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INSIDE CREATIONISM'S TROJAN HORSE: A CLOSER LOOK AT INTELLIGENT DESIGN

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ABSTRACT

Intelligent design (ID) creationists at the Discovery Institute's Center for Science and Culture claim to be advocating good science and education. Although they promote ID as a "full-scale scientific revolution," it is really the newest variant of American creationism. Proponents have no scientific data to support their contention that a supernatural designer explains biological phenomena better than natural processes. They have waged a thirteen-year PR and political campaign to translate their religious views, which include religious exclusionism and anti-secularism, into public policy. Only six states remain exempt from their attempts to influence science standards. curricula, or textbooks. When approaching educational policymakers, they disguise their agenda with seemingly innocuous terminology co-opted from legitimate scientific and educational discourse. ID creationists work through local, state, and national religious organizations and religious/political operatives, including members of Congress. If they succeed, they will damage both science education and the separation of church and state.

Editor's Note: Barbara Forrest appeared on CNN's Larry King Live, August 23, 2005, defending the methodology of science against advocates of Intelligent Design "theory."

Keywords: Intelligent design, politics, Wedge strategy, legal decisions, Michael Behe, William Dembski, Phillip Johnson, Jonathan Wells, Center for Science and Culture, Discovery Institute, Intelligent Design and Evolution Awareness Center, Intelligent Design Network

INTRODUCTION

In Creationism's Trojan Horse (1), Paul R. Gross and I explained the nature and strategy of the intelligent design (ID) creationist movement, which is headquartered at the Discovery Institute (DI), a conservative think tank in Seattle, WA. In 1996, DI established the Center for the Renewal of Science and Culture (CRSC), now called the Center for Science and Culture (CSC), to promote "intelligent design theory." Functioning as DI's creationist arm,

the CSC is advancing a religious agenda by cultivating political influence with state boards of education, local school boards, and members of Congress. Executing a twenty-year plan outlined in a document called "The Wedge Strategy" (a.k.a. the "Wedge Document"), ID creationists hope to drive a "wedge" between the concept of science and the naturalistic methodology by which science operates (2). This would foster in the public mind a premodern understanding of science in which God is invoked as a scientific explanation of natural phenomena. An early CRSC website announced that "new developments in biology, physics, and artificial intelligence are raising serious doubts about scientific materialism and re-opening the case for the supernatural" (3). ID proponents call this "theistic science."

Law professor Phillip E. Johnson began his anti-evolution crusade in the late 1980s following his religious conversion (1). He and his tightly knit cadre of religiously motivated associates call themselves "the Wedge." While they were formalizing the Wedge Strategy in 1996, DI added the CRSC to its roster of programs, guaranteeing that the Wedge would have a formal home and lucrative "research fellowships." Johnson became a CRSC advisor. A student creationist group founded in the 1970s (37), Students for Origins Research, transformed itself into Access Research Network (ARN), a separate, auxiliary ID organization in Colorado Springs. ARN functions as a clearinghouse for ID "educational" and promotional materials.

The Wedge Strategy called for publication of thirty ID books by 2003, and the CSC has moved past that goal with books aimed at a popular audience. In 1991, Johnson had already published Darwin on Trial, in which he rejects science's naturalistic methodology (4). In 1996, biochemist Michael Behe published Darwin's Black Box, in which he stated that excluding the supernatural from scientific explanations is "an artificial restriction on science" (5). William Dembski, a philosopher, mathematician, and Christian apologist, followed in 1999 with Intelligent Design: The Bridge Between Science and Theology, explaining ID in overtly religious terms (6). In 2000, Jonathan Wells, the only founding Wedge member with a Ph.D. in biology, published Icons of Evolution (7), charging that science textbooks present fraudulent material about evolution to unsuspecting students. In 2003, philosopher Stephen C. Meyer co-edited Darwinism, Design, and Public Education (8), falsely advertised as a "peer-reviewed science book" (9). In addition to publication, the Wedge is executing virtually every aspect of the Wedge Strategy except the one they list as foundational to their program: "scientific research being done from the perspective of design theory" (2). Despite their protestations to the contrary, ID is a supernatural religious belief that its proponents attempt (unsuccessfully) to conceal behind their scientific pretensions.

Wedge leaders deny that ID is religion and, consequently, that it is creationism. Most worrisome is Meyer's contention that the 1987 U. S. Supreme Court ruling, Edwards v. Aguillard, which outlawed creationism in public school science classes, "does not apply to design theory" since ID is science (13). Claiming that "intelligent design fits the bill as a full-scale

scientific revolution" (36), Dembski challenges critics: "Ask any leader in the intelligent design movement whether intelligent design is stealth creationism, and they'll deny it" (1). Yet their own words show that ID is characterized by that hallmark of creationism, the rejection of evolution in favor of creation by a supernatural deity. Johnson has stated flatly, "Evolution is a hoax" (1). "Darwinism is not science," insists Behe (10). DI president Bruce Chapman promotes the falsehood that "Darwinism is a theory in crisis" (12). And Dembski identifies ID as not only a religious but a sectarian Christian belief: "Intelligent design is just the Logos theology of John's Gospel restated in the idiom of information theory" (11). Wells' involvement, stemming from a different but equally anti-evolutionist religious affiliation, fulfills his obligation as a "Moonie," a member of Rev. Sun Myung Moon's Unification Church. At Moon's urging, Wells earned a Ph.D. in molecular biology at the University of California-Berkeley, not to do science (he admittedly does no scientific research), but because "Father" Moon convinced him that "I should devote my life to destroying Darwinism" (1). And Wells himself, as a founding Wedge member, confirmed in 1996 that ID is creationism when, calling Johnson a "creationist," he affirmed that "the most vocal advocates of design in the creation-evolution controversies, however, are creationists rather than theistic evolutionists" (1). (ID proponents reject theistic evolution, which holds that God shaped life through evolution, despite its acceptance by all mainstream Christian denominations. Catholic theologian John Haught is a prominent theistic evolutionist [38], as is scientist Francis Collins, director of the National Human Genome Research Institute [43].)

A telling piece of evidence that ID is not science is the total failure by Wedge scientists to produce original research supporting ID – even by Behe, a practicing biochemist who claims to have embraced ID for scientific rather than religious reasons. Declining to discuss ID at scientific meetings – "I just don't think that large scientific meetings are effective forums for presenting these ideas" (1) – he chooses instead to discuss it in churches (14). After thirteen years of the Wedge Strategy (which Johnson says began in 1992 at a conference at Southern Methodist University [1]), Paul Nelson, himself a Wedge founder (and young-earth creationist), recently assessed ID's current scientific status:

"Science in the Key of Design" if you will, is a melody that we're going to have to teach others to hear and play. First, of course, we have to master it ourselves! ...

Easily the biggest challenge facing the ID community is to develop a full-fledged theory of biological design. We don't have such a theory right now, and that's a real problem. Without a theory, it's very hard to know where to direct your research focus. Right now, we've got a bag of powerful intuitions, and a handful of notions such as "irreducible complexity" and "specified complexity" – but, as yet, no general theory of biological design. (15)

Despite ID's admitted scientific sterility, the Wedge has a nationwide network of supporters and state-level organizations that do the political legwork

in states where the CSC tries to influence public school science standards, textbook selection, or curriculum development. After young-earth creationists initiated efforts leading to the Kansas Board of Education's deleting evolution from state science standards in 1999, ID creationists moved in and assumed the lead role when corporate lawyer John Calvert founded the Intelligent Design Network (IDnet) in Shawnee Mission, KS. Having played a pivotal part in promoting ID in Kansas, IDnet has affiliates in New Mexico and Minnesota and works closely with Science Excellence for All Ohioans (SEAO) to promote ID in Ohio. ID supporters on the Ohio Board of Education, with help from the CSC and IDnet, inserted an ID-friendly benchmark into state science standards and engineered the board's acceptance of a creationist lesson plan for that benchmark. Recognizing the need for recruits, the Wedge also has student supporters. The Intelligent Design and Evolution Awareness Center (IDEA) began as the student IDEA Club at the University of California-San Diego. Transformed into the IDEA Center after its founders graduated, the organization helps establish IDEA clubs at universities and high schools (1). The Intelligent Design Undergraduate Awareness Center (IDURC) is the student division of ARN. The Wedge Strategy also aims at higher education, and supporters among university faculty have used special courses outside required curricula to expose students to ID (16). ID proponent Jed Macosko, who teaches biophysics at Wake Forest University, taught such a class when he was a doctoral student at the University of California-Berkeley. He modeled his class after the one his father Chris Macosko, a chemical engineering professor at the University of Minnesota, taught as a freshman seminar at UM (1). Both courses awarded credit toward graduation, though not in science.

ID CODE WORDS, ALLIANCES AND RELIGIOUS EXCLUSIONISM

In the Wedge's early years, ID creationists candidly displayed their true identity and agenda; they needed to raise money and cultivate their support base, which the Wedge Document calls ID's "natural constituency, namely, Christians" (2). They did not shy away from the word "creationist" and were forthright in their references to the supernatural. However, as they have assumed a higher public profile, they have adopted euphemisms to disguise their aims to mainstream audiences (although they drop their linguistic façade when addressing religious supporters). (See note 45 for a list of ID creationist tactics that will enable parents, concerned citizens, and school officials to identify ID activity if it appears in their school districts.) In the wake of publications exposing ID's religious foundations and political ambitions, they have strategically altered their terminology, attempting to conceal their identity as creationists (1, 17). But their code words are clearly identifiable.

One ID tactic is to try to convince school boards to alter the way evolution is taught, as Darby, Montana, minister Curtis Brickley did in 2004. Brickley's proposal to add "intelligent design" to Darby's high school science curriculum was supported by three of five school board members. Both Calvert and CSC fellow David K. DeWolf, a law professor (13), addressed the board on

Brickley's behalf. After opposition by Ravalli County Citizens for Science (RCCS), Brickley altered his terminology, requesting the teaching of "objective origins" rather than "intelligent design." RCCS ultimately won: a new board scuttled the policy after the next election. But ID activity continues in other states, and ID code talk includes a variety of other euphemisms.

The CSC promotes "teaching the controversy," hoping to convince the public and educational policymakers that there is a raging debate over evolution in mainstream science. Stymied so far in efforts to get ID into science classes via the front door, ID creationists take the backdoor approach of proposing that the "strengths and weaknesses of evolution" be taught in order to encourage "critical thinking" or, as in the Ohio benchmark and lesson plan, "critical analysis" (17). They used the "strengths and weaknesses" approach in an unsuccessful attempt to influence the Texas Board of Education's selection of science textbooks in 2003 (12). ID creationists yet needed another euphemism for their attempt to evade the legal constraints of Edwards v. Aguillard, in which the U.S. Supreme Court outlawed creationism while acknowledging that "teaching a variety of scientific theories about the origins of humankind to schoolchildren might be validly done with the clear secular intent of enhancing the effectiveness of science instruction" (18). Viewing this as a legal loophole, ID creationists pronounced ID an "alternative theory," a scientific competitor to evolutionary theory (13). Even further, co-opting the language of civil liberties to disquise their reactionary agenda, they argue that teaching ID is protected by "a teacher's right to academic freedom" (13). One of the most effective terms in the ID lexicon is "fairness," used in constant appeals to allow children to hear "both sides" of ID's contrived controversy. According to Dembski, one of ID's favorite tactics is "to appeal to the undecided middle's sense of fairness and justice, especially its tendency to root for the underdog and its predilection for freedom of expression" (19). But the ID tactic that most conclusively identifies ID as religion is its rejection of "naturalism"

Parents, concerned citizens, and school officials must be able to recognize attempts by ID proponents to make inroads in their communities. Below is a list of their most frequently used tactics:

- Efforts to convince school boards to weaken the way evolution is taught.
- Use of euphemisms and code talk in an attempt to skirt court rulings against teaching creationism:
 - "Teach the controversy."
 - "Teach the strengths and weaknesses of evolution."
 - "Teach objective/balanced views of origins."
 - "Teach alternative theories."
 - "Teach students to critically analyze evolutionary theory."

- "Academic freedom/fairness requires that students hear 'both sides.'"
- Objections to teaching "naturalism."
- Attempts to influence science standards and curricula, using the above code terms.
- Attempts to influence selection of science textbooks, which may include objecting to the books' instruction in evolution and/or to the exclusion of "alternative theories."
- Accusations of fraudulent material in science textbooks.
- Proposals for disclaimer stickers in science textbooks and/or verbal disclaimers by science teachers or administrators.
- Efforts to pass ID-friendly legislation that incorporates the above code terms.
- Criticism of taxpayer funding for research in evolutionary biology, geology, and/or other related sciences.
- Involvement of local, state, and national Religious Right organizations.
- Presentations about ID as "science" to school boards, preceded or followed by presentations about ID in churches (where religious terminology is usually integrated into discussion of ID).
- ID proponents touting their scientific credentials. (ID proponents with genuine scientific credentials are usually engineers, physicists, chemists, etc., not biologists.)

ID's anti-naturalism is central to the Wedge Strategy. Johnson conflates "methodological naturalism," which is simply a fancy name for scientific method, with "philosophical naturalism," a metaphysical view that reaches beyond science in its conclusion that the supernatural does not exist. Johnson wrongly but deliberately equates these terms in order to argue that teaching evolution, the product of science's naturalistic methodology, is tantamount to teaching atheism in public school science classes (20). But his rejection of naturalism is merely a backhanded way of arguing that an appeal to the supernatural can suffice as a scientific explanation. In doing so, Johnson ignores the essential distinction between science and religion that constitutes an elementary understanding of science.

In addition to its strategic use of terminology, the Wedge employs other recognizable tactics intended to undermine the teaching of evolution. ID proponents have played a major role in disputes over science standards in New Mexico, Kansas and Ohio (1). With help from ID creationists such as University of Georgia chemist and CSC fellow Henry F. Schaefer III, the Wedge has been heavily invested in defending the Cobb County, GA, disclaimer stickers (21). Jonathan Wells calls for his readers to protest public funding of evolution research (7). In addition, awakened to the Wedge's agenda by its aggressive

PR campaign, sympathetic lawmakers have introduced ID-friendly legislation. Among the most egregious was Missouri House Bill No. 911, introduced by Rep. Robert Wayne Cooper into the Missouri General Assembly in December 2003. This abominably written bill, called the "Missouri Standard Science Act," would have required that "if scientific theory concerning biological origin is taught, biological evolution and biological intelligent design shall be taught and given equal treatment" (39). It would also have required that "willful neglect of any elementary or secondary school superintendent, principal, or teacher to observe and carry out the requirements of this section shall be cause for termination of his or her contract." From 2001-2003, thirty bills were introduced in fourteen states, and such efforts continue (22). As of April 2005, ten anti-evolution bills had been promoted in state legislatures (23). So far, all such legislation has failed. But CSC creationists now have political influence in the nation's capital; they used it in an attempt to co-opt the No Child Left Behind Act (NCLB).

In June 2001, Sen. Rick Santorum (PA) introduced a sense of the Senate resolution into NCLB. The "Santorum amendment" seemed innocuous to everyone except those familiar with the Wedge Strategy, who recognized its intent. Written by Phillip Johnson, it singled out "biological evolution" as a subject that "generates so much continuing controversy" that for the sake of "good science education," students should be taught to "distinguish the data and testable theories of science from philosophical or religious claims that are made in the name of science" (1). The called-for distinction reflected ID complaints that naturalism is supposedly being used in public schools to chip away at students' theistic beliefs (20). Pro-science and education organizations successfully lobbied to get the resolution removed from the bill, but ID supporters on the conference committee placed a slightly altered version in the legislative history, from whence ID supporters constantly invoke it as authoritative over educational policy. Although the Santorum amendment has no legal force over educational policy, Bruce Chapman and David DeWolf refer to it as "federal policy" with "the effect of law" (1). Influential members of Congress have signaled their agreement. In March 2002, Rep. John Boehner (OH) and Rep. Steve Chabot (OH) wrote a letter on congressional stationery to the president and vice-president of the Ohio Board of Education, incorrectly asserting, "The Santorum language is now part of the law." In September 2003, Boehner, joined by Sen. Judd Gregg (NH) and Sen. Santorum himself, intervened in the Texas textbook dispute with a letter to Chapman, also on congressional stationery, endorsing DI's interpretation of the amendment: "The Santorum language clarifies that public school students are entitled to learn that there are differing views on issues such as biological evolution" (24). This letter was distributed to the Texas Board of Education at the selection hearings (25).

Evangelical Christians are an essential support base for the ID movement. The Wedge has evangelical supporters in churches around the country, as well as in campus ministries such as InterVarsity Fellowship and Veritas Forum

(1). Prominent television evangelist Pat Robertson endorsed the teaching of ID on his 700 Club program (40). Prison Fellowship Ministries founder Charles Colson is one of ID's staunchest supporters (41). (There are also evangelicals, including scientists, who actively oppose ID [44].) Some of ID's most vocal supporters, however, are national Religious Right organizations and their state affiliates (1). The most prominent supporter on the Religious Right is James Dobson. Dobson's Focus on the Family (FOF) co-published a professional-looking creationist videotape, Unlocking the Mystery of Life, currently being sold by PBS as a science film in its online store. On its August 15, 2003. CitizenLink website, FOF announced that, thanks partly to this video, ID is "blowing Darwinism out of the water." Additional support comes from Religious Right leaders such as D. James Kennedy of Coral Ridge Ministries: Phyllis Schlafly of Eagle Forum; and Concerned Women for America, founded by Beverly LaHaye (whose husband Tim LaHaye co-authored the popular Left Behind books). All of these organizations reject church and state separation as a myth.

In addition to its religiously motivated anti-evolutionism, the ID movement has a more ominous side: its leaders attack the secularism and religious tolerance that are vital to constitutional democracy. CSC fellow Benjamin Wiker asserts that ID "directly contradicts the modern secularist intellectual trend that has so thoroughly dominated Western culture for the last two centuries" (26). He warns, "Soon enough, secularized culture will be compelled to realign." Dembski and Johnson promote a disturbing religious exclusionism. Displaying a penchant for military metaphors, Dembski calls ID "ground zero of the culture war" (27). By his own admission, Christian apologetics (the defense of Christianity against perceived attacks) forms the foundation of his work as a "design theorist" (28). For Dembski, ID goes hand-in-hand with an aggressive forward movement into secular society by defenders of Christian orthodoxy: "We are to engage the secular world, reproving, rebuking and exhorting it, pointing to the truth of Christianity" (1). Christianity, he says, has a "dark side" for "those who refuse to embrace this truth." He favors reviving the religious transgression of heresy: "Heresy remains a valid category for today" (1). Knowing that his Christian "mandate" will be unpopular, he asks rhetorically, "Can't we all just get along and live together in peace?" His reply is chilling: "Unfortunately, the answer is no" (1, 29).

Johnson has also exhibited a disturbing tendency to criticize fellow Christians who disagree with him. His unsettling comments have been at times quite personal: during a 2003 radio program, he criticized the religious faith of Brown University biologist Kenneth Miller, a Behe critic and, like Behe, a devout Catholic:

The only reason I have to believe that Kenneth Miller is a Christian of any kind is that he says so. Maybe he's sincere. But I don't know that. If he is, I can say this: you often find the greatest enemies of Christ in the church... [T]here is a kind of person who may be sincere in a way, but is double-minded, who goes into the church in order to save it from itself by bringing it into

concert with evolutionary naturalism... And these are dangerous people. They're more dangerous than an outside atheist, like Richard Dawkins, who at least flies his own flag. So I am not impressed that somebody says that he is a Christian... and believes that evolution is our creator... [S]uch people often do a great deal of damage within the church. (30)

The religious exclusionism of ID leaders has at times taken on another facet: the criticism of non-Christian religious belief. In an interview about the ID movement with Christianity Today, Johnson, referring to September 11, 2001, spoke in the same breath of Muslim terrorists and Muslim students in American universities. He implied that Muslims worship a false god:

Now we're seeing how the country is almost cringing in fear of these Muslim terrorists from the Middle East. I see professors afraid to discuss the subject because they're afraid of what the Muslim students will do. They're afraid it won't keep the peace on campus. I never thought our country would descend to this level. We are afraid to search the truth and to proclaim it. We once knew who the true God was and were able to proclaim it frankly. (31)

In promoting ID for more than a decade, Johnson has repeatedly stressed his desire to move the country back toward what he considers its Christian foundation. Given his role as the catalyst for the formation of the Wedge and the sectarian Christian foundation upon which he and his fellow Wedge members have built their movement, such exclusionary sentiments can be understood as an integral part of the ID edifice.

CONCLUSION

Journalists have asked me how the Discovery Institute creationists, all well-educated and some with scientific credentials, can truly believe what they tell the public and educational policymakers about ID's purported scientific validity and evolution's impending demise. Although such puzzlement is inevitable if ID is isolated from its cultural, religious, and political framework, the ID movement is not puzzling at all when one views it within this context. It must be understood as part of something more than a strategy dreamed up by a relative handful of well-financed religious zealots: it is another column in the Religious Right's attack on public education and secular society, and the Wedge Strategy constitutes ID's logistical contribution to this attack. The aggressive campaign waged for more than a dozen years now by Wedge members and their supporters points to a troubled future for public education and constitutional democracy. Citizens who value both should understand what the ID agenda portends.

NCLB's 2008 deadline for nationwide, standardized science testing requires the revision of state science standards in time to meet this deadline. Having inserted themselves into the Kansas, Ohio, New Mexico, and Minnesota revision processes, ID proponents can be expected to target standards in other states. Given ID's aggressive recruitment of young supporters, we can also expect anti-evolutionism to become more broadly integrated into American politics. Moreover, the CSC crafted a legal strategy in anticipation of lawsuits

(13), reflecting another Wedge Strategy goal: "We will also pursue possible legal assistance in response to resistance to the integration of design theory into public school science curricula" (2). The first lawsuit over ID was filed in December 2004 against the Dover, PA, school district (32), and more lawsuits can be expected. Wells' call for his readers to challenge public financing of evolution research could also prompt attacks on research in related sciences such as astronomy and geology (33).

The long-term results of ID proponents' coordinated actions against teaching evolution, with the consequent diversion of time and money toward fending off its advances, will be the deterioration of science education, already threatened in many places by under-prepared and intimidated teachers. Fewer students who are properly educated about science will translate into fewer students who are qualified to become scientists. And the results of ID's encroachment upon the public policy-making process include the further erosion of secular democracy, the bulwark of academic freedom that is the lifeblood of science. Separation of church and state may appear only distantly related to science education – until one remembers that we have only one Constitution to protect both. Science education is ID's chosen vehicle for its role in the Religious Right's broader attack on secular society. The undermining of church and state separation will mean the undermining of science education as well.

Qualified scientists such as my co-author, Paul R. Gross, have now deflated ID proponents' scientific pretensions. Other prominent scientists, including Steven Pinker, E. O. Wilson, Francisco Ayala, and Nobelist Steven Weinberg have rejected ID as lacking in scientific legitimacy (42). Detailed accounts and analyses of the Wedge Strategy are available to anyone wishing to understand how it is being pursued (1). But the exhaustive scientific analyses and accounts of the Wedge's agenda must not overshadow the personal damage ID proponents have done and will yet do. There is no sadder example than Darby, Montana, as recounted by resident and RCCS member Victoria Clark, who said, "The local impact has been huge" (34). Comments by Darby residents whom Clark overheard revealed that the animosity Brickley ID's campaign stirred up extended not only into the public school where ID would have been taught ("My daughter stormed out of the classroom to avoid more trouble"), but into the business community ("The florist didn't deliver when she saw my name on the bill"). According to Clark, Brickley's "objective origins" policy "brought Darby nothing but grief and discord." His success in turning neighbor against neighbor over the ID issue was reflected in the tension in encounters between citizens on opposite sides. Clark stated, "There [was] a strangeness and bristling up the back, sometimes mixed with hostility" and "a tendency to avoid public conversation." ID proponents, purporting to defend "critical thinking, freedom of speech, and freedom of religion," had swallowed ID misinformation whole, contending that "there exists valid scientific criticism of evolution" and that "evolution and God are mutually exclusive." Fortunately,

the Wedge Strategy failed in Darby because concerned "Darbarians" rallied to the defense of their science curriculum and the Constitution. Both are safe there – at least until the next election. But Clark offers a hard-won lesson to communities who are potential targets of the Wedge Strategy: "[P]ay attention to local trustee elections, follow school board proceedings carefully, be aware of underlying agendas. Save your community from this malignancy."

Fortunately, help is available. The National Center for Science Education is a clearinghouse for information and advice about ID. NCSE alerts members around the country so they can help resist Wedge efforts in their respective states and elsewhere. Organizations such as Georgia Citizens for Integrity in Science Education (GCISE) make valuable contributions to the anti-ID effort, and there are now other such pro-science organizations (35). Unfortunately, they work with small staffs – and small bank accounts. (See information about the Wedge's financial largesse in Creationism's Trojan Horse [1]). NCSE, like GCISE and its sister organizations, needs support from those who benefit, either as scientists, educators, parents, or simply as citizens, from the vital work it does. The beneficiaries of their efforts are invited to contribute manpower and financial assistance. Don't wait until ID wedges its way into your schools.

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- 31. Staub D: The Dick Staub interview: Phillip Johnson. Christianity Today, December 3, 2002, www.Christianitytoday.com/ct/2002/147/22.0.html.
- 32. Kitzmiller V. Dover Area School District, www.aclu.org/Religious-Liberty/ReligiousLiberty.cfm?ID=17203&c=139.
- 33. The Wedge's anti-science agenda includes an astronomy component. They are promoting their contention that Earth was intelligently designed to accommodate life in a videotape, "The Privileged Planet," based on the book by CSC fellows. Guillermo Gonzales and Jay Wesley Richards. See www.privilegedplanet.com.
- 34. Clark V: Shall we let our children think? Reports of the National Center for Science Education, March 2004, www.ncseweb.org/newsletter.asp?curiss=42.
- 35. See NCSE's website at www.ncseweb.org and GCISE's at www. georgiascience.org. See a list of other pro-science organizations at www.creationismstrojanhorse.com. In addition, national science organizations such as the American Association for the Advancement of Science are taking steps to counteract ID's influence and provide resources to those needing assistance. See a list of organizations that have issued formal statements of support for teaching evolution at www.ncseweb.org/resources/articles/344_statements_from_scientific an 12 19 2002.asp.
- 36. Dembski WA: "The Design Revolution." Downers Grove, IL: Inter-Varsity Press, 2004.
- 37. See ARN founder and board chairman Dennis Wagner's announcement of his founding of Students for Origins Research at www.grisda.org/origins/05006.htm.
- 38. See Haught J: "God After Darwin: A Theology of Evolution." Westview Press, 2001.
- 39. See the text of this bill at www.house.state.mo.us/bills041/biltxt/intro/HB0911I.htm.
- 40. See the Mediamatters.org article: Religious conservatives tout "intelligent design" as a "secular," "scientific" alternative to evolution,

- http://mediamatters.org/items/200412210002.
- 41. See Colson C: Upholding accuracy in science journalism: PBS misses the mark. BreakPoint Commentary #010924 9/24/2001, www.leaderu.com/science/colson-pbs.html.
- 42. For comments by Pinker, Wilson, and other scientists, see the endorsements of Creationism's Trojan Horse at www.creationismstrojanhorse.com. For Ayala's statement of concern about anti-evolution comments by a prominent Catholic cardinal, see the letter to Pope Benedict XVI that he co-signed with Case Western Reserve University physicist Lawrence Krauss and Brown University biologist Kenneth Miller at http://genesis1.phys.cwru.edu/~krauss/papalletttxt.htm. The Discovery Institute arranged publication of the cardinal's comments as a New York Times op-ed. (For background on this issue, see National Center for Science Education: Cardinal creates controversy, at www.ncseweb.org/resources/news/2005/US/49_cardinal_creates_controversy_7_15_2005.asp.) For Weinberg's comments on intelligent design, see A Designer Universe? at www.physlink.com/Education/essay_weinberg.cfm.
- 43. Wallis C: The evolution wars. Time, 26-35, August 15, 2005.
- 44. For an excellent collection of essays by evangelical scientists who oppose ID, see Miller KB., ed.: Perspectives on an Evolving Creation, Eerdmans Publishing Co., 2003.