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Kennewick Man and the Meaning of Life

Steven Goldberg[†]

When Native Americans and scientists clashed over ownership of the ancient remains of Kennewick Man it was, in part, a dispute between the needs of traditional culture and the needs of the modern research establishment.¹ Native Americans demanded the reburial of Kennewick Man whereas scientists wanted to analyze the ancient remains.

But more was at stake.

From the Native American perspective, their relationship with Kennewick Man is tied to a view of their origins. This view is central to the Native American understanding of their place in the world. It follows that questions about the ownership of Kennewick Man involve Native American beliefs and emotions. Yet, perhaps surprisingly, the question of who owns Kennewick Man, of who were the First Americans, also has a powerful hold on the beliefs and emotions of scientists.

The Kennewick Man case illustrates that the question of ownership of the human body engages deep beliefs and emotions on both sides of the dispute, even when the body in question is thousands of years old. Indeed, the quarrel over Kennewick Man has parallels in other disputes over the origin and meaning of life where there are deeply emotional investments on both sides of the argument.

This Article explores the common emotional element of these disputes. Part I examines the legal controversy over Kennewick Man as it played out in the courts and Congress. Part II then turns to the relationship between the dispute over Kennewick Man and the dispute over theories of evolution. Finally, Part III addresses the remarkable emotional investment on both sides of the evolution versus intelligent design dispute.

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¹ See, for example, John W. Ragsdale Jr., *Tinkering with the Past*, Natl L J A20 (Feb 11, 2002) (noting the battle between scientists and local Indian tribes for control over Kennewick man).

I. LEGAL DEBATE OVER KENNEWICK MAN

In July of 1996, teenagers discovered human remains near the shore of the Columbia River outside Kennewick, Washington.² Early testing, later confirmed by additional research, determined that the remains were over eight thousand years old.³ Kennewick Man, as scientists came to call the discovery, was an unusually complete skeleton. As one early researcher put it: "The Kennewick Man skeleton is virtually intact. It lacks only the sternum and a few small nondiagnostic bones of the hands and the feet."⁴

From the beginning, the discovery of Kennewick Man, or "the Ancient One" as some Native Americans called him,⁵ generated interest.⁶ The skeleton seemed unrelated to both European settlers and Native Americans in the region.⁷ Its great age suggested to some researchers that it came from a group of early Americans who died out and who were unrelated to current Native Americans.⁸

² The following rendition of the facts of the Kennewick Man case are adapted from *Bonnichsen v United States*, 367 F3d 864, 869-72 (9th Cir 2004), and *Bonnichsen v United States*, 217 F Supp 2d 1116, 1120-22 (D Or 2002), *affd*, *Bonnichsen v United States*, 357 F3d 962 (9th Cir 2004) (describing the pre-litigation history of Kennewick Man). See also Allison M. Dussias, *Kennewick Man, Kinship, and the "Dying Race": The Ninth Circuit's Assimilationist Assault on the Native American Graves Protection and Repatriation Act*, 84 Neb L Rev 55, 56-60 (2005) (noting the facts of the Kennewick Man case); Ryan M. Seidemann, *Time for a Change? The Kennewick Man Case and Its Implications for the Future of the Native American Graves Protection and Repatriation Act*, 106 W Va L Rev 149, 154-55 (2003) (same).

³ See, for example, *Bonnichsen*, 217 F Supp 2d at 1128 (noting that the remains of Kennewick Man are between eight thousand five hundred and nine thousand five hundred years old); Ragsdale, *Tinkering with the Past*, Natl L J at A20 (cited in note 1) (noting that Kennewick Man is over nine thousand years old).

⁴ *Bonnichsen*, 367 F3d at 870 n6 (describing the rarity of the discovery of such a complete specimen). The completeness of the skeleton is important because "[h]uman skeletons this old are rare in the Western Hemisphere, and most found have consisted of only fragmented remains." *Id.* Scientists believed "the remains were a rare discovery of national and international significance." *Id.* at 870.

⁵ See, for example, <<http://www.umatilla.nsn.us/ancient.html>> (last visited Apr 6, 2006) (mentioning how the local tribes came to call Kennewick Man "the Ancient One").

⁶ For competing views of this controversy, compare Dussias, 84 Neb L Rev at 60 (cited in note 2) (arguing that *Bonnichsen* was improperly decided and, as a result, failed to "understand and respect Native American perspectives"), with Seidemann, 106 W Va L Rev at 151 (cited in note 2) (arguing that *Bonnichsen* "represents a reasonable balance of the interests of all groups involved in the debate" and proposing that the "[Native American Graves Protection and Repatriation Act] was never intended to apply to unaffiliated, ancient remains").

⁷ See, for example, *Bonnichsen*, 367 F3d at 869 (noting that further study of the Kennewick Man's remains revealed characteristics unlike those of a European settler, yet also inconsistent with any American Indian remains previously documented in the region).

⁸ *Id.*

The Kennewick Man discovery also created a tangled legal controversy. Current Native American tribes, including the tribes of the Columbia Plateau and the Nez Perce, claimed a relationship to the Ancient One.⁹ They urged that the Ancient One's remains should be reburied, explaining that "[w]hen a body goes into the ground, it is meant to stay there until the end of time. When remains are disturbed and remain above the ground, their spirits are at unrest."¹⁰

The United States Army Corps of Engineers was also involved in the controversy because the remains were found on federal property that it managed. After some initial scientific testing had been done, the Corps seized the skeleton on September 10, 1996.¹¹ Agreeing with the Native Americans, the Corps halted all DNA testing.¹²

In support of their position, the Corps and the Native American tribes relied on the Native American Graves Protection and Repatriation Act ("NAGPRA").¹³ This statute protects Native American remains found on federal or tribal land. Under the statute, if Kennewick Man qualified as "Native American remains" he would be turned over to the tribes for reburial.¹⁴ The Corps believed that Kennewick Man qualified as Native American remains.¹⁵

On the other side of the legal controversy, scientists claimed the right to study the bones under the Archaeological Resources Protection Act.¹⁶ They planned to take precise measurements

⁹ *Bonnichsen*, 217 F Supp 2d at 1121 (mentioning how the Tribal Claimants believed their people had been part of the land in question since the beginning of time).

¹⁰ *Id* (quoting the Joint Tribal Amici Memorandum).

¹¹ *Id*.

¹² *Id*.

¹³ 25 USC §§ 3001 et seq (2000). Among other things, section 3002 states that ownership of Native American human remains shall belong to the Indian tribe on whose tribal land such remains were discovered. 25 USC § 3002(a)(2)(A) (2000).

¹⁴ See, for example, 25 USC § 3002 (2000) (delineating the various criteria by which discovered remains and objects would belong to various Native American tribes).

¹⁵ *Bonnichsen*, 217 F Supp 2d at 1128 (describing the process by which the Corps pronounced the remains to be Native American). The Corps believed the remains were Native American because "the remains were inadvertently discovered on . . . land recognized as aboriginal land of an Indian tribe [and] a relationship of shared group identity can be reasonably traced between the human remains and five Columbia River basin tribes and bands." *Id* at 1122 n9.

¹⁶ See, for example, 16 USC § 470aa-mm (2000). Section 470aa enumerates the purpose of the Act, namely, to:

secure, for the present and future benefit of the American people, the protection of archeological resources and sites which are on public lands and Indian lands, and to foster increased cooperation and exchange of information between governmental au-

comparing Kennewick Man's cranial and dental characteristics with other populations, as well as perform DNA analysis and diet analysis.¹⁷ Scientific groups, led by Dr. Robson Bonnicksen,¹⁸ director of an academic group called the Center for the Study of the First Americans,¹⁹ brought suit challenging the Corps' legal conclusion that Kennewick Man qualified as Native American remains.

On June 27, 1997, the United States District Court for the District of Oregon remanded the matter, finding that the Corps had done inadequate analysis of difficult legal and factual issues.²⁰ The Department of the Interior then took over as the lead federal agency in the matter. On January 13, 2000, the Department of the Interior concluded that Kennewick Man's remains were "Native American" within NAGPRA's meaning.²¹

The scientists sued again, and this time the district court ruled in their favor.²² On appeal, the United States Court of Appeals for the Ninth Circuit affirmed.²³ The Ninth Circuit ruled that Kennewick Man did not constitute "Native American" re-

thorities, the professional archeological community, and private individuals having collections of archeological resources and data which were obtained before [the date of the enactment of this Act].

16 USC § 470aa(b) (2000).

¹⁷ *Bonnicksen*, 367 F3d at 882 n 24 (describing the general types of testing which Plaintiff-scientists planned to engage in).

¹⁸ Dr. Bonnicksen passed away on December 25, 2004. Richard L. Hill, *Service Scheduled for Anthropologist*, *The Oregonian* A14 (Jan 5, 2005).

¹⁹ See <<http://www.centerfirstamericans.org/about.php>> (last visited Apr 6, 2005) (noting how The Center for the Study of the First Americans was founded in 1981 to explore "the questions surrounding the peopling of the Americas" and to "pursue[] research, education, and public outreach").

²⁰ *Bonnicksen v United States*, 969 F Supp 628, 645 (D Or 1997). This is the second opinion published by the district court in this case. In the first published opinion, *Bonnicksen v United States*, 969 F Supp 614 (D Or 1997), the court denied the defendants' motion to dismiss.

²¹ *Bonnicksen*, 217 F Supp 2d at 1128 (noting how defendants concluded that the remains were Native American after relying on the age of the remains and the fact that they were found in the United States).

²² *Id* at 1138-39 (holding that without a finding that the remains are of, or relating to, a tribe, people, or culture that is indigenous to the United States, the Secretary of the Interior would not have sufficient evidence to conclude that the Kennewick Man's remains were Native American under NAGPRA).

²³ *Bonnicksen*, 357 F3d at 979 (holding that because Kennewick Man's remains were so old and the information about his era so limited, the Secretary of the Interior could not reasonably conclude that Kennewick Man shared special and significant genetic or cultural features with presently existing indigenous tribes, peoples, or cultures). This opinion was amended and superseded by *Bonnicksen v United States*, 367 F3d 864, 882 (9th Cir 2004) (reaching the same conclusion as the previous opinion). Although the earlier opinion was substantially unchanged by this amendment, all citations will be to the later opinion.

mains under NAGPRA.²⁴ According to the Ninth Circuit, that statute defines human remains as “Native American” if the remains are “of, or relating to, a tribe, people, or culture that is indigenous to the United States.”²⁵ The court stressed that the relevant statutory text is written in the present tense: it speaks of a group that “*is* indigenous” to the United States.²⁶ Thus, the court concluded, “the statute unambiguously requires that human remains bear some relationship to a *presently existing* tribe, people, or culture to be considered Native American.”²⁷ The court found that there was insufficient evidence that Kennewick Man was related to any current tribe. The remains appeared to be from some other group, presumably settlers who came to America before the ancestors of the current tribes arrived.²⁸ The court concluded that the remains should be turned over to the scientists who could proceed to study them under the Archaeological Resources Protection Act.²⁹

The Department of the Interior and the Native American tribes did not seek review of the Ninth Circuit decision by the United States Supreme Court.³⁰ Instead, the tribes turned to Congress in the hope of amending NAGPRA to provide protection for remains that are related to a tribe that “is or was” indigenous to the United States.³¹ To date, no such amendment has passed.

II. KENNEWICK MAN AND OTHER DISPUTES ABOUT THE ORIGIN OF LIFE

The Native American interest in their connection to Kennewick Man goes beyond the widely shared desire that graves not

²⁴ *Bonnichsen*, 367 F3d at 882 (holding that because Kennewick Man’s remains were so old and the information about his era so limited, the Secretary of the Interior could not reasonably conclude that Kennewick Man shared special and significant genetic or cultural features with presently existing indigenous tribes, peoples, or cultures).

²⁵ 25 USC § 3001(9) (2000).

²⁶ *Bonnichsen*, 367 F3d at 875.

²⁷ *Id.*

²⁸ *Id.* at 881 (noting that the evidence suggests that the cultural group existing at the time of Kennewick Man was likely small in size and highly mobile, while the Columbia Plateau culture consisted of larger, more sedentary groups).

²⁹ *Id.* at 882 (concluding that studies of Kennewick Man’s remains by the Plaintiff-scientists may proceed pursuant to the Archaeological Resources Protection Act).

³⁰ See, for example, Richard L. Hill, *Tribes Quit Long Fight Over Kennewick Man’s Remains*, *The Oregonian* A01 (July 16, 2004); Hill, *Tribes Give Up Fight for Kennewick Man*, *Seattle Post-Intelligencer* B3 (July 17, 2004).

³¹ See <<http://www.umatilla.nsn.us/kman14.html>> (last visited Jan 13, 2006) (noting that the Confederated Tribes of the Umatilla Indian Reservation’s Board of Trustees decided not to appeal the Kennewick Man case to the US Supreme Court and would work with tribes across the nation to amend NAGPRA).

be disturbed. In the Kennewick litigation, the Plateau tribes introduced evidence of oral histories referring to “ancient floods, volcanic eruptions, and the like,” in an effort to show that they trace their origins back thousands of years to the time of the remains at issue.³²

Even Dr. Robson Bonnicksen, who led the opposition to the tribes’ claims, recognized the importance of those claims:

Where did the native people of the Americas really come from? When did they first appear in those lands, and how? Just as the Judeo-Christian tradition teaches that human beings originated when God created Adam and Eve in the Garden of Eden, so every Native American tribe has at least one creation story. . . . All people and all cultures strive to understand the world and their place in it. Origin stories—whether traditional accounts or scientific theories—help satisfy those yearnings.³³

As one academic noted: “In the real world, one’s responses to fundamental moral questions has long been intimately bound up with one’s response—one’s answers—to certain other fundamental questions: Who are we? Where did we come from; what is our origin, our beginning?”³⁴

For indigenous peoples, origin questions are linked with particular intimacy to questions of reburial, since they believe that the land they live on ties them to “the point of their creation.”³⁵ As the Cherokee put it, “[w]e cannot separate our place on earth from our lives on the earth nor from our vision nor our meaning as a people. . . . So when we speak of land . . . [w]e are speaking of something truly sacred.”³⁶

But passions run high on the other side as well. As noted, Dr. Bonnicksen recognized that scientific “origin stories” satisfy the yearning to understand our place in the world just as Native

³² *Bonnicksen v United States*, 367 F3d 864, 881 (9th Cir 2004) (referencing the expert conclusions of Dr. Daniel Boxberger).

³³ Robson Bonnicksen and Alan L. Schneider, *Battle of the Bones*, *The Sciences* 40, 40 (July/Aug 2000).

³⁴ Michael J. Perry, *The Morality of Human Rights: A Nonreligious Ground?*, 54 *Emory L J* 97, 122 & n 69 (2005).

³⁵ Angela R. Riley, *Recovering Collectivity: Group Rights to Intellectual Property in Indigenous Communities*, 18 *Cardozo Arts & Ent L J* 175, 204 & n 132 (2000) (noting that cultural property situates indigenous people in a historical context, tying them to the point of their creation).

³⁶ Peter Matthiessen, *Indian Country* 119 (Viking 1984) (quoting Jimmie Durham, a Western Cherokee).

American stories do.³⁷ Further, Dr. Bonnicksen argued that, “[i]f a choice must be made among competing theories of human origins, primacy should be given to theories based on the scientific method.”³⁸ According to Dr. Bonnicksen, Native American origins theories should not enter “the domain of public policy,” rather they should be left in “the realm of personal religious beliefs.”³⁹

These passages from Dr. Bonnicksen reveal what is at issue in the Kennewick Man dispute. It is one skirmish in the long-running debate over human origins: Darwin versus the Bible, science versus faith, humans as just another topic for scientific analysis versus humans as unique beings. While some people can accommodate their faith to a thoroughly scientific theory of human origins, many cannot.

From this perspective, it is clear that amending or failing to amend NAGPRA will not end the controversy. If there is one thing that the evolution controversy teaches us, it is that victories for either side are illusory or at best short lived. As Edward J. Larson has written, the basic issues raised by the *Scopes v State*⁴⁰ trial have “not really changed since the twenties.”⁴¹ Lawyers on both sides in *Scopes* aimed their arguments at public opinion. After the trial, both sides declared victory.⁴²

When a challenge to an Arkansas statute forbidding the teaching of evolution reached the Supreme Court in 1968, Justice Fortas, in his opinion for the Court striking down the statute as an establishment of religion, offered the hope that “the statute is presently more of a curiosity than a vital fact of life.”⁴³ Yet, Justice Fortas could not have been more wrong. After the Arkansas statute fell, Louisiana required that “creation science” be taught

³⁷ Bonnicksen and Schneider, *The Sciences* at 40 (cited in note 33).

³⁸ *Id.* at 42.

³⁹ *Id.* at 41. Indeed, the Center for the Study of the First Americans, which Dr. Bonnicksen founded, believes the scientific study of origins should prevail over Native American values in settings beyond those raised by the Kennewick dispute. For example, the Center points out on its website what it regards as a dire possibility: that NAGPRA’s provisions will be extended to private land. In other words, in the Center’s view, even if human remains, unlike Kennewick Man, are definitively linked to an existing tribe they should be scientifically studied rather than reburied if they happen to be found on private land. See <<http://www.centerfirstamericans.com>> (last visited Sept 12, 2005) (reporting that proposed National Park Service and Department of Interior regulations may try to extend NAGPRA’s provisions to artifacts and human remains found on private land).

⁴⁰ 152 Tenn 105 (1927).

⁴¹ Edward J. Larson, *Trial and Error: The American Controversy over Creation and Evolution* 211 (Oxford 3d ed 2003) (describing the ongoing debate surrounding creationism first raised in the courts in the celebrated *Scopes* case).

⁴² *Id.* at 212-13.

⁴³ *Epperson v Arkansas*, 393 US 97, 102 (1968).

in the public schools whenever evolution was taught.⁴⁴ When that statute was struck down on establishment of religion grounds,⁴⁵ people began efforts to teach intelligent design in public schools.⁴⁶ While the last of these movements may raise broader issues, many supporters of intelligent design are simply believers in creationism who reject Darwin.⁴⁷

III. EMOTIONAL INVESTMENT ON BOTH SIDES OF THE DEBATE ABOUT THE ORIGIN OF LIFE

I cannot claim neutrality in the dispute between proponents of evolution and those who reject it on the basis of faith. I am thoroughly imbued with a rather conventional scientific world view. I find only metaphorical wisdom in the various traditional creation stories in the Bible, Native American sources, and elsewhere. This does not mean, however, that I believe that evolution displaces culture or morality or that the theory of evolution is exempt from the normal course of scientific progress. In other words, someday scientists may present Darwin's work in a different light than they do today. Moreover, my acceptance of the value of modern science does not resolve the question of how to balance conflicting beliefs concerning proper respect for human remains. But, even as someone who accepts evolution as a reigning paradigm in science today, I believe I have some perspective on the intensity of the debate, whether the subject is a tenth

⁴⁴ *Edwards v Aguillard*, 482 US 578 (1987).

⁴⁵ Id at 582 (holding that Louisiana's Creationism Act violates the Establishment Clause of the First Amendment because it seeks to employ the symbolic and financial support of government to achieve a religious purpose).

⁴⁶ See, for example, Jeffrey F. Addicott, *Storm Clouds on the Horizon of Darwinism: Teaching the Anthropic Principle and Intelligent Design in the Public Schools*, 63 Ohio St L J 1507, 1570 (2002) (noting how individual science teachers exercise academic freedom to present intelligent design to their classes apart from state curriculum guidelines); David K. DeWolf, Stephen C. Meyer, and Mark Edward DeForrest, *Teaching the Origins Controversy: Science, Or Religion, Or Speech?*, 2000 Utah L Rev 39, 59-61 (noting that a growing number of scientists are now willing to consider alternatives to strictly naturalistic origins theories); Richard Monastersky, *Seeking the Deity in the Details*, 48 Chron Higher Educ A10 (Dec 21, 2001) (noting that the design movement is now selling books and attracting attention as a more scientifically sophisticated alternative to biblical creationism). Additionally, a U.S. district court judge has ruled that a Pennsylvania school district's policy requiring the teaching of intelligent design violates the Establishment Clause. *Kitzmiller v Dover Area School Dist*, 400 F Supp 2d 707, 765 (D Pa 2005).

⁴⁷ The district court found a religious basis for the intelligent design legislation it invalidated in *Kitzmiller*, 400 F Supp 2d at 765 (concluding that intelligent design cannot be separated from its creationist, and thus religious, antecedents). For other views of various approaches to intelligent design, see, for example, DeWolf, Meyer, and DeForrest, 2000 Utah L Rev at 49-56 (cited in note 46) (stating that a search for alternative theories of human origins has resulted from various problems with Darwin's theories).

grade biology class or the reburial of Kennewick Man. In this section, I address the emotional investment on both sides of the dispute between evolution and intelligent design.

Let us begin with the point of view of those who reject evolution. Their approach is vividly and candidly put forward by Ron Carlson and Ed Decker in a book that defends evangelical Christianity.⁴⁸ According to Carlson and Decker, evolution says: "You are the descendant of a tiny cell of primordial protoplasm washed up on an ocean beach 3½ billion years ago. . . . You are a mere grab-bag of atomic particles, a conglomeration of genetic substance. . . . [Y]ou came from nothing, you are going nowhere."⁴⁹ The Christian view, by contrast, says: "You are the special creation of a good and all-powerful God. You are the climax of His creation [Y]ou are unique Your Creator love[s] you."⁵⁰

In broader and more measured terms, a legal text summarizes the tension between evolution and morality as follows:

If nature came about purely by chance, it is much more difficult to believe not only in a creator God, but in any normative quality to the universe. How could natural law, for example, be based on an understanding of the nature of reality, if nature itself has no purpose? . . . To be sure, many people believe, and some scientists argue, that God chose natural selection as the mechanism for bringing new species into being. . . . Nevertheless, the ways of harmonizing natural selection and traditional religion are not straightforward, and to many persons—both scientists and believers—the two are irreconcilable.⁵¹

One response to this tension is to say that it is just too bad if science reveals unpleasant truths. We are stuck with those truths and there is no point in pretending otherwise. This was the argument made by Clarence Darrow when he criticized a believer in Genesis: "To make assertions not based on facts; to construct fantastic theories because he wants to dream; to entertain beliefs because he fears the truth shows only his craven fear of life and death."⁵²

⁴⁸ Ron Carlson and Ed Decker, *Fast Facts on False Teachings* (Harvest House 1994).

⁴⁹ *Id.* at 62.

⁵⁰ *Id.* at 63.

⁵¹ Michael W. McConnell, John H. Garvey, and Thomas C. Berg, *Religion and the Constitution* 663 (Aspen 2002).

⁵² Larson, *Trial and Error* at 211 (cited in note 41) (quoting Clarence Darrow, *Purpose of the Universe* (unpublished and undated speech on file with the Clarence Darrow Papers

But, Darrow, a lawyer and an atheist,⁵³ did not necessarily share the world view of those who devote their lives to studying the natural world, as scientists do.⁵⁴

As Dr. Bonnicksen wrote, scientific origin stories, while they stand on a different empirical footing than traditional ones, serve the same purpose in giving us an account of our place in the world.⁵⁵

Consider, in this respect, the words of a leading modern evolutionary scientist, E.O. Wilson:

Traced back far enough through time, across more than three billion years, all organisms on Earth share a common ancestry. That genetic unity is a fact-based history confirmed with increasing exactitude by the geneticists and paleontologists who reconstruct evolutionary genealogy. If *Homo sapiens* as a whole must have a creation myth—and emotionally in the age of globalization it seems we must—none is more solid and unifying for the species than evolutionary history.⁵⁶

As Wilson notes, the theory of evolution serves a rather specific psychological purpose. Apparently, globalization suggests that we are fortunate indeed that humans descend from a single source, rather than from two or three. In pure theory, science could proceed apart from such considerations. But, science is done by human beings and evolution has long been associated by some of them with nonscientific ideas.⁵⁷ Wilson stresses unity,

at the Library of Congress, Washington, DC)).

⁵³ Although Darrow identified himself as an agnostic, he was typically viewed as an atheist. See, for example, S.T. Joshi, ed, *Closing Arguments: Clarence Darrow on Religion, Law, and Society* xiii (Ohio 2005) ("It is a bit puzzling why [Darrow] continually referred to himself merely as an agnostic; there seems little doubt that he was an atheist.").

⁵⁴ See, for example, Edward J. Larson and Larry Witham, *Scientists are Still Keeping the Faith*, 386 *Nature* 435 (1997) (reporting that, in a recent survey conducted by the authors, nearly 40 percent of scientists still believed in a personal God and an afterlife, while roughly 45 percent disbelieved and 15 percent were agnostic); Jim Chen, *Legal Mythmaking in a Time of Mass Extinctions: Reconciling Stories of Origins with Human Destiny*, 29 *Harv Envtl L Rev* 279, 315-19 & n 276 (2005) (quoting the physicist Hermann Weyl as stating, "My work always tried to unite the true with the beautiful").

⁵⁵ Bonnicksen and Schneider, *Battle of the Bones* at 40 (cited in note 33).

⁵⁶ Edward O. Wilson, *The Future of Life* 133 (Knopf 2002).

⁵⁷ See, for example, Kenneth R. Miller, *Finding Darwin's God: A Scientist's Search for Common Ground Between God and Evolution* 267 (Harper Collins 1999) ("If faith and reason are both gifts from God, then they should play complementary, not conflicting, roles in our struggle to understand the world around us."); Stephan Lovgren, *Evolution and Religion Can Coexist Scientists Say*, *National Geographic News* (Oct 18, 2004) available at <http://news.nationalgeographic.com/news/2004/10/1018_041018_science_religion.html> (last visited Apr 6, 2006) (noting that many scientists and theologians maintain

whereas earlier researchers often stressed progress.⁵⁸ Nonetheless, the desire to see science as casting a positive light on human nature is the same.

My point is not to dissect the current motivations or desires of modern evolutionary biologists. Rather, the point is that the question of human origins is important to scientists in a way that far outstrips the science itself. A simple thought experiment will demonstrate what I have in mind.

When the Supreme Court decided, in 1968, that Arkansas could not forbid the teaching of evolution, the Court did not require the state to teach evolution. As Justice Black pointed out in a concurrence, “[i]t would be difficult to make a First Amendment case out of a state law eliminating the subject of higher mathematics, or astronomy, or biology from its curriculum.”⁵⁹ Justice Stewart made the same point.⁶⁰ Therefore, it is possible that a state could avoid the controversy over teaching human origin theory by simply teaching nothing on the subject in its public schools.

Scientists, however, would be absolutely outraged by such a solution. We would hear that generations of youth would be condemned to dangerous ignorance, and those would be the mild complaints.

Yet, most American high school students do not study physics.⁶¹ Where is the outrage among scientists here? Physics, after

that it would be perfectly logical to think that a divine being used evolution as a method to create the world).

⁵⁸ See, for example, Stephen Jay Gould, *Wonderful Life: The Burgess Shale and the Nature of History* 28 (Norton 1989) (“The familiar iconographies of evolution are all directed—sometimes crudely, sometimes subtly—toward reinforcing a comfortable view of human inevitability and superiority.”); Jill S. Quadagno, *Paradigms in Evolutionary Theory: The Sociobiological Model of Natural Selection*, 44 *Am Sociological Rev* 100, 101 (1979) (“Darwinian theory represented a major paradigm shift over earlier theories of organic evolution. Pre-Darwinian evolutionary theories such as those espoused by Lamarck, Chambers, Spencer, and the German *Naturphilosophen* had taken evolution to be a goal-directed process, incorporating the principles of direction, progress and perfectibility.”).

⁵⁹ *Epperson*, 393 US at 111 (Black concurring).

⁶⁰ *Id* at 116 (Stewart concurring) (“It is one thing for a State to determine that ‘the subject of higher mathematics, or astronomy, or biology’ shall or shall not be included in its public school curriculum. It is quite another thing for a State to make it a criminal offense for a public school teacher so much as to mention the very existence of an entire system of respected human thought.”).

⁶¹ In 2000, 31.4 percent of public high school graduates took a physics course, as opposed to 91.2 percent of public high school graduates taking a biology course. See National Center for Education Statistics, *Digest of Education Statistics* (2003), tbl 139, available at <<http://nces.ed.gov/programs/digest/d03/tables/dt139.asp>> (last visited Apr 6, 2006) (presenting data compiled by the National Center for Education Statistics on high school math and science course enrollment).

all, is absolutely fundamental to a modern scientific understanding of the world. Indeed, physics is more fundamental than biology; it is physical reactions, after all, that underlie the mechanism of evolution and of everything else in the material world.⁶² Some scientists might claim that physics is too difficult for high school, but surely some of its basic conclusions could be presented in an understandable manner. After all, public school biology classes hardly present a sophisticated view of evolutionary biology.⁶³

On the other hand, when physics *is* taught in high school, where are the Biblical literalists? Their protests are far weaker than they are when evolution is at stake, even though physics, to put it mildly, challenges the Biblical account of nature.⁶⁴ It posits a much older universe, a different account of creation, a rejection of the sun stopping in the sky, and challenges a variety of other aspects of traditional faith.⁶⁵

If only logic were involved, both scientists and Biblical literalists would be just as concerned about the study of physics as about the study of biology. But biology, because of its closer ties to our sense of who we are, incites stronger reactions on both sides of this debate.

CONCLUSION

Usually, scientists do not litigate against the government in federal court. Nevertheless, scientists brought suit in the Kennewick Man case just as science teachers challenged the ban on

⁶² See, for example, Susan Kinzie, *Star of Physics Will Tell How Science Is Fun; Nobel Laureate Hopes His Stories Will Spark Interest in High School Students*, Wash Post T03 (Apr 15, 2004) (reporting on Leon Lederman's argument that "high school science is stuck in a time warp, a backward construction that begins with biology, proceeds to chemistry and eventually . . . gets to physics. But physics helps explain the basics of chemistry, and understanding chemistry is essential to understanding biology."); Leon Lederman, *Revolution in Science Education: Put Physics First!*, 54 Physics Today 11 (Sept 2001) (arguing that physics should be taught before chemistry and biology).

⁶³ See, for example, Cynthia Passmore, *Providing High School Students with Opportunities to Reason Like Evolutionary Biologists*, 67 Am Biology Tchr 214, 214-15 (2005) (quoting a National Research Council study finding that "many students receive little or no exposure to the most important concept in modern biology, a concept essential to understanding key aspects of living things—biological evolution").

⁶⁴ For one of the relatively rare religious attacks on physics, see Donald R. Morse, *Big Bang or Big Collision: Where Does God Fit In?*, 24 J Religion & Psychical Res 121-22 (2001) (arguing that the Big Bang Theory is flawed because of its omission of an intelligent God).

⁶⁵ See, for example, Wolfhart Pannenberg, *The Doctrine of Creation and Modern Science*, 23 Zygon 3, 3-7 (1988) (discussing the relationship between theology and science and how traditional conceptions of the creation of the earth have been challenged by physics).

teaching evolution in Arkansas and science teachers challenged the teaching of creation science in Louisiana. These legal actions illustrate that it is not just Native Americans and Biblical creationists who care deeply about our origins.

Questions concerning human origins and the origin of life matter a great deal to all of us because they speak not only to where we come from, but also to whether and how our lives have meaning. Recognizing that both sides have strong beliefs and emotions will not resolve these disputes, but it might introduce a needed note of humility into these controversies.

