

Name: _____
Course: 28677, Primer on ID
Instructor: William A. Dembski

Date & Time: 3/27/06, 4:00-5:30pm
Room: Norton 102

MIDTERM EXAM

Please answer the following questions in the space allotted—do not write outside the given borders. Answer all the parts of each question. Be concise. Write legibly. Good luck.

**Identify the person who matches the description;
give first name where applicable [1 point each]:**

The author of *On the Origin of Species*. **Charles Darwin**

The author of *Natural Theology* (1802). In this book the author makes a famous watchmaker argument. **William Paley**

The author of *The Blind Watchmaker*. **Richard Dawkins**

The Cal Berkeley law professor who is widely regarded as the architect of the ID movement. **Phillip Johnson**

Author of *Darwin's Black Box*. **Michael Behe**

Widely regarded as the greatest scientist of all time. **Isaac Newton**

The school teacher who in 1925 stood trial for teaching evolution. **John Scopes**

Author of *The Design Inference*. **William Dembski**

Student of Plato who drew the distinction between nature and design. **Aristotle**

The father of liberal theology who trashed miracles. **Friedrich Schleiermacher**

Define the following terms and briefly note their significance [3 points each]:

intelligent design

--Definition: The study of patterns in nature that are best explained as the result of intelligence.

--Significance: Undercuts Darwinian evolution and the naturalistic/materialistic philosophy that is so at odds with Christianity in our culture.

[In this and the following nine questions, give 2 points for the right definition and 1 point for the significance. Be generous in grading these ten questions. The definitions or their significance don't have to exactly coincide with the ones I'm proposing here. All I'm looking for is some evidence of comprehension of the point at issue. Think of this exam as testing whether someone at an informal gathering can coherently describe what ID is all about.]

methodological naturalism

The view that for the sake of science one must pretend that natural forces/the material world is all there is. It is significant because it prevents ID from getting out of the starting blocks and having any place at the scientific table.

theistic evolution

The view that materialistic evolution is the best explanation of biological complexity and that God did it that way. This view refuses to challenge materialistic science. It attempts to have the best of both worlds (scientific respectability and Christian faith), but ends up having neither. The God of theistic evolution does nothing scientifically interesting, and the natural order of theistic evolution has no need of God.

common descent

This is a fundamental claim in Darwin's theory, namely, that all organisms trace their lineage back to some last universal common ancestor (aka "universal common ancestry"). This is a strong claim about natural history, and one that Christians have had a hard time reconciling with the first chapters of Genesis.

natural selection

Darwin's big idea -- that nature, by allowing organisms with advantageous features to survive and reproduce and by getting rid of the rest -- could do all the work traditionally described to a designing God. Natural selection thus acts as a designer substitute.

Big Bang

The idea that the universe started as an infinitely dense fireball that has been expanding ever since. During the mid 20th century, scientists resisted the Big Bang because it suggested a beginning, which is consonant with the Biblical account of creation but contradicts an eternal universe, which the scientific community at the time preferred. On the other hand, young earth creationists tend to resist the Big Bang because it suggests that the earth and universe are older than allowed by Genesis.

information (in general)

Information literally means to give shape to something. In its more technical mathematical sense, it refers to the elimination of possibilities -- the more possibilities eliminated, the greater the information. Information speaks to the patterning of the world and thus highlights an aspect of physical reality downplayed by materialist reductionists, who attempt to reduce information to the outworkings of physical laws.

specified complexity (or complex specified information)

The form of information that is the basis of my theory of design detection. Specified complexity denotes a highly improbable event that also exhibits an objectively/independently given pattern. This form of information, so I argue, is beyond the reach of material mechanism and strongly implicates a designing intelligence.

creationism

Creationism can simply refer to the view that God created the world. Typically, however, it refers to a view of creation in which God creates the world in six literal twenty-four days within the last 10,000 years. This view is widely held among the US populace, though among academic elites it is roundly rejected.

miracle

Literally, the term refers to an event that excites wonder. Thinkers like Spinoza and Schleiermacher construed it as a violation of natural law, and thus as an inherently self-contradictory notion since God is the author of natural law. Thomas Aquinas saw miracles as God endowing nature with powers that it does not “naturally” possess. Without some form of miracle, it is hard to see how God can play any significant role in the natural world.

Answer the following questions [10 points each]:

How are intelligent design and creationism different? How are they similar?

Intelligent design looks to patterns in nature that are best explained as the result of intelligence but does not inquire about the ultimate source of the materials in which those patterns are displayed. Creationism, on the other hand, presupposes a doctrine of creation and thus attempts to explain the origin of everything as stemming from an infinite personal transcendent creator God. The two views are similar in that creationism is typically not only a doctrine about where everything ultimately came from but also a doctrine about how the material world got organized and thus patterned in ways that bespeak design -- namely, by the agency of a God who by wisdom originated and then ordered the world.

State the God of the Gaps objection to intelligent design. Does the objection succeed or fail? Explain.

The God of the Gaps objection to intelligent design states that intelligent design substitutes a supernatural cause for a natural cause, albeit a natural cause that to date is not fully understood but which with further scientific inquiry will be understood in terms perfectly acceptable to materialist science. The problem with this objection is that it presupposes precisely the point at issue, namely, whether nature left to itself apart from any intelligent guidance is able to produce complex biological systems. There is no evidence that it can, and to say that nature must be constituted in such a way that purely natural forces could do all the work of bringing about biological complexity is thus an article of speculative faith. It may be that nature has this capacity, but until it is shown that it does, it is an open question whether the gap in the God of the Gaps objection is merely a gap in human ignorance about the workings of nature or whether it is a fundamentally gap in nature that only intelligence is able to overcome.

What is dysteleology? Give an example of dysteleology in nature. Why do many find this phenomenon persuasive as an objection against ID? Should they find it persuasive?

The “dys” in “dysteleology” is the same prefix as in the pop-psych term “dysfunctional.” When used in relation to design in nature, it refers to the supposedly stupid, bad, and evil designs that appear in nature. Its force against ID usually depends on a tacit premise, namely, that any being responsible for biological designs would have been good and done a better job of it. It’s the idea that “no sensible designer would have designed things they way they are” that is supposed to undercut ID entirely. This objection fails to appreciate that in a fallen world, originally good designs can go awry. It also fails to appreciate that we need to deal with design as such and separate out its morality, goodness, or optimality. An example of dysteleology in nature commonly cited is parasitism (Darwin cited it) -- organisms exploiting other organisms by sucking the life out of them.

What is Michael Behe’s notion of irreducible complexity? Give an example of an irreducibly complex biological system. Explain why it is in fact irreducibly complex.

Irreducible complexity is a property of complex multipart functional systems in which the removal of parts does not permit recovery of the original function of the system. An example is the bacterial flagellum. Since it is a bidirectional motor-driven propeller, there will be various parts that cannot be removed and yet allow the system to keep functioning. For instance, the long whip-like tail of the flagellum that functions as a propeller cannot be removed and still allow what’s left to act as a motility structure, moving the bacterium through its watery environment.

Answer the following question [20 points]:

Briefly outline Darwin's theory of evolution (contrast the pattern of evolution in natural history with the mechanism of evolution). What are some of the scientific problems with this theory? Is this theory reconcilable with Christian theism? Explain.

Darwin's theory of evolution consists of two parts: (1) a historical claim about the tree-like pattern of evolution in natural history (common descent with gradual change over eons); (2) a mechanism of evolutionary change in which natural selection acts on random variations to produce biological complexity and diversity.

There are many scientific problems with this theory. With regard to the historical claim of the theory (i.e., common descent), the fossil record simply does not support it (cf. especially the Cambrian explosion). With regard to the mechanism, it appears inadequate to account for biological complexity and diversity (especially at the subcellular level, as with Michael Behe's irreducibly complex systems).

The theory is hard to reconcile with Christian theism. Certainly it requires a loose interpretation of Genesis (not only with regard to the age of the earth but also with regard to the original kinds created -- Genesis suggests that organisms belong to distinct kinds that have an essence whereas evolution tends to blur all organisms together).

Darwin's theory of evolution also has the difficulty of not allowing any evidence of design in biology -- strictly speaking no designer is required to make Darwin's theory work (it is a nonteleological theory). Thus, a Christian Darwinist would need to take the view that God created a world in which a Darwinian mechanism produces living forms but leaves no trace of the divine wisdom or handiwork. This seems counterintuitive to many Christians.

Additionally, there is the problem that Darwinian evolution bespeaks a violent history of life (Darwin referred to "the battle for life"). It is a challenge to square this picture of life's history with God's goodness in creation.

Thus, even though there may be no strict contradiction with Christianity (broadly construed), there are deep tension between the two views.

Extra credit question [5 points]:

Is intelligent design a testable scientific theory? How is it testable? Describe a test that could disconfirm ID.

Yes, ID is testable. It claims that certain systems are unevolvable by materialistic means (e.g., the bacterial flagellum). ID could therefore be tested and refuted if Darwinists could show how purely materialistic means could actually produce such systems.