

Should Public Schools Suppress Scientific Controversies over Core Claims of Evolution?

by John H. Calvert, J.D.¹
in support of his remarks

at

*Science Wars: Should Schools “Teach the Controversy”
Over Intelligent Design Beliefs?*

American Enterprise Institute

Washington, D.C.

October 21, 2005

Introduction

A couple of years ago we made a presentation to an Iowa School board about teaching intelligent design. During the Q & A the Principal said he didn't see how ID could be brought into the class room because it would bring in a religious discussion. So he thought it necessary to stick to an “Evolution Only” policy.

My response to the Principle was that the school's Evolution Only policy had already brought a religious discussion into the classroom. By choosing to discuss with children the origin of life and its diversity he had started a discussion that is directly responsive to questions fundamental to religion - **Where do we come from? Are we designs or merely occurrences? Are we the product of a purposeful or purposeless process? Is there an objective and rational basis for belief in a creator?**

Furthermore, by choosing to teach students a core claim of evolution that the apparent design of living systems is just an illusion, the school was already discussing ID, but just in a very one-sided negative way. This claim of no-design was being presented to students as fact, when it actually is only a speculative philosophical claim.

The problem is that an “Evolution Only,” policy is not really scientific or constitutional. It is not scientific because it is officially biased rather than scientifically objective. Because it is biased, it is not religiously neutral. Evolution Only effectively requires our children to “know” that we come from a natural rather than an intelligent cause, that we are occurrences and not designs, and that we naturally arise without purpose from a purposeless process. It effectively

¹ For a recent fairly comprehensive discussion of the scientific, cultural, religious and legal issues see John H. Calvert, *Are we designs or occurrences? Should science and the state prejudice the question?* (IDnet, 2003, www.IntelligentDesignNetwork.org/Designsoroccurrences111003.pdf). A shortened version of the article without notes or legal discussion is published in the August 2005 issue of *WhistleBlower*, a publication of *Worldnet Daily*. See also William S. Harris, PhD and John H. Calvert, JD, *Intelligent Design, the Scientific Alternative to Evolution*, p. 542-549 (*The National Catholic Bioethics Quarterly*, Autumn, 2003); and *Suggested Findings of Fact and Conclusions of Law* regarding the hearings held in May 2005 in Kansas about the issues covered in this article, published at www.KansasScience2005.com.

teaches that no **rational**² evidentiary basis exists for theistic beliefs. Evolution Only converts these scientific claims into dogmas that are the fundamental tenets of non-theistic religions and that directly contradict the fundamental tenets of theistic religions. Accordingly, in my opinion, Evolution Only is not “secular” or neutral. Rather it is an ideology that directly conflicts with the First Amendment rights of parents and students.

What creates the religious problem is teaching only one side of a scientific controversy that unavoidably impacts religion. The solution is to allow teachers to cover both sides of the debate. That can be accomplished without opening the class room to explicit religious issues.³

The critical impediment to this solution is a profound misunderstanding of the meaning and application of key terms and concepts. These include:

1. EVOLUTION
2. INTELLIGENT DESIGN
3. METHODOLOGICAL NATURALISM
4. RELIGION
5. RESPECTING
6. SECULAR

Definition of Evolution and Intelligent Design

The confusion starts with a lack of understanding of the core claim of evolution. In *The Blind Watchmaker: Why the evidence of evolution reveals a universe without design* Richard Dawkins observes that “biology is the study of complicated things that give the appearance of having been designed for a purpose.”⁴ This reflects the core claim of evolution that apparent

² Note the title of this conference. It is a discussion about “intelligent design beliefs” rather than “evolution beliefs.” Evolution claims to be the only rational explanation, while its competitor is just a “religious belief,” and therefore not a competitor at all. Further, because it is not rational and is just religious it does not deserve any place in any reasoned discussion about how we should live as a culture. Actually, if one examines the relevant evidence with any care at all, one will find that an inference of design is far more rational than the counterintuitive alternative.

³ Design is simply a disagreement with the Darwinian claim of no-design. The disagreement is not based on religion, but rather on careful analysis of the data supporting evolution’s claim of no design and other data that suggests an intelligent cause. The hypothesis leaps from the data and is tested with and only with scientific knowledge concerning the nature of the natural laws, concepts of statistics, statistical analysis, information theory, biochemistry, geology, paleontology, without reference to any religious doctrine. There is always a worry that ID will give rise to a discussion of the identity of the designer. However, the very straight forward response is that the data simply does not provide a scientific answer to that question, if indeed the claim of design is correct. That is a question properly reserved for religion.

⁴ Before Darwin “there was no alternative explanation for apparent design.” “Natural Selection is the blind watchmaker, blind because it does not see ahead, does not plan consequences, *has no purpose in view*. Yet the living results of natural selection *overwhelmingly impress us with the appearance of design* as if by a master watchmaker, impress us with the *illusion of design* and planning. The purpose of this book is to resolve this paradox to the satisfaction of the reader, and the purpose of this chapter is further to impress the reader with the power of the *illusion of design*.” Richard Dawkins, *The Blind Watchmaker*:

design is just an illusion. The idea is reiterated by philosopher of science James Barham where he explains that those asserting this mechanistic consensus hold that:

“design is not objectively real but merely an optical illusion, like the rising and setting of the sun. On this view, living matter is nothing special. It is just chemistry shaped by natural selection.”⁵

The National Academy agrees. They propose that we teach fourth graders that living systems lack the attribute of design. Kansas and West Virginia currently have science standards that do just that.⁶ The American Association for the Advancement of Science recently adopted an edict against teaching that living systems may be designed.⁷ They obviously contend that apparent design is an illusion.

If design in living things is indeed shown by the data to be an illusion, then it is not rational. Just as it is not rational to contend that the sun is setting when the data shows that the earth is turning away from the sun, it is not rational to contend that life arises from an intelligent cause. But does the data actually confirm that conclusion? That is the real question - is design really an illusion?

Evolution’s claim of no design is rooted in the mechanisms that drive it - random mutation and natural selection. Generally, Darwinian evolution claims that new morphological features arise ultimately from changes in the sequence of nucleotide bases in DNA. Since those sequences are not dictated by chemical or physical laws, the sequence is postulated to be dictated by chance - by random copying errors and random insults from radiation and chemicals that may intrude into the environment. Although all but a vanishingly small number of these mutations are deemed to be beneficial, it is argued that some mutations produce new beneficial “functions” which happen to cause the organism to be more fit for then existing environment conditions, whose occurrence

Why The Evidence of Evolution Reveals A Universe Without Design” p. 6, 21, (W.W. Norton & Company, 1996).

⁵ James Barham, explains the “mechanistic consensus” held by many in science. That consensus “holds that (1) the known laws of physics and chemistry, together with special disciplines such as molecular biology, fully explain how living things work, and (2) the theory of natural selection explains how these laws have come to cooperate with one another to produce the appearance of design in organisms. According to the Mechanistic Consensus, design is not objectively real but merely an optical illusion, like the rising and setting of the sun. On this view, living matter is nothing special. It is just chemistry shaped by natural selection.” James Barham, *The Emergence of Biological Value* (Chapter 11 of *Debating Design*, Ed. Dembski & Ruse, Cambridge University Press 2004)

⁶ See Kansas Science Education Standards, adopted February 14, 2001, Fourth Grade, Life Sciences, Standard 5, Benchmark 3 and the National Science Education Standards benchmark from which the Kansas Standard was derived. They teach that there are two kinds of objects in the world - natural and designed. The former just “occur,” while the latter have been designed and made for a purpose.

⁷ See Memorandum: Response to the Resolution of the American Association for the Advancement of Science that seeks to censor intelligent design, dated December 19, 2002
<http://www.intelligentdesignnetwork.org/ResponseToAAAS.htm> and the attached AAAS resolution.

are in many respects also random. This theory postulates that the diversity of life arises without any intelligent cause that somehow guides the process. Change is laid entirely at the doorstep of chance. This is explained by Jacques Monod, an evolutionary biologist who played a key role in advancing the theory with his essay "*Chance and Necessity*:"

"We call these [mutation] events accidental; we say that they are random *occurrences*. And since they constitute the *only* possible source of modifications in the genetic text, itself the sole repository of the organism's hereditary structures, it necessarily follows that chance *alone* is at the source of every innovation, of all creation in the biosphere. Pure chance, absolutely free and blind, at the very root of the stupendous edifice of evolution: this central concept of modern biology is no longer one among other possible or even conceivable hypotheses. It is today the sole conceivable hypothesis, the only one that squares with observed and tested fact. And nothing warrants the supposition --or the hope -- that on this score our position is likely to be revised." *Chance and Necessity*, p. 112-3 (Vintage Books, 1971)

I think of Darwinian evolution like a river. A river has no actual direction or goal. It "meanders." Its direction is a function only of randomly changing boundary conditions and gravity. According to the National Association of Biology Teachers, evolution is a process that has "no discernable direction or goal." This is because it is not a guided process - one that has been produced by some intelligence for a purpose. This aspect of evolution was made clear in a letter by 38 Nobel Laureates to the Kansas State Board of Education on September 9, 2005:

"Logically derived from confirmable evidence, evolution is understood to be the result of an *unguided, unplanned process* of random variation and natural selection."⁸

Darwinian evolution seeks to explain the diversity of life once it arises. It is based on the assumption that life did arise by unexplained physical and chemical causes that somehow combined to form an astonishing replicating information processing system driven by a language or genetic code that was recently analyzed to amount to "eerie perfection."⁹ Thus, the

⁸ The letter, along with a reply by the authors of changes they criticize, is posted by the authors on the web site at <http://www.KansasScience2005.com>.

⁹ In *Life's Solution: Inevitable Humans in a Lonely Universe*, paleontologist Simon Conway Morris devotes a sub-chapter to the extraordinary efficiency of the Genetic Code. He captions it "EERIE PERFECTION." He marvels about how it could attain such perfection so soon after the Earth first became habitable to any form of life. He finds the answer in an article titled "*The Genetic Code is One in Million*" by S.J. Freeland and L.D. Hurst [*Journal of Molecular Evolution*, vol. 47, pp 238-248 (1998)]. Freeland and Hurst developed a computer model that compared the genetic code with one million other possible codes that were randomly selected from 10¹⁸ possible alternatives. In describing their findings Morris states: "Freeland and Hurst have difficulty in keeping the surprise out of their report, even given the provisos that their approach necessitates a number of assumptions. They write: 'The natural genetic code shows *startling* [my emphasis] evidence of optimization, two orders of magnitude higher than has been suggested previously. Though the precise quantification used here may be questioned, the overall result seems fairly clear: under our model, of 1 million random variant codes produced, only 1 was betterthan the natural code -- our genetic codes is quite literally '1 in a million.'"

assumption, which has little or no evidentiary basis, is that life also arose through an unguided and unplanned process. This assumption is critical to Darwinian Evolution. If it is in error and an intelligent cause is necessary to adequately explain it, then there would be no rational basis to exclude intelligent causes for subsequent changes in the genetic software.

So, it is clear that when impressionable young minds are taught evolutionary theory, they are effectively being taught a materialistic or naturalistic argument against design - the argument that material causes, rather than unmentioned intelligent causes, are sufficient to explain life.

Definition of Intelligent Design

The next confusion is over the definition of “intelligent design.” It is argued that it is religion in disguise. Actually, ID is simply a scientific disagreement with the core claim of evolution that design is an illusion. So long as that disagreement remains theoretical, then it is scientific. From this it should be clear that ID is science and not religion.¹⁰

Furthermore, the hypothesis that an intelligent cause may have played a role in the origin of life and its diversity, is science because it arises only from an observation and analysis of the very same data that evolutionary biologists use to postulate no-design. The design hypothesis does not arise from a religious text, rather it arises from logical analysis of the observed data. Both evolutionary biologists and ID scientists agree that living systems appear designed and that DNA contains “messages” that run the system. This appearance of design triggers the design hypothesis. They also agree that the sequence of nucleotide bases that make up the messages are not ordered by any physical or chemical law.¹¹ The key difference is that the ID scientists disagree on the Darwinian claim that chance alone is sufficient to explain new variation. They are testing that claim through statistical analysis, experimentation, mathematical modeling, and challenges to Darwinian explanations that fail to provide detailed explanations of how random mutation and natural selection can initially construct life or subsequently emerging biosystems that “appear irreducibly complex.”

Monod and other evolutionary biologists reject the need for these tests for two reasons. They assume, without any careful analysis, that billions of years is sufficient time for chance to operate. But, more importantly, as explicitly shown in Monod’s essay, chance *can be the only alternative* because an intelligent cause is simply not philosophically allowed. Since, design, law

¹⁰ The claim is based on the inadequacy of known physical and chemical laws and chance to explain specified complex information that provides for biological function in living systems. The work of William Dembski, Michael Behe and others reflect the truly scientific nature of the counter argument. It is not based on speculation or faith, but rather on the logical analysis of observed data and experiment. A recent paper by Stephen Meyer explains mutagenesis experiments that provide powerful support for the argument. Stephen C. Meyer, *The Origin of Biological information and the higher taxonomic categories*, *Proceedings of the Biological Society of Washington*, Vol 117(2), p. 213-239 (August 4, 2004).

¹¹ Jacques Monod, a Nobel Prize-winning French biologist, *Chance and Necessity: A philosophy for a universe without causality*, p. 112 (Vintage Books, 1971)

and chance constitute the universe of explanatory causes, and since law is ruled out by the data and design is ruled out in advance by philosophy, then there can be no other explanation but chance. What is fascinating is that the level of “indescribable complexity,” now being discovered by bio-scientists is leading them to reject Monod’s claim of random mutation and natural selection in favor of a teleological explanation called “cybernetics” or “natural genetic engineering.”¹²

Methodological Naturalism

I read a paper by an European scientist who specializes in bioinformatics, Albert D.G. de Roos. His paper suggested that he was using design as a working hypothesis in his attempt to understand the genome. So, I sent him an email that posed this question: “It is my contention that bio scientists actually use design type thinking in trying to understand the genome. This is not a metaphysical construct, rather as a methodological construct. Is that correct?”

In his January 31, 2005 response he said:

“Most scientists indeed do use “design” as a practical approach or methodology. The teleological approach works very fine in deciphering systems like the brain, the eye etc. **However, as soon as you touch on the subject evolution, it is “forbidden” to talk about design.**”¹³

This describes methodological naturalism. It is a rule or doctrine that “forbids” teleology or design only in the area of science that seeks to explain the origin of natural phenomena.

Naturalism is “the doctrine that cause-and-effect laws (as of physics and chemistry) are adequate to account for all phenomena and that teleological [design] conceptions of nature are invalid.”¹⁴ Methodological Naturalism (MN) holds that when scientists investigate and seek to explain the natural world they must irrefutably assume that only “natural” or material causes have operated throughout the relevant history of life without the aid of any intelligent cause. Those who seek to refute the Rule are not scientists and therefore are not qualified to speak or be heard. MN is sort of like a rule that would require arson investigators to provide only natural explanations for all fires. If one disagrees with the rule, he is not qualified to investigate or report. The result would be massive increases in insurance premiums and profound misunderstanding about the true cause of fires.

¹² See the work of James A. Shapiro, PhD, *Genome Organization and Reorganization in Evolution: Formatting for Computation and Function*, a paper presented at a symposium on “Contextualizing the Genome,” at the University of Ghent, Belgium in November 2001 and *A 21st century view of evolution: genome system architecture, repetitive DNA, and natural genetic engineering*, (*Gene* 345 (2005) 91-100.

¹³ Dr. de Roos granted permission to publish his comment. It was introduced as an exhibit in the Kansas Hearings and may be obtained at the Kansas Department of Education Web Site: <http://www.ksde.org>

¹⁴ *Webster's Third New International Dictionary of the English Language, Unabridged*, 1993). This authoritative dictionary is a good source for this definition because it is the dictionary used by the Supreme Court in deciding the meaning of controversial terms.

Methodological naturalism is not really a “method.” It is actually an irrefutable assumption that is usually unstated. The effect of its use is to treat its assumption as true. It is really no different than off-balance sheet liabilities that Enron and its accountants failed to state in its financial statements. The effect of that assumption caused people to buy Enron stock for much more than it was really worth. The effect of methodological naturalism is to allow evolution to explain things it really cannot explain on its own merits.

Of course the problem with this is that most advocates of any cause usually become believers in their cause, even if the basis for their belief is lacking. In time they seek to convince others of the belief they have embraced. One worries about the results of a highly regarded poll published by Edward Larson and Larry Witham in the Journal *Nature*. Larson and Witham found that 93% of members of the National Academy respondents disbelieved or doubted the existence of a “personal god” versus 7% who professed belief in a personal God. The numbers are reversed when the poll is taken of the public in general. The National Academy is the author of our National Science Education Standards. The article closes with these remarks:

“As we compiled our findings, the NAS issued a booklet encouraging the teaching of evolution in public schools.... The booklet assures readers, 'Whether God exists or not is a question about which science is neutral'. NAS president Bruce Alberts said: 'There are many very outstanding members of this academy who are very religious people, people who believe in evolution, many of them biologists.' *Our survey suggests otherwise.*"¹⁵

Of course the Methodological Naturalism used by the Academy does take a position on the existence of God. As further discussed below, it suppresses evidence that does support rational arguments for the existence of a God. It also takes a position on whether any God or other intelligent cause has intervened in the natural world since the beginning of time and it takes a position on whether natural objects and systems have inherent purpose. All of these positions are critical to theistic and non-theistic religious beliefs.

The effect of Methodological Naturalism in origins science is to declare the argument of design - the counter argument to evolution to be *per se* invalid.¹⁶ It essentially requires

¹⁵ Edward J. Larson and Larry Witham: *Leading Scientists Still Reject God* (Nature, July 23, 1998 issue). Science does take a position on the existence of God. It suppresses evidence that would support rational arguments for the existence of a God. It also takes a position on whether any God has intervened in the natural world since coming into being and it takes a position on whether natural objects and systems have inherent purpose.

¹⁶ The argument is frequently made that methodological naturalism accounts for all of the extraordinary progress of science in the past two centuries. This loses sight of the fact that it is the scientific method and its promotion of thinking out of the box, not irrefutable assumptions used in origins science that has promoted that progress. The argument ignores the historical nature of origins science and how that assumption actually undercuts the credibility of historical explanations where competition among alternative hypotheses is critical. One need not abandon methodological naturalism in areas where that assumption may be helpful. In origins science it is actually counterproductive because it exempts evolutionary theory from true critical analysis. Furthermore, it is an assumption that is not actually used in current bioengineering. As explained by Michael Ruse biochemists use an assumption of design in

acceptance of the core claim of evolution that design is an illusion. This robs evolution of its theoretical nature and converts it into a subtle unwritten dogma or ideology that children are effectively required to believe.

The argument for design is premised on showing (a) positive evidence of design and (b) evidence that demonstrates the inadequacy of material causes such as random mutation and natural selection to account for this appearance of design. Since the appearance of design is fairly evident in the natural world, to be effective Methodological Naturalism must essentially suppress not only (a) but also (b). This suppression of criticisms of evolution has been recently demonstrated in numerous venues throughout the country from California, to Georgia, to Kansas, to Minnesota, to Ohio, to Montana to West Virginia. In all of these cases the petitions with respect to origins science asked only to teach the positive claims for evolution honestly - to teach evolution critically. However, if this is allowed, then Methodological Naturalism crumbles. Its strength depends on a robust evolutionary account - one that can not be criticized. So the effect of MN is actually to rob evolution of any theoretical status. It converts the "theory" into a dogma or ideology and thereby actually takes it out of the realm of science.

Perhaps the best example of Methodological Naturalism being used as an irrefutable doctrine that suppresses criticisms of evolutionary theory are recent proposals for changes to Kansas Science Standards.¹⁷ All the changes simply focus on critical analysis of evolutionary theory, not the insertion of the positive case for design. When called to testify with regard to the scientific validity and educational propriety of the changes, the institutions of science that embrace methodological naturalism boycotted the hearings. A "boycott" "is to combine in abstaining from, or preventing dealings with, as a means of intimidation or coercion."¹⁸ The Kansas boycott was designed to coerce into silence any critic of evolution. However, it was not completely effective. The 23 expert witnesses that testified for the changes included 4 PhD biochemists, 5 PhD biologists/molecular biologists, 3 PhD Chemists (two being origin of life experts), a PhD geneticist who invented the gene gun, a PhD quantum physicist, three Philosophers of science (two PhD's), a PhD philosopher of Education, three biology teachers, a Muslim journalist and an attorney. Following the hearings one of the witnesses returned to Ohio to defend a PhD dissertation. Because he testified the Ohio science institutions immediately took steps to insure that defense would not be successful. The chilling effect of such blatant coercion on any critical analysis of a scientific theory is exceedingly damaging to the credibility of science as an enterprise. Other scientists see the sanctions levied on one who breaks "The Rule" and are compelled to hold their true beliefs in silence. I know this to be a fact. Scientists who know the problems with evolution are being counseled daily to hide their reservations until they obtain their PhD's, a good job and then tenure at that job. Once this has been achieved, they are guided to still be very

seeking to understand the "function" of living systems. "Teleological" thinking is not only used but "necessary." [Michael Ruse, *Darwin and Design: Does evolution have a purpose?*, p. 268 (Harvard, 2003).]

¹⁷ The Authors of the changes have posted the changes and other information about them at www.KansasScience2005.com

¹⁸ Random House Websters Unabridged Dictionary

guarded in their criticisms of this “theory.” Thus the mantra “there is no scientific controversy,” is just a slogan supported by coercion and intimidation, not by the actual scientific data or any true scientific consensus.

What is so fascinating is that the inclusion of design in science is actually necessary to make evolution scientific. If the claim of design is not allowed then the core claim of evolution that life is not designed can not be science because all scientific claims must be subject to refutation. So the competition between design and evolution is actually necessary for either to be scientific.

Methodological Naturalism is also called scientific materialism.¹⁹ It is also called “Evolution Only.” Whether the school principle knows it or not, when he is persuaded by the scientific community or the AAAS to suppress the counter argument to evolution, he is actually being asked to have the state embrace and implement a philosophy of naturalism/materialism.

The State Enters a Religious Sphere when it Chooses to talk about Evolution - that Life is not Designed.

Now that we have defined the key scientific terms we can move to a discussion of the legal issues.

Even the most hard core Darwinist concedes that discussions about origins impact religion. This is important because the state has chosen to engage in that discussion.²⁰ In making that choice it unavoidable enters into a religious sphere or arena. Having entered that sphere, the state must then ask itself: “*Are we conducting this discussion consistent with the religious rights of parents and students?*”

The Religious Rights of Parents derive from the First Amendment

Religious rights of parents and students arise out of the First Amendment to the US Constitution as well as out of state and local law. My comments here are focused only on Federal law rather than state law. The First Amendment contains two clauses that expressly

¹⁹ Kenneth R. Miller refers to Naturalism as “scientific materialism:” *Finding Darwin’s God: A Scientist’s Search for Common Ground Between God and Evolution*, 27 (Harper Collins, 1999). He tries to explain why the materialism that undergirds evolutionary biology need not conflict with theism. He fails, because he never explains how any materialistic process driven only by law and chance can produce purpose and why a materialistic explanation does not destroy the evidentiary basis for theistic belief. If the observed appearance of design is merely an illusion because it can be explained fully without resort to a mind or any form of intelligence, then the inference that supports theistic belief crumbles. Although Miller recognizes both of these problems as the central issues, he never reconciles them.

²⁰ All standard high school biology textbooks have a section on the origin of life. The books then explain how it’s diversity arose via only natural causes. MN and these books assume irrefutably that life arose via a natural cause. This is a critical assumption that is not supported by the available evidence. Given the lack of evidentiary basis for the assumption, design does become the best current explanation for the origin of life. If design best explains the origin of life, Occam’s Razor would seem to cut off natural causes as the sole source of subsequent modifications.

protect those rights: the Establishment Clause and the Free Exercise Clause.²¹ The question I will discuss in this paper is only whether an “Evolution Only” policy that causes the state to officially withhold information about scientific criticisms and disagreements with evolution violates the Establishment Clause. During the hearings in Kansas I testified as the last witness and in that connection submitted to the hearing committee a detailed legal memorandum that may be found at www.KansasScience2005.com. That memorandum explains why I believe such a policy offends not only the Establishment Clause but also the Free Exercise and Speech Clauses.

The Establishment and Free Exercise Clauses provide that:

“Congress [Government, including any public school] shall make no law [or policy] *respecting* an establishment of *religion*, or prohibiting the free exercise thereof...”

The parenthetical additions reflect currently effective judicial interpretations. The key phrase in the Establishment Clause is “respecting an establishment of religion.” Although some have argued that the word “establishment” narrows the scope of the clause, for the most part the courts have construed that word very broadly to go beyond the actual establishment of a state religion to cover state “comment on religious questions.”²² As a consequence, the key words that have defined the scope of our religious rights are “religion” and “respecting.” In short the Establishment Clause states that a school may not adopt a policy “respecting...religion.” So what does “religion” and what does “respecting” mean?

Issues of Religion key to the Origins Debate

There are two key aspects of religion critical to the origins debate. First, religion is dogmatic while science is theoretical. Religious explanations never change, while those of science must be open to change. Religion commands belief, while science is supposed to invite further investigation and analysis.

This is important because so long as both ID and evolution remain theoretical competitors and scientifically tentative they both remain in the realm of science. However, when one uses

²¹ The Free Exercise clause provides a powerful basis for an attack on state sponsored Naturalism. See “*Are we designs or occurrences? Should science and the state prejudge the question?*” (IDnet, 2003, www.IntelligentDesignNetwork.org/Designsoroccurrences111003.pdf)

²² “The First Amendment contains no textual definition of “establishment,” and the term is certainly not self-defining. No one contends that the prohibition of establishment stops at a designation of a national (or with Fourteenth Amendment incorporation, *Cantwell v. Connecticut*, 310 U.S. 296, 303 (1940), a state) church, but nothing in the text says just how much more it covers. There is no simple answer, for more than one reason. The prohibition on establishment covers a variety of issues from prayer in widely varying government settings, to financial aid for religious individuals and institutions, **to comment on religious questions.**” [*McCREARY COUNTY, KENTUCKY, et al. v. AMERICAN CIVIL LIBERTIES UNION OF KENTUCKY* et al., Supreme Court, No. 03—1693, Opinion of the Court, p 27 (June 27, 2005)] As composed in October, 2005, it appears that Justices Scalia and Thomas are two among five that disagree with this view. The views of Chief Justice Roberts have not been expressed.

methodological naturalism to suppress design theory or uses religious assumptions to suppress evolution, then the protected claim ceases to be scientific and becomes an ideology.

Second, and critically important, is that religion includes not only theistic religion, but also non-theistic religions and belief systems. This issue is important because a good part of our culture has been led to believe that religion is confined to a belief in God. In fact that is not the case.

In 1961 the Supreme Court noted that

“Among religions in this country which do not teach what would generally be considered a belief in the existence of God are Buddhism, Taoism, Ethical Culture, ***Secular Humanism and others.***”²³

In August of this year, the Seventh Circuit Court of Appeals held that Atheism is a religion. In that case a Wisconsin prison violated the Establishment Clause when it ruled that a prisoner’s desire to create a group to study atheism should be categorized under prison regulations as an activity rather than as a religion, thereby allowing the prison to deny the activity under rules not pertinent to religious groups. In holding that the Prison had mischaracterized Atheism as an “activity” rather than a “religion,” it said:

“As the Court put it in *Wallace v. Jaffrey*.....’At one time it was thought that this right [referring to the right to choose one’s own creed] merely proscribed the preference of one Christian sect over another, but would not require equal respect for the conscience of the infidel, the atheist, or the adherent of a non-Christian faith such as Islam or Judaism. But when the underlying principle has been examined in the crucible of litigation, the Court has unambiguously concluded that the individual freedom of conscience protected by the First Amendment embraces the right to select any religious faith or none at all.’ *Id.* at 52-53. In keeping with this idea, the Court has adopted a broad definition of “religion” that includes nontheistic and atheistic beliefs, as well as theistic ones. Thus, in *Torcaso v. Watkins*, 367 U.S. 488, it said that a state cannot “pass laws or impose requirements which aid all religions as against non-believers, and neither can [it] aid those religions based on a belief in the existence of God as against those religions founded on different beliefs.” *Id.* at 495. **Indeed, *Torcaso* specifically included “Secular Humanism” as an example of a religion.** *Id.* at 495 n.11. ²⁴ (emphasis added)

During the Vietnam war the Court held that an exemption from combat designed to apply only to religious belief in God was also applicable to those holding non-theistic religious beliefs and convictions. In so doing it held that a belief that does not derive from a God or a “supreme being” is religious if it is “sincere and meaningful [and] occupies a place in the life of its possessor

²³ *Torcaso v. Watkins*, 367 U.S. 488, 495 n. 11, (1961)

²⁴ *JAMES J. KAUFMAN, v. GARY R. MCCAUGHTRY*, No. 04-1914, p 5 (7th Cir August 19, 2005)

parallel to that filled by the orthodox belief in God”²⁵

In 1989, the Court in *Smith v. Board of School Commissioners of Mobile County*, 655 F. Supp, 939, (SD Ala 1987), held that Secular Humanism is a religion. Although the case was reversed on appeal the Court of Appeals did not reverse the lower Court’s conclusion that Secular Humanism is a religion. It clearly is. Secular Humanists meet in houses of worship, just like Christians.

In the recent Pledge case, the atheistic beliefs of the Plaintiff were characterized by both the Ninth Circuit and the Supreme Court as “religious.” In a concurring opinion, Justice O’Connor noted that “[E]ven if the Religion Clauses were originally meant only to forestall intolerance between Christian sects, they now encompass *all forms of religious Conscience*.”[“*Elk Grove Unified School District et Al. V. Newdow et al.* (June 14, 2004)]

So religion includes both theistic and non-theistic belief systems.

Tenets that Distinguish Theistic from Non-theistic Religion

There are two fundamental tenets that distinguish traditional theistic from non-theistic religions. First traditional theists hold that belief in the existence of God is a rational and reasonable inference from an observation of nature:

“..¹⁹since what may be known about God is plain to them, because God has made it plain to them. ²⁰For since the creation of the world God’s invisible qualities – his eternal power and divine nature – have been clearly seen, **being understood from what has been made, so that men are without excuse.**”[Romans 1:19-20] [The commentary for this verse states: “Atheists have no excuse. **Open minded attention to the nature of creation** makes the existence of God evident.”]²⁶

²⁵ *United States v. Seeger*, 380 U.S. 163, 166 (1965). *Welsh v. United States*, 398 U.S. 333, 357-8 (1970) (J. Harlan, concurring): “However, having chosen to exempt, it cannot draw the line between theistic or non-theistic religious beliefs on the one hand and secular beliefs on the other. Any such distinctions are not, in my view, compatible with the Establishment Clause of the First Amendment. See my separate opinion in *Walz v. Tax Comm’n*, 397 U.S. 664, 694 (1970); *Epperson v. Arkansas*, 393 U.S. 97 (1968); *School District of Abington Township v. Schempp*, 374 U.S. 203, 305 (1963) (Goldberg, J., concurring); *Engel v. Vitale*, 370 U.S. 421 (1962); *Torcaso v. Watkins*, 367 U.S. 488, 495 (1961); *Fowler v. Rhode Island*, 345 U.S. 67 (1953).

²⁶ New International Version, Disciples Study Bible, p. 1,417 (Holoman Bible Publishers, 1988). A recent article in *Discover* shows how anthropologists use the same evidence used by the Apostle Paul to infer the existence and nature of a Divine mind, to infer the prior existence and nature of human minds:

“Scientists don’t yet know how that modern mind came into existence. The question is particular hard to answer because they can’t get into the brain of *H. ergaster* or any of our ancestors. Instead they have to infer what those ancient minds were like **by looking at the things they made**.....Klein ...has offered a **controversial theory**: The modern mind is the result of a rapid genetic change.” Carl Zimmer, *Great Mysteries of Human Evolution*, p. 40 (*Discover*, September 2003) The theory of rapid change is “controversial” because it allows little time for a gradual evolutionary process to operate. Sudden change

Contrast this with the observation of Richard Dawkins:

“But what Hume did was criticize the logic of using apparent design in nature as positive evidence for the existence of God. He did not offer any alternative explanation for apparent design, but left the question open. An atheist before Darwin could have said, following Hume: ‘I have no explanation for complex biological design. All I know is that God isn’t a good explanation, so we must wait and hope somebody comes up with a better one.’ ***I can’t help feeling that such a position, though logically sound, would have left one feeling pretty unsatisfied, and that although atheism might have been logically tenable before Darwin, Darwin made it possible to be an intellectually fulfilled atheist.***”

[Richard Dawkins, *The Blind Watchmaker: Why The Evidence of Evolution Reveals A Universe Without Design*” p. 6, (W.W. Norton & Company, 1996).]

While traditional theistic religion is predicated on an intuitive design inference as a rational basis for belief in a God, the Secular Humanist and the atheist hold that St. Paul, St. Thomas Aquinas²⁷ and William Paley are all wrong. They claim design is just an illusion that can actually be explained very well by natural rather than intelligent causes. Accordingly, the Secular Humanist finds no rational reason to believe in a God that intervenes to order events in the natural world. This was explained by one of the founders of Secular Humanism in a case holding that Secular Humanism is a religion:

“Dr. Kirk defines Secular Humanism as “.....a ***creed*** or world view which holds that ***we have no reason to believe in a creator***, that the world is self existing, that there is no transcendent power at work in the world, that ***we should not turn to traditional religion for wisdom; rather that we should develop a new ethics and a new method of moral order founded upon the teachings of modern naturalism and physical science.***”²⁸

The Humanist Manifesto III, which rejects the “*supernatural*” holds that “nature is self-existing,” that “Humans are the result of unguided evolutionary change,” that “Ethical values are derived from human need and interest as tested by experience,” and that “science is the best method for determining knowledge [of the world] as well as for solving problems and

is the kind of evidence that supports design theory because it tends to rule out chance as a likely explanation for the change.

²⁷ "We see that things which lack knowledge, such as natural bodies, act for an end, and this is evident from their acting always, or nearly always, in the same way, so as to obtain the best result. Hence it is plain that they achieve their end, not fortuitously, but designedly. Now whatever lacks knowledge cannot move toward an end, unless it be directed by some being endowed with knowledge and intelligence." (St. Thomas Aquinas, *The Summa Theologica of St. Thomas Aquinas*, Pt I, Q2, Art 3, (Second and Revised Edition, 1920)

²⁸ ***Smith v. Board of School Commissioners of Mobile County***, 655 F. Supp, 939, (SD Ala 1987, holding that Secular Humanism is a religion) *rev'd* on other grounds 827 F2d 684(11th Cir 1987).

developing beneficial technologies.”²⁹

The conclusion that we are just occurrences rather than designs leads to the other principle differences between theistic and non-theistic religions. **“Only an intelligent mind, one with the capacity for forethought, can have purpose..... For evolutionary biologists, the flower of a violet has a function, but not a purpose.”**³⁰ Accordingly, evolutionary occurrences that result from no intelligent cause are just happenings that lack purpose. Because human life has no inherent purpose, the Secular Humanist relies on human reason rather than traditional theism to provide life with purpose.

The consequence of this is explained by Kenneth Miller:

“As Wise makes clear, he believes that the real danger of evolutionary biology to Christianity is not at all what most scientists might suspect. It is not that evolution’s version of natural history threatens to unseat the central Biblical myths of unitary creation and the Flood. Rather, *it is the chilling prospect that evolution might succeed in convincing humanity of the fundamental purposelessness of life. Without purpose to the universe, there is no [inherent] meaning, there are no [inherent] absolutes, and there is no [inherent] reason for existence.*” (emphasis and commentary added)³¹

²⁹ Humanist Manifesto III. “Humanism is a progressive philosophy of life that, *without supernaturalism*, affirms our ability and responsibility to lead ethical lives of personal fulfillment that aspire to the greater good of humanity. The life stance of Humanism—*guided by reason....Knowledge of the world is derived by observation, experimentation, and rational analysis. Humanists find that science is the best method for determining this knowledge as well as for solving problems and developing beneficial technologies. Humans are an integral part of nature, the result of unguided evolutionary change. Humanists recognize nature as self-existing.* We accept our life as all and enough, distinguishing things as they are from things as we might wish or imagine them to be. ...Ethical values are derived from human need and interest as tested by experience.”

³⁰ “It cannot be sufficiently emphasized that before Darwin, both philosophers and people in general answered “Why?” questions by citing purpose. **Only an intelligent mind, one with the capacity for forethought, can have purpose.**

The entire tradition of philosophical explanation by the purposes of things, with its theological foundation, was made completely superfluous by Darwin's theory of natural selection. The adaptations of organisms—long cited as the most conspicuous evidence of intelligent design in the universe—could now be explained by purely mechanistic causes. **For evolutionary biologists, the flower of a violet has a function, but not a purpose. ... The profound, and deeply unsettling, implication of this purely mechanical, material explanation for the existence and characteristics of diverse organisms is that we need not invoke, nor can we find any evidence for, any design, goal, or purpose anywhere in the natural world, except in human behavior.** Douglas J. Futuyma, *Evolutionary Biology, Third Edition*, p. 10 (Sinauer Associates, Inc. 1998)

³¹ Kenneth R. Miller, *Finding Darwin’s God: A Scientist’s Search for Common Ground Between God and Evolution*, 187 (Harper Collins, 1999). Dr. Miller does not explicitly admit the validity of this extraordinarily important concern. Rather his book raises the issue suggesting that eventually the Author will explain why the concern is not valid. However, the book never provides the promised rebuttal.

One might think this is really just academic. However, I would commend to your reading National Science Education standards which contemplate that children will know by the time they finish the fourth grade that living systems are just occurrences that have not been designed and made for a purpose. That standard has been adopted in both West Virginia and Kansas.³²

We have now defined religion to include both theistic and non-theistic beliefs and we have shown the important differences between the two. The differences identify the reason for the profound controversy over design and evolution and why they are important in the competition between theistic and non-theistic religions.

As pointed out, the “*claims*” of evolution and ID as tentative scientific claims are not religious. This is because, as scientific claims, they must be theoretical. Their theoretical nature is also necessitated by the fact that they are historical claims about the cause of singular unobserved past events that can never be absolutely confirmed by observation and experiment. All we can ever do is assess which is the best current explanation based on the evidence collected to date about those past events. For this reason their explanatory power will vary as new discoveries are made. Presently the new discoveries are pushing the scales to the design side of the equation. Maybe in the future the scales will swing the other way. Neither claim becomes a religion or ideology until they are required to be accepted.

Secular Humanism is predicated on the idea that we have “no reason to believe in a creator.” This is because evolution shows that the Apostle Paul is wrong. Apparent design really is just an illusion. As explained by the National Academy of Science and the AAAS, natural phenomena lack the attribute of design. We are just occurrences and not designs. Because evolution is a “purposeless” process not guided toward any particular goal, human life has no inherent purpose. For the Secular Humanist, Rick Warren’s book *The Purpose Driven Life* is an absurdity.

On the other hand, design theory is powerful support for theistic beliefs. It provides a rational basis for belief in the idea that we were designed and made for a purpose. Scientific evidence that supports design supports theism, while scientific evidence that supports the competing evolutionary claim of no-design supports non-theistic beliefs.

Meaning of the Word “Respecting” in the Establishment Clause.

Now that we have defined terms we are ready to return to the Establishment Clause and look at the word “respecting.” The clause effectively reads that no public school “shall” adopt a

Manifesto III makes it pretty clear that one need not look to the natural world for any intelligent cause that might provide its inhabitants with inherent purpose.

³² The issue is discussed in letters issued to the Kansas and West Virginia State Boards of education that are posted at www.IntelligentDesignNetwork.org in the following documents: 6thdraftrevisions.htm (Letter to Kansas State Board dated January 5, 2001); Feb8letterKSBE.htm (Letter to Kansas State Board Dated February 8, 2001); wvletter.htm (Letter dated January 6, 2003 to the West Virginia Department of Education) and Feptytolerner.pdf (Letter to West Virginia Board of Education dated February 17, 2004).

policy “*respecting... religion.*”

Respecting is a very broad term. It means “regarding” or “concerning.” Concern means “to relate to; be connected with; be of interest or importance to; affect: *The water shortage concerns us all.*” A very literal interpretation of *respecting* would cause the Establishment clause to proscribe any governmental activity that affects theistic or non-theistic religion. Thus, literally, a school could not teach evolutionary theory because it clearly affects the fundamental tenets of both theistic and non-theistic religions and belief systems.

In order to ensure that the term is not too prophylactic, the Court has chosen to restrict the meaning of “respecting” in the Establishment Clause by allowing government actions that touch religion if (a) the predominant purpose³³ of the activity is “secular” and if (b) the primary effect of the activity on religion is neutral [*Gillette v. United States*, 401 U.S. 437, 449-50 (1971):

“[T]he Establishment Clause stands at least for the proposition that when government activities **touch on the religious sphere**, they must be secular in purpose, evenhanded in operation, and neutral in primary impact.” [*Allegheny County v. Greater Pittsburgh ACLU*, 492 U.S. 573, 592 (1989); ruling against a nativity scene at the entrance of a government office.]

The question then becomes: Is it permissible under the Establishment Clause for the state to officially embrace methodological naturalism so that “all” children in the state will come to “know”³⁴ that they are occurrences that have not been designed and made for a purpose? Is this OK, even though many parents would find this offensive to theistic beliefs they seek to instill in those children? Is it permissible for the State to officially suppress design and criticisms of evolution? Because the two competing claims dramatically affect both theistic and non-theistic belief, the answer would seem to be “**NO**” unless the state can show that the use of methodological naturalism in the discussion of origins has both a predominant secular purpose and is neutral as between theistic and non-theistic religion.

What is the purpose of methodological naturalism? It is pretty clear that it’s purpose is to keep God or “supernatural” explanations out of science.

³³ In the *McCreary County* case the majority articulated the need to show predominance. “When the government acts with the ostensible and predominant purpose of advancing religion, it violates that central Establishment Clause value of official religious neutrality, there being no neutrality when the government’s ostensible object is to take sides.” *McCREARY COUNTY, KENTUCKY, et al. v. AMERICAN CIVIL LIBERTIES UNION OF KENTUCKY et al.*, Supreme Court, No. 03—1693, Opinion of the Court, p 11 (June 27, 2005)]

³⁴ The goal of No Child Left Behind and public education today is to define what children are to “know and be able to do” after their training.

“...We take the side of science *in spite* of the **patent absurdity of some of its constructs**, *in spite* of its failure to fulfil many of its extravagant promises of health and life, *in spite* of the tolerance of the scientific community for just-so stories, because *we have a prior commitment, a commitment to materialism*. It is not that the methods and institutions of science somehow compel us to accept a material explanation of the phenomenal world, but, on the contrary, that **we are forced by our *a priori* adherence to material causes** to create an apparatus of investigation and a set of concepts that produce material explanations, no matter how counterintuitive, no matter how mystifying to the uninitiated. **Moreover, that materialism is absolute, for we cannot allow a Divine Foot in the door.**” (emphasis added – the “*a priori adherence to material causes*” excludes design or intelligent causes for natural phenomena)³⁵

It’s purpose is to keep scientific discussions of origins non-theistic. It essentially requires that scientific explanations of our origins, which so dramatically affect our religious beliefs, favor religious beliefs held by Secular Humanists, atheists, and theistic evolutionists who do not hold to traditional theistic views of creation.

Meaning of Secular - Does MN have a Secular Purpose?

So now we get down to a very critical question. What does “secular” mean?

Many would read secular to mean non-Christian. If that is the case, then methodological naturalism certainly meets that definition of secular. However, the dictionary definition means “non-religious:” “of or pertaining to worldly things or to things that are not regarded as religious.” The National Assessment Governing Board that administers the National Assessment of Educational Progress defines secular as an activity that neither “advocates or opposes any particular religious views or beliefs.”³⁶ This essentially reflects the “endorsement” test of religion espoused by Justice O’Connor. A secular purpose is one that does not favor one particular religious view over another.³⁷

Thus in the context of this discussion a secular purpose is one that does not favor non-theistic beliefs and religions over theistic or vice versa. But methodological naturalism does exactly that. It not only favors, but actually promotes non-theistic beliefs and religions.

³⁵ Richard Lewontin, *Billions and Billions of Demons*, (*The New York Review*, January 9, 1997, p. 31)

³⁶ See Attached policy of the National Assessment Governing Board.

³⁷ “When a court confronts a challenge to government-sponsored speech or displays, I continue to believe that the endorsement test ‘captures’ the essential command of the Establishment Clause, namely, that government must not make a person’s religious beliefs relevant to his or her standing in the political community by conveying a message ‘that religion or a particular religious belief is favored or preferred.’” *Elk Grove Unified School District et Al. V. Newdow et al.*. Concurring opinion by Justice O’Connor (June 14, 2004).

One need only read the Humanist Manifesto and the description of Secular Humanism in the *Smith* case to understand why the truth of naturalistic theories of chemical and Darwinian evolution are so critical to those religions. For a Humanist it is essential that life be “the result of unguided evolutionary change.” Recently, 38 Nobel Laureates admonished the Kansas State Board for allowing students to be shown scientific data and analysis that would call into question this fundamental tenet of that religion.³⁸

The problem is that methodological naturalism effectively disallows any challenge to the postulate. Since Secular Humanism, Atheism, Agnosticism and Scientism can be classified as particular religious views or beliefs, then it seems pretty clear that official state advocacy of Naturalism or scientific materialism would not be a secular purpose. It prejudices the all important questions: where do we come from? Are we designs or occurrences? Do we have an inherent purpose? When the state embraces Methodological Naturalism it requires itself to cause students to “know” that they come from purposeless natural rather than supernatural causes, that they are occurrences rather than designs and that they lack any inherent purpose. Accordingly, they are necessarily steered toward the idea that they should use human reason to answer all their questions in life, not traditional religion.

Science argues that MN is necessary to do good science, and is therefore secular even if it does discriminate against God. This is false for a number of reasons. As explained by Dr. de Roos, methodological naturalism is not required in operational science that seeks to understand the genome. In that area scientists are permitted to use methodological design. This is explained by Michael Ruse, a highly regard Darwinian philosopher of science:

“Both history and present Darwinian evolutionary practice have shown us that this kind of design-type thinking is involved in the adaptationist paradigm. We treat organisms – *the parts at least* -- as if they were manufactured, as if they were designed, and then we try to work out their functions. End-directed thinking – teleological thinking – is appropriate in biology because, and only because, *organisms seem as if they were manufactured*, as if they had been created by an intelligence and put to work.”³⁹

Design or teleological thinking then is only forbidden in a very narrow area of science - the science that seeks to describe subjective historical claims regarding the “evolution of the genome.” In that area teleological thinking “is forbidden.”⁴⁰

Conclusions regarding the evolution of the genome have obvious application to

³⁸ In their letter they describe evolution as: “Logically derived from confirmable evidence, evolution is understood to be the result of an unguided, unplanned process of random variation and natural selection.” This not only reflects the core claim of evolution that life is not designed, it also explains the basis for that postulate - “random variation and natural selection.” A copy of the letter is posted at www.KansasScience2005.com along with a reply from the Authors of the changes being criticized by the letter.

³⁹ Michael Ruse, *Darwin and Design: Does evolution have a purpose?*, p. 268 (Harvard, 2003).

⁴⁰ See note 13 and accompanying text.

operational science, but they also have an enormous impact on our world views regarding religion, ethics, bioethics, government and politics. But in operational science both teleological and naturalistic thinking is allowed. So, the prescriptive effect of methodological naturalism seems to be only in the area that has the most impact on our world views. Thus, if the state embraces this way of thinking, it will essentially become one grounded in materialism and naturalism, philosophies and ideologies that are corrosive to traditional theistic religions and beliefs.

Does methodological naturalism lead us to more reliable conclusions about the origin of life and its diversity. That is hardly the case. It shuts out of the investigation a significant amount of data and analysis that is extremely relevant to a legitimate competing hypothesis that leaps from the data.

Methodological Naturalism also renders the materialistic claims of evolution to be practically non falsifiable or testable. This is because the claims of chemical evolution and macroevolution relating to the development of new body plans and systems that appear to be irreducibly complex relate to singular unobserved and unobservable events that are not confirmable through traditional empirical methods of direct observation and experiment. As explained by Dr. Ernst Mayr “Evolutionary biology, in contrast with physics and chemistry, is a historical science -- the evolutionist attempts to explain events and processes that have already taken place. **Laws and experiments are inappropriate techniques for the explication of such events and processes.** Instead **one constructs a historical narrative**, consisting of a tentative reconstruction of the particular scenario that led to the events one is trying to explain.”⁴¹

The primary method used for testing an historical claim is one that seeks evidence that both supports the claim but that also tends to rule out competing hypotheses. It is an analysis that yields an inference to the best current explanation rather than one that proves an assertion in an absolute sense. The difficulty with methodological naturalism in this historical science is that it rules out the competition based on philosophy rather than the data. This leaves the claims of evolution to be untested speculations. So, in this science, methodological naturalism is actually counter productive and in conflict with the scientific method. The Supreme Court case of *Daubert v. Merrill Dow Corporation Pharmaceuticals*⁴² explains that for an inference or assertion

⁴¹ Ernst Mayr, “*Darwin’s Influence on Modern Thought*,” p. 80, (July 2000, Scientific American). The late Dr. Mayr was described in the biographical sketch that accompanies the article at page 83 as “one of the towering figures in the history of evolutionary biology.”

⁴² *Daubert v. Merrill Dow Corporation Pharmaceuticals, Inc.*, 509 U.S. 579, 590 (1993) and its progeny. According to *Daubert* for an inference or assertion to qualify as scientific knowledge, it must be derived by the scientific method. As shown above, that is not the case with either Methodological Naturalism or, because of Methodological Naturalism, evolution. An expert that cannot rule out a competing hypotheses has not been allowed to advance an opinion as to the cause of an historical event. (*Kumho Tire Co., Ltd., Et al. v. Carmichael Et al.* 119 S.Ct. 1167 (1999) (where an expert that could not rule out other hypotheses was not allowed to opine that a tire failed due to design defect. See Arvid V. Zuber, J.D., Ph.D., *Daubert & Scientific Methodology – Science Made Easy, Supplement For The Defense*, p 19 (Defense Research Institute, November 1999).

to qualify as scientific knowledge, it must be derived by the scientific method rather than a preconception. Methodological Naturalism is a preconception. In *Kumho Tire* the court refused to allow an opinion as to the cause of an historical event (failure of a tire resulting in death) where a competing hypotheses (normal wear and tear) was not given consideration.⁴³ Daubert explains that true science seeks the most “reliable” explanations rather than explanations that seek to reach a pre-ordained conclusion.

Methodological Naturalism is actually the enemy of reliable scientific explanations of our origins. This is because it ensures that an enormous amount of data that supports the disagreement with evolution’s claim of illusion will never be scientifically analyzed or examined. This is because the data that is excluded from scientific investigation and analysis is data that only scientists are equipped to investigate and report on. It takes chemists, biologists, biochemists, geneticists, paleontologists, geologists, mathematicians, statisticians, and a whole host of other scientific expertise to evaluate both scientific claims of design and no-design. Accordingly, if the only qualified persons available to test the data and claims are not allowed to do that job, it will never be done. This ensures that the data that supports theistic religions will be assigned to an intellectual black hole that will ensure the mantra that theism is just a non-rational faith based idea.

If scientists cannot examine the evidence of design, then the patrons of science will never know anything about the validity of the claim of illusion. Presently the AAAS says there is no evidence to support that claim. Is this a valid or invalid statement? Methodological Naturalism does not allow that question. Methodological Naturalism requires that it be taken as true. The construct actually destroys the credibility of science. If we can not believe science in its explanations of origins because it has ordained in advance the answer, then why should we believe any other answer it provides with respect to issues impacting other world views?

Clearly, the purpose of Methodological Naturalism is not secular because it seeks to exclude from any scientific explanation of origins data and analysis that happens to support theistic beliefs over non-theistic religions and beliefs. This is a purpose that explicitly seeks to promote materialism or naturalism, a key tenet of non-theistic religions -- those that depend on material causes - unguided evolution to explain the origin of life. That is an explicitly religious rather than secular purpose. That means that an official Evolution Only policy designed to show only a materialistic view of origins would not appear to pass the secular purpose requirement of the Lemon Test.

Methodological Naturalism is not Religiously Neutral

The second prong of the Lemon test requires that the primary effect of the government practice in question be one that “neither **advances nor inhibits religion.**” This has been interpreted by the Court as requiring government to be “neutral” as to religion – that it not discriminate for or against religion.

⁴³ *Id*

“An attack founded on disparate treatment of "religious" claims invokes what is perhaps **the central purpose** of the Establishment Clause - **the purpose of ensuring governmental neutrality in matters of religion.....Necessarily the constitutional value at issue is "neutrality."** [*Gillette v. United States*, 401 U.S. 437, 449-50 (1971).]

Let's assume for the moment the state can show a secular purpose for suppressing evidence of design. The problem is that it must still show that the effect of the practice is religiously neutral. It clearly is not. Methodological Naturalism supports non-theistic belief systems while denigrating theistic. It leads to the belief that apparent design is indeed just an illusion and that we are all deluding ourselves when we rely on the appearance of design in nature as a rational basis for any theistic belief.

The Supreme Court cases dealing with origins science support the conclusion that government may not officially gerrymander this religiously charged debate to exclude a legitimate scientific disagreement with the core claim of evolution.⁴⁴

In both *Epperson v. Arkansas* and *Edwards v. Aguillard*⁴⁵ the state sought to suppress the scientific claim that natural phenomena are not designed. In *Epperson* the court said that if the state had sought to suppress all discussions of origins it might have made a case.⁴⁶ But when it

⁴⁴ *Welsh v. United States*, 398 U.S. 333, 356-7 (1970), See note 15 of Justice Harlan's concurring opinion: "The Establishment Clause case that comes most readily to mind as involving 'underinclusion' is *Epperson v. Arkansas*, 393 U.S. 97 (1968); There the State prohibited the teaching of evolutionist theory but 'did not seek to excise from the curricula of its schools and universities all discussion of the origin of man.'" The conscientious objector cases show that government may not gerrymander classes based on particular tenets of religious beliefs so that certain religious beliefs are favored while those holding other beliefs are not. Thus, government may not gerrymander exemptions from the draft based on whether a belief system is one which adheres to a God, no God or simply a moral conviction. *United States v. Seeger*, 380 U.S. 163 (1965), (conscientious objection on non-theistic religious grounds sustained) and *Welsh v. United States*, 398 U.S. 333 (1970), (conscientious objection on moral rather than any theistic or non-theistic religious ground sustained). *Church of Lukumi Babalu Aye v. City of Hialeah*, 508 U.S. 520 (1993); declaring invalid city ordinances narrowly tailored to proscribe ritual sacrifices of animals for religious purposes but not proscribing other nonreligious forms of animal sacrifice, such as fishing. The Court said at 536: "The Free Exercise Clause, like the Establishment Clause, extends beyond facial discrimination. The Clause '**forbids subtle departures from neutrality,**' ... and '**covert suppression of particular religious beliefs**'... Official action that targets religious conduct for distinctive treatment cannot be shielded by mere compliance with the requirement of facial neutrality. **The Free Exercise Clause protects against governmental hostility which is masked as well as overt.** "The Court must survey meticulously the circumstances of governmental categories to eliminate, as it were, religious gerrymanders."

⁴⁵ *Epperson v. Arkansas*, 393 U.S. 97, 116 (1968); *Edwards v. Aguillard*, 482 U.S. 578, 107 S.Ct. 2573 (1987)

⁴⁶ *Welsh v. United States*, 398 U.S. 333, 356-7 (1970), See note 15 of Justice Harlan's concurring opinion: "The Establishment Clause case that comes most readily to mind as involving 'underinclusion' is *Epperson v. Arkansas*, 393 U.S. 97 (1968); There the State prohibited the teaching of evolutionist theory but "did not seek to excise from the curricula of its schools and universities all discussion of the origin of man."

sought to suppress only one side of the origins debate it crossed the line. In explaining the need for neutrality in matters touching religion the Court said at 103-106:

“Government in our democracy, state and nation, must be neutral in matters of religious theory, doctrine, and practice. ***It may not be hostile to any religion*** or to the advocacy of no-religion; and it may not aid, or foster or promote one religion or religious theory against another or even against the militant opposite. ***The First Amendment mandates government neutrality*** between religion and religion, and ***between religion and nonreligion.***

.....the State may not adopt programs or practices in its public schools or colleges which ‘aid or oppose’ any religion. Id. at 225. This prohibition is absolute. ***It forbids*** alike the preference of a religious doctrine or ***the prohibition of theory which is deemed antagonistic to a particular dogma.***” (emphasis added)

Similarly in *Edwards v. Aguillard*, the court said: “If the Louisiana Legislature's purpose was solely to maximize the comprehensiveness and effectiveness of science instruction, ***it would have encouraged the teaching of all scientific theories about the origins of humankind.***”⁸ But under the Act's requirements, teachers ***who were once free to teach any and all facets of this subject*** are now unable to do so.”⁴⁷

An official state policy that embraces methodological naturalism does exactly what the court in *Epperson* and *Edwards* were ruling against. Both deal with instances where the state has sought to suppress one side of the origins debate. In both *Epperson* and *Edwards* the official suppression of one of two views was deemed a violation of the establishment clause due to a lack of secular purpose. If the state cannot officially suppress the claim of illusion, then it necessarily follows that it may not suppress the scientific disagreement with that claim.

Even if the religious issues are ignored, the Court has held that general First Amendment principles preclude the State from promoting an ideology. *West Virginia v. Barnette* and *Planned Parenthood v. Casey*⁴⁸ hold that the state cannot promote an official ideology. In the recent

⁴⁷ *Edwards v. Aguillard*, 482 U.S. 578, 588-9; 107 S.Ct. 2573 (1987)

⁴⁸ In *Planned Parenthood v. Casey*, 505 U.S. 833, 851 (1992) Justice O'Connor stated that “[a]t the heart of liberty is the right to define one's own concept of existence, of meaning, of the universe, and of the mystery of human life. Beliefs about these matters could not define the attributes of personhood were they formed under compulsion of the State.” Similarly, in *West Virginia v. Barnette* the court held that the state may not require students to recite the pledge of allegiance (before the insertion of the “under God” phrase) and a salute to the US Flag: “If there is any fixed star in our constitutional constellation, it is that ***no official, high or petty, can prescribe what shall be orthodox*** in politics, nationalism, religion, or other matters of opinion or force citizens to confess by word or act their faith therein.” *West Virginia Board of Education v. Barnette*, 319 U.S. 624, 642 (1943). See also *Board of Education v. Pico*, 457 U.S. 853, 879 (1982); and *Keyishian v. Board of Regents*, 385 U.S. 589, 603 (1967).

Pledge case⁴⁹ Justice O'Connor, the swing vote on the court explained:

“Our cardinal freedom is one of *belief*; leaders in this Nation cannot force us to proclaim our allegiance to any creed, whether it be religious, *philosophic*, or political. That principle found eloquent expression in a case involving the Pledge itself, even before it contained the words to which respondent now objects. See *West Virginia Bd. of Ed. v. Barnette*, 319 U. S. 624, 642 (1943) (Jackson, J.)”

No Child Left Behind Requires Secular, Neutral and Non-ideological Education.

A very interesting issue occurs when public schools fail in their task. This problem was specifically addressed in No Child Left Behind. The statute entitles the parents of children who have been left behind to receive supplemental educational services from providers of their choice. However there is a stipulation. Because the funds for providing the services are to be paid by the State, the Statue requires the provider to ensure that the educational services and materials that it delivers be (a) consistent with state educational standards adopted pursuant to No Child Left Behind, and (b) “secular, neutral and non-ideological.”⁵⁰

Although the statute does not explicitly so state, the implicit effect of this two pronged requirement is that the state standards themselves be secular, neutral and non-ideological. So, what does that phrase mean?

When I first came across this provision in the Act it hit me square that in four short words the phrase summarizes the holdings of the Supreme Court on First Amendment rights of students

⁴⁹ *Elk Grove Unified School District et Al. V. Newdow et al..* (June 14, 2004)

⁵⁰ A number of provisions in NCLB indicate that it is inappropriate for States to adopt or implement educational standards that fail to be secular, neutral and nonideological. Sections 1116(b) and 1116(e)(5)(D), relating to School Improvement, require schools which have failed to make adequate yearly progress to provide supplemental educational services from outside providers. The instructional content of the services and materials provided must be consistent with state standards and also be “secular, neutral and nonideological.” Similarly, services and materials provided by the State to private school students and teachers and certain immigrants under the Act are required to be “secular, neutral and nonideological.” (See sections 1120(a)(1), 3245 (a)(7)(A), 9501 (a)(2); Section 5142(a)(1). This would seem to effectively require that State standards themselves be “secular, neutral and nonideological. The Act also requires that all items selected for use in the National Assessment of Educational Progress “are **free from racial, cultural, gender, or regional bias and are secular, neutral and nonideological.**” (See amended Section 412 (e)(4) of the National Education Statistics Act of 1994). These requirements merely reflect the holdings of the Supreme Court in a number of cases. See John H. Calvert, *Are we designs or occurrences? Should science and government prejudge the question?* pp 24 -32 (Intelligent Design network, inc. 2003) at www.IntelligentDesignNetwork.org/Designsoroccurrences111003.pdf. The concept of neutrality effectively proscribes government from taking an official position on any form of **orthodoxy** affecting a variety of beliefs. "If there is any fixed star in our constitutional constellation, it is that **no official, high or petty, can prescribe what shall be orthodox** in politics, nationalism, religion, or other matters of opinion or force citizens to confess by word or act their faith therein." *West Virginia Board of Education v. Barnette*, 319 U.S. 624, 642 (1943); *Board of Education. v. Pico*, 457 U.S. 853, 879 (1982); *Keyishian v. Board of Regents*, 385 U.S. 589, 603 (1967)

and parents. Unless public education is secular, neutral and non-ideological it will not be satisfying the purpose prong or neutral effect prong of the Lemon test. Neither will it satisfy the idea that the First Amendment guarantees each individual to choose what to believe and not have the government imposing ideologies on those it serves.

The No Child Left Behind Act also imposed the secular, neutral and non-ideological requirement on the National Assessment of Educational Policy.⁵¹ In response the National Assessment Governing Board adopted the attached policy which defines the phrase.

In defining “secular,” the policy states:

“Secular — NAEP questions will not contain language that advocates or opposes any particular religious views or beliefs, nor will items compare one religion unfavorably to another.”

In defining “neutral and non-ideological” the NAGB states:

“Neutral and Non-ideological — Items will not advocate for a single perspective on a controversial issue. An item may ask students to explain both sides of a debate, or it may ask them to analyze an issue, or to explain the arguments of proponents or opponents, without requiring students to endorse personally the position they are describing.”

State sponsored methodological naturalism flies in the face of this advice. It guarantees that only one side of the origins question will be presented. It is no different than *Epperson v. Arkansas* reversed. State sponsored naturalism is not secular, it is not neutral and it effectively promotes the ideology that is the foundation for non-theistic religions and religious beliefs at the expense of theistic beliefs.

For these reasons states should abandon Evolution Only policies not only because good science dictates that result, but because it violates the First Amendment rights of parents and students.

In the conclusion of the Origin of the Species, Darwin expressed a hope that is now being renewed by a growing number of scientists around the world. He said that he looked “with confidence to the future – to young and rising naturalists, who will be able to view both sides of the question with impartiality.”⁵² Thankfully, good science and our Constitution actually necessitate fulfillment of that desire.

Whenever I do a talk I end with a question and a quote that has been attributed to Thomas Huxley: “*Science commits suicide when it adopts a creed.*” Has science adopted a creed when it will not allow disagreement with Darwin’s core claim?

⁵¹ See prior note.

⁵² Charles Darwin, *The origin of the Species by Means of Natural Selection or the Preservation of Favored Races in the Struggle for Life*, p. 639 in the “Conclusion” (The Modern Library 1998).

APPENDIX A¹

Definitions of Secular, Neutral, and Non-ideological Item Review Criteria

From Governing Board Policy on NAEP Item Development and Review—5/18/02

Items shall be secular, neutral, and non-ideological. Neither NAEP nor its questions shall advocate a particular religious belief or political stance. Where appropriate, NAEP questions may deal with religious and political issues in a fair and objective way. The following definitions shall apply to the review of all NAEP test questions, reading passages, and supplementary materials used in the assessment:

Secular — NAEP questions will not contain language that advocates or opposes any particular religious views or beliefs, nor will items compare one religion unfavorably to another. However, items may contain references to religions, religious symbolism, or members of religious groups where appropriate.

Examples: The following phrases would be acceptable: “shaped like a Christmas tree,” “religious tolerance is one of the key aspects of a free society,” “Dr. Martin Luther King, Jr. was a Baptist minister,” or “Hinduism is the predominant religion in India.”

Neutral and Non-ideological — **Items will not advocate for** a particular political party or partisan issue, for any specific legislative or electoral result, or for **a single perspective on a controversial issue. An item may ask students to explain both sides of a debate, or it may ask them to analyze an issue, or to explain the arguments of proponents or opponents, without requiring students to endorse personally the position they are describing.** Item writers should have the flexibility to develop questions that measure important knowledge and skills without requiring both pro and con responses to every item. (Emphasis not contained in Appendix issued by NAGB)

Examples: Students may be asked to compare and contrast positions on states rights, based on excerpts from speeches by X and Y; to analyze the themes of Franklin D. Roosevelt’s first and second inaugural addresses; to identify the purpose of the Monroe Doctrine; or to select a position on the issue of suburban growth and cite evidence to support this position. Or, students may be asked to provide arguments either for or against Woodrow Wilson’s decision to enter World War I. A NAEP question could ask students to summarize the dissenting opinion in a landmark Supreme Court case.

The criteria of neutral and non-ideological also pertain to decisions about the pool of test questions in a subject area, taken as a whole. **The Board shall review the entire item pool for a subject area to ensure that it is balanced in terms of the perspectives and issues presented.** (emphasis added)

¹ National Assessment Governing Board, *Collection and Reporting of Background Data by the National Assessment of Educational Progress Policy Statement, Appendix A, Definitions of Secular, Neutral, and Non-ideological: Item Review Criteria* (NAGB, May 18, 2003).