mechanism would suffice... further, if neo-Darwinism is true, then the natural world does not display evidence of actual design, divine or otherwise – as most religious theists affirm. For both of these reasons, neither neo-Darwinism nor other materialistic origins theories taught in the public schools (such as the chemical evolutionary theory of the origin of the first life) are religiously or metaphysically neutral.²⁴⁴

“Religion,” Dr. Harris said, “is fundamentally based on dogmas that are unquestionable. One just accepts the view of whatever religion you're talking about and says that's the way it is. And data is, to some extent, irrelevant.”²⁴⁵ Dogmas, therefore, “have no place in science.”²⁴⁶ Asked on cross-examination if he thought that mainstream science was “analogous to religion,” Dr. Harris replied, “no, not at all. We're just talking a tiny sliver of science today that concerns itself with the origin of life. The origin of the universe, that area, I think is fundamentally driven by a naturalistic philosophy, but that is a very, very small piece of science.”²⁴⁷ A piece of science, the Minority pointed out over and over, in which methodological naturalism is the chief religious doctrine.

“I would argue,” said philosopher Angus Menuge:

²⁴³ Warren Nord, “Intelligent Design Theory, Religion, and the Science Curriculum,” in *Darwinism, Design, and Public Education*, ed. John Angus Campbell and Stephen C. Meyer (East Lansing, MI: Michigan State University Press, 2003), 56.

²⁴⁴ Stephen C. Meyer and Michael Newton Keas, “The Meanings of Evolution,” in *Darwinism, Design, and Public Education*, ed. John Angus Campbell and Stephen C. Meyer (East Lansing, MI: Michigan State University Press, 2003), 142.

²⁴⁵ William Harris, hearings transcript, May 5, 2005.

²⁴⁶ Ibid.

²⁴⁷ Ibid.

that methodological naturalism, in fact, does side with non-theistic religions. There isn't any direct logical implication between scientific evidence and religious view; however, if science is taught in such a way that you can only be presented with that evidence which is consistent with naturalism, it's natural for students to conclude that all the evidence points there and that no evidence points or could even gently suggest that the theistic religious claims about the world could be true. Those views are not allowed to be provided with any evidence.²⁴⁸

“Naturalism,” said Dr. Edward Peltzer, “is a religious view and people that are basing their interpretation of science and they're doing their science on it are, in fact, practicing their religion. Those thousands of scientists are trying to impose naturalism on the rest of the public.”²⁴⁹ To the Minority, the imposition of that naturalism is clear in the majority's standards. “In the majority document,” Dr. Peltzer stated, “there was a clear identification that natural explanations were the only explanations. This is rooted in the philosophy of naturalism. While neither a religious philosophy that people recognize, it is-- it's a world view that many people subscribe to that substitutes for religion. It-- it is, if you will, a non-theistic religion.”²⁵⁰

If methodological naturalism informs the majority's interpretation of evolution, and if methodological naturalism is indeed a non-theistic religion, evolution as presented in the majority's standards fails the test of religious neutrality. On that point, John Calvert testified:

I think that what methodological naturalism does is that it prohibits-- it prohibits a particular point of view based on-- even if-- even if there is scientific evidence that supports that view, methodological naturalism essentially rules it out of order. And I think that that is not-- and when you're in-- that impacts religion, origin science. I think that any time you get into a discussion of religion and you decide

²⁴⁸ Angus Menuge, hearings transcript, May 7, 2005.

²⁴⁹ Edward Peltzer, hearings transcript, May 6, 2005.

²⁵⁰ Ibid. Punctuation in the original.

we're going to skew the evidence one way or the other, I think you violate the idea of neutrality.²⁵¹

Yet, at least one of the Minority's witnesses refused to fully separate science from religion. When Pedro Irigonegaray asked, "it is important to keep science and religion separated. Correct?" biochemist Michael Behe responded with a startling, "No."

I-- no. It's a very complex business. By that example, I was trying to say that what some people think to be religion at the time may turn out to be understandable later on. But if you rule out an explanation which seems to describe the data pretty well because it seems to have unwelcome philosophical or religious overtones, then I think that does science a disservice.²⁵²

Today's religion, in other words, could become tomorrow's science. Preemptively ruling out a data-driven explanation of natural phenomena on purely ideological grounds, therefore, fails as science on several levels: it lacks objectivity, it demonstrates religious bias, and it is not, according to the Minority's definition, good science. Indeed, the Minority's constant argument was that it sought nothing more than to bring good science back into the public schools of Kansas.

The question of good science was perhaps the most contentious issue at the hearings. The shadow of the 1999 evolution controversy loomed large. "In casting his opposition," reported the Associated Press in 2001, "[Steve] Abrams rejected depictions of the old standards as being crafted by religious conservatives. He argued repeatedly that evolution is a flawed theory and that he wasn't espousing any religious doctrine in questioning its teaching. 'What I do espouse is that this is not good science,' Abrams

²⁵¹ John Calvert, hearings transcript, May 7, 2005. Punctuation in the original.

²⁵² Michael Behe, hearings transcript, May 7, 2005. Punctuation in the original.

said of the new standards.”²⁵³ Those new standards, the existing standards challenged by the Minority at the 2005 hearings, were at last under scrutiny.

The definitions of science put forward by the majority and Minority varied only slightly in their wording. Both sets of standards used nearly identical language to describe they referred to as the “Nature of Science.” In that section’s opening statement, the majority described science as “a human activity of systematically seeking natural explanations for what we observe in the world around us.” Jonathan Wells noted that by “defining science as the human activity of seeking natural explanations, namely to mention the majority view, [Kansas] is absolutely unique in the United States. There is no other state in the union that defines science that way.”²⁵⁴

No other state gives priority to the explanation we're supposed to find. Every one else gives priority to the process.

In this sense the minority view, in my opinion, is actually putting Kansas back in the mainstream of American science education. And as a scientist myself-- and I have the data here which I'll hand that to you later, as a scientist myself I hear this. I would not like to see science become an enterprise where we're told at the outset what sorts of explanations we're supposed to find. For me science is an exciting, open ended search for truth. And the way that's conducted is through hypothesis testing. And I think the minority view replacement definition here is much more in line with that than the definition of science as seeking natural explanations.²⁵⁵

The Minority re-wrote that first sentence so that science became “a systematic method of continuing investigation, that uses observation, hypothesis testing, measurement, experimentation, logical argument and theory building, to lead to more

²⁵³ John Milburn, the Associated Press. Reported in the *Lawrence Journal-World* February 14, 2001.

²⁵⁴ Jonathan Wells, hearings transcript, May 5, 2005.

²⁵⁵ Ibid. Punctuation in the original.

adequate explanations of natural phenomena.” The Minority added language at the end of the “Nature of Science” describing its definition’s consistency with the “advice” regarding science education found in the so-called Santorum Amendment inserted into the 2002 No Child Left Behind Act.²⁵⁶ They wrote:

According to many scientists a core claim of evolutionary theory is that the apparent design of living systems is an illusion. Other scientists disagree. These standards neither mandate nor prohibit teaching about this scientific disagreement. However, to promote good science, good pedagogy and a curriculum that is secular, neutral and non-ideological, school districts are urged to follow the advice provided by the House and Senate Conferees in enacting the No Child Left Behind Act of 2001.²⁵⁷

When asked why he thought the Board should adopt the Minority's proposed standards, Dr. William Harris replied:

I think [the Minority report] is good didactic science. We need to teach kids to take the data regardless of its philosophical implications, follow the data where it leads, then we're going to make good science. If we have-- put blinders on them and say you can only look over here and you must find an explanation in that box, that's not good science. And that box might be a religious box and I don't-- that's not the way to do it either. You don't have philosophical bias, you don't have a religious bias that the data all has to fit into. That's good science. Number one-- I think it's-- I'm not a lawyer and you told me, and I believe it, the Constitutional neutrality will be served by presenting both sides of the view...

When you do good science you get-- you remove the concern about bias and you bring neutrality to public education. And then it also removes this tension that is present among teachers and parents and kids about how we're going to teach this. It lays it all out, just teach the data and move on.²⁵⁸

“I guess [the reason] why I got into this whole thing,” said Ohio State University nutrition professor Robert DiSilvestro:

²⁵⁶ I will discuss the purported influence of the Santorum Amendment in greater detail in Chapter Six.

²⁵⁷ Proposed Revisions to Kansas Science Standards Draft 2 with Explanations. Retrieved from <http://www.kansasscience2005.com/Marked%20version%20of%20Proposed%20Revisions%20to%20Draft%202.pdf> February 14, 2007.

²⁵⁸ William Harris, hearings transcript, May 5, 2005. Punctuation in the original.

is I felt that when it came to issues like origin of life and origin of species that the same good science standards weren't always applied...

I look at what I have to do to get a paper published, then I look at some of the statements made like-- like the one I said earlier, given enough time the improbable becomes probable. Well, in any other area of science, the question that would be asked back is, okay, how much time do you have available, how much time do you need before this becomes probable. And that's not asked here, and I think that's inconsistent with the rest of the science.²⁵⁹

On the witness stand himself, John Calvert argued:

when we go into a science classroom, it's essentially the job of the public school and the job of the teacher to put behind themselves, to put aside, their own personal philosophical, religious biases and simply do good science. Let the evidence-- the scientific evidence dictate what is shown to the students on both sides of that issue. And that's precisely what the Minority Report does. That achieves not only the best science, but the best science education.²⁶⁰

Not everyone shared the Minority's enthusiasm for their proposed definition of science and interpretation of evolution. "The scary thing is," said Carol Rupe:

that although I believe that we have excellent science teachers in the state, they will have been well taught to teach good science that, for years now, even if we change the standards back, they're going to be gun-shy about this because of it being such a heated topic. When the universities are saying that a foundation in good science is so necessary for the students that they are getting into the colleges and universities, and that they are afraid that maybe Kansas students won't have a good foundation in science, I just think that's critical. And I'm sorry about that...

I heard from one parent when we were discussing in recent months whether students should opt in or opt out of sex education material. One parent in my district wrote to me and said, I'd like for my children to opt out of anything other than good science [laughs] so if they're going to teach Intelligent Design, I would like to opt out of that in science class.²⁶¹

"I resent the fact," Janet Waugh said:

²⁵⁹ Robert DiSilvestro, hearings transcript, May 6, 2005.

²⁶⁰ John Calvert, hearing transcript, May 7, 2005.

²⁶¹ Republican Board of Education member Carol Rupe, District 8. Personal interview, August 10, 2006.

that because we [moderates] support good science, we are considered atheists. I am not an atheist, I am a Christian, like I said. I met with my pastor prior to the discussion starting on the state level, my pastor was very supportive, we sat down, opened the Bible, went through it and we had no problem. And I think a lot of the mainstream religions are really getting a little tired of being, not being a part of this discussion because they're saying that anyone that supports science is not a Christian.²⁶²

“I was very much opposed to [the Minority report] because of what it represents,”

Pedro Irigonegaray said:

Science is easily defined as that process by which we understand the natural world around us. And it is to the scientific process that we learn those facts and scientists don't always agree with one another...

What's not appropriate is to suggest that science should be a matter of faith and that's what the purpose was for the changing of the definition, so the most local support for the change came from Mr. Abrams, Ms. Martin, Ms. Morris, and those on the board that are very fundamentalist extremist Christians.²⁶³

While none of the Board members interviewed for this study was shy about discussing his or her personal faith, neither was anyone overtly disparaging of evolution.

“I have never denied that I'm a Christian,” Dr. Abrams said. “But at the same time, I have had a lot of science, science education and I fully understand what it takes to be a scientist.”²⁶⁴

“I'm a Christian, Catholic,” said conservative Kathy Martin, “and so I never had any problems with getting my religion and evolution to work together... [and] being a Christian I believe that God is in charge of our existence and so forth and so, fine, if he

²⁶² Democratic Board of Education member Janet Waugh, District 1. Personal interview, August 7, 2006.

²⁶³ Pedro Irigonegaray. Personal interview, August 7, 2006.

²⁶⁴ Republican Board of Education member Steve Abrams, District 10. Personal interview, August 7, 2006.

used evolution, [that's] fine with me."²⁶⁵

"I'm Episcopalian, so I'm Anglican Catholic," said moderate Carol Rupe, "and our church has studied this a great deal... I would categorize myself as a theistic evolutionist and that is that I believe God did it, I believe that he did all, I just believe he did it through evolution."²⁶⁶

"I am a Christian," said moderate Janet Waugh, "and I have a real problem being judged... in 1999, I received one e-mail – I had been quoted in the paper as saying that I was a Christian and that I had no problem of science and religion being able to work together – and I got one e-mail from this one fellow that said, not only are you not a Christian, a slow death by torture is to good for you."²⁶⁷

The question before the Board, therefore, and the sharp end of the second prong, was not the scientific validity of evolution itself. Rather, the Minority argued that the *manner* in which evolution was presented in the 2001 Kansas state science standards represented a specific religious position. By focusing on material causes of natural phenomena to the exclusion of all other possible explanations, the Minority argued, the majority was adopting the position that non-material causes were beyond the realm of science. Since science was supposed to be an objective enterprise, limiting its scope to strictly material causes both demonstrated the majority's ideological bias and deprived the children of Kansas of the full range of science's explanatory power.

The majority argued that the Minority was, by virtue of these very claims to

²⁶⁵ Republican Board of Education member Kathy Martin, District 6. Personal interview, August 9, 2006.

²⁶⁶ Republican Board of Education member Carol Rupe, District 8. Personal interview, August 10, 2006.

²⁶⁷ Democratic Board of Education member Janet Waugh, District 1. Personal interview, August 7, 2006.

scientific objectivity, advancing its own ideological position not through proper science but by appeals to emotion. The Minority's position, Mr. Irigonegaray noted, was:

very seductive because the argument they make is, look, all we want is equal treatment. But to treat unequal as equal is in itself unequal, so that if one is not careful in understanding the proposition, one is likely to say well, yeah, equal treatment is a good thing. And for the most part, it is. But in this case, the argument is flawed from the beginning because it is absolutely erroneous to suggest that ID and science are two views of the same subject. They're not. But when the question is phrased as though they were, the average individual in the street is going to say yeah, equality of treatment here is fine.²⁶⁸

The emotions ran both ways. "It's a very emotional issue," said moderate Bill Wagnon. "I am deeply offended by the arrogance of a public body, I am deeply offended by the Discovery Institute's trying to use public schools as a way to get their social agenda adopted."²⁶⁹ For better or for worse, most scientific research fails to inspire this degree of passion in the general public. In Kansas, the emotional tenor was set not by the scientific arguments themselves but by their religious invocations. Each side of this debate has accused the other of advancing a religious doctrine in the guise of science. The third prong of Mr. Calvert's pitchfork lays out the Minority's argument that teaching evolution as presented by the majority's standards was tantamount to religious indoctrination.

Prong Three: Religious Indoctrination

Twenty-five minutes into William Harris's testimony, John Calvert asked him about a document called the Humanist Manifesto.^{270 271} You've handed to the

²⁶⁸ Ibid.

²⁶⁹ Democratic Board of Education member Bill Wagnon, District 4. Personal interview, August 8, 2006.

²⁷⁰ Evangelical Christians often point to this document as representative of the dangers facing Christianity. The website www.christianparents.com, for example, warns that John Dewey was an original signatory of

committee,” Mr. Calvert said, “a copy of the Humanist Manifesto. Can you explain how the tenets of that religion influenced or impacted the origin story that you showed on the scale, the design, no design image[sic]?”

“Well, sure,” Dr. Harris replied:

The Humanist Manifesto-- this is taken from the web site. Humanism is a progressive-- I don't remember it, let me read it. Progressive philosophy of life without supernaturalism. So it begins with the philosophy that there is nothing beyond nature. So that's-- to me that's a bias that you just begin with because you don't know that to be a fact, you just assume it to be a fact. So right away we're outside the realm of science here.²⁷²

Although Dr. Harris was the only scientific witness to make specific reference to the Humanist Manifesto, Mr. Calvert said in his own testimony, “we have shown that the controversy unavoidably impacts religion.”

The side of the controversy that supports the idea that man is the product of an unguided evolutionary process, that side which is the evolutionary biology, supports but does not require one kind of religious belief and conflicts with theistic religious beliefs. So we saw an example of that, in spades, in the Humanist Manifesto. The secular humanism was decided in the Schempp case in, I believe, 1987. It was a fascinating case. It involved books in a school that were charged to be promoting secular humanism. By the way, none of the books involved science books or biology textbooks.

And so the Court had to make a decision: Is secular humanism a religion? Because if it wasn't, then, there wouldn't be an issue regarding the books. And the Court took an enormous amount of testimony and concluded ultimately that secular humanism is a religion. It found that it was a religion because the tenets of secular humanism is[sic] that there is no reason to believe in the existence of a

the first Humanist Manifesto, that “John Dewey is recognized as the Father of modern education [and that] the N.E.A. gave him high recognition for his works. Much of his changes to schools was [sic] made possible by the theory of evolution being so strongly accepted after the writings of Charles Darwin. John Dewey wrote a theory of education and democracy that was based on evolution.” Retrieved from <http://www.christianparents.com/jdewey.htm>, March 6, 2007.

²⁷¹ It should also be noted that there are, to date, three versions of the Humanist Manifesto. Each subsequent manifesto is an update of its predecessor. As of this writing, the most recent version can be found here: <http://www.americanhumanist.org/3/HumandItsAspirations.htm>.

²⁷² William Harris, hearings transcript, May 5, 2005. Punctuation in the original.

Creator.²⁷³

Thus, the religious position espoused by the majority's standards, by virtue of its foundation in methodological naturalism and overt denial of any possible scientific explanations that were outside those narrow boundaries, was that of secular humanism.

“Mr. Calvert,” Pedro Irigonegaray later said:

had a rather ingenious argument. Mr. Calvert argued that the Supreme Court ruled that being an atheist entitles one to protection under the Constitution and he's right. Our Constitution does not simply protect religion, it protects us from religion. The case that Mr. Calvert points out is one that he then proceeds to misinterpret...

What Mr. Calvert then went on to say was that as a result of that, since science is a materialistic process, that science equates to atheism and that in order to balance the atheism, one must bring a theistic view into the system so that they have equal opportunity at the minds our children. That is a very convoluted and erroneous interpretation of the law. The only cure to religion in our schools is not more religion but the excising from our schools of whatever religion was there to begin with.

Mr. Calvert, in this convoluted, irrational, and not-supported-by-the-law suggestion of his would tell you that in order to combat the materialistic approach to science which deals only with the natural processes, that Intelligent Design must be brought into balance things out. It's absurd. It's not supported by the law. Clearly Supreme Court case history tells this, that religion is not to be taught in our schools, much less as science.²⁷⁴

Ironically, Mr. Calvert would likely agree with Mr. Irigonegaray's statement about the Supreme Court's position on teaching religion. The fundamental disagreement between the two men lay in the interpretation of what, exactly, constituted religion. Mr. Irigonegaray argued that public schools must always err on the side of removing religion from their curricula. The 2001 Kansas state science standards do precisely this by

²⁷³ John Calvert, hearings transcript, May 7, 2005.

²⁷⁴ Pedro Irigonegaray, personal interview, August 7, 2006.

describing scientific inquiry as a search for natural causes, unimpeded by invocations of the supernatural. Mr. Calvert, however, argued that by doing this very thing, the Kansas state science standards introduced bias into science by promoting the religion of secular humanism in public schools. The standards, in other words, were bringing state-sponsored religion into millions of private homes.

“Many [parents] come to me with concerns about the textbook,” said middle-school teacher Jill Gonzalez-Bravo, “with concerns about the-- what they believe to be a humanistic world view into the textbooks because it did not provide for any alternatives to evolution... I still struggle with not knowing how to present this information in a way that would not negatively impact any of my students' beliefs.”²⁷⁵ Arguing that the Minority Report standards would enable greater academic freedom in her classroom, Ms. Gonzalez-Bravo said, “the argument is that no scientists support anything counter to evolution. I would say that by today's testimony this just is not the case. I am more concerned that perhaps censorship has been applied to these scientists because they hold views that are counter to the secular humanist world view.”²⁷⁶

Philosopher Angus Menuge pointed out that, legally, “there are certainly humanistic religions.

You can certainly be religious without believing in God. Atheism is just as religious a position as theism, and certainly secular humanism is being recognized as being religious for First Amendment purposes...

So in that environment, what does it mean for science to be taught in a secular

²⁷⁵ Jill Gonzalez-Bravo, hearings transcript, May 6, 2005.

²⁷⁶ Ibid. Ms. Gonzalez-Bravo also spoke of secular humanism as the religious belief she herself once held. “I believe the change in my faith from secular humanism to Christianity... has opened my mind to the vast amount of knowledge and information that I have yet to learn.”

way as defined by the National Assessment Governing Board? It seems to be a pluralistic context. You can no longer be neutral by saying, 'Here's a neutral position.' Neutrality, rather, is obtained by not taking sides with respect to those various religious perspectives. You can't side with any one one of them. That isn't neutral.

Well, I would argue that methodological naturalism, in fact, does side with non-theistic religions. There isn't any direct logical implication between scientific evidence and religious view; however, if science is taught in such a way that you can only be presented with that evidence which is consistent with naturalism, it's natural for students to conclude that all the evidence points there and that no evidence points or could even gently suggest that the theistic religious claims about the world could be true...

It might be that some evidence of science that is generated makes theists uncomfortable because it looks like the world is undirected. It might be that some evidence that is generated by science makes secular humanists uncomfortable because it looks like the world is in some respects designed. Neutrality here is achieved by not prejudging the outcome of that evidence. The evidence needs to be allowed to speak for itself.²⁷⁷

The Minority report, according to Dr. Menuge, addressed the issue of religious neutrality by balancing theistic and non-theistic worldviews without favoring one over the other. Further, he said:

I will argue that methodology naturalism [sic], though those words do not occur [in the majority's standards], the concept does. And the strikeouts that have been proposed by the minority report do remove that. They are correct to remove that because methodological naturalism prevents students from being properly informed on matters of scientific philosophy, a failure of full disclosure.

It's not neutral and nonideological because it advocates a single perspective on a controversial issue, and it fails to be secular because it will favor-- even if that's not its intention, it will favor secular humanism and other naturalistic religions of theistic and other non naturalistic religions by only allowing the evidence that favors the former religion to be presented.²⁷⁸

Kathy Martin stated that she fully agreed with this position. "I suppose," she said,

²⁷⁷ Angus Menuge, hearings transcript, May 7, 2005.

²⁷⁸ Ibid. Punctuation in the original.

“there's some ideology way out here on the fringes but as far as the standards themselves [are concerned], they are meant to be objective, not have any kind of religion, secular humanism, Christianity... just be objective, open-minded, let the kids and the teachers do what research they want, present it, and then go on from there.”²⁷⁹ In the end, the two other Board members on the hearings subcommittee agreed.

Closing Arguments

“These hearings,” Pedro Irigonegaray told the subcommittee on May 12, 2005, “have been an unjustified waste of taxpayer money intended first to justify the Board's support for inserting creationist claims into the science standards and to provide a showcase for the National Intelligent Design Movement... The State of Kansas is being used, used by the National Intelligent Design Movement and their wedge strategy.”²⁸⁰

In a later interview, Mr. Irigonegaray asserted his belief that the hearings over the Kansas state science standards were part of a broader religious movement to eliminate the secular character of American government:

The Intelligent Design movement is a very well-financed political movement with clear religious objectives. They are in every state, they have at a moment's call any immense number of troops because Americans do go to church on Sunday. And these extremists have by a very well-orchestrated political process, taken from those of us that differ from them the moral high ground. They have convinced a significant number of the population that it is amoral to do what we're doing and that is to exclude ID from schools, that it is not good family values and somehow, somehow those of us that believe our conduct to be moral, to be appropriate, need to figure out how we can affect public opinion more effectively so that these battles do not take on the character that they presently have...

²⁷⁹ Republican Board of Education member Kathy Martin. Personal interview, August 9, 2006.

²⁸⁰ Pedro Irigonegaray, hearings transcript, May 12, 2005.

I am not an alarmist, I am not a conspiracy theorist. I'm just a country lawyer, a country lawyer that has in a very real sense experienced the ugliness of intolerance, the danger of blind faith, and the abuse of power that income along with it when those who have those types of persuasions take control²⁸¹ and that's what happened with the Board of Education.²⁸²

Mr. Irigonegaray's closing statements to the Board focused on the religious nature of the Minority's recommendations. He presented statements from scientists at the University of Kansas, concerned citizens groups, and clergy, all supportive of the majority standards. Legally, he said, "by advancing the Minority position through these hearings and other actions the State Board is advancing a narrow sectarian theological view of science over many other faiths, and, therefore, the Board, through its actions, raise real and serious legal questions about violations of the Establishment Clause of the United States Constitution and the Kansas Constitution and abuses of Kansas[']s statutory authority and discretionary power."²⁸³

Discussing the place of the standards in the overall framework of the Kansas State public school system, Mr. Irigonegaray argued that:

the Minority and the Minority witnesses consistently misrepresented the role of the standards. I want to emphasize that. They consistently misrepresented the role of the standards...

The Minority repeatedly claimed explicitly or implicitly that unless their anti-evolutionary critiques of evolution were put in the standards, students would be prohibited from even asking questions about evolution. This is completely false. This is completely false. It's completely false. The Minority seem to have real little familiarity I should say little familiarity with the reality of public school

²⁸¹ Mr. Irigonegaray later clarified his statement, speaking briefly of his childhood in pre-Castro Havana, Cuba. "We didn't take good care of our democracy in Cuba," he said. "We didn't do what was necessary to protect ourselves from despots. We didn't do what was necessary to ensure that our democracy succeeded. And you've seen what's happened in Cuba."

²⁸² Pedro Irigonegaray, personal interview, August 7, 2006.

²⁸³ Pedro Irigonegaray, hearings transcript, May 12, 2005.

education. [It is] the attitudes of real science teachers or the work teachers do to develop a curriculum that teaches both the content and the process of science.

Minority witnesses claimed that unless the Minority's proposals were adopted we would be teaching students nothing but rote memorization and treating students like robots. They're talking about our Kansas children.

In fact, critical thinking is the number one goal of most teachers, irrespective of subject area. The insistence that without the Minority proposals students would be merely taught to uncritically accept dogma like robots, is insulting, Mr. Calvert, to Kansas science teachers and our Kansas children. That's an insult this Board cannot allow to occur.²⁸⁴

He concluded his remarks with another reminder of the financial burden upon the

Kansas taxpayer:

For our future I urge you to discard entirely the non-scientific biased testimony that has been presented in this classroom, to keep out of our classroom the narrow theistic view that implies that evolution is being erroneously taught as faith because that is false.

Your duty is to carefully look after the dollars that Kansas taxpayers work so hard in order to pay the state. You have a responsibility that is much greater than each of you individually. You have a responsibility to the children and the future of this state. A responsibility that you have sadly, sadly failed. This was a gigantic waste of money and an insult to Kansas teachers with great potential harm to teachers and students.

I stand here as counsel for Draft 2. I am not a witness, and, therefore, I will not stand for questioning. If you want answers I urge you to do what you have not yet done, read Draft 2. Thank you very much. I am done.²⁸⁵

John Calvert began his closing statements with a jab at Pedro Irigonegaray.

“What you saw today,” he said, “was oratory from one who is not a scientist, one who is not a philosopher, one who is not an educator, one who is a lawyer, and we all know all

²⁸⁴ Ibid.

²⁸⁵ Ibid.

the different lawyer jokes.”²⁸⁶

Thomas Huxley once said science commits suicide when it adopts a creed. Science commits suicide when it adopts a creed. There is a creed involved in this debate. Evolution cannot be criticized. And you heard Mr. Irigonegaray say that, because, of course, if we allow evolution to be criticized then guess what happens, people begin to-- can then look at the evidence of design which we have otherwise expressed. So in order to maintain the suppression of the evidence of design we also have to effectively insulate Darwinian evolution from any scientific criticism. So when does that happen to evolution? Where is the test? Where is the scientific test for evolution if it can't be criticized?²⁸⁷

Arguing that evolution was an inherently unguided process, Mr. Calvert rhetorically asked, “is evolution a guided or unguided process? It is clearly unguided, because law and chance cannot guide anything.”²⁸⁸ The bulk of Mr. Calvert’s statement was a summation of testimony offered by his witnesses.

What is it the Minority Report is asking for? Is it asking that we put theism into the standards? No. It's asked that we put objectivity into the standards, that we simply treat evolution honestly and candidly and we subject it to the very same critical analysis that other scientific theories are, but it's not allowed because if we-- as Mr. Irigonegaray says we allow criticisms of that theory, well, all these other things could come in, and we can't possible [sic] have them coming in...

What is so fascinating about this strategy of portraying the competition as ignoramus you see it is designed to achieve a really interesting purpose. What is the purpose? It's to keep you from looking at the specific provisions in the Minority Report. They don't want you to look at those. Why?

You heard the witnesses. These proposals are really pretty-- how would I characterize it, minimal. This is a minimal first step to begin to open a discussion in which teachers are afraid...

It's fascinating the complaint of the opposition is that the Minority Report inserts the word unguided in the definition of evolution, as if we're trying to put into evolution something that is not there. And that is perhaps the biggest deception

²⁸⁶ John Calvert, hearings transcript, May 12, 2005.

²⁸⁷ Ibid.

²⁸⁸ Ibid.

that ever came down the pipe. Evolution by its very nature, as the witnesses testified over and over and over again, evolution does not have the mechanism to produce a guided process, period. Law and chance cannot produce any kind of a guided process. So by its very inherent nature it is unguided...

[Evolution] says design is an illusion, that it is-- not-- the diversity does not result from a guided process. So you see, when you cannot criticize evolution, which essentially is an unguided process, then you cannot challenge that tentative evolution that the process is not unguided and that's why that word creates a problem. Because what the problem with mainstream science is that they have a theory which in fact is not guided but that happens to conflict with the views of the public...

And so what [Darwin] is saying is that evolution is an unguided, purposeless process and that has major implications for religion. Enormous implications for religion. The-- so again we get back to-- the-- why-- why didn't-- why is there a boycott? In my mind there's a boycott because the scientific community really can't answer the issues raised by the Minority Report which suggests that we add the word inform to the mission statement.

Now, why would anybody object to adding the word informed to the mission statement? That's the function of public education is to inform students so that when they do make reasoned decisions they will make good reasoned decision...

“Who cares about seeking natural explanation,” he concluded, “when we're doing lab experiments, we can test and confirm hypotheses with experiments. It only really comes up in the area of science that touches religion and that's a problem.”²⁸⁹ Before returning to his seat, Mr. Calvert took a parting shot at his opposing counsel. “Why wouldn't I shake the hand of Pedro? I don't think this strategy deserves a handshake. In my mind this is repugnant.”²⁹⁰

Pedro Irigonegary, despite the “hundreds of hours,” he devoted to preparing for the hearings, believed that the Board subcommittee had determined the verdict before the

²⁸⁹ Ibid. Punctuation in the original.

²⁹⁰ Ibid.

trial had even started. “Mr. Abrams,” he said, “with Mr. Calvert devised these hearings as a way to circumvent the failure through the democratic process of the writings committee, the Minority and that group, to get their views accepted and set up these hearings in order to justify accepting the minority view and disregarding the majority. That's how perverse that process was.”²⁹¹

As a professional litigator, Mr. Irigonegaray was doubtless vocal in his defense of evolution and, to some in the conservative majority, was unduly aggressive in his cross-examination of Mr. Calvert's witnesses. “I didn't think [the hearings] were bad until Mr. Irigonegary got to his little part of it,” Kathy Martin said, “and then he would just be rude, crude, and as far as I can say almost vulgar, the way he would address these folks and interrupt them and not let them even finish a statement... Mr. Irigonegary was very rude as far as I was concerned, almost like a bully.”²⁹² Connie Morris, who had the last word of the last day of the hearings, addressed him directly. “Mr. Irigonegaray, I believe your behavior here was abusive. I do understand abuse and I just want you to know that I forgive you, truly.”²⁹³

²⁹¹ Pedro Irigonegaray, personal interview, August 7, 2006.

²⁹² Republican Board of Education member Kathy Martin, District 6. Personal interview, August 9, 2006.

²⁹³ Connie Morris, hearings transcript, May 12, 2005.

Chapter Six

Power to the People

This chapter describes the contentious period following the hearings and before the formal adoption of the new science standards. All seven descriptive codes are used to organize and support the following arguments: that the appearance of a legal proceeding was critical to the Intelligent Design advocates' success; that the new standards opened the door to teaching Intelligent Design; that the Discovery Institute laid the major groundwork for the arguments presented at the hearings; and that, as Intelligent Design advocates had long hoped, the people would weigh the evidence and decide for themselves.

Similarly, all four analytic codes came together as the Board engaged in vigorous public debate as a science standards came up for a final vote. The analytic code of "emotionality" emerges in the midst of heated debate, adding a complex new dimension to the question of "fairness." Even after the vote, science standards remained a hot-button issue for the state's voters when half the Board stood for reelection. Intelligent Design advocates increased the volume of their "argumentation" by mounting a statewide public campaign touting the strength and value of the new standards.

Aftermath

The idea of putting evolution on trial appealed to Intelligent Design advocates for three reasons. First, in any trial, both sides are assured an equal hearing, something Intelligent Design advocates felt was sorely lacking from the scientific community regarding their position. Second, a trial enables advocates on both sides to cross-examine

the opposition and punch as many holes as possible in their arguments. Intelligent Design advocates have worked tirelessly to point out perceived flaws in both the method and the science of evolution but scientists have, by and large, ignored them. Mainstream scientists argue that there is simply no scientific merit to Intelligent Design. Intelligent Design advocates claim that mainstream scientists have ignored whatever inconvenient evidence calls the validity of evolution into question and accuse scientists of taking, in Dr. Abrams's words, a dogmatic approach to their work.

The third reason for the appeal of a trial lies with the Intelligent Design advocates themselves. Philip Johnson, the “father” of the Intelligent Design movement, is an attorney and professor emeritus at Boalt Hall, the law school of the University of California, Berkeley. John Calvert, the founder of the Kansas City-based Intelligent Design Network and principal instigator of the Kansas science standards hearings, is a retired lawyer with an undergraduate degree in geology. Finally, there is also the *Wedge Strategy's* desire for a “major public debate.”

As such, it was perhaps only logical that Mr. Calvert wanted to put evolution on trial, if not in a court of law then at least in the court of public opinion. Over the course of three days, his witnesses made a clear and, to the Board subcommittee, compelling argument that the 2001 science standards were ideologically biased and therefore unsuitable for the children of Kansas. The subcommittee members were not the only ones persuaded. “By far, people wanted [changes to the 2001 standards],” Steve Abrams said. “Seventy-five percent, maybe, of the contacts from people within my district said,

go for it, you bet, pursue it, absolutely.”²⁹⁴

And pursue it he did. On May 11, 2005, four days following the conclusion of the witness testimony and a day prior to the attorneys’ closing statements, the *Wichita Eagle* published a letter to the editor from Dr. Abrams that read in part, “I have stated that I want to remove [from the standards] the dogmatic fashion with which neo-Darwinian evolution is taught. When a subject is discussed using words such as ‘always’ and ‘fact’ and ‘no controversy,’ when in actuality, it is not always, nor factual, and great controversy is involved, then by definition it is being taught as a dogma.”

The conclusion of the science standards hearings was not the final word on the question of the Minority report standards. At a full meeting of the Kansas Board of Education on June 15, 2005, Board Chairman Steve Abrams invited feedback on the hearings from the Board. All four moderates raised vocal objections. Democrat Bill Wagnon expressed his sadness that the board had been used by the Discovered Institute to advance a “set of agendas which were designed to discredit the credibility of mainstream science.” Democrat Janet Waugh shared concerns from science teachers that they were unqualified to effectively discuss alternative theories to evolution. Moderate Republican Carol Rupe stated her belief that no board member was qualified to effectively define science and that “questions should be sent to the science community to determine what science is and that is what should be taught.” Moderate Republican Sue

²⁹⁴ Republican Board of Education member Steve Abrams, District 10. Personal interview, August 7, 2006. Sue Gamble reported a similar experience, with correspondents urging her in the opposite direction. She described getting e-mail “from all over the world. I had thousands of people contact me, outraged about what was going on and many of them scientists [with] long scientific ramblings. And I had a one-page reply: what happened, who voted for what, why it was important, why it was not just the Kansas issue, what we were going to do about it, how they can help. And I mailed that back to thousands of people.”

Gamble stated that “she felt the science committee was better qualified to write that section of the introduction to the standards.”²⁹⁵

Mrs. Gamble also got into a heated exchange with conservative Connie Morris over the place in the standards Mrs. Gamble claimed Intelligent Design or creationism is mentioned. “Connie Morris says,” Mrs. Gamble later said of the exchange:

you tell me right now where that it is. And I broke my rule [of addressing only the chair during Board meetings] and I said, Mrs. Morris, I'm sorry, I had a set of the documents at home. I forgot to bring it, you'll have to give me a few minutes to look for it. And she says, you tell me right now, you don't have any time. And I am so mad, and I'm trying [to find it], and we're on television and I was saying I'm sorry, I don't have it at my fingertips, and she says, you answer my question right now. I can't remember which question it is now but it was one that I wasn't going to answer and I said, I'm not going to answer it. And so there is this personal exchange that is caught on television that went all over the state. Jodene, my older daughter, called me that night after seeing me on television and she's laughing and she says mother, that woman is looking to be skinned alive. I have seen that look on your face. You were ready to rip her face off. And Janet [Waugh] said, I had my hand, I was ready. If you lunged, I was going to grab you [laughs].²⁹⁶

The Board voted seven-three to send the standards back to the science writing committee for revision.

At the Board meeting of July 12, 2005, Mrs. Morris proposed further revisions to the standards based upon the Minority report. Mrs. Gamble argued that the “Additional Specificity” clarification for Grade 8-12 Standard 3, Benchmark 3 had been added by the science hearings Subcommittee, but it was not accepted science, and that it was

²⁹⁵ Kansas Board of Education meeting minutes, June 15, 2005. Retrieved from http://www3.ksde.org/commiss/june_2005_min.htm, February 27, 2007.

²⁹⁶ Republican Board of Education member Sue Gamble, District 2. Personal interview, August 3, 2006. The question that Mrs. Gamble refused to answer, according to the minutes, was a request by Mrs. Morris to “please e-mail her references [to Intelligent Design or creationism in the standards] and she would make an effort to have them removed.”

subsequently “introducing a new subject in the standards that had not been previously included by the science standards writing committee.”²⁹⁷ Dr. Abrams responded that “it was an extension of the existing subject of neo-Darwinian evolution that was in the standards.”²⁹⁸ Mrs. Gamble said that “that the only defense for it was in Intelligent Design and Creationism,” to which Dr. Abrams disagreed.²⁹⁹ Dr. Wagnon stated his support for Mrs. Gamble's position and, referring to Grades 8-12 Standard 7, Benchmark 3, 1. a., “Additional Specificity,” objected to the statement that ““modern science can sometimes be abused by scientists and policymakers, leading to significant negative consequences for society and violations of human dignity presented a misconception about the scientific process,” presented a misconception about the scientific process.”³⁰⁰

Mrs. Morris, who had authored a list of changes to the standards based on the Minority report, “said she felt it was important in the specific areas cited to stay with the language from the report.”³⁰¹ When a vote was taken to approve of Mrs. Morris's changes, however, the vote failed to gain the required six-vote majority because conservative Ken Willard was briefly out of the room at the time.³⁰² A second motion to vote on Mrs. Morris's changes led to its passage by a six-four margin. In the interim, Mrs. Martin circulated a petition to describe evolution as an “unguided” process, a

²⁹⁷ Kansas Board of Education meeting minutes, July 12, 2005. Retrieved from http://www3.ksde.org/commiss/july_11_12_2005_board_minutes.htm, February 27, 2007.

²⁹⁸ Ibid.

²⁹⁹ Ibid. Punctuation in the original.

³⁰⁰ Ibid.

³⁰¹ Ibid.

³⁰² Ibid.

motion that passed by a vote of seven-three.³⁰³

Dr. Abrams said that the science writing committee would meet on August 2, 2005, and that he hoped to have a revised draft of the standards available for the August Board meeting.

The minutes of the Board meeting of August 9, 2005, record:

In discussion of the draft under consideration, a several Board members reiterated their belief that only those things that had gained acceptance in the scientific community should be included in curriculum for science classrooms and that controversies that were considered outside the realm of science should be discussed in social studies, philosophy or comparative religion classrooms. That laymen, rather than those involved in the sciences, were deciding what should belong in the science education standards was also seen as inappropriate.³⁰⁴

The Board voted to send the draft of the standards to the Mid-Continent Region for Education and Learning (McREL) and established a budget for their review.³⁰⁵

McREL returned the standards with its commentary to the science writing committee in October and released them to the public on October 13, 2005. On a scale of one to four, four being exemplary, the standards received a rating of four “applicability and appropriate challenge, and a [three] rating (the document generally meets the criterion addressed with a few revisions recommended) to appropriate [sic] for assessment, measurability and specificity. On the criteria of “clarity” and “high quality,” however, the standards received a rating of two. Despite this, science writing committee co-chair Dr. Stephen Case “said his committee is unlikely to do more work, noting that much of

³⁰³ Ibid. The minutes not reflect the specific language of Mrs. Martin's proposal. The language was reported in the *Lawrence Journal-World*, July 13, 2005.

³⁰⁴ Kansas Board of Education meeting minutes, August 9, 2005. Retrieved from http://www3.ksde.org/commiss/august_2005_min.htm, February 27, 2007.

³⁰⁵ Ibid.

the criticism in the Mid-Continent review arose from changes made by conservative board members.”³⁰⁶ Dr. Case added, “Mid-Continent’s criticisms — that parts of the proposed standards were poorly worded or unclear or that statements were not supported by scientists — are reason to continue working on the document.”³⁰⁷

Yet the Mid-Continent report cited only 7 percent of the material in the standards as questionable. Much of that material reflected intelligent design advocates’ criticism of evolutionary theory that natural chemical processes can create the building blocks of life, that all life has a common origin and that man and apes share a common ancestor .

“I’m not sure the public understands the nature of this review,” Case said. “What they will hear is that the standards are pretty solid.”

John Calvert, a retired Lake Quivira lawyer who helped found the Intelligent Design Network, said he expected criticism of the proposed standards...

“I could have predicted the reviewers would not embrace these changes. I would not expect the reviewers to be jumping for joy,” Calvert said.³⁰⁸

Two weeks later, on October 26, 2005, the National Academy of Sciences and the National Science Teachers Association denied the use of their copyrighted material in the Kansas Department of Education’s proposed science standards.³⁰⁹

At the November 8, 2005 Board meeting, the moderates made one last attempt to prevent the proposed standards from being adopted. They failed. Following the moderates’ initial objections to the lack of consideration given to the position of mainstream science – an argument to which Dr. Abrams replied that mainstream scientists had refused to testify at the hearings – and the significance of McREL’s low

³⁰⁶ John Milburn, the Associated Press. Reported in the *Lawrence Journal-World* October 14, 2005.

³⁰⁷ Ibid.

³⁰⁸ Ibid.

³⁰⁹ John Hanna, the Associated Press. Reported in the *Lawrence Journal-World*, October 27, 2005.

scores on three of the evaluation criteria, the discussion became a freewheeling debate about the religious nature of the Minority's version of the standards and the place of critical thinking in Kansas science classrooms. In the end, the language in the standards remained in place. Eventually, Mrs. Morris moved for a vote on the adoption of the standards. Mrs. Martin seconded the motion and the board voted six-four to adopt Draft Three of the Kansas state science standards.³¹⁰ Dr. Abrams “stated that with passage of the standards it would be a great day for education in Kansas. He added that he felt it was one of the best things that the Board could do because it would raise the quality and teach more about science. Mr. Bacon agreed, stating that passage of the standards would help eliminate scientific dogma.”³¹¹

With that vote, the Intelligent Design advocates won. But what, exactly, did they win?

Significance

On May 12, 2005, Dr. Abrams chaired the hearing’s closing statements in which attorneys John Calvert and Pedro Irigonegary presented their final arguments. Mr. Irigonegary read aloud a response to Dr. Abrams’s *Wichita Eagle* letter penned by Dr. Steve Case, co-chair of the science standards writing committee, that stated in part, “standards create a broad vision of what it means to be scientifically literate. They serve only as a foundation for local school districts to create their curriculum and instruction. It seems as if Dr. Abrams is promoting State control for what has been a local function; the

³¹⁰ Ibid.

³¹¹ Kansas Board of Education meeting minutes, November 8, 2005. Retrieved from http://www3.ksde.org/commiss/nov_2005_brd_min.htm, February 27, 2007.

curriculum and instruction occurring in local classrooms.”³¹²

If individual school districts possessed the authority to interpret the science standards in the manner they saw fit so long as the standards were met³¹³, why was the language of the standards of such vital importance that the Board of Education justified spending thousands of taxpayer dollars on public hearings? Given the earnest seriousness with which Board members and Mr. Calvert's witnesses address the issue, it is unlikely that the alteration of the standards was merely a symbolic gesture. Yet, when asked how the standards would affect classroom instruction, conservative Kathy Martin believed that it would be “business as usual because teachers are going to do what they want to do anyway. Standards can be put on the shelf and pretty much ignored, except if you have to have your students assessed over certain areas of the standards [so] you better make sure that those have been covered or your students won't do well.”³¹⁴ Conservative Steve Abrams concurred that the new standards “wouldn't change how science is taught hardly any, if [the teachers] were allowed to proceed.”³¹⁵ If science instruction in Kansas would be virtually unchanged, as Dr. Abrams and Mrs. Martin claim, what was the significance of the new language in the standards?

³¹² Pedro Irigonegaray, hearings transcript, May 12, 2005.

³¹³ Steve Abrams pointed out that “in Kansas we do not have a state curriculum, we do not have state purchases of textbooks. Every school district and as a matter-of-fact within school districts, some school districts, the teachers determine their own scope and sequence and the teachers in Kansas are given lots of latitude to teach what they think is important. Now, as you move up, some districts require for instance more emphasis on something or other than other things, for instance, and some of the districts, the school board has said we want to focus on reading, very much focus on reading, we want you to make sure you cover these items and so there is some of that within the districts.” Republican Board of Education member Steve Martin, District 10. Personal interview, August 7, 2006.

³¹⁴ Republican Board of Education member Kathy Martin, District 6. Personal interview, August 9, 2006.

³¹⁵ Republican Board of Education member Steve Abrams, District 10. Personal interview, August 7, 2006.

The answer lies in the structure of public schooling in the state of Kansas. Although statewide standards are in place, school districts have tremendous latitude in curricular decision-making. Dr. Abrams pointed out that the state of Kansas has no statewide curriculum or any statewide textbook purchasing program. Curricular and textbook purchasing decisions are made at the local district level. Even with No Child Left Behind pushing states to assume greater control of local schools, Kansas public school districts maintain a great deal of autonomy.

Neither school districts nor individual teachers, however, have total independence in determining curricular content. The statewide assessments, moderate Janet Waugh pointed out, are based on the state standards.³¹⁶ The assessments from the state level thus drive content at the local level in so far as standards-specific material must be covered. How that material is taught in the classroom is left to the discretion of the districts so long as they stay within the boundaries established by the standards. To alter those boundaries, therefore, is to alter the content of the curriculum. And it was this alteration that lay at the heart of the science standards controversy.

In July 2006, the Kansas State Board of Education published *Kansas Science Standards Summary of Changes*, in which the evolution-related changes made to the standards and the rationale for those changes were spelled out. The key phrase in this eight-page booklet can be found in response to Question Two: Do the standards include Intelligent Design? “We [the Kansas Board of Education] also emphasize that the Science Curriculum Standards do not include Intelligent Design... while the testimony

³¹⁶ Board of Education member Janet Waugh, District 1. Personal interview, August 7, 2006.

presented at the science hearings included many advocates of Intelligent Design, these standards *neither mandate nor prohibit* teaching about this scientific disagreement.”³¹⁷

The 2001 standards offered a clear, focused definition of science as “the human activity for seeking natural explanations for what we observe in the world around us.” The sticking point, as several witnesses argued during the hearings, was the inherent ideological bias found in the phrase “natural explanations.” If natural explanations were the only explanations the standards allowed, alternate explanations such as Intelligent Design could not be presented in Kansas public schools. By instead describing science as “a systematic method of continuing investigation that uses observations, hypothesis testing, measurement, experimentation, logical argument and theory building to lead to more adequate explanations of natural phenomena,” scientific inquiry was no longer limited to the natural realm. This new description is demonstrably fuzzier, lacking guidelines for what constitute “logical argument” and “more adequate explanations.”

Dr. William Harris’s arguments supporting the new standards as they relate to evolution were typical of the witness testimony:

Because [evolution is] a historical science. It doesn't get much more historical than billions of years ago. Nobody was there to know what happened. Nobody watched it. We cannot say with any certainty how anything came to be.³¹⁸

Intelligent Design advocates argued that this new definition was a more accurate explanation of the scientific process, free from the ideological constraints of methodological naturalism. Up until now, educators who presented alternate views of

³¹⁷ Kansas State Board Of Education, *Kansas Science Standards Summary of Changes*, July, 2006. Emphasis added.

³¹⁸ William Harris, hearings testimony, May 5, 2005.

evolution were ridiculed or ignored. Ironically, rather than striking back at criticism that accused Intelligent Design of being unscientific, Intelligent Design advocates have begun using such criticism to their advantage.

The Free Speech Campaign of the Discovery Institute's Center for Science and Culture claims that "self-appointed defenders of the theory of evolution are waging a malicious campaign to demonize and blacklist anyone who disagrees with them"³¹⁹ and provides a link for donations to and membership in the Discovery Institute. On a brightly-colored four-page FAQ about the new standards, the Intelligent Design Network argues that "textbooks and prior science standards teach the origin of the universe and the origin of life and its diversity from only one perspective. The new standards are more objective... they seek to eliminate rather than advance a religious bias that permeated the old standards."³²⁰ Thus, the overall thrust of the Discovery Institute's public-relations campaign has been to argue that valid scientific alternatives to evolution have been unfairly maligned and subjected to institutional discrimination.

Most mainstream scientists, on the other hand, argue that Intelligent Design – to date, the only alternative to evolution seriously considered by a school board as a scientific explanation since the 1987 *Edwards v. Aguillard* decision struck down Bible-based creation science – fails as science.³²¹ And, it logically follows, if it is not science, it does not belong in a science classroom.

³¹⁹ The Free Speech Campaign of the Center for Science and Culture of the Discovery Institute. Retrieved from <http://www.discovery.org/csc/freeSpeechEvolCampMain.php>, March 7, 2007.

³²⁰ FAQ about the New Science Standards. Retrieved from http://kansasscience2005.com/FAQ_lowres.pdf, March 7, 2007.

³²¹ See, for instance, Mark Perakh, *Unintelligent Design* (Amherst, NY: Prometheus Books, 2004).

Both sides, however, do agree on one thing: good science is being repressed.

Non-Repression

“Democratic communities,” writes Amy Gutmann, “are not in principle bound to teach the truth, although the wisest communities will strive to do so, but they must be bound *not* to teach false doctrines that threaten to undermine the future prospects of a common democratic education.”³²² The interpretation of evolution presented in the 2001 Kansas state science standards, testified the Minority, represented just such a false doctrine. The majority, in turn, leveled the same charge at the Minority report. “The constitutional prohibition against the establishment of religion,” Amy Gutmann continues, “creates such a negative boundary, which is subsumable under the more general democratic principle of nonrepression.”³²³

Both sides of this debate have adopted the non-repression argument as their own. In a political system such as the Kansas State Board of Education, in which policymakers are directly elected by the people, it is the public's perception of who is repressing whom that fuels political action. Determining favorable education policy, therefore, required direct appeals to the voting public.

The Discovery Institute has had a long string of successes in getting their message “out” to voters. Since 2000, a number of states, including California, Georgia, Michigan, New Mexico, Ohio, Wisconsin, and perhaps most notably, Pennsylvania have witnessed proposed legislation or decisions by school boards to challenge the way in which

³²² Amy Gutmann, *Democratic Education*, Princeton, New Jersey: Princeton University Press, 1987, p. 103. Emphasis and spelling in the original.

³²³ Ibid.

evolution is taught. Local school boards in Dover, Pennsylvania and Grantsburg, Wisconsin further wrestled with the decision to explicitly introduce Intelligent Design into their schools' science curricula in the mid-2000s.

The Discovery Institute has clearly tapped into a public desire to reconcile biological evolution with a God-centered universe. The Institute's Center for Science and Culture (CSC), its advocacy arm for and clearinghouse of the latest news in Intelligent Design, describes itself as a “program that encourages schools to improve science education by teaching students more fully about the theory of evolution, as well as supporting the work of scholars who challenge various aspects of neo-Darwinian theory and scholars who are working on the scientific theory known as intelligent design.”³²⁴ The CSC also claims that it is neither a creationist organization nor does it seek mandating teaching Intelligent Design in science classrooms. Indeed, the language found in its webpage and press releases is remarkably similar to the testimony offered by the Minority witnesses at the Kansas science standards hearings. Answers offered to some of the questions on the CSC's FAQ webpage state:

Although open hostility from those who hold to neo-Darwinism sometimes makes it difficult for design scholars to gain a fair hearing for their ideas, research and articles supporting intelligent design are being published in peer-reviewed publications³²⁵...

³²⁴ The Discovery Institute, <http://www.discovery.org/csc/topQuestions.php>. Retrieved March 7, 2007.

³²⁵ The passage continues, “Examples of peer-reviewed books supporting design include *The Design Inference* (Cambridge University Press) by William Dembski, *Darwin's Black Box* (The Free Press) by Michael Behe, [Darwinism, Design and Public Education](#) by Stephen C. Meyer & John Angus Campbell (Michigan State University Press) and *Debating Design* (Cambridge University Press) by Center Fellow William A. Dembski and ID critic Michael Ruse. In the area of journals, Michael Behe has defended his concept of "irreducible complexity" in the peer-reviewed journal *Philosophy of Science* published by the University of Chicago.” The Discovery Institute is careful in this passage not to claim that Intelligent Design-informed papers and books have been peer-reviewed by *scientific* journals and publishing imprints. The Institute also points out that Charles Darwin's *On the Origin of Species* “was published in a prominent

[The] Discovery Institute seeks to increase the coverage of evolution in textbooks. It believes that evolution should be fully and completely presented to students, and they should learn more about evolutionary theory, including its unresolved issues. The true censors are those who want to stop any discussion of the scientific weaknesses of evolutionary theory...

[The] Discovery Institute recommends that states and school districts focus on teaching students more about evolutionary theory, including telling them about some of the theory's problems that have been discussed in peer-reviewed science journals. In other words, evolution should be taught as a scientific theory that is open to critical scrutiny, not as a sacred dogma that can't be questioned.³²⁶

By appealing directly to the public, the Discovery Institute has demonstrated a strategy more suitable for a legal proceeding than to scientific research. All sides, they argue, should be given their say before a decision is reached. Certainly, weighing all of the available evidence prior to making a judgment is appropriate, even desirable, for a court of law. The same applies equally to science. The critical difference between these two modes of inquiry is that rules of evidence in science differ from those in the law, a distinction often lost on the average layperson.

When preparing for a case, attorneys on both sides argue the merits of the evidence before a judge, who determines what evidence is permitted and what is not. The attorneys naturally seek to exclude evidence detrimental to their respective cases whether or not it may have an objective bearing on the outcome. In effect, attorneys do their best to pre-determine the outcome of the case before it ever reaches trial. To use a highly simplified example, a man accused of attacking his neighbor may have evidence

British trade press and was not peer-reviewed in the modern sense of the term," as if to suggest that Intelligent Design advocates, and not Darwin, followed proper scientific protocol to reach their conclusions.

³²⁶ The Discovery Institute, <http://www.discovery.org/csc/topQuestions.php>. Retrieved March 7, 2007.

of his guilt – such as a videotape of the attack that includes sound, a violation of wiretapping laws in some states if the recording was made without the consent of all those recorded – thrown out on this legal technicality. Without this evidence, a jury may find the man not guilty of the crime even though he in fact committed it.

The rules of evidence in science work differently. Dr. Abrams's description of science as that which is observable, measurable, testable, repeatable, and falsifiable is a textbook definition of the scientific process. Following this protocol, a scientist will write up the results of his or her experiments and publish them. Other scientists will run the same experiments, following the described protocols, and determine whether or not the published results are good science. Scientific evidence thus stands upon and adds to a pre-existing knowledge base. Unlike lawyers, scientists do not have the luxury of being advocates for a particular set of outcomes; their experiments, if conducted properly, will lead where they lead and enable others to follow.

Scientists have historically been less successful than Intelligent Design advocates in appealing to the general public, for two reasons. First, science does not easily lend itself to media-friendly, soundbite-oriented discussion. To fully understand evolution, for example, a scientist must draw upon a wide range of scientific disciplines, including astronomy, biology, chemistry, and paleontology. Even popular treatments of evolution, such as Ernst Mayr's *What Evolution Is* and Carl Zimmer's *Evolution: The Triumph of an Idea*, are rich in technical detail.

Second, until recently, scientists have made relatively little effort to present their latest findings in language easily accessible to layperson. This responsibility often falls

to the public relations staff of universities and research centers, as well as to journalists. Instead, scientists themselves have traditionally focused on persuading other scientists of the merits of their work rather than directing their arguments to the general public. Science is an enterprise of consensus, not a body of established laws open to argumentation and interpretation.

Pluto offers an excellent example. At its August, 2006, annual meeting in Prague, Czech Republic, the 2500-member International Astronomical Union (IAU) voted on Pluto's status as a planet. Scientists argued at length over Pluto's relatively diminutive size and the significance of recent discoveries of other similarly sized orbital bodies before taking a vote on Pluto's status. Following its discovery in 1930, the IAU had declared Pluto a planet "by fiat but never clearly defined what a planet is."³²⁷ In Prague, the scientists voted and reached consensus. On August 24, 2006, at 3:32PM local time, "Pluto ceased to be a planet."³²⁸ A handful of scientists, specialists in one scientific sub-discipline representing 0.000000004167 percent of the Earth's population, made a decision that reached into the homes and classrooms of billions of people and led to publishers and consumers of science education material spending hundreds of millions of dollars on reprinting and purchasing costs globally.

In the realm of science, nothing is scientifically valid unless it has the consensus of the scientific community. Intelligent Design lacks this consensus and is therefore, by definition, unscientific. In time, and with further research, that consensus may well

³²⁷ News This Week column, *Science*, 1 September 2006, volume 313, p. 1214.

³²⁸ *Ibid*, p. 1215.

change. For Intelligent Design to be accepted as science, however, it must do two things: conduct scientific research according to the rules of science and concentrate its advocacy on the scientific community, not the general public. The only way to be accepted as science is to be accepted by scientists.

On April 8, 2006, Kansas State University professor of science education John Staver told a group of assembled science teachers that Intelligent Design advocates sought to circumvent the scientific process by, in effect, cutting to the front of the line. When conducting scientific research, Dr. Staver said, scientists must first persuade other scientists before they can persuade the public. To do otherwise is unscientific.³²⁹

The Discovery Institute has claimed numerous times over the past five years that its proponents have published peer-reviewed scientific material. The Institute's website offers a list of books and journal articles supporting the Intelligent Design position.³³⁰ Once again, however, the presentation of this list of articles is intended less for scientists than it is for the general public. This list embodies, in many ways, a peculiar schizophrenia unique to Intelligent Design advocates. On one hand, they argue that mainstream science is repressing their legitimate scientific criticism of the naturalistic manner in which science is conducted and that, as a consequence, they cannot get a fair hearing in peer-reviewed journals. On the other hand, they are quick, even eager, to announce any publications supportive of Intelligent Design that appear in any academic publication, scientific or not. They are equally quick to highlight the scientific

³²⁹ John Staver, *Controversy over Evolution: Understanding Its Roots and History in Science, Religion, and Law*. National Science Teachers Association annual conference, Anaheim, California, April 8, 2006.

³³⁰ <http://www.discovery.org/scripts/viewDB/index.php?command=view&id=2640>, Accessed March 7, 2007. Some of the titles are listed twice, once under "Featured Articles" and once more on the main list.

credentials and university affiliations of their proponents while simultaneously attacking the very methods through which they earned those credentials and academic posts.³³¹ To the layperson, it is easy to overlook this thinly-veiled hypocrisy and see instead a group of rag-tag mavericks breaking away from an imperial scientific establishment. “It is ingrained in the American character,” wrote physicist Robert Park, “that a simple, virtuous man can accomplish things that are beyond the reach of closed-minded, so-called experts.”³³²

In his opening statement at the hearings, Dr. William Harris accused mainstream scientists of bullying those who disagreed with them.

Our witnesses will be in front of you the next few days and you will be able to see and hear for yourself and you will be able to judge. Are our witnesses political opportunists? I think not. They are advocating a point of view that about 80 percent of the public in the United States believes in. When polls have been taken about 80 percent of those responding favor a balanced view, teach both sides, present all the data. Now, this country is not 80 percent one political party or another, so that's got to include republicans and democrats. So I don't think this is political opportunism.

Are they evangelical activists? Well, some like myself do have a religious belief. All of us are dissenters from Darwinism, some of us don't have religious beliefs. All of us are professional scientists who have really committed, as I think as most scientists are, to follow the evidence wherever it leads regardless of its religious implications. That is the crux of science.

Are we ignoramuses? Well, you'll have to decide. Are we rule breakers? Well, yes, we are. In a sense we are rule breakers. We are willing to break the unwritten rule of science that says only natural explanations are allowed. The natural explanations are proven by scientific experiment to be inadequate and we are happy to break the rule and to follow the evidence where it goes.

³³¹ For example, “click here for biographical sketches of the 23 experts (19 with doctoral degrees) who testified during the hearings,” invited a link on John Calvert’s website devoted to the Kansas state science standards. <http://kansasscience2005.com/WitnessesScienceHearings.pdf>. Accessed March 7, 2007.

³³² Robert Park, *Voodoo Science: the Road from Foolishness to Fraud* (New York, NY: Oxford University Press, 2000), p. 108.

Are we unprincipled bullies? The dictionary definition of a bully is a blustering, quarrelsome, overbearing person who habitually badgers and intimidates smaller and weaker people. Now, you may see some bullying these next few days, you'll have to decide who is doing the bullying.³³³

Intelligent Design critics Barbara Forrest and Paul Gross accuse the Discovery Institute, and the Center for Science and Culture in particular, of being an “intellectually reactionary enterprise [that] will not fade away quietly.”³³⁴ While the degree to which the Discovery Institute is intellectually reactionary remains a matter for debate, there is little doubt that it has no plans to simply fold up its tent and leave anytime soon. Their public relations strategy has, however, changed since the inception of the Wedge Strategy in 1998. Mainstream scientists, despite their public relations inexperience and relative lack of organization, have to some degree succeeded in painting Intelligent Design as akin to Biblical creationism. In response, Intelligent Design advocates such as John Calvert have shifted away from the active promotion of Intelligent Design and concentrated more on criticisms of evolution. The best defense, this new strategy suggests, is a good offense. The witness testimony at the Kansas science standards hearings reflected this new approach. The Discovery Institute has stated much the same.

The Institute’s CSC FAQ webpage states that the:

Discovery Institute favors teaching students more about evolution, not less. We think students deserve to know not only about the strengths of modern evolutionary theory, but also about some of the theory's weaknesses and unresolved issues. In other words, students should be taught that evolutionary theory, like any scientific theory, continues to be open to analysis and critical

³³³ William Harris, hearings transcripts, May 5, 2005.

³³⁴ Barbara Forrest and Paul R. Gross, *Creationism's Trojan Horse: the Wedge of Intelligent Design* (New York, NY: Oxford University Press, 2004)

scrutiny.³³⁵

The idea of evolution as dogmatic materialism is central to the arguments of Intelligent Design advocates. From their perspective, the issue of teaching the origins of life can be defined in terms of orthodoxy and oppression. Virtually all of the witnesses at the hearings testified that scientists have an ideological stake in maintaining the status quo vis-a-vis the dominance of the Darwinian paradigm and, therefore, “Darwinism” remains accepted science despite mounting scientific evidence to the contrary.³³⁶ They do not, however, argue that Intelligent Design should replace evolution. Rather, Intelligent Design advocates say that both positions should be allowed to complement one another in a manner that allows the student to make the final determination about which is the more acceptable explanation. Alvin Plantinga, John A. O'Brien Professor of Philosophy at the University of Notre Dame, writes:

... it is unfair or unjust to teach evolution – universal common ancestry, for example – in the public schools, at any rate where there is a substantial segment of the population whose comprehensive beliefs are incompatible with evolution. In the very same way, of course, it would be unjust to teach creationism as the settled truth.³³⁷

Thus defined, Intelligent Design is not an attempt to impose religion upon science but rather represents scientific objectivity at its best. Steve Abrams, a practicing veterinarian, expressed a particular dislike for what he believed to be the dogmatic

³³⁵ The Discovery Institute, <http://www.discovery.org/scripts/viewDB/index.php?command=view&id=2112>. Retrieved March 7, 2007.

³³⁶ In this argument has also been advanced in Intelligent Design literature. Among the most prominent of these authors are Michael Behe (1996), William Dembski (1999), and Phillip Johnson (2000).

³³⁷ Plantinga, *Intelligent Design Creationism and Its Critics*, p. 787. He argues that if we are to be truly “fair” in teaching the origins of life, we can present both evolution and creationism “conditionally” if we are careful to teach the “sober truth” of each position. (p. 790)

manner in which in evolution was taught in public schools, “particularly when there is evidence presented by scientists in peer reviewed journals and articles that seem to contradict what is commonly presented.”³³⁸ Teaching “both sides” of the issue of origins is a common refrain in Intelligent Design literature and until the 2005 *Dover* trial, represented the thrust of its public position.

Similarly, when asked about the degree of academic freedom her students have in her classroom, Jill Gonzalez-Bravo replied:

I allow for academic freedom on a variety of subjects so why not evolution? So if a student showed interest into some aspect of the occult that was dealing with an area of what they perceived science to be, I would encourage them to apply the steps of scientific method and research this interest. It is at that point looking at the data, whether they could gather data or not, that the students-- they would have to gather data, but that the students would need to draw their own conclusions. I take issue with invalidating anyone's thoughts because they may derive from a world view counter to mine.³³⁹

Criticizing evolution thus opens the door to other possible explanations about the origins of life, a door through which, several witnesses testified, Intelligent Design might be permitted entry. In June, 2001, Intelligent Design advocates even attempted to get a mandate to criticize evolution codified in federal law.

The Santorum Amendment

The Center for Science and Culture FAQ claims that “[Intelligent Design] has also been endorsed by the U.S. Congress and report language attached to the No Child Left Behind Act Conference Report,” with an embedded link leading to a description of the so-called Santorum Amendment. Moreover, one of the justifications the Minority

³³⁸ Abrams, personal interview, August 7, 2006.

³³⁹ Jill Gonzales-Bravo, hearings transcript, May 6, 2005.

offered in Draft 2 for its revised definition of science was the language found in the Santorum Amendment concerning teaching the origins of life. During floor debate in the U.S. Senate on the final day before the final vote on the No Child Left Behind Act in 2001, Senator Rick Santorum (R-PA) tried to include “two innocuous sentences” into the Act that read:

It is the sense of the Senate that –

- (1) good science education should prepare students to distinguish the data or testable theories of science from philosophical or religious claims that are made in the name of science; and
- (2) where biological evolution is taught, the curriculum should help students to understand why this subject generates so much continuing controversy, it should prepare the students to be informed participants in public discussions regarding the subject.³⁴⁰

“It simply says” Senator Santorum continued, “[that] there are disagreements in scientific theories out there that are continually tested. Our knowledge of science is not absolute, obviously. We continue to test theories. Over the centuries, there were theories that were once assumed to be true and have been proven, through further revelation of scientific investigation and testing, to be not true.”³⁴¹

By December, 2001, however, it had been removed from the legislation and placed instead in the “Joint Explanatory Statement of the Committee of Conference,” moving it from the legislation itself into a non-binding explanation of the legislative

³⁴⁰ “Better Education for Students and Teachers Act,” U.S. Senate, June 13, 2001. Retrieved from <http://thomas.loc.gov/cgi-bin/query/F?r107:1:/temp/~r107mw3Mr7:e0>; March 7, 2007. Despite speculation as to why Senator Santorum felt the need to assure other senators that the two sentences were “innocuous,” his choice of words has never been fully explained.

³⁴¹ Ibid.

history.³⁴² The language of the amendment was also changed. The final version inserted into the conference report read:

The Conferees recognize that a quality science education should prepare students to distinguish the data and testable theories of science from religious or philosophical claims that are made in the name of science. Where topics are taught that may generate controversy (such as biological evolution), the curriculum should help students to understand the full range of scientific views that exist, where such topics may generate controversy, and how scientific discoveries can profoundly affect society.³⁴³

Consequently, it became little more than an historical footnote. Yet, Intelligent Design advocates immediately seized upon it as justification for their claims that federal standards opened door to teaching alternatives to evolution. During his remarks on the Senate floor on June 13, 2001, Senator Santorum had also spoken at length about the influence of legal scholar David DeWolf on the language being proposed.

David DeWolf was a Senior Fellow at the Discovery Institute and professor of law at Gonzaga University Law School whose primary area of expertise, with respect to his Discovery Institute position, was the legality of teaching Intelligent Design. In an undated article following the insertion of the Santorum Amendment, Professor DeWolf and Discovery Institute President Bruce Chapman argued that:

After the Senate vote on Sen. Santorum's resolution, those favoring a Darwin-only approach to science education campaigned to have the conference committee remove the Santorum language or to water it down by deleting any reference to "biological evolution." Many letters, phone calls and emails were launched to

³⁴² Barbara Forrest and Paul R. Gross, *Creationism's Trojan Horse: the Wedge of Intelligent Design* (New York, NY: Oxford University Press, 2004), p. 243.

³⁴³ Retrieved from <http://www.discovery.org/scripts/viewDB/filesDB-download.php?id=113>, March 7, 2007.

persuade members of the committee to omit the Santorum language. These efforts failed.³⁴⁴

Incredibly, despite the failure of Senator Santorum to make his amendment part of the final version of the bill, Professor DeWolfe and Mr. Chapman claimed victory.

While the wording in the conference report was revised slightly from the original Santorum Amendment, the changes made actually *strengthened* support for what we at the Discovery Institute have called a “teach the controversy” approach. Darwin-only advocates often assert that students should only be exposed to the majority view in science and therefore have no right to hear about competing scientific views. In contrast to this view, the conference committee language explicitly encourages a curriculum teaching “the full range of scientific views that exist...”

Some supporters of a Darwin-only approach to science education have tried to create a controversy over the fact that the final Santorum statement resides in the report language rather than the statutory language of the No Child Left Behind Act. These Darwin-only advocates apparently hope to convince state and local policymakers that Congress did not intend for the Santorum statement to be taken seriously. This view of congressional intent is false...

In fact, the language on teaching the scientific evidence for and against controversial theories such as evolution was of such importance that some members of Congress threatened to vote against the inclusion of federal requirements for science standards if it was not included. Their fear—thoroughly justified, it turns out!—was that states would be pressured to adopt science standards that attempted to close down debate on Darwin’s theory...

...it was adopted because the language itself is a plea for openness and academic freedom on controversial topics. Therefore, it does not dictate; it recommends strongly. If any state or local boards doubt that it is now federal policy, they should inquire about the subject to the U. S. Department of Education.³⁴⁵

³⁴⁴ “Why the Santorum Language Should Guide State Science Education Standards”. Retrieved from <http://www.discovery.org/articleFiles/PDFs/santorumLanguageShouldGuide.pdf>, March 7, 2007.

³⁴⁵ Ibid. Emphasis in the original.

It is little wonder, then, that similar language made its way into the Minority's explanation of its position regarding the Kansas science standards. The letter accompanying Draft Two of the Minority's proposed standards said:

On March 7, 2005 the Science Committee of the Kansas State Board stated that the hearings should focus on the following question: To what extent do the proposed science standards comply with the advice provided by the House and Senate Conferees in enacting the No Child Left Behind Act of 2001:

[quotes the Santorum Amendment in full]

This is the perfect question, because our proposals have actually been designed to cause Kansas science education to be responsive to this advice. Accordingly, the explanations that accompany our proposals have been revised to briefly explain how they address the concerns of the NCLB advice.³⁴⁶

Curiously, the Santorum Amendment was not mentioned once over the course of the hearings during either direct testimony or cross-examination.³⁴⁷ The Discovery Institute, however, continued to defend its position. When biologists Joseph Levine and Ken Miller published “The Truth about the ‘Santorum Amendment’ Language on Evolution,” the Discovery Institute responded with a sarcastic press release attacking Dr. Miller’s credentials and his purported motivation.

The expertise of Brown University biologist Ken Miller apparently knows no bounds. Perhaps tired of being just a biologist, Miller in recent weeks has taken to moonlighting as a legal scholar and political scientist...

However, before Prof. Miller quits his day job and signs up to teach American Government 101, he may want to pursue further studies. As with many other claims raised by Miller, these new charges turn out to be based more on bluster

³⁴⁶ “Recommendations for Further Revisions to the Second Draft of Kansas Science Educational Standards,” March 29, 2005. Retrieved from <http://kansasscience2005.com/Cover%20letter%20for%20Proposed%20Rev%20Draft%202.pdf>, February 26, 2007.

³⁴⁷ None of the Board members nor Mr. Irigonegaray brought up the Santorum Amendment during their interviews. This is due largely to the fact that the author, to his regret, neglected to ask the question.

than fact...

What is especially revealing about the effort by Prof. Miller and fellow Darwinists to deny, dismiss, and downplay the Santorum statement is their apparent reluctance to engage in open debate over the substance of the statement....

Perhaps Darwinists are reluctant to debate the Santorum statement on its merits because they think such a debate could eventually expose the Darwinists' disregard for free speech in science education. On that point, at least, they're right.³⁴⁸

Once more, in the debate between evolution's supporters and detractors, the accusation of repression stood tall.

Victory

So what, exactly, did the Intelligent Design advocates win? Was Intelligent Design in fact incorporated into the new standards? Dr. Abrams argued that it was not. When asked if media descriptions of Intelligent Design influencing the standards were accurate, he responded, "our critics [portray it as such], it's not just media, but our critics do. And that's the reason that I suggested everybody read the standards, because the standards don't talk about [Intelligent Design]. The standards talk about what's good science."³⁴⁹

A Discovery Institute blog on Intelligent Design concurred. "There is no national movement to require the teaching of intelligent design in schools," wrote CSC associate Director John West. "What is being discussed in most states is simply the presentation of scientific evidence critical of Darwinian theory as well as scientific evidence favoring the

³⁴⁸ "Biologist Ken Miller Flunks Political Science on Santorum," April 19, 2002. Retrieved from <http://www.discovery.org/scripts/viewDB/index.php?command=view&id=1149>, March 7, 2007.

³⁴⁹ Republican Board of Education member Steve Abrams, District 10. Personal interview, August 7, 2006.

theory. Thus, the Dover, Pennsylvania school district policy explicitly endorsing intelligent design is an exception (and Discovery Institute opposes the Dover policy).”³⁵⁰

If we are to take Intelligent Design advocates at their word, the introduction of Intelligent Design into the Kansas science curriculum was never one of their aims. Rather, Intelligent Design advocates wanted something different, something far more substantial than the influencing of a single state’s educational policy: they wanted to be taken seriously. If the scientific establishment would not listen, they would take their message to the people. Either way, they would be heard. And in Kansas in 2005, they were victorious.

After years of tireless advocacy, their efforts have finally begun bearing fruit, first in Ohio and then in Kansas. By organizing symposia, soliciting funding, and maintaining a clearinghouse of Intelligent Design publications, the Discovery Institute serves as the primary organizing body for Intelligent Design advocates throughout the United States. It offers support and, as demonstrated by the Kansas science standards hearings, expert witnesses whenever a local Intelligent Design organization requires assistance. The Institute’s efforts, although geared toward advocating a scientific discipline, focused primarily in the area of public relations.

Intelligent Design activist John Angus Campbell stated, with no apparent irony, that “certainly it is not the business of pressure groups with special agendas to set the

³⁵⁰ “Upcoming Article: Will the Washington Post Be Fair?” Retrieved from http://www.evolutionnews.org/2005/02/upcoming_article_will_the_washington_pos.html, March 7, 2007.

science curriculum.”³⁵¹ What, if not a pressure group with a special agenda, is the Discovery Institute? It has become adept at squeezing policymakers where it hurts the most: in the ballot box and in the wallet. Sue Gamble noted that as a result of evolution becoming a political issue in campaigns for the Kansas Board of Education, the levels of campaign spending have reached unprecedented heights. “Sunny Rundell,” she said:

who had been elected like six times to the state board said that he never spent more than \$500. In my race, I spent \$51,000 to win the primary and the general. Most of that money was spent on the primary, something like \$38,000, and the rest was spent on the general race. Linda Holloway spent \$126,000 to lose the primary. It was the most expensive state board race in the history of the state and continues to be. And when you count soft money, which are other organizations that are promoting your candidacy, that race was more than half million dollars.³⁵²

Moreover, some Board of Education members believe themselves qualified to determine how best to run Kansas public schools irrespective of their personal backgrounds in education. At a March, 2005 Board meeting, conservative Ken Willard claimed “that he was qualified to make educational policy by virtue of his election.”³⁵³ This belief, coupled with the religious sympathies of the Board, the agitation of the Minority members of the science writing committee, and the Board’s six-four conservative majority threw open the policy window to changing the Kansas science standards in a manner favorable to attacks on evolution.

Religion, especially, played a major role in the adoption of the 2005 standards.

During the hearings, Kathy Martin was quoted in the *Seattle Times* about her faith.

³⁵¹ John Angus Campbell, “Intelligent Design, Darwinism, and the Philosophy of Public Education,” in *Darwinism, Design, and Public Education*, ed. John Angus Campbell and Stephen C. Meyer (East Lansing, MI: Michigan State University Press, 2003), 21-22.

³⁵² Republican Board of Education member Sue Gamble, District 2. Personal interview, August 3, 2006.

³⁵³ Kansas Board of Education meeting minutes, March 8, 2005. Retrieved from http://www3.ksde.org/commiss/march_2005_board_min.htm, March 7, 2007.

“‘Evolution is a great theory, but it is flawed,’ said [Kathy] Martin, 59, a retired science and elementary-school teacher who is presiding over the hearings. ‘There are alternatives. Children need to hear them. We can’t ignore that our nation is based on Christianity, not science.’”³⁵⁴

Science is found not in its facts but in its methods. It is a mode of inquiry, not a belief system. It is, as Dr. Abrams so eloquently pointed out, the act of observing, testing, experimenting, repeating, and falsifying. It is not, of course, as it is told in the Bible.

Intelligent Design claims to be science. Yet, while claiming to be science, it also claims to redefine it. By attacking what it claims are the naturalistic underpinnings of an unsupportable materialistic philosophy, Intelligent Design argues that it is broadening rather than restricting the scope of scientific inquiry and making the study of what it calls “origins science” objective at last.

“The religions that reject evolution as a valid scientific theory,” writes Amy Gutmann, “also reject the secular standards of reasoning that make evolution clearly superior as a theory to creationism.”³⁵⁵ Intelligent Design, and the Kansas Board of Education, did exactly this. Whether the standards would remain intact, however, depended on the upcoming election cycle. As the Discovery Institute had long hoped, the

³⁵⁴ Reported in the Seattle Times, May 6, 2005. Retrieved from http://seattletimes.nwsourc.com/html/nationworld/2002265204_evolution06.html, February 26, 2007.

³⁵⁵ Amy Gutmann, *Democratic Education*, Princeton, New Jersey: Princeton University Press, 1987, p. 102.

people would have the final word.

New Elections

In 1999, the Board's vote on the place of evolution in the state's science curriculum was a 6-4 decision that split the Board down its conservative/moderate divide. In 2005, the vote on the science curriculum would again split the Board 6-4, pitting the conservative majority of six Republicans against a moderate minority of two Republicans and two Democrats.³⁵⁶ Ironically, the same day that the Kansas Board of Education adopted its new science standards, voters in Dover, Pennsylvania, ousted the school board members who insisted that Intelligent Design be taught to students in their district. Consequently, evolution once more became the overriding campaign issue for the five Board members running for reelection in 2006.

Every two years, half of the ten-member Board stands for reelection. With the election schedule alternating between the even- and odd-numbered districts, the 2006 campaign season saw the seats for districts one, three, five, seven, and nine become the subject of the costliest State Board of Education election in Kansas history.³⁵⁷ Almost immediately, the science standards were a campaign issue. Less than 24 hours after the Board's November 8, 2005, adoption of the standards, the media reported that three challengers filed papers formalizing their intention to run against incumbent conservatives. Two of those challengers, Harry McDonald (District 3) and Sally Cauble

³⁵⁶ Democratic Board of Education member Janet Waugh, District 1. Personal interview, August 7, 2006. Regarding the Board's internal politics, Mrs. Waugh observed, "it's more philosophy [than party affiliation], I think. Moderate vs. conservative is what [the media] put it because they call us all moderates. In fact, if you want to know the truth, Sue Gamble is a Republican and I think oftentimes I am more conservative than Sue is."

³⁵⁷ Republican Board of Education member Sue Gamble, District 2. Personal interview, August 3, 2006.

(District 5), had already filed prior to the Board's vote while the third, Kent Runyan, filed to run in District 9 against Iris Van Meter. Dr. Runyan, a professor of education at Pittsburg State University and former local school board president, stated that the new standards were a major factor in his decision to run.³⁵⁸

The day after the new standards were adopted, officials of the Lawrence (KS) school district announced that science instruction in the district's biology classes would proceed as they had been.

Sue Morgan, a member of the Lawrence school board, said the [state Board's] vote could deter teaching candidates.

Morgan said she expects the Lawrence school board to discuss the state board's vote within the next few meetings.

Morgan said she anticipates the [district] board will take an official stance that it will not change the standards.³⁵⁹

Two days later, Discovery Institute Senior Fellow John West said of the outcry from the scientific and educational communities, "This is a propaganda strategy of the other side... They're trying to snatch victory from the jaws of defeat by spin."³⁶⁰

Even the state's governor, Democrat Kathleen Sibelius, was openly critical of the new standards. Urging Kansas voters to carefully follow the Board's "very critical elections," Governor Sibelius said, "I hear from parents and teachers and business leaders that they really want Kansas education to be first-class education, and they want to make

³⁵⁸ The Associated Press, "Third Conservative Member Draws Foe in 2006 Election," *Lawrence Journal-World*, November 9, 2005.

³⁵⁹ Sophia Maines, "Lawrence Officials: School Board Vote Won't Change Biology Classes," *Lawrence Journal-World*, November 9, 2005.

³⁶⁰ John Hanna, "Evolution Debate May Tarnish State's Image," *Lawrence Journal-World*, November 11, 2005.

sure that we are known as a state that values education, values science, values initiatives, technologies, creativity. And I think this is a step in the wrong direction, as do a lot of the people who talk to me.”³⁶¹

The conservatives struck back, arguing that criticism of the standards was ideologically biased and had no foundation in science. In a letter sent to newspapers across Kansas and to media outlets throughout the United States, Dr. Abrams defended the new standards and criticized its opponents. “‘Evolutionists do not want students to know about or in any way to think about scientific criticisms of evolution,’ [Steve] Abrams said. ‘Evolutionists are the ones minimizing open scientific inquiry from their explanation of the origin of life.’”³⁶² Despite Dr. Abrams’s protests, criticism poured in from around the world and was published across the media spectrum from mainstream newspapers and television reports to highly opinionated Internet blogs. Kansas’s science standards had become a political lightning rod.

On November 16, 2005, the Kansas Alliance for Education, a new moderate political action committee, announced that it would support candidates for the Board “whose beliefs and objectives are more in line with mainstream Kansans” and opposed the six-member conservative majority.³⁶³ When the Vatican’s official astronomer declared the following day that Intelligent Design was not science, Dr. Abrams shrugged off the remarks, saying, “I don’t believe intelligent design belongs in the science

³⁶¹ John Hanna, “Sibelius Says Kansas Should Follow Ed Board Race Closely,” *Lawrence Journal-World*, November 12, 2005.

³⁶² John Hanna, “Board of Ed Chairman Defends Science Standards,” *Lawrence Journal-World*, November 15, 2005.

³⁶³ Journal-World staff, “Group Formed to Oppose Conservative Members of State Board Of Education,” *Lawrence Journal-World*, November 17, 2005.

classroom [either]... [the new standards] allow critical thinking and analysis. It's not about whether intelligent design does get in or doesn't."³⁶⁴

Simultaneously, another controversy was brewing at the University of Kansas, where Professor Paul Mirecki, chair of the University's religious studies department, announced his intention to teach a class entitled "Special Topics in Religion: Intelligent Design, Creationism and other Religious Mythologies." John Calvert predicted that the class "will go down in history as one of the laughingstocks of the century" as he attempted to retain a vestige of humility. "My voice is a very, very small voice in the woods... My voice is rarely heard because we're in the minority. A strategy that seeks to demean can be very, very effective to them."³⁶⁵

Further controversy was ignited when Professor Mirecki posted a message about the course on a Yahoo.com listserv. "The fundies want it all taught in a science class," he wrote, "but this will be a nice slap in their big fat face by teaching it as a religious studies class under the category 'mythology.'" He signed the message, "Evil Dr. P." State Senator Kay O'Connor called Professor Mirecki "a hateful man" and said, "He wants me to say 'thank you' by giving more money... Who is the ignoramus here? Who is the uninformed one here?"³⁶⁶

While university officials tried to placate critics of the proposed class, University of Kansas anthropology professor John Hoopes announced plans to include Intelligent

³⁶⁴ Journal-World staff, "Abrams Shrugs off Vatican Official's Statement on ID," *Lawrence Journal-World*, November 18, 2005.

³⁶⁵ Sophia Maines, "KU Class Angers 'Design' Advocates," *Lawrence Journal-World*, November 22, 2005.

³⁶⁶ Sophia Maines, "KU Class Angers 'Design' Advocates," *Lawrence Journal-World*, November 24, 2005.

Design in a course entitled “Archaeological Myths and Realities.” The course “will cover such topics as UFOs, crop circles, extrasensory perception and the ancient pyramids... ‘I think this is very important for students to be articulate about — they need to be able to define and recognize pseudoscience,’ Hoopes said.”³⁶⁷

On Monday, November 28, 2005, faculty at the University of Kansas religious studies department approved Professor Mirecki’s course but remove the phrase “and other Religious Mythologies” from the title. State legislators, meanwhile, became increasingly vocal about their displeasure of the course and, especially, its professor over the e-mail. Some legislators suggested holding hearings when the legislature resumed in January, 2006. State Senator Karin Brownlee said, “The KU administration — it is their job to hold their faculty responsible, and then it is the job of the Legislature to hold the administrators accountable.”³⁶⁸

That same day, Professor Mirecki offered an apology. “I accept full responsibility,” he wrote, “for an ill-advised e-mail I sent to a small group of students and friends that has unintentionally impugned the integrity and good name of both the university and my faculty colleagues. My words were offensive, and I apologize to all for that.”³⁶⁹ The apology was not well-received. State Senator Kay O’Connor asked, “If a person has hate in his heart and says something hateful and later apologizes, do you think the hatred in his heart has been mended?... I’m surprised that something more severe isn’t

³⁶⁷ Sophia Maines, “KU Class Angers ‘Design’ Advocates,” *Lawrence Journal-World*, November 27, 2005.

³⁶⁸ Scott Rothschild, “KU Course Creates Furor in Topeka,” *Lawrence-Journal World*, November 29, 2005.

³⁶⁹ Journal-World staff, “Religion Professor Issues Apology about E-Mail,” *Lawrence-Journal World*, November 29, 2005.

happening to this teacher who obviously has a hatred for Christians.”³⁷⁰

On Friday, December 2, 2005, four days after issuing his apology, Professor Mirecki canceled the course. “My concern is that students with a serious interest in this important subject matter would not be well served by the learning environment my e-mails and the public distribution of them have created,” he wrote in a statement. While some conservative legislators were pleased with the course’s cancellation, Kansas Attorney General Phill Kline, himself a conservative Republican, was surprised. “I believe people ought to be engaged in free discussion,” he said. “I didn’t have any problem with the teaching of the class, I don’t have a problem with all the discussion surrounding it. I think it’s healthy.”³⁷¹

Early in the morning on Monday, December 5, 2005, Professor Mirecki was driving to breakfast when he was beaten by two men in a pickup truck. “I just pulled over hoping they would pass, and then they pulled up real close behind,” he said. “They got out, and I made the mistake of getting out.” As they attacked him, “Mirecki said the men who beat him were making references to the controversy that has propelled him into the headlines in recent weeks.”³⁷² Conservative columnist and political activist John Altevogt questioned Professor Mirecki’s claims. “He (Mirecki) has very little credibility left... The one thing that could save his bacon is to become a martyr of sorts, or to elicit

³⁷⁰ Sophia Maines, “Mirecki Apology Doesn't Appear to Appear Critics,” *Lawrence-Journal World*, November 30, 2005.

³⁷¹ Sophia Maines, “Intelligent Design Course Canceled,” *Lawrence Journal-World*, December 2, 2005.

³⁷² Ron Knox, Eric Weslander, “Mirecki Hospitalized after Beating,” *Lawrence Journal-World*, December 5, 2005.

sympathy from being the victim rather than the persecutor.”³⁷³

On December 7, 2005, the University of Kansas announced that Paul Mirecki had stepped down as chair of the religious studies department. Two days later, however, Professor Mirecki told the *Lawrence Journal-World* that his resignation had been forced.³⁷⁴ Despite claims that he had been forced to give up the chair of the department because he had the “temerity to challenge the power of the religious right in Kansas and the university capitulated to demands of the conservative minority,”³⁷⁵ University of Kansas maintained that the resignation was voluntary.³⁷⁶ Professor Mirecki hired a lawyer and declared his intentions to sue the department.³⁷⁷ In April, 2006, the Douglas County Sheriff's Office closed the case without arresting any suspects, citing lack of evidence.

Meanwhile, Board of Education member Kathy Martin announced on December 14, 2005, that she wanted to help better equipped public school teachers with the tools to critically analyze evolution. She wanted the board to recommend textbooks and “provide leadership for teachers looking to teach the controversial issue objectively.” Moderate Sue Gamble said that she was “surprised that was even being mentioned... It is beyond

³⁷³ Eric Weslander, “Mirecki Treated after Roadside Beating,” *Lawrence Journal-World*, December 6, 2005.

³⁷⁴ Sophia Maines, “Professor Blasts KU, Sheriff's Investigation,” *Lawrence Journal-World*, December 10, 2005.

³⁷⁵ Ibid.

³⁷⁶ Sophia Maines, “Mirecki Left Leadership Post Voluntarily,” *Lawrence Journal-World*, December 13, 2005.

³⁷⁷ No subsequent information on the lawsuit was publicly available as of this writing. It is unknown whether Professor Mirecki dropped the charges or if they are still pending.

our authority.”³⁷⁸ Four days later, a federal judge in Pennsylvania ruled that Intelligent Design cannot be taught in public schools.

Perhaps inspired by Judge Jones’s ruling, science writing committee co-chair Steve Case announced plans to reconvene the committee and resume work on the standards without compensation, claiming that roughly half of the original committee had expressed interest in his proposal. After pointing out that “the committee’s last draft contains errors and sections that need to be clarified to help districts that might use the panel’s work rather than the final version edited by the education board’s conservative majority,” Dr. Case said, ““I really don’t want districts using drafts or unfinished work or poor work... I have some pride in the work that I do, and I want to finish that and make it available to schools. If people want to use it, great.” Dr. Abrams stated that he had no objection to the committee continuing its work. “Realizing that the state assessments will not be taken off of these curriculum standards,” he said, “of course that is their prerogative.”³⁷⁹

Even without input from the reconvened science writing committee, Board of Education Attorney Dan Biles acknowledged that portions of the standards needed to be rewritten. The National Academy of Sciences and the National Science Teachers Association both refused the Board permission to use their copyrighted material in the new science standards. Thus, “any language in the standards identified as copyright expressions will have to be rewritten, a job that will fall to the Department of Education,”

³⁷⁸ The Associated Press, “Board Member Wants to Help Teachers Teach Criticisms of Evolution,” *Lawrence Journal-World*, December 16, 2005.

³⁷⁹ The Associated Press, “Science Standards Committee to Meet Again, without Board,” *Lawrence Journal-World*, December 23, 2005.

said Biles, who noted that the anticipated cost of the external legal review would be “a few thousand dollars.”³⁸⁰

Late January, 2006 witnessed a flurry of evolution- and Intelligent Design-related activity in Kansas. Professor William Dembski, of the Southern Baptist Theological Seminary, addressed a nearly full house at the University of Kansas Lied Center on January 23 in what was supposed to be a debate between himself and a scientist supportive of evolution. No scientist, however, accepted the invitation to speak. Asked how biology teachers should teach Intelligent Design, Dr. Dembski said that teachers should “go as far as you can” in presenting the material.³⁸¹

A week later, Eric Rothschild and Steve Harvey, attorneys for the plaintiffs in the Pennsylvania *Dover* case, spoke at the University of Kansas Dole Institute of Politics. ““These same negative arguments against evolution that have arisen out of the creationist movements — and which are outdated and discredited and just plain false — those are the same arguments that were supporting intelligent design in the Dover case,”” said Eric Rothschild. ““They’re absolutely present in Kansas.””³⁸² On the question of a possible lawsuit in Kansas, Eric Rothschild warned against jumping to litigation. Intelligent Design advocates ““gave it their best shot in that trial,” he said. ‘They had their best witnesses there to make the case, and it was completely unpersuasive and the judge ruled that the public servants who had promoted this policy had done their constituents a disservice. ... It’s a lot to go through for something that is not going to advance kids’

³⁸⁰ Scott Rothschild, “State Science Standards Set for Rewrite,” *Lawrence Journal-World*, January 3, 2006.

³⁸¹ Sophia Maines, “Speaker Stands behind Theory,” *Lawrence Journal-World*, January 24, 2006

³⁸² Sophia Maines, “Is Kansas Court Battle over Intelligent Design Next?” *Lawrence Journal-World*, January 29, 2006.

education at all.”³⁸³

On February 2, 2006, the documentary “Flock of Dodos: The Evolution-Intelligent Design Circus” premiered to a capacity crowd at the Glenwood Arts Theater in Overland Park, Kansas.³⁸⁴ The documentary, written and directed by an evolutionary biologist who later attended film school, examined the evolution/Intelligent Design controversies in Kansas and in Dover, Pennsylvania. Board of Education member Sue Gamble was delighted. When first speaking with Kansas native and *Flock of Dodos* writer/director Randy Olson about his proposed documentary, Mrs. Gamble recalled:

I really discouraged him because I said, by that time I had already been in like five or six documentaries, and I said I'm not sure you can bring a fresh perspective and he said I think I can. So he and I have worked pretty closely together, he and I and Steve Case have worked very closely together on that movie. I won't get any credit for and I did not do it for that reason.

The basic theme of the movie is that you have something called intelligent design that has no story, but compelling language to tell up with. And you have science over here with the compelling story and fell language area no communication ability. And so scientists think, if I just keep explaining to you, this is really good, it's important stuff, and we're going go back here to the little tiny pieces and then take it all the way forward and you're really get a lot out of it. And [the listener is] going, I can't do this anymore.³⁸⁵

The purpose of the film, said Mrs. Gamble, was to tell the complex story of evolutionary science in an informative, entertaining way. Board of Education member Kathy Martin was less enthusiastic. “These supposed scientists and professors,” she said:

are sitting around thd table playing poker and drinking and they're talking about how other people are so dumb because we don't believe in evolution... And we're going, oh man, these guys have a lot to learn. Just like they are so much smarter

³⁸³ Ibid. Punctuation in the original.

³⁸⁴ The Journal-World staff, “Film on ID, Evolution Premieres Thursday,” *Lawrence Journal-World*, February 1, 2006.

³⁸⁵ Republican Board of Education member Sue Gamble, District 2. Personal interview, August 3, 2006.

than everybody else and can't have any questions, the thing of pride, you know, [it was a] “you question me, well, you can't question me because I know it all” kind of thing. And I question that. If anybody tells me they know it all then I'm thinking, you probably haven't done your research. Because it always seems to me that the more I learn, the more I realize I don't know, so I'm just going, wow, kind of closed minded there if you ask me. And I would hate to have that for any science person.³⁸⁶

On February 21, 2006, the *Lawrence Journal-World* published an article about three positions at the University of Kansas medical center who signed a petition that questioned the legitimacy of neo-Darwinian evolution. The petition, circulated by the Discovery Institute and extant since 2001, reads, “We are skeptical of claims for the ability of random mutation and natural selection to account for the complexity of life. Careful examination of the evidence for Darwinian theory should be encouraged.”³⁸⁷ In response, “Leonard Krishtalka, director of KU’s Biodiversity Institute and a vocal critic of intelligent design, said if one worked at it, it’s possible to compile a list of signatures of people who believe the earth is flat.”³⁸⁸ As of this writing, the Discovery Institute claims to have “over 700 scientists from around the world” as signatories.³⁸⁹

The Discovery Institute’s regular publicity of the petition led to a counter-petition from the National Center for Science Education called “Project Steve,” in honor of late evolutionary biologist Stephen Jay Gould. Describing the petition as a “tongue-in-cheek parody of a long-standing creationist tradition of amassing lists of ‘scientists who doubt evolution’ or ‘scientists who dissent from Darwinism,’” the National Center for Science

³⁸⁶ Republican Board of Education member Kathy Martin, District 6. Personal interview, August 9, 2006.

³⁸⁷ Retrieved from <http://www.dissentfromdarwin.org/>, March 9, 2007.

³⁸⁸ Sophia Maines, “KU Profs Support Evolution Skepticism,” *Lawrence Journal-World*, February 21, 2006.

³⁸⁹ Discovery Institute press release, February 8, 2007.

Education states that “Steves” make up approximately 1% of the world’s scientists and that each signatory³⁹⁰ thus represents 100 scientists who supports traditional evolution. As of March 7, 2007, the petition claims 792 signatories with a variation of the name “Steve.”³⁹¹

Conservative Board of Education member Iris Van Meter, District 9, announced that she would not seek reelection in order to spend more time with her family.³⁹² That same day, Dr. Steve Case announced the release of new science standards on which some of the majority members of the science writing committee had continued work. “I want people to have the ability to look at the two documents and see the difference and cut through the hyperbole,” he said.³⁹³

Despite its rejected by the Board, Case said the standards writing committee continued its work for two reasons.

The first was to make changes to the recommendations that were suggested by an outside consultant. Aside from evolution, Case said, there were other areas of the standards that needed repair.

And the second reason was in case there is a change in the makeup of the board during this year’s elections.

“Should there be an electoral change we wanted to make sure there is a coherent document to turn to,” he said.³⁹⁴

³⁹⁰ Named Stephen, Steven, Stephan, Stephanie, et cetera.

³⁹¹ “NSCE Steve-o-Meter,” retrieved from <http://www.ncseweb.org/resources/articles/meter.html>, March 9, 2007.

³⁹² The Journal-World staff, “State Board Member Decides Not to Run Again,” *Lawrence Journal-World*, March 15, 2006.

³⁹³ Scott Rothschild, “Rival Science Standards Emerge in the Evolution Debate,” *Lawrence Journal-World*, March 15, 2006.

³⁹⁴ Ibid.

Board Chairman Steve Abrams was unsure if the Board would examine the proposed new standards. “School districts can basically do anything they want to do,” he said. “We don’t have centralized development of curriculum in the state of Kansas, and consequently they can develop their own curriculum as they see fit.”³⁹⁵

Two days later, faculty at the University of Kansas announced a speakers’ series to discuss the implications of the Board’s decision about the state science standards to be held in April and May. Organizer and physics and astronomy professor Hume Feldman said, ““If we are going to introduce all kinds of bizarre notions into the science curriculum and say that’s legitimate science, we’re just going to dilute what science is... I think that’s very dangerous.”³⁹⁶ University of Kansas geology department chair Robert Goldstein added, “We’re hurt by the outside perception of the deliberations... There is this strange phenomenon that is occurring where non-scientists are trying to define what science is.”³⁹⁷

In May, Department of Education spokesman David Awbrey argued at a Kansas City Press Club forum that “evolution proponents are practicing a religion. Supporting evolution, he said, is metaphysical speculation. ‘Anyone see the origin?’ he said. ‘Anyone see the Big Bang? Anyone see the dinosaurs? These are metaphysical speculations.’”³⁹⁸ Moderate Board of Education member Janet Waugh said of his remarks, “When he is doing his job as public information officer, he should not have an

³⁹⁵ Ibid.

³⁹⁶ Sophia Maines, “Series to Focus on Science Standards,” *Lawrence Journal-World*, March 17, 2006.

³⁹⁷ Ibid.

³⁹⁸ Sophia Maines, “Evolution, Religion Comments Put Heat on Department Spokesman,” *Lawrence Journal-World*, May 26, 2006.

opinion... When he is speaking for the board, he should represent the entire board. I think it was totally inappropriate.”³⁹⁹ Kathy Martin concurred, saying that “if she were a spokeswoman, she would make clear when she was speaking for herself and when she was speaking for the organization she represented.”⁴⁰⁰ David Awbrey later stepped down from his post.

Meanwhile, the campaigns for the five contested Board of Education seats began to heat up as the August primaries approached. In July, the Discovery Institute announced that it would begin a campaign over the Internet and “possibly start a radio campaign” to inform the public about what the Kansas state science standards do.⁴⁰¹ “Everybody sees through the intent of the Discovery Institute,” responded Dr. Steve Case, who added that he resented the fact that an out-of-state organization was trying to influence Kansas elections. “‘Kansans are not appreciative of folks coming in from the outside, trying to explain it to us,’ he said.”⁴⁰² John West, director of the Discovery Institute’s Center for Science and Culture “said the group was simply exercising its rights of free speech and felt compelled to combat what it considered inaccurate information given by the other side.”⁴⁰³

At a July 11 Board meeting, Kansas Citizens for Science director Jack Krebs protested what he described as a “smear campaign” by Intelligent Design advocates of his organization. “I think it’s a smear campaign because everybody knows there are an

³⁹⁹ Ibid.

⁴⁰⁰ Ibid.

⁴⁰¹ Scott Rothschild, “Intelligent Design Advocates to Campaign in Kansas,” *Lawrence Journal-World*, July 7, 2006.

⁴⁰² Ibid.

⁴⁰³ Ibid.

awful lot of people who do believe that evolution is atheistic and that they are trying to tar us and other people who accept the committee's standards as atheists," he said, adding that "John Calvert, managing director of the Intelligent Design Network, was promoting the idea that anyone who believes in evolution is an atheist."⁴⁰⁴ Mr. Calvert did not address the Board at this meeting.⁴⁰⁵

The Ballot Box Speaks

During the campaigns themselves, evolution was a prominent issue. On the question of evolution, listed first among his campaign platforms, conservative Board member Ken Willard, District 7, wrote:

For too long the Darwinian evolution theory of the origin of the universe and life within it has been taught uncritically in Kansas science classes, and the views of the growing number of scientists who are skeptical of some of the claims of evolution have been withheld from students. Students have been taught that life has evolved over billions of years to its current state by chance, without cause or purpose, dismissing the lack of supporting evidence for those claims. There is little wonder that students leave school feeling lost and without hope or sense of purpose for their lives.⁴⁰⁶

In District 1, moderate Janet Waugh faced Jesse Hall in the Democratic primary. Mr. Hall, she said, "supported the majority of the board... his statement was that I had spent too much time on [evolution-related] issues and we needed to put them all behind us and just move ahead. Because he agreed with the adoption of the science committee, you know, and all the other decisions that have been controversial on the board, he pretty

⁴⁰⁴ Gena Terlizzi, "Scientist Decries 'Smear' Campaign," *Lawrence Journal-World*, July 12, 2006. It should be noted that, contrary to the article headline, Jack Krebs is not himself a scientist.

⁴⁰⁵ Kansas Board of Education meeting minutes, July 11, 2005. Retrieved from <http://www.ksde.org/LinkClick.aspx?fileticket=WCu%2b1XxEbEI%3d&tabid=63&mid=405>, March 9, 2007.

⁴⁰⁶ <http://www.kenwillard.net/issues.html>. Retrieved Dec. 7, 2006.

well agreed with the majority.”⁴⁰⁷

In primaries that were described as one having one of the lowest voter turnouts in memory,⁴⁰⁸ both Mrs. Waugh and Mr. Willard easily won their respective primaries. Incumbent Republican John Bacon of District 3 also won his primary despite stiff opposition from Harry McDonald, former president of Kansas Citizens for Science. Mr. Bacon campaigned on five key issues, the first two of which, according to his website, were sex education and science standards. “Although not required by our current science standards,” he wrote:

I would note that the vast majority of Kansans, and Americans for that matter, believe that students should be taught about the controversy surrounding the origin of life, which is still a mystery. The standards allow teachers an opportunity to discuss scientific evidence that may be critical to certain claims of evolution. This was not permitted in the previous standards. These standards allow for more academic freedom for the teachers in the classroom.

The negative information about these standards in the press is all rhetoric and is geared towards the strategy to demean rather than to discuss the controversy surrounding the origin of life.⁴⁰⁹

Incumbent conservative Connie Morris was not so fortunate, losing her primary to moderate Republican Sally Cauble. Touting her background as a lifelong Kansan, small business owner, and the “the ONLY candidate with **classroom experience**,”⁴¹⁰ Mrs. Cauble’s website emphasized “fairness in considering difficult educational issues” but made no explicit mention of the science standards.⁴¹¹ The District 9 Republican

⁴⁰⁷ Democratic Board of Education member Janet Waugh, District 1. Personal interview, August 7, 2006.

⁴⁰⁸ Chad Lawhorn, “Voter Turnout among Lowest in Memory,” *Lawrence Journal-World*, August 2, 2006.

⁴⁰⁹ Retrieved from <http://www.johnbacon.org/issues.html>, March 9, 2007.

⁴¹⁰ Retrieved from <http://www.caubleforcommonsense.com/>, March 9, 2007. Emphasis in the original.

⁴¹¹ Ibid.

primaries saw moderate Jana Shaver defeat conservative Brad Patzer, Iris Van Meter's son-in-law.

Although the general election was still three months away, the moderates had effectively reclaimed the Kansas State Board of Education with the primary defeats of two conservative incumbents. National Center for Science Education spokesman Nick Matzke expressed delight at the outcome. "I don't think there is any other way to interpret it" than as a blow against teaching creationism in the classroom, he said.⁴¹² "When you have politicians who are willing to compromise science education, then they are going to be fast and loose with other things." The Discovery Institute was circumspect:

Casey Luskin, a spokesman for the Discovery Institute, a Seattle-based think tank that advocates for intelligent design, disagreed [with Nick Matzke].

First, he insisted that the Kansas science standards have nothing to do with intelligent design.

Secondly, he said, the institute plans to continue a campaign of radio ads to educate Kansans about what the standards mean.

"We see this as an academic freedom issue," Luskin said. "The freedom of teachers to teach more about the science of evolution and the freedom of students to learn more about the science of evolution."⁴¹³

Moderate Janet Waugh was exasperated. "'It's like [Intelligent Design advocates] won't give up,' she said. 'They just keep trying. Why won't they accept the fact that we

⁴¹² Sophia Maines, Scott Rothschild, "Election Hailed As Pro-Evolution," *Lawrence Journal-World*, August 3, 2006.

⁴¹³ Ibid.

can teach religion in school, but we can't teach it in a science class?"⁴¹⁴

Moderates hoped to win an even stronger majority in the November general election and, for a brief period, appeared poised to do so. While conservative John Bacon won reelection in District 3 by a 56-44 margin, Ken Willard was locked in a tight reelection race with Democratic challenger Jack Wempe. Mr. Willard would eventually go on to win reelection by a 51-49 March. Sally Cauble defeated Democrat and former Board of Education member Tim Cruz while Janet Waugh was unopposed. Democratic Governor Kathleen Sibelius, embarrassed by the Board's actions, stated her desire to "to strip the board of most of its duties, reducing it to an advisory panel with most of the power vested in an appointed secretary of education."⁴¹⁵

Janet Waugh, who opposed changing the science standards regarding evolution in 2005, later expressed her belief that the new moderate majority "will, I'm confident, reverse [the standards]." Barely a month after the November election, moderate Democrat Bill Wagnon – expected to be elected Chairman of the Board when the newly-elected board members met in January, 2007 – announce at a Board meeting that the science standards would be one of the first issues the new Board tackles. In response:

Mr. Willard indicated that he did not understand the need to review the science standards again, noting that they had just undergone a lengthy review and it appeared irregular to be reviewing them again. He noted that the normal cycle for review was every seven years. Mrs. Martin agreed, as did Mr. Bacon. Mr. Bacon indicated that he felt that perhaps there should be a vote on whether it should be an agenda item. He added that he didn't feel that the staff should spend any time

⁴¹⁴ Ibid.

⁴¹⁵ Carl Manning, "Board Of Education Races Set Moderates' Control," *Lawrence Journal-World*, November 8, 2006.

or money pursuing the issue until a vote was taken.⁴¹⁶

Despite this opposition, Dr. Wagnon said, “It’s likely we’ll have a discussion of the proposal and act on it in February.”⁴¹⁷ In keeping with his prediction, the new Board moved fast. As the final order of business at the Board’s first meeting of January, 2007, Dr. Stephen Case presented science standards recommendations on behalf of the informal group composed of former members of the science writing committee. At the request of moderate Sue Gamble, Dr. Case said he would make an electronic version of the proposed standards available for review prior to the next Board meeting. Conservative Steve Abrams asked if Board staff could prepare a comparison of the new and existing standards for review. The minutes reflect that “Mrs. Gamble stated she didn’t see the need of a comparison document. Mrs. Martin also didn’t see the need for a comparison because she felt the current standards shouldn’t be revised. She indicated her satisfaction with the current standards, but if revisions were to be seriously considered, she would like to see a comparison.”⁴¹⁸ Conservative Ken Willard, while supportive of the idea of a comparison, “questioned the propriety of the discussion to bring the standards up at the current time.”⁴¹⁹ Conservative John Bacon concurred, pointing out that:

that the current standards had been made an issue in the 2004 election, but had still been addressed within the regular review cycle. Mrs. Waugh said she recognized the revision of the standards at the current time was out of the normal

⁴¹⁶ Kansas Board of Education meeting minutes, December 13, 2006. Retrieved from <http://www.ksde.org/LinkClick.aspx?fileticket=5cvnrTibFJE%3d&tabid=63&mid=405>, March 9, 2007.

⁴¹⁷ Scott Rothschild, “Wagnon: Evolution Will Return to State Board Agenda,” *Lawrence Journal-World*, December 13, 2006.

⁴¹⁸ Board of Education meeting minutes, January 9, 2007. Retrieved from <http://www.ksde.org/LinkClick.aspx?fileticket=Y79V%2faYF1hA%3d&tabid=63&mid=405>, March 9, 2007.

⁴¹⁹ *Ibid.*

order, but the issue had been very important in her district in the recent election. She added that she felt she owed it to her electorate to try and changes standards that it disagreed with. Mrs. Rupe also agreed that it might be inappropriate to look at revisions out of the normal sequence. However, she noted that the standards adopted in 2005 did not follow the appropriate process and were not standards that had been brought to the Board by the standards writing committee.⁴²⁰

Since Kansas needed to develop new statewide standardized tests by 2008 in keeping with No Child Left Behind legislation, Dr. Wagon said it was imperative for the board to move quickly:

“Since the tests are based on curriculum standards, the majority of the board feels that we need to have the best possible set of curriculum standards,” Wagon said. “We believe that Steve Case’s committee has produced those. And I would expect those will be adopted.”

The main change will concern the definition of science and how science is to be applied in the classroom, he said.

“Evolution will be only one of the issues,” he said.⁴²¹

On February 13, 2007, the Board adopted new science standards more friendly to evolution.

The board on Tuesday [February 13, 2007] removed language suggesting that key evolutionary concepts — like a common origin for all life on Earth and change in species creating new ones — were controversial and being challenged by new research. Also approved was a new definition of science, specifically limiting it to the search for natural explanations of what’s observed in the universe.

“Those standards represent mainstream scientific consensus about both what science is and what evolution is,” said Jack Krebs, an Oskaloosa math and technology teacher who helped write the new guidelines. He is also president of Kansas Citizens for Science.

But the board’s conservative minority said the new standards will limit the relevant information students get about evolution.

⁴²⁰ Ibid.

⁴²¹ Dave Toplikar, “Wagon Says SBOE to Act on Evolution in February,” *Lawrence Journal-World*, January 10, 2007.

“There seems to be a pattern,” said board member Steve Abrams, an Arkansas City Republican. “Anything that might question the veracity of evolution is deleted.”⁴²²

John West, director of the Center for Science and Culture at the Discovery Institute, dismissed the Board’s actions. “It’s not going to be a precedent in other states... Education is largely a state and local matter, so states are going to do what they think is best and so are local school boards.”⁴²³ Moderates, however, were delighted with the outcome. Even the governor expressed relief:

Kathleen Sebelius, a Democrat re-elected last year, cited embarrassment caused by the board’s past decisions on evolution as a reason to strip it of its power to set education policy.

“Governor Sebelius has consistently said that we need more science education in our schools, not less, so she is relieved to see the State Board of Education take this action,” spokeswoman Nicole Corcoran said.⁴²⁴

Despite the moderates’ optimism, however, Janet Waugh was cautious. “I think we’re good for two years... [but] who knows what the election will hold in two years?”⁴²⁵

⁴²² John Hanna, “Science Standards Evolve Again,” *Lawrence Journal-World*, February 14, 2007.

⁴²³ Ibid.

⁴²⁴ Ibid.

⁴²⁵ Ibid.

Chapter Seven

Findings

This chapter briefly presents four findings from my analysis of the available evidence, corresponding to each of the four analytical codes. These findings address the first research question asked in Chapter One: What strategies have creationists developed in the wake of the 1987 *Edwards v. Aguillard* Supreme Court decision striking down creation science and how have those strategies been employed?

In brief, those findings are:

1. Fairness: Intelligent Design advocates are masters of public relations, far excelling their counterparts in mainstream science by utilizing simple messages of fairness in science and letting the people decide the merits of evolution for themselves.
2. Public appeal: Creationists, in the form of Intelligent Design advocates, have shifted their education policy advocacy from making laws to influencing local school boards in the wake of the *Aguillard* decision their new focus is explicitly local.
3. Emotionality: Intelligent Design advocates appeal less to reason and more to emotion when making their arguments. This emotional resonance is far more effective at influencing public opinion than the cold, analytical arguments popularly associated with modern science.
4. Argumentation: Intelligent Design advocates have systematically adopted legal methodology and argumentation as a means of swaying the public rather

than scientists and educators.

Fairness

In the domain of public relations, the brilliance of Intelligent Design is at its zenith. Indeed, the Wedge Strategy clearly delineates Intelligent Design as a public relations strategy whose purpose is to challenge evolution in a way that garners maximum public support. So effective as this campaign in that “teach the controversy,” appealing to the fairness impulse, has become a popular rallying cry for evolution opponents across the United States.

Scientists have historically been less successful than Intelligent Design advocates in appealing to the general public, for two reasons. First, science does not easily lend itself to media-friendly, soundbite-oriented discussion. To fully understand evolution, for example, a scientist must draw upon a wide range of scientific disciplines, including astronomy, biology, chemistry, and paleontology. Even popular treatments of evolution, such as Ernst Mayr’s *What Evolution Is* and Carl Zimmer’s *Evolution: The Triumph of an Idea*, are rich in technical detail.

Second, until recently, scientists have made relatively little effort to present their latest findings in language easily accessible to layperson. This responsibility often falls to the public relations staff of universities and research centers, as well as to journalists. Instead, scientists themselves have traditionally focused on persuading other scientists rather than directing their arguments to the general public. Science is an enterprise of consensus, not a body of established laws open to argumentation and interpretation. While this may appear “unfair” to the lay citizen in a democracy, “fairness” in law and

“fairness” in science rest on very different principles.

In the realm of science, nothing is scientifically valid unless it has the consensus of the scientific community. Intelligent Design lacks this consensus and is therefore, by definition, unscientific. In time, and with further research, that consensus may well change. For Intelligent Design to be accepted as science, it must do two things: conduct scientific research according to the rules of science and concentrate its advocacy on the scientific community, not the general public. The only way to be accepted as science is to be accepted by scientists.

Ironically, this is Intelligent Design’s primary point of contention and the basis of its “fairness” argument. By pointing out that scientists refuse to accept Intelligent Design as valid science, Intelligent Design advocates insist that accepted scientific principles, rather than Intelligent Design itself, should be forced to change. Their adoption of legal instead of scientific argumentation to press for public acceptance does little more than underscore the scientific weakness of their position.

The general public, however, does not always accept this point, especially when science appears to contradict one’s own faith. Intelligent Design, as Pedro Irigonegaray observed, *feels* good because it enables the believer to reconcile faith with science without turning his or her back on either. Intelligent Design advocates have expertly tapped into this emotional truth and turned evolution into a question of politics rather than a question of science. Intelligent Design advocates have, in effect, adopted Amy Gutman’s nonrepression argument, of the necessity of challenging evolution to avoid

teaching “false doctrines.”⁴²⁶ The dogma of evolution, they argue, has no basis for scientific hegemony in a democratic society.

Missing from this argument, either as a consequence of ignorance or deliberate omission, is the necessary absence of democracy in scientific inquiry. Science, far from being a popularity contest, follows strict protocols governing its methodology and advancement. Once-popular ideas, such as geocentrism and the medical efficacy of blood-letting, fell into obscurity as science tested and successfully challenged them. Scientists testing popular ideas today do so by following the rules of scientific inquiry and submitting their results for public scrutiny.

If Intelligent Design could successfully play by the rules of science, the “fairness” argument would be unnecessary. The subsequent streams of “public appeal,” “emotionality,” and “argumentation” would be similarly unneeded. Because Intelligent Design is unable to play by the rules of science, however, its advocates must rely on other means to broaden the appeal of its message. They therefore appeal not to scientists but to the general public.

Public Appeal

The Supreme Court’s 1987 *Edwards v. Aguillard* ruling rendered obsolete any plans to introduce Bible-based creation science into the American educational system. Intelligent Design was born in the aftermath of this decision as a means of preserving the spirit, if not the letter, of creation science. Both sought to weaken evolution as the preeminent scientific explanation for life’s origins and both sought to introduce the idea

⁴²⁶ Amy Gutman, *Democratic Education*, Princeton, New Jersey: Princeton University Press, 1987, p. 103.

of a supernatural creator responsible for the formation of all known life. From the beginning, its purpose was to appeal not to scientists but to the general public.

Despite the protestations to the contrary from John Calvert and Steve Abrams, it is clear that Intelligent Design played a significant role in the outcome of the Kansas state science standards debate. Every witness at the hearing was in some way engaged in promoting Intelligent Design while the eight-member Minority on the standards writing committee worked closely with John Calvert and the Intelligent Design Network to undermine the committee's efforts and promote their own agenda. There was a locally-focused strategy executed to perfection.

Public appeal works best when targeted constituents feel they have a personal stake in the proceedings. Few stakes are more personal than the education of one's children. Such appeal works best on the most local, and therefore personal, level possible. School voucher programs, for example, promise to send children from poor-performing public schools to higher-performing private schools at reduced or no cost to the parent. Despite the warning that "the institution of a federal voucher program may turn out to be a disaster for the majority of black American children," the *Journal of Blacks in Higher Education* observes that "millions of black parents are fed up with years of broken promises that inner-city schools would improve"⁴²⁷ and suggests that vouchers would be a very attractive alternative to local public schools. The potential consequences of a broad federal program pale when parents see an advancement opportunity for their own children.

⁴²⁷ *The Journal of Blacks in Higher Education*, Spring, 2002, Vol. 35, pp. 79-70.

The decentralized nature of American schooling all but necessitates a local approach to affecting educational policymaking. With the Discovery Institute serving as a global clearinghouse for Intelligent Design literature and apologetics, regional organizations such as John Calvert's Intelligent Design Network have the ammunition they need to effectively lobby state and local school boards. School board members are often ill-equipped to independently judge the merits of arguments that call for modifying the teaching of evolution. Moreover, board members may already be sympathetic to the Intelligent Design position and willing to accommodate challenges to evolution in science classrooms.

By acting and advocating locally, Intelligent Design advocates neatly sidestepped thorny legal precedents barring the teaching of creation science. School boards are responsible not for making law but for formulating and enacting policies that affect the learning outcomes of classroom instruction. The closest state-level school boards get to passing legislation is the crafting of curricular standards and their subsequent tests. Most local school boards are unable to do even this much, dealing instead with textbook purchases and drafting a district-level curriculum. When Intelligent Design advocates engage in a grassroots campaign to challenge evolution, therefore, school boards are highly vulnerable to pressure.

This is not to suggest that school boards are easy targets. The fierce resistance in Kansas and Dover, Pennsylvania, clearly demonstrate that Intelligent Design advocates do not have a monopoly on public advocacy. Rather, school boards provide excellent foils for a movement that wants first and foremost to be heard. Intelligent Design

desperately wants to avoid the fate of the tree that fell in the woods when no one was listening.

Effective public advocacy, however, cannot take place in the absence of an emotional connection. Former House Speaker Thomas P. “Tip” O’Neill’s observation that “all politics is local” applies to legislatures and school boards in equal measure. It is also worth noting Deborah Stone’s observation that “politicians always want to preserve their power, or gain enough power, to be able to accomplish their policy goals.”⁴²⁸ By arguing that the education of children is somehow compromised by teaching only evolution, Intelligent Design advocates appeal to the emotions of board members who want to be fair to every child in their schools and still retain their place on the board. If, as in the case of Kansas, elected board members receive feedback from constituents pushing them in one direction in particular issue, they are unlikely to offer much resistance.

Emotionality

“Who started the fire that killed your mama, Bambi? What's that? It was evolution?”⁴²⁹

When asked about the emotional tone of the hearings and subsequent Board debate, moderate Bill Wagnon responded:

Wagnon: What do you hear in my voice?

Jones: A lot of emotion.

Wagnon: A lot of emotion. It’s a very emotional issue.⁴³⁰

⁴²⁸ Stone, 1997, p.2.

⁴²⁹ Attorney Wallace Brady, voiced by Larry Hagman, “The Monkey Suit”, *The Simpsons*, Fox Broadcasting Corporation, original airdate May 14, 2006.

⁴³⁰ Democratic Board of Education member Bill Wagnon, District 4. Personal interview, August 8, 2006.

Since effective public relations in scientific disciplines consist exclusively of publishing in peer-reviewed scientific publications and presenting at scientific conferences, it is clear that the Discovery Institute and Intelligent Design advocates are appealing not to scientists but to voters and policymakers relatively unversed in the methods of science. The testimony at the hearings and their general public advocacy efforts also played as much to emotion as they did to logic. Consider Mustafa Akyol's testimony at the hearings:

And I could say in recent years, I can claim to be an expert on Islamic radicalism. That's what I write especially in the United States in the media, in Turkey. We know that view that we have is a problem, Islamic radicalism. Why is there hatred of America and the west in general in the Islamic world? And it's because of many reasons, sociological reasons it has about Muslim failure of Muslim world in the 20th Century.

But one reason of the widespread resentment is that Muslims think the west and, of course, the United States is completely a materialistic civilization. They think that when they watch western films, when they read western media, and when the kids take western education, they think that they will be poisoned by an ideology, materialism. That's why they just don't like it. They just want to get away from it. And at the very extreme, it creates what we have, anti-American sentiment among those populations...

And now times have changed. Now [Muslim families] see MTV, they see Hollywood, and I mean that's, of course, materialism in a cultural sense, in terms of hedonism and just caring about profit and don't have any ethical values.

But it also has a philosophical side, and that philosophy, as we all know, is also called naturalism, the idea that nature is all there is. And when that idea, when that philosophy, which has no scientific justification at all, becomes the dominant force in science education in the United States, what you have is that you will have alienated people. You will-- for example, Muslims. They will feel alienated. They will think that there's a school system which imposes on them, on their kids, a philosophy which they don't believe, and which they find to be poisonous, and

which doesn't have any scientific evidence at all. That's the important point.⁴³¹

By doing away with a strictly materialist philosophy, he argues, the Muslim world would be more amenable to accepting American values. It is as if, as Mr. Irigonegaray argued in his interview, Mr. Akyol is suggesting that by encouraging attacks on evolution, the United States can reduce the threat of Islamic terrorist attacks on itself. Religion scholar Warren Nord further testified, “public education must take religion seriously, must include religious voices in the conversation, not just in the context of the distant past, but now as live alternatives, as a matter of liberal education, as a matter of civic justice, as a matter of constitutional neutrality.”⁴³²

The Constitution may be neutral with regard to religion but few can honestly make the same claim on an individual level. When presented with two competing and seemingly equal ideas, one that contradicts one’s beliefs and another that supplements it, the reasonable person is most likely to sympathize with the idea consonant with his or her beliefs. The idea opposed to one's values, on the other hand, is likely to be viewed with suspicion, if not outright hostility. Such attitudes are not restricted to religion.

In 1957, the white residents of Little Rock, Arkansas, responded with howling fury when Little Rock’s Central High School was desegregated. “‘Blood will run in the streets,’ [Arkansas Governor Orval] Faubus warned, if the [black] youngsters tried to enter the school.”⁴³³ The white outrage was so great that President Dwight Eisenhower ordered elements of the U.S. Army’s famed 101st Airborne Division to escort the school’s

⁴³¹ Mustafa Akyol, hearings transcript, May 7, 2005.

⁴³² Warren Nord, hearings transcript, May 7, 2005.

⁴³³ Kirp, 1997, pg. 443.

first nine black student to class. Governor Faubus ordered Little Rock's three high schools closed the following year to halt further attempts at racial integration.

The emotional response in Little Rock and the riveted attention of the country highlight the political magnitude of emotional educational policy issues. The issues themselves have changed since 1957 but the emotions have not. "I had been quoted in the paper as saying that I was a Christian and that I had no problem of science and religion being able to work together," said Moderate Kansas Board member Janet Waugh, "and I got one e-mail from this one fellow that said, not only are you not a Christian, a slow death by torture is to good for you."⁴³⁴ The Board members themselves were not immune. "Mr. Irigonegary," said conservative Kathy Martin, "was very rude [at the hearings] as far as I was concerned, almost like a bully."⁴³⁵ The evolution issue, said moderate Bill Wagnon, is "a very emotional issue. I am deeply offended by the arrogance of a public body, I am deeply offended by the Discovery Institute's trying to use public schools as a way to get their social agenda adopted. I subscribe to the notion that American society is too materialistic but I don't blame that on Darwin."⁴³⁶

When testifying at the hearings, middle school science teacher Jill Gonzalez-Bravo spoke at length about the need for academic freedom when presenting the concept of evolution in the classroom. She also drew a direct parallel between her pregnancy and the confusion of her students when taught about "macroevolution." "I saw how my body compensated during pregnancy," she said. "I was amazed how my child's nourishment

⁴³⁴ Democratic Board of Education member Janet Waugh, District 1. Personal interview, August 7, 2006.

⁴³⁵ Republican Board of Education member Kathy Martin, District 6. Personal interview, August 9, 2006.

⁴³⁶ Democratic Board of Education member Bill Wagnon, District 4. Personal interview, August 8, 2006.

was immediately provided by me and it clicked. I saw what the students conflicted with this theory.[sic] I understood what they took issue with the idea of macroevolution.”⁴³⁷

By framing the issue as a matter of personal revelation, Ms. Gonzalez-Bravo tapped into the emotions underlying the appeal of Intelligent Design. Her students, she argued, shared with her the same emotional objections to evolution but the state science standards unfairly prohibited her from offering any alternative explanation. Consequently, students were confused and angry about the lack of a framework supportive of their beliefs. The standards, from their perspective, were externally imposed and reflected values with which they disagreed.

Ms. Gonzalez-Bravo, certainly better versed in science than the average layperson, arrived at her conclusion independently. Like many Christians, she had taken a step away from evolution when it conflicted emotionally with her faith but had not taken a step toward something else until Intelligent Design presented an attractive alternative. Science standards that cut at the emotional core of a community’s faith thus risk the anger of that community unless it can present some sort of reconciliation between religion and science. That community can be as small as a single family or as large as a state.

The desire to accept the benefits of modern science is a powerful force in American life. The desire to practice one's own religion is an equally powerful force. When these two forces collide, something invariably gives way. The average layperson understands his or her emotions far better than the latest scientific discoveries.

⁴³⁷ Ill Gonzalez-Bravo, hearings transcript, May 7, 2005.

Consequently, the average layperson will most likely stay with what he or she “knows” to be true rather than walk away from the emotional comforts of faith. While the success of Intelligent Design’s “emotionality” argument is not assured, it enters the conversation with the presumption of truth already on its side.

Policymakers seeking to preserve evolution in curricular standards in such communities face an uphill battle from the beginning. The ostensibly democratic overtones of Intelligent Design, of offering a fair alternative to “purposeless” evolution, clash with the seemingly autocratic methods of science. Constituent interpretations of evolution as antithetical to faith add further to the policymaker’s challenges.

A community views its public schools as a cultural representation of itself, its people, and its values. When perceived outsiders, such as scientists, insist on teaching that which challenges those values, community members are understandably upset. When a curricular alternative that seems to complement those values appears, community members will pressure policymakers to, at the very least, consider adopting it even if its academic merits are at best questionable. An emotional electorate has greater sway over elected educational policymakers than the reasoned analysis of experts. In such circumstances, the curriculum often takes a backseat to politics.

Argumentation

In Kansas, the policy streams aligned to open a policy window, thereby enabling significant changes to the standards. Board Chairman Steve Abrams’s surprise proposal in February, 2005, to hold hearings on the standards was the moment of liftoff for the Intelligent Design movement. Outnumbered six to four, the Board’s moderates were

merely along for the ride. Their frustration was evident, their anger equally so. “He’s an arrogant son of a bitch,” said moderate Bill Wagon of attorney John Calvert, the instigator of the hearings, “but he’s bright and he’s articulate... he’s very committed and he’s provided on a volunteer basis a lot of leadership for the Discovery Institute”⁴³⁸ in Kansas.

The adoption of a legal approach to promoting the Minority’s standards was clearly evident not only in the hearings themselves but in the Intelligent Design Network’s broader public advocacy campaign. At the foundation of this strategy lies the presumption of equal merit, that both sides are entitled to the presumption of truth.

By adopting a such an approach to his arguments, John Calvert clearly demonstrated a strategy more suitable for a legal proceeding than to scientific research. All sides, Intelligent Design advocates argue, should be given their say before a decision is reached. Certainly, weighing all of the available evidence prior to making a judgment is appropriate, even desirable, for a court of law. The same applies equally to science. The critical difference between these two modes of inquiry is that rules of evidence in science differ from those in the law, a distinction often lost on the average layperson.

When preparing for a case, attorneys on both sides argue the merits of the evidence before a judge, who determines what evidence is permitted and what is not. The attorneys naturally seek to exclude evidence detrimental to their respective cases whether or not it may have an objective bearing on the outcome. In effect, attorneys do their best to pre-determine the outcome of the case before it ever reaches trial. To use a

⁴³⁸ Democratic Board of Education member Bill Wagon, District 4. Personal interview, August 8, 2006.

highly simplified example, a man accused of attacking his neighbor may have evidence of his guilt – such as a videotape of the attack that includes sound, a violation of wiretapping laws in some states if the recording was made without the consent of all those recorded – thrown out on this legal technicality. Without this evidence, a jury may find the man not guilty of the crime even though he in fact committed it.

The rules of evidence in science work differently. Dr. Abrams's description of science as that which is observable, measurable, testable, repeatable, and falsifiable is a textbook definition of the scientific process. Following this protocol, a scientist will write up the results of his or her experiments and publish them. Other scientists will run the same experiments, following the described protocols, and determine whether or not the published results are good science. Scientific evidence thus stands upon and adds to a pre-existing knowledge base. Unlike lawyers, scientists do not have the luxury of being advocates for a particular set of outcomes; their experiments, if conducted properly, will lead where they lead and enable others to follow.

Intelligent Design advocates have either failed to recognize this distinction or deliberately ignore it as an inconvenient annoyance. Further, attorneys are by professional temperament zealous advocates for their clients. The concept of truth takes on a different meaning when one feels obligated to defend a particular viewpoint. I cannot speak specifically to Mr. Calvert's motivations but his actions establish without doubt his commitment to expand the influence of Intelligent Design.

Conclusion

This chapter outlined the strategies of Intelligent Design advocates and described

some of the challenges facing educational policymakers whose communities want to amend the teaching of evolution. The public relations argument underlying Intelligent Design advocacy is a simple one: Intelligent Design challenges the orthodoxy of modern evolutionary science and, despite its scientific validity, is therefore repressed by mainstream scientists clinging to a specific religious interpretation of life's origins. Its educational policy argument is simpler still: Intelligent Design is a valid alternative to evolution and should be taught in public schools at the discretion of the local community.

It should be repeated that Intelligent Design advocacy is aimed not at scientists but at the general public, that it is more a public relations campaign than a purely scientific endeavor. Intelligent Design offers the hope of accommodation between religion and science. Many people of faith, any faith, will find such accommodation appealing and urge their school boards to adopt it in some way.

How educational policymakers can respond to this pressure without alienating their constituencies, and what educational policymakers can expect from Intelligent Design advocates, is the subject of the next chapter.

Chapter Eight

Implications

This chapter briefly offers some implications of this study's findings and answers the last two research questions asked in Chapter One: How might science educators respond to political pressure demanding a change in how evolution is taught? What are the policy implications of the new creationist strategies for the American school system? The chapter concludes that the evolution/creation debate in classrooms and in school boards is far from over.

Responses for Educators

To counter the spreading influence of Intelligent Design, science teachers have the best possible weapon on their side: they understand science. As discussed throughout this study, Intelligent Design advocates have systematically ignored the scientific process when it stood in the way of their agenda. This is not to say that they are wholly ignorant of science; to the contrary, many of the hearings witnesses, as well as Board Chairman Steve Abrams and attorney John Calvert, had extensive formal backgrounds in science. Rather, they object to the teaching of evolution as an undirected process because, they argue, it contradicts a religious interpretation of life's origins and is therefore itself religious. Nothing could be further from the truth.

The primary thrust of the Intelligent Design argument is the existence of a designer, a cosmic engineer who purposefully established the many variegated patterns of life we see around us today. It is, as Judge Jones ruled in the 2005 *Kitzmiller v. Dover* trial in Pennsylvania, a clearly religious position. Evolution, on the other hand,

presupposes the existence of life. It is the study of what theologians call proximate, or secondary, causes. Evolution does not, cannot, study the ultimate, or primary, cause. To study evolution is to study the changing nature of life by following the available evidence. Evolutionary biology has offered tantalizing hints about the nature of the ultimate cause but cannot, as of this writing, offer any definitive explanation. Intelligent Design, on the other hand, claims to do this very thing by encouraging the faithful to substitute the generic Designer with their creator of choice.

Ironically, by attempting to offer the hope of scientific and religious reconciliation to millions of Christians, Intelligent Design both fails as science and undermines the Christian faith far more insidiously than evolution ever could. I have chronicled its failure as science in previous chapters. A brief description of its attack on Christianity follows below.

The Bible's First Commandment reads, "I am the Lord thy God." These six simple words are the foundational statement of the entire Christian faith. All of Christ's teachings are based upon the fundamental truth of this statement. For a believing Christian, this statement leaves no room for misinterpretation and no room for doubt. It does not, for instance, suggest that "I *might be* the Lord thy God." Yet, Intelligent Design twists the First Commandment to say this very thing.

If Intelligent Design is brought into a science classroom, and the teacher is teaching it honestly, the teacher is obligated to state that the creator could be anyone. If a Christian student asked if the creator was God, the teacher would be obligated to say, "maybe." If a Hindu student then asked if the creator was Brahma, the teacher would

again be obligated to say, “maybe.” Buddhist students, Muslim students, Zoroastrian students, and so on would all hear the same answer their questions. Consequently, the teacher effectively says to the Christian student that the First Commandment really reads, “I *may not be* the Lord thy God. The creator might be Brahma, or Amaterasu, or one of a million other possibilities.” Intelligent Design would, in other words, put government officials, in the form of public school teachers, in the position of explicitly contradicting the faith statement of every child they teach. Intelligent Design, in short, would force Christian students to deny God.⁴³⁹ From a Christian perspective, and indeed from the perspective of any faith, Intelligent Design *taught honestly* is a theologically repugnant philosophy.

Intelligent Design promotes a false dichotomy between evolution and faith while attempting to establish itself as the bridge between the two. At the May, 2005 hearings, Intelligent Design advocates objected to evolution as a dogmatic, religious position. Taught properly, evolution is no such thing. Indeed, evolution enables the faithful to put the creator of their choice as the ultimate cause through its very lack of an explanation for the first origin of life.

This is not an easy lesson to teach, however, especially for students who have heard so much about the evils of evolution. It may well be that John Calvert's proposal for teaching alternatives can find a place in a science curriculum by first examining ideas that failed the test of scientific scrutiny before moving on to evolution. The most important aspect of this lesson is the study of the scientific process itself, a process that

⁴³⁹ If I wanted to carry this argument to its logical extreme, I would proceed to ask, “and who stands to gain the most by doing such a thing?” before pointing to a cloven-hoofed man wielding a pitchfork.

follows strict rules and strives at all times for objective analysis. In many ways, it is the public lack of understanding about the scientific process that has enabled Intelligent Design to flourish. The biggest favor science educators can do for themselves, therefore, is to teach not only the theories, facts, and methods of science but also its rules of engagement and self-correcting mechanisms.

To borrow an historical analogy from American football, fans of the game have debated for decades the so-called “Immaculate Reception.” In the 1972 American Football Conference Divisional playoff game between the Pittsburgh Steelers and visiting Oakland Raiders, Steelers running back Franco Harris appeared to catch a loose ball from the tops of his shoes. His team trailing with twenty-two seconds remaining in the game, Harris sprinted down the field and scored the winning touchdown. The Steelers went on to win the Superbowl championship. The two controversies of that play – whether Harris’s reception was a legal play and whether or not the ball touched the ground before Harris had control of it – have sparked lively discussion ever since. Fans argue that Harris’s catch was illegal, that the ball had already the ground before he scooped it up, that he made a brilliant legitimate play... for impassioned fans, the debates are endless. No one argues, however, that Franco Harris was playing football at the time. Similarly, the mechanics of evolution have been subject to constant scientific debate since Darwin first proposed the theory in 1859. No scientist, however, can argue that evolution didn’t and doesn’t continue to happen.

Implications for School Boards

As the case of Kansas has shown, Intelligent Design has both succeeded and

failed. It has proven a resounding success in the court of public opinion but failed utterly as science. It has become a successful public policy tool that has failed to sway those who would be responsible for implementing it: teachers of science. And it has demonstrated the relatively short time frame for policy success or failure at the local level. A national campaign can take years to mount. Intelligent Design achieved its initial success in Kansas in a matter of months and then lost significant ground almost as quickly.

The primary lesson learned from the evolution conflict at the Kansas Board of Education is the sheer resilience of Intelligent Design as a solution desperately seeking a problem. Intelligent Design advocates do not cave easily in the face of defeat. Rather, they adapt, retreat, regroup, and try again. For some, it takes on the importance of a holy crusade determined to vanquish its enemies. For others, it is simply a means of defending the faith. Either way, its advocates' emotional as well as professional investment means that Intelligent Design is not going away anytime soon.

School board members must deal with numerous concerns in the course of their work: personnel issues, budgetary considerations, acquiring instructional materials, and most importantly, ensuring that the students in their charge receive the best education possible. The extraordinary pressures that accompany a campaign to challenge evolution severely inhibit a school board member's ability to accomplish the necessary day-to-day work required to keep a school district running. Each Intelligent Design campaign will be different because each school board is different, each district is different, and the goals of each campaign will be tailored to the specific science curriculum in question.

There are, however, a few common threads. Intelligent Design advocates will encourage citizens to voice their opinions and pressure school board members to support their position. If the district is large enough, a media campaign may follow. Letters to the editor will appear in local newspapers and local clergy may be encouraged to speak up. Assertions of academic freedom will be coupled with charges of unfairness and a stated desire to put decision-making power in the hands of “the people” rather than at the whims of distant scientists. Angry citizens may exchange heated comments at school board meetings and the community may begin to polarize over the issue. Intelligent Design advocates will then encourage additional publicity, partly to gain public support and partly as a means of self-promotion and possible fund-raising.

The interactions of the conservative and moderate Board members in Kansas highlight the importance of remaining as dispassionate as possible in the face of a highly emotional issue. Despite their personal differences, the ten members of the Kansas Board of Education were able to remain on professional and relatively good personal terms with one another throughout their shared ordeal. Other board members, especially those serving in smaller communities, may not be as fortunate.

Board members facing this sort of pressure have three choices: they can take sides, they can refuse to participate entirely, or they can attempt to seek a middle ground. Of these three choices, the first is polarizing, the second is nearly impossible, and the third may involve unpleasant compromises. As a practical matter, therefore, most board members will find it necessary to take sides. In this case, it is critical to remember that one is not taking sides for or against an individual or a philosophy. Rather, one is taking

sides for or against good science. And whatever the outcome, the powerful emotions raised can mean the looming specter of additional conflict over evolution in the near future.

If history is any indicator, moderate Board member Janet Waugh's concerns about the continuing battle over the Kansas science standards issue are justified. In the eight years between 1999 and 2007, the Kansas science education standards changed four times under the leadership of four different political majorities. Election campaigns for Board seats were won or lost based largely on the public's perception and support of a candidate's position on the evolution issue. Moderate Bill Wagon even spoke of a "shadow movement of fundamentalists" who worked quietly in the months leading up to the 2004 Republican primaries in preparation for "picking off" moderate Republicans. During 2001 and 2002, when the Board had an eight-member moderate majority, he said:

We were able to change our whole school accreditation and accountability system to conform to QPA. We propose significant increases in funding in order to meet the challenges closing the achievement gap, this was before No Child Left Behind, and all those things really represented, I think, extraordinarily important reforms that moved Kansas education, prepared us for successful 21st century education. But it wasn't sexy.

And when school boards are doing things sort of normal and mainstream, the public sort of loses interest and so then you've got this shadow movement of fundamentalists out there who are now egged on by the structure of the Discovery Institute and Intelligent Design to come in and began to pick away at moderate board members in Republican primaries.⁴⁴⁰

Kansas's primary election of 2002 and the general election of 2004, in which Kathy Martin was elected, allowed the Intelligent Design advocates' policy window to

⁴⁴⁰ Democratic Board of Education member Bill Wagon, District 4. Personal interview, August 8, 2006.

open wide. John Calvert and sympathetic Board members needed only to step through. I have little doubt that continued advocacy will result in another policy window opening in the near future.

The full extent of the Discovery Institute's involvement in Kansas Board of Education politics is unknown. It is clear, however, that it played a significant role in the modification of the Kansas science standards and in supporting political candidates sympathetic to their position. The promise of further radio advertisements following the Board's overturning the 2005 standards signals continued involvement as the 2008 campaign season looms. The state of Kansas also became the focal point of Intelligent Design promotional activity as well as criticism in numerous public forums. For better or for worse, Kansas has developed a reputation that, depending on one's point of view, it must work hard to either sustain or overcome.

The Kansas science standards hearings of May, 2005, were an extraordinary moment in American educational policy. Ostensibly an attempt to present both sides of the question of origins fairly, Pedro Irigonegaray's refusal to call witnesses led instead to a three-day lecture – critics would call it grandstanding – from Intelligent Design advocates on the importance of balanced treatment regarding the teaching of life's origins. The hearings themselves became a confluence of science, religion, educational policy, and great emotion. Most remarkable, perhaps, is that the hearings took place at all.

“The only freedom that is of enduring importance is freedom of intelligence,” wrote John Dewey, “that is to say, freedom of observation and of judgment exercised in

behalf of purposes that are intrinsically worth while.”⁴⁴¹ To conservative members of the Board and Intelligent Design advocates, the hearings were necessary for precisely the reason that Dewey articulates. There were few things more intrinsically worthwhile than ensuring that the story of human origins was taught “correctly.” While each side claims its share of the truth, the correctness of such instruction is, from a policy perspective at least, highly subjective. When voters can speak about the issue through the ballot box, the subjectivity becomes fluid. Whoever influences the most voters influences not only science instruction in Kansas public schools but affects the state’s international reputation.

Making effective educational policy about such an emotional issue under trying circumstances is difficult at best. Indeed, for a directly elected Board of Education, “difficult” is perhaps the best situation that Board members could hope to face. Since 1999, none of the various state science standards adopted by the Kansas Board of Education was in place long enough to have any significant effect on the delivery of classroom instruction and Board members largely agreed that the 2005 standards would have a similar lack of impact.⁴⁴² Bill Wagnon, however, saw a greater threat to science education than just instruction in the classroom. “I think that the existing standards,” he said:

the in-place standards that change the nature of science, [that] talk about teaching the controversy with regard to evolution, invite extraordinary disputation to undermine science and the quality of science education and here’s why: because a number of kids going to school classrooms are misinformed by their Sunday

⁴⁴¹ John Dewey, *Experience and Education* (New York, NY: Touchstone, 1938, 1997) p. 61.

⁴⁴² Board members on both sides of the issue stated that the immediate impact of the 2005 standards in classroom would be minimal.

school teachers about what science is, and they bring the hostility into the school room, requiring them, the science teachers, to spend some time trying to recover confidence in order that science can be learned because they're dealing with all the misinformation that they getting from their churches.

And that has made the quality experience of science, I think, really diluted at a time when we need people to be good mathematicians and scientists and engineers, at a time when we need America's supreme confidence in science, not that science is delusionary, [that] it's some diabolical movement trying to perpetuate materialism, secular materialism in a world that needs more spiritualism.⁴⁴³

Ultimately, the science standards hearings were supposed to be an exercise in objectivity. Each side would have its say and each side would be forced to defend its position from what Dr. Abrams called the "loyal opposition." But when the very nature of objectivity was itself open to interpretation, developing objective science standards by consensus became impossible.

Intelligent Design advocates wanted to challenge evolution and put it on the defensive. Years of unflagging public advocacy in Kansas culminated in new science standards and worldwide publicity. Consequently, educators and policymakers throughout the United States must contend with highly-organized local campaigns seeking to weaken the role of evolution in the science classroom. It is my hope that this study offers some small aid to those facing the Intelligent Design PR machine.

I wish to conclude by offering two predictions. First, specific to Kansas, I am certain that John Calvert, Steve Abrams, and other Intelligent Design advocates will not suffer gladly the 2007 standards reversal. I can therefore predict with some confidence

⁴⁴³ Democratic Board of Education member Bill Wagon, District 4. Personal interview, August 8, 2006.

that the Kansas science standards will be *successfully* challenged at least once more within the next ten years.

Second, more generally, I predict that Intelligent Design advocates will continue to adopt increasingly subtle means of advocacy while refining their focus on local school boards. Specifically, I believe that Intelligent Design advocates will continue to shift the spotlight away from promoting Intelligent Design and concentrate their efforts on attacking evolution. The next ten years will therefore see Intelligent Design fade from the public eye to be replaced by a more innocuous name such “Alternatives to Evolution” or “The Whole Picture,” suggesting a complementary rather than competing interpretation of Darwinian evolution.

How accurate will my predictions prove? Only history can tell. History, however, has already made a very compelling argument that challenges to evolution never quite fade away. They eventually come back in more aggressive, more persistent, more insidious forms. They come back, in other words, more highly evolved.

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Appendix A

Interview Protocol

1. How did you first become involved in the evolution/creation discussion in Kansas?
2. How did you first hear about the challenges to evolution to that led to the Board's 2005 hearings?
3. Do you recall who most strongly supported the challenges? Who most strongly opposed them?
4. How would you describe your role in the Kansas Board of Education's decision to put evolution on trial in 2005?
5. Did other Board members attempt influence your opinion on this matter in one direction or another?
6. Were you ever contacted by lobbyists or concerned citizens about the proposed changes? What did they say? How did you respond?
7. To your recollection, how emotional was the debate?
8. The Board ultimately decided to change the state's definition of science. Following the decision, Steve Abrams said, "this is about what's good science." Who most strongly supported/opposed this decision? Did you support this decision?
9. What effect do you think this decision will have on how science is taught to the schoolchildren of Kansas? To children elsewhere? How have the students

and parents responded?

10. Is there anything you would like to add that I haven't covered?

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