

Intelligent Design and Science: Allies or Enemies?

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Introduction

On Monday, September 26, 2005 a federal judge in Harrisburg, Pa. began hearing arguments in the case of *Kitzmiller v. Dover Area School District*.¹ The case arose because several parents with the help of the ACLU (American Civil Liberties Union) had brought suit against the district's school board for adopting a policy that required students to be informed about the theory of Intelligent Design (hereafter ID). Both sides claimed going in that the case could set the fundamental ground rules for how American public school students would be taught the origins of life for years to come.²

About one year earlier, on October 18, 2004, the school board had passed by a 6–3 vote the following resolution:

Students will be made aware of gaps/problems in Darwin's theory and of other theories of evolution including, but not limited to, intelligent design. Note: Origins of Life is not taught.³

One month later, on November 19, 2004, the school district announced that starting in January 2005 teachers would be required to read the following statement to students in the ninth grade biology class at Dover High School:

The Pennsylvania Academic Standards require students to learn about Darwin's Theory of Evolution and eventually to take a standardized test of which evolution is a part.

Because Darwin's Theory is a theory, it continues to be tested as new evidence is discovered. The Theory is not a fact. Gaps in the Theory exist for which there is no evidence. A theory is defined as a well-tested explanation that unifies a broad range of observations.

Intelligent Design is an explanation of the origin of life that differs from Darwin's view. The reference book, *Of Pandas and People*, is available for students who might be interested in gaining an understanding of what Intelligent Design actually involves.

With respect to any theory, students are encouraged to keep an open mind. The school leaves the discussion of the Origins of Life to individual students and their families. As a Standards-

¹ Official designation: *Tammy Kitzmiller, et al. v. Dover Area School District, et al.*, Case No. 04cv2688.

² Alex Johnson, "'Intelligent Design' Faces First Big Court Test: Parents Sue after Alternate to Evolution Added to Science Curriculum" <<http://msnbc.msn.com/id/9444600>> (accessed 11 October, 2006).

³ *Memorandum Opinion of the United States District Court for the Middle District of Pennsylvania, December 20, 2005* <<http://fl1.findlaw.com/news.findlaw.com/hdocs/docs/educate/ktzmllrdvr122005opn.pdf>> (accessed 12 October, 2006).

driven district, class instruction focuses upon preparing students to achieve proficiency on Standards-based assessments.⁴

Kitzmiller v. Dover Area School District constituted a challenge in federal court brought against a public school district that was requiring the presentation of ID as an alternative to evolution as an explanation of the origin of life. In essence a federal court was being asked for the first time to decide this fundamental question: is ID religion or science?⁵ The significance of the case was its focus on ID and not Creation Science (or Scientific Creationism), which the courts had dealt with two decades earlier. *McLean v. Arkansas* was a 1982 court ruling that the Arkansas “Balanced Treatment for Creation-Science and Evolution-Science Act” was unconstitutional because it violated the Establishment Clause of the U.S. Constitution.⁶ In the 1987 case *Edwards v. Aguillard* the US Supreme Court ruled that the teaching of Creation Science in public schools is unconstitutional.⁷

Even though the bone of contention in *Kitzmiller v. Dover Area School District* was ID the ACLU claimed that, just like the Balanced Treatment Act in *McLean v. Arkansas*, the Dover policy likewise violated the Establishment Clause by promoting a religious doctrine. Proponents of ID argued against this charge, claiming that since ID is a scientific theory and not a religious doctrine, its presentation to students does not constitute a violation of the Establishment Clause.⁸

So at the heart of *Kitzmiller v. Dover Area School District* was the nature of ID, the nature of science, and the relationship between the two. The title of this paper, “Intelligent Design and Science: Allies or Enemies?” reflects the heart of the matter. If the ACLU is right, then ID is not science but religion, “creationism gussied up for the courts.”⁹ As such, ID could be considered anti-science and even the enemy of science. But if the proponents of ID are right, ID is not a religious dogma but a bona fide scientific theory. As such, ID would be an ally of science since it is a genuine scientific theory in its own right.¹⁰

⁴ Ibid.

⁵ Johnson, “Intelligent Design.”

⁶ See <<http://www.talkorigins.org/faqs/mclean-v-arkansas.html>> (accessed 26 October, 2006). The first two clauses of the First Amendment of the US Constitution are known as the religion clauses. Together they read, “Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof.” The first is called the Establishment Clause and the second the Free Exercise Clause.

⁷ See <http://www.law.cornell.edu/supct/html/historics/USSC_CR_0482_0578_ZC.html> (accessed 26 October, 2006).

⁸ Michael J. Behe and William A. Dembski, members of the Discovery Institute and senior fellows of the Center for Science and Culture, testified as expert witnesses on behalf of the school district. The Discovery Institute (DI) is a non-profit conservative educational foundation and think tank founded in 1990. In 1996 a DI program called the Center for Science and Culture (CSC) was started. The CSC supports research which challenges neo-Darwinian theory and develops the scientific theory of ID. The CSC also supports research which explores the impact of scientific materialism on culture, and encourages schools to improve science education by teaching students more fully about the scientific weaknesses and strengths of the theory of evolution (see www.discovery.org for more information).

⁹ Johnson, “Intelligent Design.”

¹⁰ Of course even if ID were on par with Scientific Creationism as a religious doctrine (as viewed by the courts) we could still consider it an ally of science. For us scientific fact will always harmonize with the metaphysical truth claims of inerrant Scripture. By the same token, proponents of Scientific Creationism could (and do for good reason) argue that their view is just as scientific as ID since they point to much of the same empirical evidence to support their position as do proponents of ID.

In this paper I will examine the nature of ID and the nature of science. I will argue that ID is indeed a scientific theory. I will likewise point out that what causes many scientists to reject ID is not any deficiency with ID as a scientific theory, but rather a naturalistic bias which serves to mar and not enhance the scientific enterprise. But while granting the scientific nature of ID theory, I conclude that the effort of ID proponents to keep the theory separate from its theological implications carries serious consequences. Nevertheless, the particular arguments of ID can continue to be useful and effective in our defense of the faith.

The Nature of ID

In any discussion it is important to clarify the meaning of terms. With regards to ID the term *design* can indicate one of three things. First, *design* can refer to the scientific theory known as design theory or ID, to be discussed below, which distinguishes intelligent agency from natural causes. Second, *design* can denote intelligent agency itself; to say something is designed is to say it was caused by an intelligent agent. Third, *design* can describe the signature or trademark of an intelligent agent. Objects produced by intelligent agents give evidence of being designed.¹¹

The third use of the term *design*, design as the signature of an intelligent agent imbedded in the object he has produced, relates to the doctrine of general revelation. The next section will examine scriptural teaching on general revelation and relate it to the concept of design.

ID and General Revelation

If God, as an intelligent agent, designed the world, then there should be evidence of this imbedded in the world He has created. We should be able to “see” God and know something about Him through what He has made. What we “see” of God via creation is what is called the general revelation of God. General (or natural, or universal) revelation is the doctrine that God has manifested Himself to all people at all times and in all places by means of the world He created. Several passages of Scripture confirm this general revelation.

In Psalm 19 David verifies a general revelation of God’s glory and creative ability through the world He has created, specifically the heavens and the sky (v. 1). This revelation is constant (v. 2), nonverbal (v. 3), and universal (vv. 4–6). By their regularity and orderliness the heavenly bodies show forth God’s majesty. By their magnificence they confirm God as their Creator, for they are all “the work of His hands.”¹²

In similar fashion Paul claims in Romans 1 that God makes Himself known through His creation. This has been going on “since the creation of the world” (v. 20a). In other words, “the universe has always borne upon it the imprint of God’s handiwork.”¹³ Through the world God has made,

¹¹ William A. Dembski, *Intelligent Design: The Bridge Between Science and Theology* (Downers Grove, Ill.: IVP, 1999), 127.

¹² Willem A. VanGemeren, “Psalms,” in *The Expositor’s Bible Commentary*, ed. Frank E. Gaebelin (Grand Rapids: Zondervan, 1978–1991), vol. 5, 179–80.

¹³ Leon Morris, *The Epistle to the Romans* (Grand Rapids: Eerdmans, 1988), 81.

everyone “sees” the unseen things of God, that is, His eternal power and divine nature (v. 20b). “In nature we see something of nature’s God.”¹⁴

As a supplement the didactic material of Psalm 19 and Romans 1, Acts 14 narrates the preaching of Paul and Barnabas to the pagans of Lystra. Although couched in language drawn from the OT, the apostolic appeal centers on the natural revelation of God the Creator.¹⁵ Pagans must turn from their vain idols to the living God, “who made the heaven and earth and the sea and all that is in them” (v. 15; cf. Exod 20:11 LXX; Ps 145:6 LXX [146:6 MT]). In times past God permitted all the nations to go their own ways (v. 16), yet He did not leave Himself without witness (v. 17a). Put in positive terms, God left testimony of Himself, or evidence for Himself, as a benefactor to all the nations.¹⁶ He did good and gave them rains from heaven and fruitful seasons, satisfying their hearts with food and gladness (v. 17b). God’s works of creation and providence show Him to be the living God who supplies the needs of all people.¹⁷

Together these passages testify that the world gives evidence of its Creator. By observing the world around them, all people who have ever lived know that God exists and, to some extent, what kind of a God He is.

To look at the sky is to see evidence of the infinite power, wisdom, and even beauty of God; it is to observe a majestic witness to the glory of God.... Rains and fruitful seasons, food produced from the earth, and gladness in people’s hearts, all bear witness to the fact that their Creator is a God of mercy, of love, and even of joy. These evidences of God are all around us in creation to be seen by those who are willing to see them.... Thus, even without the Bible, all persons who have ever lived have had evidence in creation that God exists, that he is the Creator and they are creatures, and have also had some evidence of his character. As a result, they themselves have known something about God from this evidence.¹⁸

Returning to the concept of design as the signature of intelligent agents imbedded in the objects they produce, it is easy to see the relationship between intelligent design and general revelation. According to the passages of Scripture mentioned above, the world which God made points to His existence and character. The world contains the signature or trademark of its Maker. This signature is thus a revelation of God. It is general by virtue of its availability to all people everywhere at all times. General revelation is the knowledge of God’s existence and character which is always available to all people through creation. The knowledge comes through the creation because the Creator has left us His calling card imbedded within it.

ID and Natural Theology

If general revelation denotes “the traits of the author reflected in his product, the fingerprints of the potter in the clay, so to speak ... the arguments of natural theology are the human products of

¹⁴ Ibid., 82.

¹⁵ F. F. Bruce, *The Book of the Acts*, rev. ed., NICNT (Grand Rapids: Eerdmans, 1988), 276.

¹⁶ BDAG, 51.

¹⁷ Bruce, *Acts*, 277.

¹⁸ Wayne Grudem, *Systematic Theology* (Leicester, England: IVP; Grand Rapids: Zondervan, 1994), 121–22.

men's rational reflection upon general revelation."¹⁹ Natural theology is thus considered by many to be a legitimate "branch of theology that gives us knowledge of the existence and nature of God from the study of the natural world."²⁰ Proponents of natural theology believe that man can learn truths about God and His character apart from special revelation. Natural theology lies at the center of debates over apologetic methodology. Followers of the classical method of apologetics hold that natural theology is a legitimate subject of study because of the reality of general revelation. God has given man a revelation of Himself through creation. This general revelation has content (e.g. God is eternal, divine, the Creator), hence the term natural *theology*. Therefore the Christian can and should use rational arguments to persuade unbelievers that God does in fact exist.²¹ On the other hand, proponents of the Reformed epistemological method of apologetics contend that natural theology's attempt to prove the existence of God through rational argumentation cannot succeed and should not even be attempted. Reformed epistemologists hold that belief in God is properly basic; His existence need not be proved through rational argumentation and evidence in order for belief in God to be rational. Thus, Reformed epistemologists reject natural theology.²²

But aside from the apologetic debate, it is certainly true that countless thinkers through the centuries, both from within Christianity and apart from it, have reasoned about God through their observations of nature. Thomas Aquinas, the first great proponent of natural theology with its body of truth distinguishable from that derived from special revelation, supported his view not only from Scriptures such as Romans 1 but also from the actual accomplishments of pagan philosophers like Aristotle.²³ So regardless of one's stance in the apologetic debate, it is an undeniable fact that scholars have been reasoning about God from nature for centuries. It is therefore appropriate for us now to consider a particular argument of natural theology directly linked to ID theory: the design argument for God's existence.

Notable Design Arguments

"From time immemorial the beauty of birds and flowers, the cycle of the seasons and the remarkable adaptations in animals have led people to posit some type of intelligent cause behind

¹⁹ William Lane Craig, "Classical Apologetics," in *Five Views on Apologetics*, ed. Steven B. Cowan (Grand Rapids: Zondervan, 2000), 39.

²⁰ J. P. Moreland, "Introduction," in *The Creation Hypothesis: Scientific Evidence for an Intelligent Designer*, ed. J. P. Moreland (Downers Grove, Ill.: IVP, 1994), 18.

²¹ For such a defense of natural theology see R. C. Sproul, John Gerstner, and Arthur Lindsley, *Classical Apologetics* (Grand Rapids: Zondervan, 1984), 39–63.

²² See, for example, Alvin Plantinga, "Reason and Belief in God," in *Faith and Rationality*, ed. Alvin Plantinga and Nicholas Wolterstorff (Notre Dame, Ind.: University of Notre Dame Press, 1983), 63–68. Presuppositionalists likewise eschew natural theology in the sense of engaging unbelievers in rational argumentation about God's existence. They believe that the best apologetic strategy is to offer the existence of God and the truthfulness of Christianity as the starting point in discussions with unbelievers. Christianity is the only world view that makes sense of life. Therefore we should focus on Scripture and the presentation of the gospel and not depend upon hypothetical abstract arguments borrowed from the outside (see for example Colin Brown's discussion of the apologetic approaches of Cornelius Van Til and Francis Schaeffer in *Philosophy and the Christian Faith* [London, England: Tyndale Press, 1969], 265–67, 271–76).

²³ John Van Engen, "Natural Theology," in *Evangelical Dictionary of Theology*, ed. Walter A. Elwell (Grand Rapids: Baker, 1984), 752.

it all.”²⁴ Rational arguments for God’s existence based on observable evidence of order, design, and purpose in nature are known as design arguments.²⁵ Design arguments have a long history and diverse pedigree. From ancient times to the present day Greeks, Romans, Christians, and Muslims have posited various forms of the design argument.²⁶

Scholars often credit Plato with the first design argument by a Western philosopher, but there were several earlier hints. Two centuries before Plato Anaximander (c.610–546 BC) conceived of a first principle he called the Boundless or Infinite which “steers” or governs all things in the world, seemingly as an explanation of why the universe remains in orderly balance as it does.²⁷ Another hint of the design argument comes from Heraclitus (dates unknown, possibly c.500–c.460 BC). He theorized that an abstract formula which he called Logos ruled the world and kept it in balance in spite of constant change.²⁸ A third indication of an early design argument appears with Anaxagoras (c.500–c.428 BC), who conceived of “mind” as a dynamic principle which brings order in an ever changing world.²⁹ While postulating some sort of ordering force in the universe, none of these philosophers described that force as a moral agent. The first to do that was Diogenes of Apollonia (dates unknown, probably c.450–c.400 BC). He claimed that the regularity and harmony of the world can only be explained by an underlying intelligence, which orders all things “for the best.” Here was an argument for not only an intelligent but also benevolent agent responsible for ordering the world.³⁰

Plato (c.427–c.347 BC) developed his philosophy around the theory of Forms, which are eternal, unchangeable, universal essences. Each object in the material world is a copy or imitation of its archetype, the Form. In the *Republic* Plato argued that the highest Form of all is the Good. In the *Timaeus* he claimed that a divine Craftsman or Demiurge fashioned the world after the patterns

²⁴ Walter L. Bradley and Charles B. Thaxton, “Information and the Origin of Life,” in *The Creation Hypothesis*, 202.

²⁵ The design argument can take a number of forms depending on the type of design under examination. Advocates have appropriated at least the following: the intricacy of the laws of nature and their orderly, regular application to phenomena in the natural world; the order present in various aspects of reality (e.g., the orbit of the planets, various biological structures like the eye); the delicate concurrence of a number of factors (e.g., cosmic constants, conditions on earth, the properties of water) that serve as necessary conditions for life to appear; the presence of aspects of the world beneficial to life; the simplicity of the world and the laws describing it, along with the complexity of the world (e.g., the complex interaction of various parts in living organisms that cooperate with one another for certain ends such as allowing the organism to see); the information content in DNA; the trustworthiness of the senses and intellect as truth-gatherers from the world around us, as well as the aptness of that world to be known by those senses and intellect; the beauty and elegance of the various aspects of the world and of the equations used to describe the world (Moreland, “Introduction,” 24–25).

²⁶ The design argument for God’s existence is also commonly known as the teleological argument, from Greek τέλος, “end, goal, outcome.” I should add that the designation *design argument* pertains not only to arguments *from* design *to* God’s existence, but arguments *to* design in the first place (Frederick Ferré, “Design Argument,” in *Dictionary of the History of Ideas*, vol. 1, 671 <<http://etext.virginia.edu/cgi-local/DHI/dhi.cgi?id=dv1-80>> (accessed 26 October, 2006). This is an important distinction because, as we will see below, it helps us to understand the difference between design arguments and ID theory, and why ID proponents insist on the fact that ID is scientific theory and not religious dogma.

²⁷ *Ibid.*, 671–72.

²⁸ *Ibid.*, 672.

²⁹ *Ibid.*

³⁰ *Ibid.*

of the Forms. It is not clear that Plato ever identified the Craftsman and the Good as God.³¹ But he did characterize as benevolent the Craftsman's intentions:

He was good; and in the good no jealousy in any matter can ever arise. So, being without jealousy, he desired that all things should come as near as possible to being like himself.... Desiring, then, that all things should be good and, so far as might be, nothing imperfect, the god took over all that is visible—not at rest, but in discordant and unordered motion—and brought it from disorder into order, since he judged that order was in every way the better.³²

Aristotle (384–322 BC) rejected Plato's dualism of Forms and their copies, positing instead that Forms exist as particular things in the world. Every substance (i.e., everything that has being) possesses form and matter—the former being the set of essential properties that makes the substance what it is, the latter being whatever the substance is made of. The sole exception is God, who is Pure Form without matter. As Pure Form God is uncaused, the first cause of all that is, the unmoved Mover. But Aristotle did not attribute the order and purpose seen in the world to God; rather, he thought that nature directed itself by some inherent principle.³³

The Roman orator and statesman Cicero (106–43 BC) put forth a design argument with an uncanny modern ring. To counter Epicurean naturalism, Cicero offered evidence of a universe governed by an intelligent designer. If conscious purpose is needed to create art, and nature is more perfect than art, then nature must be designed on purpose. Just as it takes skilled intelligence to guide a ship or create a sundial or water clock in order to tell time, so too a conscious intelligence must guide the movements of the sun, stars, and planets. Cicero marveled that anyone could really believe that the chance collisions of particles (Epicurean atomism) could make anything so beautiful as the world. This would be like believing that by throwing the letters of the alphabet on the ground enough times one could spell out the *Annals of Ennius*! If the chance collision of particles can really make a world, then why can't it make less difficult objects, such as a colonnade, a temple, a house, or a city?³⁴

The Islamic philosopher Averroës (ibn-Rushd) (1126–1198), whose approach might be characterized as “Aristotle warped onto a Platonic frame,” argued for the necessity of God's existence as the Prime Mover, Pure Form, which is the source of all motion in the universe. As Intelligence, the Prime Mover is not only the source of all that is, but also the sustaining force behind all lesser intelligences.³⁵ Averroës used teleological argumentation when he assigned to the Prime Mover the special role of directing all order and motion in the world.³⁶

³¹ Ronald H. Nash, *Life's Ultimate Questions: An Introduction to Philosophy* (Grand Rapids: Zondervan, 1999), 85.

³² *Laws*, X, 895; cited in Ferré, “Design Argument,” 673.

³³ Ferré, “Design Argument,” 673.

³⁴ Russell Grigg, “A Brief History of Design” <<http://www.answersingenesis.org/creation/v22/i2/design.asp>> (assessed 27 October, 2006). Relevant passages in Cicero's *De Natura Deorum* are Book 2, sections 87–88, 93, 94.

³⁵ Stuart MacClintock, “Averroës,” in *The Encyclopedia of Philosophy*, ed. Paul Edwards (New York: Macmillan, 1967), vol. 1, 221–22).

³⁶ Taneli Kukkonen, “Averroës and the Teleological Argument,” *Religious Studies* 38 (2002): 405–428. Abstract available at <<http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=133469>> (accessed 30 October, 2006).

With Thomas Aquinas (1225–1274) the design argument took a new synthesized form. While Aquinas followed Aristotle in rejecting Plato’s dualistic structure of a world of eternal Forms separated from their archetypes within this world, he presented a design argument more along the line of Plato than Aristotle.³⁷ In his *Summa Theologica* Aquinas presented “five ways” to prove God’s existence with rational argumentation. The fifth way, a design argument,

is taken from the governance of the world. 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 towards an end, unless it be directed by some being endowed with knowledge and intelligence; as the arrow is directed by the archer. Therefore some intelligent being exists by whom all natural things are directed to their end; and this being we call God.³⁸

All five of Aquinas’s ways to prove God’s existence are *a posteriori* arguments, that is, arguments arising from and being dependent upon experience. However, the design argument appears the most empirical, seeing as how it requires observational premises about the kind of order discovered in nature. Thus it is not surprising that further development of the design argument is closely linked to the rise of modern science. Scientists such as Copernicus, Kepler, Boyle, and Newton offered arguments for God based on the order of nature.³⁹

British philosopher Thomas Reid (1710–1796) insisted that one can infer the existence of an intelligent Creator from His creation:

Whoever maintains that there is no force in the [general rule that from marks of intelligence and wisdom in effects a wise and intelligent cause may be inferred], denies the existence of any intelligent being but himself. He has the same evidence for wisdom and intelligence in God as in father or brother or friend. He infers it in both from its effects, and these effects he discovers in the one as well as the other.⁴⁰

In claiming that one can readily detect the “marks of design” in nature, Reid followed Cicero:

Cicero in his tract *De Natura Deorum* speaks thus: Can anything done by chance have all the marks of design? If a man throws dies and both turn up aces, if he should throw 400 times, would chance throw up 400 aces? Colors thrown carelessly upon a canvas may come up to appear as a human face, but would they form a picture beautiful as the pagan Venus? A hog grubbing in the earth with his snout may turn up something like the letter A, but would he turn up the words of a complete sentence? Thus in order to show the absurdity of supposing what has the marks of design could arise from chance, [Cicero] gives a variety of examples where the absurdity is palpable.⁴¹

³⁷ Ferré, “Design Argument,” 674.

³⁸ Anton C. Pegis, ed., *Introduction to Saint Thomas Aquinas* (New York: Random House, 1948), 27. Aquinas’s other four ways are the arguments from motion, cause and effect, possibility and necessity, and gradation.

³⁹ Ferré, “Design Argument,” 674–75.

⁴⁰ Thomas Reid, *Lectures on Natural Theology*, ed. E. Duncan and W. R. Eakin (1780; reprint, Washington, D.C.: University Press of America, 1981), 59, cited in Dembski, *Intelligent Design*, 78.

⁴¹ Reid, *Lectures on Natural Theology*, 59, cited in Dembski, *Intelligent Design*, 88.

Perhaps the most famous design argument is the one by British theologian William Paley (1743–1805). Imagine walking along and tripping over a stone. Asked how it got there, you might surmise that it had always been there. But imagine finding a watch on the ground. Why, if asked where it came from, would we not answer the same as with the rock, that for all we knew it had always been there? Because we see that the watch has been made of parts put together for the purpose of indicating the time of day. We would have to conclude that it had a maker who understood its construction and designed its use.

Paley said we would come to this conclusion even if: (1) we had never seen a watch made; (2) the watch didn't always function properly; (3) we couldn't discover the function of some of the parts; and (4) the watch somehow had the ability to reproduce itself. Furthermore, no one would think there was a principle or order inherent in things whereby the pieces of the watch would automatically come together. We cannot conceive of a principle of order apart from the one who does the ordering.

Paley applied this line of reasoning from watch to world. By analogy we see that nature gives evidences of design and purpose just as the watch does. Paley offers numerous examples of how organisms and organs are fitted together so that creatures can function and survive. Just as evidences of design in the watch suggest the existence of an intelligent watchmaker, so too the evidences of design in nature suggest the existence of an intelligent world maker, God.⁴²

Several compelling versions of the design argument have come on the scene recently. One by Cambridge professor F. R. Tennant (1866–1957) is considered by many to be one of the most sophisticated.⁴³ At the heart of Tennant's argument are five sets of facts which have been held by many as furnishing an adequate basis for a design argument for theism:

- (i) the adaptation of human thought-processes to the objects with which they are concerned;
- (ii) the adaptation of parts to the whole within each living organism; (iii) the adaptation of the inorganic world to the production, maintenance, and development of living organisms; (iv) the beauty and sublimity of nature; and (v) the facts of moral obligation, moral value, etc.⁴⁴

While each of these may be argued against individually, it is the co-existence and mutual connection of all five sets of facts which, when they are taken together, demands an intelligent and overruling mind.

American philosopher Richard Taylor (1919–2003) offered another recent design argument.⁴⁵ Reminiscent of Paley's walk through the field, we are asked to imagine riding a train through the English countryside and seeing a large number of white stones lying on a hillside spelling out

⁴² William Paley, *Natural Theology, Or Evidences of the Existence and Attributes of God*, chapter one, "Statement of the Argument" < <http://www.hti.umich.edu/cgi/p/pd-modeng/pd-modeng-idx?type=HTML&rgn=DIV1&byte=53054870> > (accessed 27 October, 2006). The above summary is taken from John Feinberg, *No One Like Him* (Wheaton, Ill.: Crossway, 2001), 197–98.

⁴³ Feinberg, *No One Like Him*, 196.

⁴⁴ C. D. Broad, "Review of F. R. Tennant, *Philosophical Theology, Vol. II: The World, the Soul, and God*," *Mind* NS 39 (October 1930): 476–84, accessed via <www.jstor.org> (accessed 30 October, 2006). Tennant's book was published by Cambridge University Press in 1930.

⁴⁵ Richard Taylor, *Metaphysics*, 2d ed. (Englewood Cliffs, N.J.: Prentice-Hall, 1974).

“The British Railways welcomes you to Wales.” In pondering how the stones happen to be in this particular arrangement, our most natural reaction would be that someone arranged the stones to communicate a message. Of course it would also be possible for us to venture a natural non-purposive explanation: they rolled down the hillside over a period of years and just happened to end up in an arrangement that resembles the letters and words noted above.

But now suppose we decide, solely on the basis of the stones, that we are in fact entering Wales. Now we have committed ourselves to the design hypothesis for the stones. It would be *irrational* for us to regard the arrangement of stones as evidence that we are entering Wales, and at the same time to think that they came to their arrangement by accident.

By the same token, it’s possible that our own organs of sense arose through accidental and non-purposive forces. Many scientists hold this very position. However, by what logic could one view his sense organs as the product of chance, natural, and non-purposive forces and at the same time expect them to deliver information about the world which he regards as true?

It would be irrational for one to say *both* that his sensory and cognitive faculties had a natural, nonpurposful origin and *also* that they reveal some truth with respect to something other than themselves, something that is not merely inferred from them. *If* their origin can be entirely accounted for in terms of chance variations, natural selection, and so on, without supposing that they somehow embody and express the purposes of some creative being, then the most we can say of them is that they exist, that they are complex and wondrous in their construction, and are perhaps in other respects interesting and remarkable. We cannot say that they are, entirely by themselves, reliable guides to any truth whatever, save only what can be inferred from their own structure and arrangement. If, on the other hand, we do assume that they are guides to some truths having nothing to do with themselves, then it is difficult to see how we can, consistently with that supposition, believe them to have arisen by accident, or by the ordinary workings of purposeless forces, even over ages of time.⁴⁶

By this argument the naturalist seems trapped. If he agrees that his sensory and cognitive faculties are trustworthy to deliver truth about the world, he seems compelled to abandon one of the cardinal presuppositions of naturalism and conclude that his sensory and cognitive faculties were designed by some purposeful, intelligent agent.⁴⁷

A final contemporary design argument comes from British philosopher Richard Swinburne (1934–).⁴⁸ Swinburne believes the proper way to argue for God’s existence is through inductive argument, that is, “argument from premises to a conclusion in which the premises count in favour of, provide evidence for, the conclusion, without entailing it.”⁴⁹ Furthermore, an accumulation of inductive arguments, perhaps appearing weak by themselves, can be quite strong. Swinburne imagines a hypothetical crime case:

⁴⁶ Ibid., 118–19, emphasis original, cited in Nash, *Life’s Ultimate Questions*, 56.

⁴⁷ Nash, *Life’s Ultimate Questions*, 56–57.

⁴⁸ Richard Swinburne, *The Existence of God* (Oxford: Clarendon, 1979).

⁴⁹ Ibid., 45, cited in Nash, *Life’s Ultimate Questions*, 292.

That Smith has blood on his hands hardly makes it probable that Smith murdered Mrs. Jones, nor (by itself) does the fact that Smith stood to gain from Mrs. Jones's death, nor (by itself) does the fact that Smith was near the scene of the murder at the time of its being committed, but all these phenomena taken together (perhaps with other phenomena as well) may indeed make the conclusion probable.⁵⁰

Inductive arguments are explanations, of which there are two kinds: scientific (or non-personal) and personal. Swinburne shows how detectives distinguish between non-personal and personal explanations when they examine a crime scene:

When a detective argues from various bloodstains on the woodwork, fingerprints on the metal, Smith's corpse on the floor, money missing from the safe, Jones's having much extra money to—Jones's having intentionally killed Smith and stolen his money, he is arguing to an explanation of the various phenomena in terms of the intentional action of a rational agent. Since persons are paradigm cases of rational agents, I will term explanation in terms of the intentional action of a rational agent personal explanation.⁵¹

Likewise, according to Swinburne,

when the theist argues from phenomena such as the existence of the world or some feature of the world to the existence of God, he is arguing ... to an explanation of the phenomena in terms of the intentional action of a person.... A theistic explanation is a personal explanation. It explains phenomena in terms of the action of a person.⁵²

Swinburne's category of personal explanation is an important contribution to the design argument. If scientific (non-personal) explanations cannot account for certain features of reality, and instead such features require explanation in terms of the intentional actions of a rational being, then persuasive support exists for the existence of God.⁵³

To summarize this section, many thinkers through the centuries and up to our current time have inferred the existence of God from the order and purpose observed in the world around them. They have proposed various design arguments for God's existence. But the designation "design argument" actually can refer to two separate things: an argument *to* design itself and an argument *from* design to God. The above examples show how thinkers through the years have tried to draw a line from design in the world to the existence of a world designer, namely God.⁵⁴

⁵⁰ Swinburne, *Existence of God*, 14, cited in Nash, *Life's Ultimate Questions*, 293–94.

⁵¹ Swinburne, *Existence of God*, 20, cited in Nash, *Life's Ultimate Questions*, 295.

⁵² Swinburne, *Existence of God*, 22, 93, cited in Nash, *Life's Ultimate Questions*, 295.

⁵³ Nash, *Life's Ultimate Questions*, 295.

⁵⁴ Scripture presents a design argument of sorts in at least two passages. Ps 94:9–10 asks, "He who planted the ear, does He not hear? He who formed the eye, does He not see?" The design of the ear to hear and the eye to see points to their designer, God, who likewise sees and hears. "Yahweh, the Creator, who has 'implanted the ear' [and] 'formed the eye' ... is the ground of human existence" (VanGemenen, "Psalms," 613). Heb 3:4 declares that "every house is built by someone, but the builder of all things is God." According to Kent, "the self-evident truth ... stated in verse 4 [is] that the existence of any building testifies to the fact of a builder" (Homer A. Kent, Jr., *The Epistle to the Hebrews* [Grand Rapids: Baker, 1972], 65). Morris adds, "Houses do not build themselves.... A house argues for a builder, and all that is argues for God" (Leon Morris, "Hebrews," in *Expositor's Bible Commentary*, vol. 12, 32).

But as Ferré points out, logically speaking an argument *to* design must precede an argument *from* design *to* God. What an argument to design must demonstrate is that there are significant similarities between objects in nature, or nature taken as a whole, and objects intelligently contrived by man for some purpose. Only after demonstrating this preliminary analogical basis can one properly move from design to the existence of an intelligent Designer.⁵⁵

And this is exactly where many contemporary ID proponents have focused their attention. Developments in technology have helped them make their argument to design more easily. The amazing progress made by biochemistry since the mid-1950s has not only brought the world many practical benefits in medicine and agriculture; it has also revealed “with piercing clarity that life is based on *machines*—machines made of molecules!”⁵⁶ The staggering complexity of life discovered in recent decades has paved the way for ID theorists to make a compelling scientific case for design. To this subject we now turn.

ID Theory and Science

According to William Dembski, ID is “the scientific discipline that systematically investigates the effects of intelligent causes.”⁵⁷ It is based on the conviction that intelligent causes and their effects are empirically detectible. “To say intelligent causes are empirically detectible is to say there exist well-defined methods that on the basis of observational features of the world are capable of reliably distinguishing intelligent causes from undirected natural causes.”⁵⁸ The observational features of the world have to do with the order found therein.

To illustrate the difference between naturally caused order and intelligently caused order, imagine viewing the Old Man of the Mountain, a rock formation in New Hampshire that resembles a human profile.⁵⁹ At first glance it looks like it may have been deliberately carved. But on closer inspection, perhaps from another angle, the resemblance is merely superficial. The shape accords with what erosion can do as it acts on the natural characteristics of the rock. We conclude that the rock formed naturally because natural forces suffice to account for the apparent order of the shape we see.⁶⁰

Now imagine viewing Mount Rushmore in South Dakota. Here we find not just a profile but four three-dimensional faces. Their angles do not follow the natural composition of the rock. They do not resemble anything we have seen resulting from erosion. In fact, chip marks cut across both hard and soft sections of rock. In this case the ordered shape we see in the rock is not the result of natural causes. We infer from uniform experience that a sculptor has been at work. The faces were intelligently imposed onto the rock.⁶¹

⁵⁵ Ferré, “Design Argument,” 671.

⁵⁶ Michael J. Behe, *Darwin’s Black Box: The Biochemical Challenge to Evolution* (New York: The Free Press, 1996), 4.

⁵⁷ Dembski, *Intelligent Design*, 120.

⁵⁸ *Ibid.*, 106.

⁵⁹ It actually collapsed in 2003, but for the sake of the illustration we will imagine that it is still standing.

⁶⁰ Bradley and Thaxton, “Information and the Origin of Life,” 204.

⁶¹ *Ibid.*

The methods used by ID theorists to detect intelligent causation in effect uncover information. ID is thus a theory of information. It recognizes information as a proper object for scientific investigation and claims that it serves as a reliable indicator of intelligent causation. ID is therefore “a theory for detecting and measuring information, explaining its origin and tracing its flow.” ID is “not the study of intelligent causes per se but of informational pathways induced by intelligent causes.”⁶²

In ID theory the method for detecting intelligent causation and distinguishing it from natural causation is what Dembski calls the *Complexity-Specification Criterion* (CSC). In order to infer the intelligent causation (i.e., design) of some object, structure, or event we must establish three things: contingency, complexity, and specification. Contingency means that the object, structure, or event is not reducible to any underlying physical necessity. Complexity means that the object, structure, or event is not so simple that it can readily be explained by chance. Complexity relates to probability: the greater the complexity the smaller the probability that something occurred by chance. Specification refers to the kind of complexity or pattern under view. Specifications are non-ad hoc patterns that can be used to eliminate chance and warrant a design inference.⁶³

When asked to explain an object, structure, or event we have a choice: did it arise by necessity, chance, or design? According to the CSC to answer this question is to answer three others: Is it contingent? Is it complex? Is it specified? Since these should be answered in succession the CSC can be represented as a flowchart (see next page) which Dembski calls the Explanatory Filter.⁶⁴

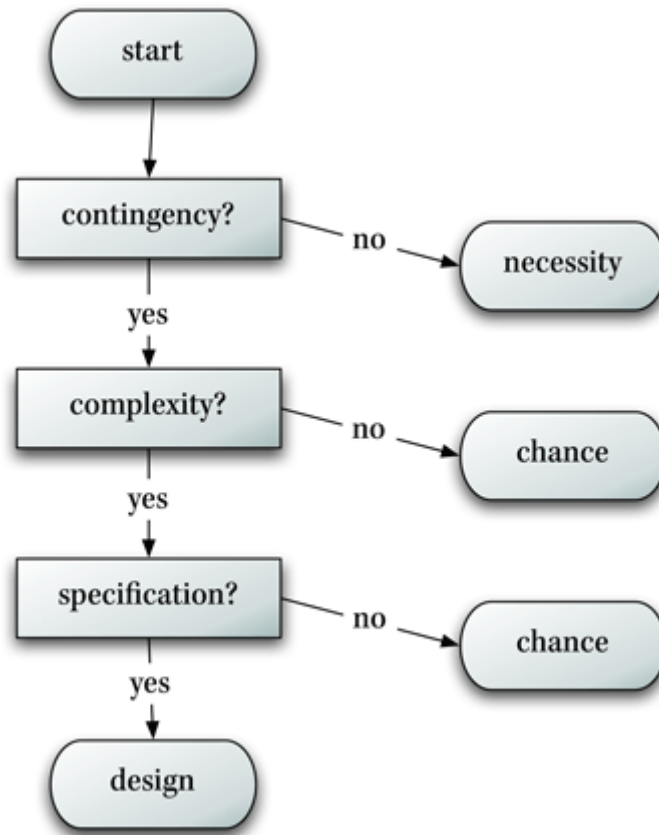
As an example of how the filter works, a design theorist is called upon to explain why a bank’s safe that was closed earlier is now open. The safe has a combination lock marked with a hundred numbers from 00 to 99. Five turns in alternating directions are required to open it; thus, there are ten billion possible combinations of which one opens the safe. The design theorist now runs the opening of the bank’s safe (event E) through the explanatory filter. Since safes do not open according to any underlying physical necessity, event E is contingent. Furthermore, with ten billion possibilities, only one of which works, random spinning of the dial is exceedingly unlikely to open the lock. Thus event E is a highly complex event not readily explained by chance. Finally, event E is clearly specified since the very construction of the lock’s tumblers specifies which of the ten billion combinations opens the lock. Therefore the design theorist infers design: an intelligent agent opened the safe (e.g. the safe’s owner or a safe-cracking thief).⁶⁵

⁶² Dembski, *Intelligent Design*, 106–7.

⁶³ *Ibid.*, 128–33. For a more detailed explanation and justification of the CSC, see William A. Dembski, *The Design Inference: Eliminating Chance Through Small Probabilities*, Cambridge Studies in Probability, Induction, and Decision Theory (Cambridge, U.K.: Cambridge University Press, 1998).

⁶⁴ Dembski, *Intelligent Design*, 134. For the digital version of the flowchart shown on the next page see <<http://www.skeptic.com/eskeptic/06-02-16.html>> (accessed 1 November, 2006).

⁶⁵ Dembski, *Design Inference*, 43–44.



The logical counterpart of the Explanatory Filter is as follows:

- Premise 1: E has occurred.
- Premise 2: E is specified.
- Premise 3: If E is due to chance, then E has small probability.
- Premise 4: Specified events of small probability do not occur by chance.
- Premise 5: E is not due to a regularity.
- Premise 6: E is due to either a regularity, chance, or design.
- Conclusion: E is due to design.⁶⁶

Premise 4, The Law of Small Probability, “asserts that for an arbitrary event X and an arbitrary chance hypothesis H, if X occurred, is specified with respect to H, and has small probability with respect to H, then the occurrence of X was not governed by the chance hypothesis H.”⁶⁷

Returning to the safecracking illustration, since there are ten billion possible combinations, only one of which opens the safe, the probability of someone opening the safe, given only one opportunity to try, is an extremely remote one in ten billion (10^{-10}).

⁶⁶ Ibid., 48.

⁶⁷ Ibid., 52.

Turning to a more relevant example, proteins are one of the key building blocks of life, and amino acids are the building blocks of proteins. There are four significant hurdles to overcome in order for amino acids to join in the very specific ways required to provide functional protein. First, amino acids exist in two forms that are mirror images of each other, called L- and D-amino acids. However, all biological proteins contain only L-amino acids. Second, amino acids are joined together in several ways, only one being the peptide bond. However, functional protein requires 100 percent peptide bonds in order to fold into the particular three-dimensional structures that give biological function. Third, the three-dimensional structure of proteins depends upon a particular sequencing of the amino acids. Fourth, the amino acids must react only with each other in order for them to be assembled into the specific chains needed to fold into the three-dimensional structures that give biological function to proteins.

For these reasons the probability that amino acids could assemble themselves into functional proteins by chance is virtually zero. If we assume that all the carbon on the earth existed in the form of amino acids, and that the amino acids were allowed to chemically react at the maximum possible rate of 10^{12} per second for one billion years (assumed by scientists to be the greatest possible time between the cooling of the earth and the appearance of life), the probability of one functional protein forming is 10^{-65} .⁶⁸ This is why so many scientists working in the field of origin of life studies reject random, accidental assembly or good luck as a viable explanation for how life began. According to Sir Francis Crick, co-discoverer of the structure of DNA and winner of the Nobel Prize, “The origin of life appears to be almost a miracle, so many are the conditions which would have had to be satisfied to get it going.”⁶⁹ In the now-famous words of British astronomer Sir Fredrick Hoyle, “The current scenario of the origin of life is about as likely as the assemblage of a 747 by a tornado whirling through a junkyard.”⁷⁰

The design inference via the CSC is of more than mere academic interest. Entire industries depend upon it. “Indeed, courts have sent people to the electric chair on account of this inference.”⁷¹ It is the design inference which characterizes the following:

- (1) how copyright and patent offices identify theft of intellectual property
- (2) how insurance companies keep themselves from getting ripped off
- (3) how detectives employ circumstantial evidence to nail criminals
- (4) how forensic scientists place individuals at the scene of a crime
- (5) how skeptics debunk the claims of parapsychologists
- (6) how scientists uncover data falsification
- (7) how the SETI program detects extraterrestrial intelligences

⁶⁸ H. P. Yockey makes this calculation in “A Calculation of the Probability of Spontaneous Biogenesis by Information Theory,” *Journal of Theoretical Biology* 67 (1981): 377, cited in Bradley and Thaxton, “Information and the Origin of Life,” 190.

⁶⁹ Francis Crick, *Life Itself* (New York: Simon and Schuster, 1981), 88, cited in Bradley and Thaxton, “Information and the Origin of Life,” 191. Incidentally, Crick thought that the problem of solving life’s origin was so beyond the resources available on earth that he proposed a theory called “directed panspermia,” or the seeding of life from outer space (Francis Crick and Leslie E. Orgel, “Directed Panspermia,” *Icarus* 19 [1973]: 341–46, cited in Dembski, *Intelligent Design*, 251).

⁷⁰ Frederick Hoyle, *The Intelligent Universe* (London: Michael Joseph, 1983), 18–19, cited in Bradley and Thaxton, “Information and the Origin of Life,” 190–91.

⁷¹ Dembski, *The Design Inference*, 47.

- (8) how statisticians and computer scientists distinguish random from nonrandom strings of digits.⁷²

Directly related to the CSC is the idea of *Complex Specified Information* (CSI). As stated, ID is in essence a theory of information. ID recognizes information as a proper object for scientific investigation and claims that information serves as a reliable indicator of intelligent causation or design. Information is the transmission of signals across a communication channel. Contingency is what enables the signals to convey information. In other words, “To convey information a communication channel must allow a multiplicity of distinct possible signals, any one of which might be sent.”⁷³ Communication theorists measure information and judge the degree of complication by the number of bits transmitted. Simple information means few bits of information while complex information means many. This information-theoretic account of complexity relates to the idea of complexity in the CSC discussed above. Just like the objects, structures, and events which transmit it, information can be both complex and specified. Such information is called *complex specified information* (CSI).⁷⁴

Now, the all-important question is where does CSI come from? According to Manfred Eigen, “Our task is to find an algorithm, a natural law that leads to the origin of information.” But while natural laws and algorithms are suited for transmitting information, they are not capable of originating or producing CSI. Algorithms and laws are functions which work with already existing information. They are wholly deterministic and cannot produce contingency; therefore, they cannot generate information, to say nothing of CSI.⁷⁵

There are only two ways for contingency and thus information to arise, either by intelligent causation/design or chance. While chance can produce complex unspecified information, or noncomplex specified information, it cannot produce CSI. By way of illustration, a person may type randomly and generate a long and precise sequence of letters (complex unspecified information). Along the way he might by chance type the short sequence t-h-e (noncomplex specified information). However, “The universe will experience heat death before a random typing at a keyboard produces a Shakespearean sonnet.”⁷⁶

Dembski’s conclusion is that natural causes, characterized by law, chance, or a combination of the two, are not capable of generating CSI. This is “the law of conservation of information.” Thus the Darwinian mechanism of natural selection plus mutation cannot produce CSI because it

cannot specify in advance the adaptations it will produce. Selection and mutation operate with no memory of the past or knowledge of the future—there’s only the present organism with its ability to survive and reproduce given its environment. Consequently whatever CSI mutation and selection generate must be generated in a single generation. To suppose otherwise is to think that mutation and selection can sustain a specification over multiple generations until the adaptation that was specified comes to fruition. But this is teleology,

⁷² Ibid.

⁷³ Dembski, *Intelligent Design*, 154.

⁷⁴ Ibid., 159.

⁷⁵ Ibid., 165.

⁷⁶ Ibid., 166.

and teleology is utterly inconsistent with the Darwinian mechanism. For mutation and selection to solve the information problem, they must do it in a single generation.⁷⁷

To show further why the Darwinian mechanism of selection and mutation cannot account for CSI, we may consider Michael Behe's *Irreducible Complexity Criterion* (ICC). The ICC, which Behe uses to establish the design of biochemical systems, is actually a special case of Dembski's more general CSC.⁷⁸ The ICC is a direct challenge to a main tenet of Darwinism: the sufficiency of natural selection to account for the complexity of all living organisms. Darwin himself famously conceded, "If it could be demonstrated that any complex organ existed which could not possibly have been formed by numerous, successive, slight modifications, my theory would absolutely break down."⁷⁹

What kind of a biological system could not be formed by numerous, successive, slight modifications? A system that was irreducibly complex. Behe explains,

By *irreducibly complex* I mean a single system composed of several well-matched, interacting parts that contribute to the basic function, wherein the removal of any one of the parts causes the system to effectively cease functioning. An irreducibly complex system cannot be produced directly (that is, by continuously improving the initial function, which continues to work by the same mechanism) by slight, successive modifications of a precursor system, because any precursor to an irreducibly complex system that is missing a part is by definition nonfunctional.⁸⁰

A simple illustration of an irreducibly complex object is the mousetrap. The typical mousetrap consists of a flat wooden platform, a metal hammer, a spring to put tension on the hammer, a catch, a metal bar that connects to the catch and holds the hammer back when the trap is set, and staples which hold the various parts in place on the platform. The mousetrap is irreducibly complex because the absence of any one part renders the trap inoperable. But there is more. Not only must all parts be present; there must be minimal function. The parts must be made of the right material, be the right size and shape, and be put together in just the right way. "A simple list of components of a mousetrap is necessary, but not sufficient, to make a functioning mousetrap."⁸¹

Behe goes on in successive chapters to examine in detail examples of irreducibly complex biological systems. Just to take one example, he considers the bacterial flagellum. The flagellum is a long, hair-like filament embedded in the cell membrane. The flagellum attaches to a forty-five degree hook which functions like a universal joint. This is connected to a rotary motor within the cell membrane, which consists of all the parts you would find in any mechanical rotary device: a rod or drive shaft, bearing, rotor (the rotating element), and stator (the stationary

⁷⁷ Ibid., 174.

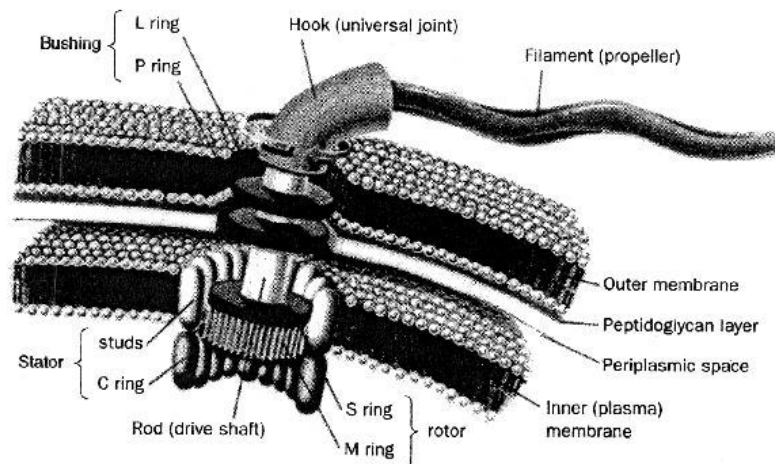
⁷⁸ Ibid., 127.

⁷⁹ Charles Darwin, *On the Origin of Species*, 6th ed. (New York: New York University Press), 154, cited in Behe, *Darwin's Black Box*, 39.

⁸⁰ Behe, *Darwin's Black Box*, 39.

⁸¹ Ibid., 45.

element). Behe supplies the following drawing of the rotary flagellum showing all of these parts.⁸²



The bacterial flagellum is composed of a number of different proteins. The filament is made of a protein called “flagellin.” The universal joint is made of what is called “hook protein.” Besides these about forty other proteins enable the flagellum to function. They include signals to turn the motor on and off, “bushing” proteins to allow the flagellum to penetrate the cell wall, proteins which assist in the assembly of the structure, and proteins to regulate the production of the proteins which make up the flagellum. To move the flagellum the motor uses energy generated by a flow of acid through the cell membrane.

In summary, as biochemists have begun to examine apparently simple structures like ... flagella, they have discovered staggering complexity, with dozens or even hundreds of precisely tailored parts.... As the number of required parts increases, the difficulty of gradually putting the system together skyrockets, and the likelihood of indirect scenarios plummets.... New research on the roles of the auxiliary proteins cannot simplify the irreducibly complex system. The intransigence of the problem cannot be alleviated; it will only get worse.⁸³

A more amazing and staggeringly complex example of the ICC concerns the function of the DNA molecule in the production of proteins in living organisms. The double helix structure of DNA is like a twisted ladder, with sugar and phosphate molecules forming the sides of the ladder and four bases (adenine, thymine, guanine, and cytosine) making up its rungs. These four bases act as the “letters” in a genetic alphabet. They combine in various sequences to form words, sentences, and paragraphs. These base sequences contain all the instruction needed to guide the cell’s functions, including the manufacture of necessary proteins. Molecular biology has discovered an analogy between DNA and language, leading to the *sequence hypothesis*. According to the sequence hypothesis, an exact order of symbols records information. The base sequences in DNA spell out in coded form the instructions for, among other things, the

⁸² Ibid., 71. For the digital version of this diagram see <<http://ourworld.compuserve.com/homepages/dp5/evod3.htm>> (accessed 2 November, 2006).

⁸³ Behe, *Darwin’s Black Box*, 73.

manufacture of proteins. The genetic code functions exactly like a language code—it actually *is* a code. The genetic code is a molecular communications system, a sequence of chemical “letters” which stores and transmits the necessary information in every living cell.⁸⁴

The structure and function of the DNA molecule is therefore doubly intriguing: it is an irreducibly complex communication *and* manufacturing system! To get a sense of the complexity of this we must examine it in at least some detail. We will consider just the function of DNA in manufacturing a protein. The large number of steps in this process can be divided into two conceptual categories: *transcription* and *translation*.⁸⁵ In transcription, the cell makes an RNA copy of a small portion of its DNA (a gene). The processes and chemicals involved just in searching for and finding the proper places to start and stop transcription along the huge DNA chain are themselves very complicated. Once RNA finds the proper location, it unwinds the two DNA strands, “reads” the base sequence along that stretch of DNA, and then copies the base sequence along the entire gene. The resulting transcript of the DNA gene is called messenger RNA (mRNA).

Once mRNA has been produced, the task of translating the message into a protein begins. As with transcription, complex chemicals and processes are involved in finding the points along the mRNA strand to start and stop translation. Translation begins once a protein complex called ribosome surrounds the strand of mRNA. The ribosome provides the place where other molecules called transfer RNA (tRNA) read the mRNA in three-base sequences (called codons) and provide corresponding amino acids. The amino acids in turn are bound together into a growing chain resulting in a polypeptide, or protein. But the process is not yet complete. The protein must be folded into a discrete and very precise three-dimensional structure in order to perform its particular function. The process whereby the protein is folded is likewise extremely complex. Frequently, several polypeptides come together in a very specific way to form a composite structure that functions as one entity. For example, hemoglobin, the transporter of oxygen within the body, is composed of four polypeptides, which only when bound together possess the necessary oxygen-binding properties.⁸⁶

What are the implications of this amazing communication-manufacturing complex? Namely that

the specified complexity or information content of DNA and proteins implicates a prior intelligent cause, because specified complexity and high information content constitute a distinctive hallmark (or signature) of intelligence. Indeed, in all cases where we know the causal origin of high information content or specified complexity, experience has shown that intelligent design played a causal role. Thus, when we encounter such information in the biomacromolecules necessary to life, we may infer—based upon our knowledge of

⁸⁴ Bradley and Thaxton, “Information and the Origin of Life,” 205.

⁸⁵ The following summary is from Behe, *Darwin’s Black Box*, 262–74. For a stunning graphic portrayal of DNA transcription and translation, see *Unlocking the Mystery of Life*, Illustra Media, 2002, DVD.

⁸⁶ There are other factors likewise necessary for the proper function of this translation system, such as enzymes which place the correct amino acid onto the correct tRNA, various mechanisms which “proofread” the translation, and the processes whereby chemical energy is present at every stage of translation.

established cause-and-effect relationships—that an intelligent cause operated in the past to produce the information necessary for the origin of life.⁸⁷

So far in this section we have surveyed two concepts proposed by ID proponents which in their eyes qualify ID theory as a scientific endeavor. First, according to the CSC one may rightly attribute intelligent causation/design to any object, structure, or event that exhibits contingency, complexity, and specification. Furthermore, intelligent causation/design is the only known mechanism capable of producing CSI. Second, the ICC detects intelligent causation/design in biological systems that contain numerous well-matched, interacting parts that contribute to the systems' functions. The removal of any one part causes the system to cease functioning. Only a non-Darwinian teleological mechanism can account for the existence of such systems.

Now we will consider a third and final concept which demonstrates for ID proponents that ID theory is truly science and not religious dogma as Darwinists claim it to be. In the above quotation Stephen Meyer speaks of an inference to intelligent causation based on our knowledge of cause-and-effect relationships. ID theory is thus based on a particular kind of argumentation called variously the method of hypothesis, abduction, or inference to the best explanation.⁸⁸ The reason for this is because, as a theory of origins, ID is a *historical science*, that is, it is concerned with past events and causes. The study of origins is just one of a cluster of scientific disciplines which seeks to study causal events or sequences of events. Some examples are cosmology, archaeology, historical geology, and evolutionary biology.⁸⁹ ID, like all historical theories, depends upon “abductive inferences.”⁹⁰ Historical scientific disciplines are to be distinguished from inductive disciplines whose concern is to discover, classify or explain unchanging laws or properties of nature. Chemistry, physics, and biology are examples of inductive sciences.⁹¹

Meyer identifies four general features of historical scientific disciplines which arise from a concern to reconstruct the past and explain the present by reference to the past. First, historical scientists have a historical interest and therefore ask historical questions. Practitioners in the historical sciences generally seek to answer questions in the form of “What happened?” By contrast, those operating in the inductive sciences generally seek to answer questions in the form of “How does nature normally operate or function?”

Second, historical scientists use a distinctly historical kind of logical inference. Abductive inference is the method used to infer a past event from present facts or clues. For example, detectives use abductive inference to reconstruct the circumstances of a crime after the fact.

⁸⁷ Stephen C. Meyer, “Word Games: DNA, Design, and Intelligence,” in *Signs of Intelligence: Understanding Intelligent Design*, ed. William A. Dembski and James M. Kushiner (Grand Rapids: Brazos, 2001), 116–17. This chapter available online at <<http://www.discovery.org/scripts/viewDB/filesDB-download.php?id=63>> (accessed 3 November, 2006).

⁸⁸ Dembski, *Intelligent Design*, 198.

⁸⁹ Stephen C. Meyer, “The Methodological Equivalence of Design and Descent,” in *The Creation Hypothesis*, 80.

⁹⁰ C. S. Pierce, “Abduction and Induction,” in *The Philosophy of Pierce*, ed. J. Buchler (London: Routledge, 1956), 150–56, cited in Meyer, “Methodological Equivalence,” 88.

⁹¹ Geisler likewise explores the methodological differences between historical and inductive science, labeling the former *origin science* and the latter *operation science* (Norman Geisler and Peter Bocchino, *Unshakable Foundations* [Minneapolis: Bethany, 2001], 145).

Third, historical scientists offer distinctively historical types of explanations. “In historical explanations, past causal events, not laws, do the primary explanatory work.”⁹² Laws alone cannot explain particular events. For example, the law “oxygen is necessary for combustion” is inadequate to explain why a particular building burned down at a particular time and place. What we need is information concerning, for example, the presence of an arsonist, or the lack of security in the building, or the absence of a sprinkler system. As another example, while the laws of nature as elucidated in chemistry and physics may be able to explain the *operation* of an automobile, they are entirely inadequate to explain its *existence*.⁹³ To equate a law with an explanation or cause “is to commit a ‘category mistake’ of the most flagrant sort.”⁹⁴

A fourth feature of historical science, which is shared with many other types of science, is the use of indirect methods of testing such as inference to the best explanation. Scientists in many disciplines cannot test theories by direct observation, prediction, or repeated experiment. Rather, they depend on indirect testing through comparison of the explanatory power of competing theories.⁹⁵

After running both the ID and Darwinian theories of origins through the above features of historical science, Meyer draws two compelling conclusions: (1) design and descent (i.e. ID and Darwinism) are methodologically equivalent; (2) therefore, design is scientific to the same extent that descent is. Meyer is worth quoting here at length:

If (1) there exists a distinctly historical pattern of inquiry, and (2) a program of origins research committed to design theory could or does instantiate that pattern, and (3) many other fields such as evolutionary biology also instantiate that pattern, and (4) these other fields are already regarded by convention as science, there can be a very legitimate if convention-dependent sense in which design may be considered scientific. In other words, the conjunction of the methodological equivalence of design and descent and the existence of a convention that regards descent as scientific implies that design should—by that same convention—be regarded as scientific too. Thus, one might quite legitimately say that both design and descent are historically scientific research programs, since they instantiate the same pattern of inquiry.

Perhaps, however, one just really does not want to call intelligent design a scientific theory. Perhaps one prefers the designation “quasi-scientific historical speculation with strong metaphysical overtones.” Fine. Call it what you will, provided the same appellation is applied to other forms of inquiry that have the same methodological and logical character and limitations. In particular, make sure both design and descent are called “quasi-scientific historical speculation with strong metaphysical overtones.”⁹⁶

⁹² Meyer, “Methodological Equivalence,” 90.

⁹³ Michael Polanyi, “Life Transcending Physics and Chemistry,” in *Chemical and Engineering News* 45 (21 August 1967): 54–66, cited in Bradley and Thaxton, “Information and the Origin of Life,” 196.

⁹⁴ W. P. Alston, “The Place of the Explanation of Particular Facts in Science,” in *Philosophy of Science* 38 (1971): 17, cited in Meyer, “Methodological Equivalence,” 80.

⁹⁵ Meyer, “Methodological Equivalence,” 90.

⁹⁶ *Ibid.*, 99.

To summarize this section on ID Theory and Science, proponents insist that ID theory is science and not religious dogma. It is based on rigorous scientific methods. ID proponents have proposed methods such as the CSC (with the related concept of CSI) and the ICC to argue for intelligent causation/design. They have helped clarify ID theory as belonging to that class of historical or origin sciences. ID theory they say is not religious dogma because it makes no pronouncement regarding the identity of the intelligent designer. In invoking design ID theory is not invoking supernatural as opposed to natural causes. This is the wrong contrast. The proper contrast made by ID theory is between undirected natural causes and intelligent causes.⁹⁷

Therefore, while ID theory is compatible with Christianity, it is also compatible with other religious models or even agnosticism with regards to the identity of the designer.⁹⁸ Likewise, ID theory is compatible both with young and old earth models of creation.⁹⁹ To understand ID proponents the point bears repeating that the argument *to* design and the argument *from* design to a Designer are entirely separate endeavors. ID proponents want to make it clear that they are sticking to the former and leaving the latter to the philosophers and theologians. ID may have metaphysical and theological implications, but it is a scientific theory and not a religious dogma.

But if this is true, why aren't more people buying it? A chief reason is that a bias operates in the academy which prevents scholars even from considering the possibility of ID.¹⁰⁰ This bias has to do with the nature of science, to which we now turn.

The Nature of Science

According to Richard Dawkins, "Biology is the study of complicated things that give the appearance of having been designed for a purpose."¹⁰¹ Francis Crick likewise insists, "Biologists must constantly keep in mind that what they see was not designed, but rather evolved."¹⁰² Why must biologists keep this in mind? Because things do not look designed? No, because they do! So then, why not conclude they *were* designed? This is verboten, a violation of true science, because for Darwinists, "Science must be provisionally atheistic, or cease to exist."¹⁰³

In the 1982 case of *McLean v. Arkansas* Judge William Overton's decision reflected the testimony of expert witness and Darwinian philosopher of science Michael Ruse. Judge Overton specified five essential characteristics of science:

- (1) It is guided by natural law;
- (2) It has to be explanatory by reference to natural law;

⁹⁷ Dembski, *Intelligent Design*, 259.

⁹⁸ *Ibid.*, 252.

⁹⁹ Behe, for example, has no problem believing the universe is billions of years old and all organisms share a common ancestor (*Darwin's Black Box*, 5).

¹⁰⁰ Another reason has to do with ID strategy and the academy's reaction to it. I will return to this in my conclusion.

¹⁰¹ Richard Dawkins, *The Blind Watchmaker* (New York: Norton, 1986), 1, cited in Dembski, *Intelligent Design*, 125.

¹⁰² Francis Crick, *What Mad Pursuit* (New York: Basic Books, 1988), 138, cited in Dembski, *Intelligent Design*, 125.

¹⁰³ Basil Willey, "Darwin's Place in the History of Thought," in *Darwinism and the Study of Society*, ed. M. Banton (Chicago: Quadrangle Books, 1961), 15, cited in Meyer, "Methodological Equivalence," 69.

- (3) It is testable against the empirical world;
- (4) Its conclusions are tentative—that is, not necessarily the final word; and
- (5) It is falsifiable.¹⁰⁴

The first two characteristics express the commitment of science to naturalism.¹⁰⁵ More specifically, the view that science must be restricted solely to undirected natural processes is called methodological naturalism.¹⁰⁶ Even many Christian scholars are convinced of this.¹⁰⁷ But methodological naturalism is the functional equivalent of metaphysical naturalism, the view that nature is entirely self-sufficient. “Methodological naturalism asks us for the sake of science to pretend that nature is self-sufficient.”¹⁰⁸ Why? Not because of compelling empirical evidence but because of “the power of a metaphysical worldview.”¹⁰⁹

The truth of this is evident upon consideration of the last three characteristics of science listed above. They relate to empiricism, the idea that knowledge arises from sense experience. The assumption is that naturalism and empiricism are about the same thing, but they are not. In fact, in the case of Darwinism they are at odds, which is telling as to the true nature of Darwinism. Johnson explains how firmly entrenched metaphysical naturalism is in the scientific community, and I quote him at length:

If empiricism were the primary value at stake, Darwinism would long ago have been limited to microevolution, where it would have no important theological or philosophical implications.... If Darwinists accepted the primacy of empiricism, they could still hope eventually to find a naturalistic explanation for everything, but for now they would have to admit that they have made a big mistake.

That admission has not come, because empiricism is *not* the primary value at stake. The more important priority is to maintain the naturalistic worldview and with it the prestige of “science” as the source of all important knowledge. Without Darwinism, scientific naturalism would have no creation story. A retreat on a matter of this importance would be catastrophic for the Darwinist establishment ... To prevent such a catastrophe, defenders of naturalism must enforce rules of procedure for science that preclude opposing points of view. With that accomplished, the next critical step is to treat “science” as equivalent to truth and non-science as equivalent to fantasy. The conclusions of science can then be misleadingly portrayed as refuting arguments that were in fact disqualified from consideration at the outset. As long as scientific naturalists make the rules, critics who demand positive evidence for Darwinism need not be taken seriously. They do not understand “how science works.”

¹⁰⁴ Phillip E. Johnson, *Darwin on Trial* (Downers Grove, Ill.: IVP, 1991), 112.

¹⁰⁵ *Ibid.*, 115.

¹⁰⁶ Dembski, *Intelligent Design*, 119.

¹⁰⁷ Moreland mentions Paul de Vries and Howard J. Van Till (J. P. Moreland, “Theistic Science and Methodological Naturalism,” in *The Creation Hypothesis*, 42), and Dembski mentions Stanley Jaki (*Intelligent Design*, 124).

¹⁰⁸ Dembski, *Intelligent Design*, 119.

¹⁰⁹ *Ibid.*, 120.

I am not implying that scientific naturalists do any of this with an intent to deceive. On the contrary, they are as a rule so steeped in naturalistic assumptions that they are blind to the arbitrary elements in their thinking.¹¹⁰

Guidance by natural law and explanation by reference to natural law are fine in much of the work carried out in inductive or operation sciences such as chemistry, biology, and physics, but they are entirely inadequate in historical or origin sciences. Other methods are needed and in fact are available. They are adequate and have compelling explanatory power. That Darwinists insist on sticking with natural laws as the only allowable explanation for origins exposes their underlying naturalistic worldview and distaste for the metaphysical implications of ID.

This is clearly seen in a recent episode of the PBS program *Think Tank* with host Ben Wattenberg. The subject was “Intelligent Design vs. Evolution” and the guests were Stephen Meyer and Michael Ruse.¹¹¹ Meyer explains how in his view ID differs from Creationism: the latter is a deduction from Scripture, while the former is an inference to design from biological data (e.g. miniature machines in cells and libraries of information in DNA). Ruse retorts that pretending ID has nothing to do with religion is “a great big fib.” Ruse claims that “for both creationism and intelligent design theory, there’s a deeply, deeply, antiscientific, anti naturalistic attitude which ultimately goes back to the bible being read more literally than traditional Christians would read it.”

Meyer gives a bit of his background and training in the “deeply unscientific” field of geophysics and responds to Ruse’s charge. Meyer explains his own research in developing a scientific method to infer intelligent design from DNA information. When scientists deal with past events they don’t infer exotic causes, but rather known causes—causes which are known to produce the effects in question. The presently known acting cause of digital information is intelligence. Therefore, the existence of digital information in DNA points to an intelligent cause. Meyer summarizes,

For us the inference to design is an inference. And it’s a justified inference because of what we know about the cause and effect structure of the world. Namely that it always takes an intelligence to produce information. And we find the information in the cell therefore we think it’s the best explanation of that evidence that intelligence played a role.

When Ruse asks what the intelligence is, Meyer answers that from the science alone we can’t identify the designer. Meyer says he is a theist for other reasons, but these second order reflections are beyond what he can know scientifically. Wattenberg asks each man to summarize their main disagreement. Ruse claims Meyer is not appealing to scientific ideas: “I think he’s appealing to religious ideas for all that he’s saying that this is not religiously driven, I think that it is.” Meyer responds,

¹¹⁰ Johnson, *Darwin on Trial*, 115–16, emphasis original. According to G. K. Chesterton, “behind every double standard lies a single hidden agenda” (*Orthodoxy* [London: John Lane, 1909], cited in Meyer, “Methodological Equivalence,” 100). Satan ultimately is the one who stands behind the God-opposing agenda of our world.

¹¹¹ For the following quotes see the transcript available at <<http://www.pbs.org/thinktank/transcript1244.html>> (accessed 7 November, 2006).

I always like it when Michael puts me on the couch like that. This has become a fashionable way of avoiding our [arguments] to impute to us some agenda or dishonest motive. But you still have to explain the origin of the digital code that's in DNA. You still have to explain the origins of these machines. And for us the key scientific issue is the issue that Darwin himself posed which is, is the appearance of design in biology real, or merely apparent? Is designing biology an illusion produced by a natural mechanism, namely natural selection that can mimic the powers of a designing intelligence, or is that appearance of design, which all biologists recognize the product of actually intelligence? A mind, not a material process? I think that's the essence of the scientific and philosophical debate. We all have agendas. You can't refute a guy by pointing out that he has a point of view, or by pointing out that an idea may have some implications that you don't favor. It may well be that if you accept that there is a design and a designer that favors a theistic world view over against a materialistic world view. It may well be that if you hold to Darwinian view, that that favors a more materialistic philosophical picture. But those are implications of more primary scientific questions. So I don't say, as Michael said before, this debate has nothing to do with religion or philosophy. Rather I would say that the important questions—the key is the distinction between the evidence and the implications.

After a brief exchange over the religious convictions of each participant, Meyer reiterates,

I think the key to this is making a distinction between the evidence and the implications. Intelligent design as a theory is based on certain key evidences. Look at our papers. All of our arguments are based on the evidence. The implications of the theory—that's another discussion. And there may well be larger implications that are favorable to some kind of belief, whether it be Christian, Jewish, or some kind of theistic belief. But that's an implication and not the basis of the theory. You can't critique our theory simply by saying, "well, it has an implication that I don't like," or find unsavory.

A little later in the discussion Ruse says that he has no problem with intelligent design being taught in a comparative religion class, but not in a biology class. Meyer counters,

Well, Michael and I disagree, this is mainly a definitional issue in the end. He doesn't want to categorize the design hypothesis as a scientific hypothesis. And yet, part of Darwinism is the attempt to explain the appearance of design. Darwinism says the appearance of design is illusory; intelligent design says it's real. You have two competing hypotheses trying to explain the same piece of evidence. How is one scientific and the other religious? They're competing explanations for the same thing. The reason it's appropriate to discuss intelligent design is that it is an explanation for biology.

Wattenberg finally asks, "Does it really matter in which class it's taught? Whether it's taught in comparative religion, or whether it's taught in biology? Just so long as students are exposed to the fact that there is an argument?" Meyer responds with this fitting conclusion:

In the end, no. Because, more fundamentally, I don't think it matters what you call it. I think we're hung up on these science, philosophy, religion. These are categories of human thought. What we're interested in is how do you explain the complexity that we see in life? And we

think that design is the best explanation. If Michael wants to classify that as a philosophy hypothesis, then I would say that our philosophical hypothesis provides a better explanation than his currently popular Darwinian scientific hypothesis. What you call the inference or the hypothesis is not as important as whether or not it's true.

Conclusion

Design or teleological arguments for the existence of God have been around for centuries and continue on in the current mix of apologetic methods. There is a clear distinction, however, between the argument *from* design to God and the argument *to* design in the first place. It is the argument to design that proponents of ID theory have been honing in recent years. Developments in technology and biochemistry have helped their efforts. ID proponents have also worked on developing scientific methods, recognized as acceptable in other scientific disciplines, which help them make the case for ID. The CSC and its attendant concept of CSI, the ICC, and clarification regarding the peculiar methods of argumentation in historical sciences are key methods used in ID theory.

ID proponents are adamant in their insistence that ID theory is not religious dogma, and they distance themselves from Scientific Creationism. ID proponents frequently point out that ID theory is compatible with young or old earth theory, with Christianity, other forms of theism, or even agnosticism. Their purpose is to stick to ID as a scientific theory and to leave the metaphysical implications to the philosophers and theologians. There is an argument *to* design, period. As to whom the designer is, they insist that ID theory does *not* answer this question.

Problems with ID Theory

This stance troubles young-earth Creationists, and for good reason. For example, Answers in Genesis (AiG, a Christian apologetics organization committed to promoting a literal understanding of Genesis and young-earth Creationism) has serious reservations regarding the ID Movement (IDM).¹¹² Since the IDM is not against evolution as such but only chance evolution, all anti-naturalists are allies, including those who accept an old earth and descent from a common ancestor. Young earth Creationists are welcome, but the IDM precludes public expression of support or concern for the Bible's authority regarding a recent creation in six days and Noah's global flood. The IDM has done much good in producing materials and arguments which are very useful for biblical Creationists. The IDM has correctly drawn attention to the naturalistic bias of Darwinism. However, AiG sees at least six serious problems.

First, the IDM has a philosophical blind spot. While it rightly exposes Darwinism's philosophical foundation, it proceeds as if there really is a neutral scientific arena in which to interpret evidence concerning the past. Examples of this are acceptance of an old universe and earth on the basis of current dating methods in astronomy and geology. "It is therefore ironic to observe IDers telling people that fighting 'naturalism' is the important issue, when at the same

¹¹² Carl Wieland, "AiG's Views on the Intelligent Design Movement" <http://www.answersingenesis.org/docs2002/0830_IDM.asp> (accessed 8 November, 2006).

time they tell people that the very naturalism-based issues which were the seedbed of Darwinism are ‘unimportant.’”¹¹³

Second, since the one commonly-shared plank in the IDM is just that naturalism is false, proponents must limit the debate to mechanism alone (designed vs. not designed) because they do not have a coherent philosophical framework on which to base axioms necessary to interpret evidence relevant to the historical sciences such as paleontology and historical geology.

Third, the IDM generally refuses to be drawn into debate on the precise sequence of events, or the exact history and duration of life on earth. But to Darwinists this seems either absurd or disingenuously evasive. If the origins debate isn’t about a story of the past, what is it about?

Fourth, whether tactically-driven or of necessity because of lack of agreement, the refusal to identify with a particular story of the past only reinforces the perception that the IDM is really just Creationism in disguise. Trying to keep the Bible out of the debate has not eliminated anti-religious hostility toward ID theory and its proponents.

Fifth, if the IDM succeeds in making the strategic inroads it desires, any proponents who later identify themselves as young-earth Creationists will be open to the charge of public deceptiveness. Furthermore, some of the strongest opponents of literal Genesis teaching may very well rise up from within the ranks of the IDM itself.

Sixth, the refusal of the IDM to identify the Designer with the God of Scripture and the particular history in Scripture means two things: (1) the acceptance of ID thinking *en masse* could just as easily lead to New-Age or Hindu-like notions of creation; and (2) there is no answer to the logically-induced charge of Darwinists that the Designer was evil and/or inept since bringing up the Fall is tactically excluded.¹¹⁴

Wieland offers this conclusion, with which I concur:

Evidence of design in nature is enough to condemn men, but it is not enough to save them. The Bible makes it overwhelmingly clear that the scientific aspects of creation ministry cannot, in the end, be separated from the preaching of the Gospel, to enable people to be reconciled to their Creator. Deducing the details of creation from nature alone, unguided by His revealed Word, ignores the fact that nature is fallen and cursed.... Of course, in practical terms, starting with the powerful design arguments which the IDM has helped to reawaken (and has formalized in modern terms) can be a very useful tool for “opening discussion” ... we may, in certain settings, seek to gain a more ready hearing through initially focusing on less controversial aspects of Biblical Creation. However, unlike the official stance of the IDM, when that opening comes, or when questioned, we will unhesitatingly affirm that we start our thinking based squarely on the real history in the Bible.... So, while it may be useful on occasion to focus on the evidence and avoid references to the Bible and religion, it is

¹¹³ Ibid.

¹¹⁴ Ibid.

counterproductive if one does so to an extent that reinforces the myth that it is somehow less “scientific” to base one’s models on God’s revelation, the Bible.¹¹⁵

Success of ID Arguments

So just how successful were the ID proponents in convincing the court to separate ID scientific theory from religious dogma in the *Kitzmiller v. Dover Area School District* case? Unfortunately, they were unsuccessful. In fact Judge Jones’s conclusions differed little from the court decisions of twenty years previous: ID is not science, it cannot uncouple itself from its Creationist and thus religious antecedents, and therefore it is unconstitutional to teach ID as an alternative to evolution in a public school science classroom.¹¹⁶ While ID proponents were convinced that the clear differences between ID theory and Creationism would “have significant legal implications for the advancement of intelligent design in the public square,”¹¹⁷ the courts at least at this point remain unconvinced. This will probably not change any time soon if ever.

Does this spell the end of ID theory’s influence? By no means is this the case. The specific methods and arguments being developed and promoted by ID proponents will continue to be compelling to some. There will be victories one person at a time. Some will be notable. Dean Kenyon, professor of biology at San Francisco State University, who once held firmly to the neo-Darwinian synthesis, has come to embrace ID.¹¹⁸

More recently Anthony Flew, world-renown British philosopher and former avowed atheist, has confessed theism as a direct result of ID argumentation. In an interview with Christian apologist Gary Habermas, Flew claims that the arguments that have been most persuasive to him are those supported by recent scientific discoveries and ID arguments such as the fine tuning of the universe for life on earth. Furthermore, says Flew, “the findings of more than fifty years of DNA research have provided materials for a new and enormously powerful argument to design.”¹¹⁹

Nothing will diminish the force of such arguments. God will continue to use His fingerprints imbedded in nature—now more visible than ever thanks to advancing technology—to testify of His existence and character and, through our witness of the gospel of Jesus Christ, to draw men into a saving relationship with Himself through faith. Therefore, ID, rightly conceived, and science, rightly conceived, are allies and not enemies. Used in accordance with the infallible

¹¹⁵ Ibid. For more detailed treatment of the benefits and pitfalls of ID theory, see Jon P. Swanson, “The Good, The Bad, and The Ugly: Fruits of the Intelligent Design Movement,” paper presented at the 1997 annual meeting of the Evangelical Theological Society.

¹¹⁶ *Memorandum Opinion*.

¹¹⁷ Dembski, *Intelligent Design*, 248.

¹¹⁸ And he has suffered professionally for his stance. The university removed him from teaching introductory biology after he explained his views on design in class. He was reinstated only after a long, drawn-out process of review committee meetings and after Stephen Meyer exposed Kenyon’s treatment at the hands of the biology department in an op-ed piece in the *Wall Street Journal* (William A. Dembski, “What Every Theologian Should Know about Creation, Evolution, and Design,” available at <http://www.arn.org/docs/dembski/wd_theologn.htm> [accessed 8 November, 2006]).

¹¹⁹ “My Pilgrimage from Atheism to Theism: An Exclusive Interview with Former British Atheist Professor Anthony Flew,” *Philosophia Christi* (Winter 2005), available online at <<http://www.illustramedia.com/IDArticles/flew-interview.pdf>> (accessed 8 November, 2006).

teachings of Scripture they provide compelling corroborating evidence the Christian can use to make his defense to all who ask for the hope that is in him (1 Pet 3:15).