Intelligent design: is it a useful concept?

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Intelligent design is the proposal that certain phenomena in nature are best explained as due to intelligent causes. Intelligent design implies that nature was brought into existence for a purpose, although that purpose may not be known. Alternative explanations that avoid the idea of design include the possibility that the phenomenon was the result of chance, or was required because of the structure of the universe (the "laws of nature").

Two types of design arguments can be distinguished. The first is the argument to design. This typically involves the claim that the order in nature indicates that nature is the product of intelligent design. This is the principal claim of the contemporary group known as the "intelligent design movement."

The second type of argument is the one *from design*. This involves the claim that the design evident in nature leads to identify the designer as having the characteristics of the biblical Creator-God. This argument is the basis for natural theology, in which the attributes of God are said to be knowable from study of nature. The "intelligent design movement" avoids making this claim and focuses its attention on the argument *to* design.

This article explores the usefulness of the idea of intelligent design in the context of modern (scientific) efforts to understand nature. Among the questions to be considered are whether intelligent design is a necessary inference from the properties of nature, and whether its incorporation into science would improve our ability to explore and understand nature.

Early history of the design argument

For centuries scholars have debated whether nature is purposefully designed (implying a con-scious mind) or whether it is the result of purely natural (unconscious, purposeless) forces. In ancient Greece, the idea that nature is designed was endorsed by Socrates, Plato, and Aristotle, who saw a necessity for a cause of the order in nature. Opponents of these ideas included Democritus, Leucippus, and Epicurus. In the century before Christ, the design argument was affirmed by Cicero and denied by Lucretius.[1]

As Christianity became dominant in western Europe, the question of design received less attention, since it was generally assumed that nature was designed. For most Christians at least, the idea that nature is designed is rooted in the biblical teaching of creation. In this case, the argument *to* design is based on special revelation rather than on the order observed in nature. The argument is that God created the world, therefore it shows design.

As for the argument *from* design, the Bible gives a mixed signal as to whether nature is a reliable indicator of God's attributes. On the one hand, nature testifies to the Creator: "The heavens are telling the glory of God" (Ps. 19:1 RSV). Note that nature is not said to reveal very much about God—only the necessary existence of an eternal, powerful, creative force. Nature is not a reliable source of information about the personal nature of God, His character and His love.

On the other hand, humans are prone not to interpret nature correctly: "they exchanged the truth about God for a lie, and worshiped and served the creature rather than the Creator" (Rom. 1:25 RSV).

Thus, even in the Bible, the argument *to* design seems to be more secure than the argument *from* design.

Augustine affirmed both the argument to design and the argument from design: "For, quite apart from the voice of the Prophets, the very order, changes, and movements in the universe, the very beauty of form in all that is visible, proclaim, however silently, both that the world was created [argument to design] and also that its Creator could be none other than God whose greatness and beauty are both ineffable and invisible [argument from design]."[2]

Augustine justifies his conclusion because of the order in nature, but his argument was grounded in his knowledge of the biblical teaching of creation.[3]

Thomas Aquinas utilized the argument from design as one of his five famous proofs of God's existence. As with Augustine, the argument was constructed not to force belief from unbelievers but to reassure believers that such belief was rational.[4]

Design theory and the rise of modern science

The rise of modern science some four centuries ago was accompanied by controversy over the value of design as a scientific explanation. At that time, descriptions of nature were commonly interspersed with comments on how the marvels of nature show God's creative power and goodness, etc. Things in nature are the way they are because God designed them that way. This can be illustrated from the writings of John Ray (1628—1705). Ray frequently used design as an explanation in his book, *The Wisdom of God Manifested in the Works of Creation* (1691). Ray claimed that nature's beauty and complexity pointed to a designer, whom he identified as God. For example, after describing the consistency of bird nest building among members of a species in separated places, Ray wrote: "This, together with the curious and artificial Contexture of such Nests, and their Fitness and Convenience for the Reception, Hatching, and Cherishing the Eggs and Young of their respective Builders, (which we have before taken notice of) is a great Argument of a Superior Author of their and other Natures, who hath endu'd 'em with these Instincts"[5]

Francis Bacon (1561—1626) objected to using the design inference to explain phenomena in nature. According to Bacon, such explanations tended to remove the incentive for scientific inquiry, leaving erroneous ideas unchallenged.[6]

Rene Descartes (1596—1650) provided an additional basis for objections to explanations based on design. Since we cannot possibly know God's intentions, it is pointless to claim that a certain phenomenon was designed by God for a specific purpose. It is better to remove such ideas from science and leave them to the philosophers and theologians.[7]

David Hume (1711—1776) employed additional criticisms against the theory of design and is sometimes credited with destroying it in his *Dialogues Concerning Natural Religion*.[8] Hume attacked both the argument *to* design and the argument *from* design. How can we know that we are really seeing design in nature? Our minds tend to impose patterns where there is no design—such as imagining the figures of the zodiac, or seeing shapes in the clouds.[9] The problem with this argument is that it tends to undermine science itself; if our minds are so easily deceived, how can we depend on conclusions drawn from our observations? Because of this, scientists do not generally utilize it in their arguments against design.

The second part of Hume's attack addressed the argument *from* design. Even if the world is designed, we cannot be confident that there is only one designer, or that the designer is the biblical God. There might have been many designers, and many previous attempts at design, some successful and others flawed. In addition, there is the problem of evil. If we claim there is a single designer, then he must be responsible not only for the order we see in the world but also for the evil. This is still a common response to the question of design.

William Paley, Archdeacon of Carlisle (1743—1805), responded to Hume's arguments. Paley's famous analogy that the existence of a watch is evidence for a watchmaker is well-known. Paley claimed that "arrangement, disposition of parts, subserviency of means to an end, relation of instruments to a use, imply the presence of intelligence and mind."[10]

However, Paley sometimes went too far in inferring design: "The hinges in the wings of an earwig, and the joints of its antennae, are as highly wrought, as if the Creator had nothing else to finish."[11] This left Paley's argument vulnerable, and Charles Darwin marshaled strong arguments of his own against Paley's conclusions.

Although Darwin was "charmed" by Paley's arguments, he was dissatisfied with the explanation of evil in nature that Paley offered. Like David Hume, Darwin exploited the problem of evil to attack the argument from design. He wrote to Asa Gray, who advocated divine guidance of evolution: "I own that I cannot see as plainly as others do, and as I should wish to do, evidence of design and beneficence on all sides of us. There seems to me too much misery in the world. I cannot persuade myself that a beneficent and omnipotent God would have designedly created the ichneumon fly with the express intention of their feeding within the living bodies of caterpillars, or that a cat should play with mice."[12]

Darwin did not in any way disprove Paley's arguments. He simply undermined them by providing an alternative explanation for the observation that organisms function well in their environments. Darwin pointed out that individuals with inferior structural characteristics would be unable to compete with those having superior characteristics. Thus, according to Darwin, it was inevitable that surviving organisms would have the appearance of good design. Since it is inevitable (those with poor design simply died out), there is no need to postulate an unseen designer. Natural selection is sufficient to explain how organisms have diversified and become adapted to their environment.

Darwin's theory of natural selection satisfied many leading scientists that descent with modification might be explainable by natural processes, without appeal to special creation. However, many scholars, including many scientists, did not believe that natural selection could accomplish all that Darwin claimed it could, and looked for other influences that might help organisms be suited for their environment. Asa Gray, Darwin's friend and confidant,

rejected natural selection, claiming that descent with modification was somehow guided by God. Darwin rejected such a notion, pointing out that the idea of natural selection would be meaningless if God was actually directing the process.[13]

In the first several decades after the *Origins* was published, many scientists looked for processes in addition to natural selection that might explain the apparent design of creatures for their environments.[14] These generally took the form of some kind of internal driving force, perhaps vitalistic, or driven by environmental stimuli. One example was the theory of orthogenesis, in which a lineage possesses some kind of internally driven tendency to change in a particular direction. This idea was especially popular with a number of paleontologists, who were trying to explain long-term trends in the fossil record. Other forms of internal driving mechanisms were proposed, but eventually, natural selection was accepted by the leaders of the scientific community.

The combined arguments of Hume and Darwin were thought to be the death

of the design argument, but this turned out to be not so. The argument to design has arisen again, this time with more detailed examples and more careful logic. A group of scholars has made the claim that certain phenomena in nature are best explained in terms of intelligent design, and has proposed methodology for identifying design. This group is known as the "intelligent design movement." Ⓜ

1   Most of this history was taken from M Ruse, *Darwin and Design* (Cambridge, Mass. Harvard University Press, 2003)
2   St. Augustine, 1958, *City of God* (originally written as Box XI, Chapter 4), 208, 209 An abridged Version from the Translation by Gerald G Walsh, S J ; Demetrius B. Zema, S J , Grace Monahan, O.S U., and Daniel J Honan With a condensation of the original Foreword by Etienne Gilson Edited, with an introduction by Vernon J Bourke Garden City, N Y : Image Books, Doubleday
3   Ruse, 21
4   Ibid , 21, 22
5   John Ray, 1691, 1717 *The Wisdom of God Manifested in the Works of Creation*, 127, 128 Available online at http://www jri org uk/ray/wisdom/
6   Ruse, 24
7   Ibid., 25.
8   David Hume (1779), *Dialogues Concerning Natural Religion* (London and New York Penguin Publishing, 1990).
9   Darwin struggled with the question of reliability of the mind See Charles Darwin, *The Autobiography of Charles Darwin and Selected Letters* (Mineola, New York Dover Publications, 1892, 1958), 68
10 W. Paley, nd (1802), *Natural Theology, or Evidences of the Existence and Attributes of the Deity* (Lincoln-Rembrandt Publishing), 11. Available online at http //www htu.umich edu/p/pd-modeng/index html
11 Paley, 541, 542
12 Quoted in C. G Hunter, *Darwin's God: Evolution and the Problem of Evil*, p 140. The reference is to Darwin's comment about evil cited by Hunter. (Grand Rapids, Mich Brazos Press, 2001) The original reference can be found in: Francis Darwin (editor) 2001. The life and letters of Charles Darwin Honolulu. University Press of the Pacific Vol 2, page 105
13 Ruse, 2001, 147
14 R England, *Design after Darwin, 1860—1900* (Bristol. Thoemmes Press, 2003), cited by J B Pitts, www thoemmes com/science/ designdesign htm