The History and Significance of the Design Argument

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ABSTRACT

From biblical times through to our own age, the argument from design has been an important component of Christian apologetics. However, not only has its plausibility waxed and waned over the centuries, but its exponents have not always been agreed over either its formulation or application. In a characteristic change of fortune, modern scientific developments, particularly in cosmology and molecular biology, have apparently infused new life into what many supposed was a post-Darwinian death.

A SPECIFIC EXAMPLE OF DESIGN

Let's begin our discussion of the design argument with an example, drawn from a species we don't encounter very often. We met our first one in A. A. Milne's *Winnie the Pooh*. Occasionally we hear one hooting from the darkness. Sometimes we catch one on the roadside in our headlight's glare. Owls; those wise denizens of the night who go so efficiently about their nocturnal business. Some, like the Australian Grass Owl are quite small. Others, like the great horned owl of North America stand 70 cm tall and have a wingspan of nearly 2m. Let's think about owls for a moment. Like most birds, they have flying absolutely worked out. In fact owls even more than most, since, due to specialised feather configurations, the flight of an owl, even a great horned owl, is absolutely noiseless. This is an important asset when hunting in the stillness of night, when the slightest sound might betray one's approach.

When humans first attempted to take to the sky it was with clumsy contrivances which, it was hoped, would utilise the power of human male biceps to flap wings. But alas, despite repeated efforts, they never soared aloft and with good reason. Even the most impressive human arm musculature accounts for less than 1% of body weight, whereas, for a strong flier like an owl or eagle, the pectoralis muscles which impel the wings may comprise a third of total body weight. This all involves what we call "power to weight" ratio, and it is all in favour of the bird![1]

And speaking of weight; we use the term, "light as a feather". But do you know that the skeleton of some birds actually weighs less than its feathers. To minimise weight bird bones are hollow, relying for much of their phenomenal strength on internal struts, like a miniature truss girder! Strong and light. All this, of course, is not to

denigrate feathers. They are unbeatable for keeping warm in chill-factor temperatures of -20 degrees, as every bushwalker knows as he/she snuggles down into their sleeping bag. They are also aerodynamic, light and strong. Enabled by some 12,000 small muscles, feathers can instantly respond to the variations in aerodynamic pressure encountered in different flight situations. Each feather consists of hundreds of thousands of small parts. Along both sides of the stiff central quill are hundreds of filamentous barbs, held together by tiny barbules consisting in turn of minute flanges and tiny hooks called hamuli. These work like zippers, and when they become unzipped the bird zips them up again by preening. And you thought velcro was new!

But it is one thing to fly, quite another to eat. Have you ever wondered how an owl at night or an eagle during the day can see the tiniest tasty titbit disguised in the grass? It is because the concentration of rods in the bird's retina is up to eight times greater than in ours. We get a "data projector" view, they get a "quality slide, high resolution" view. And in addition, as noted earlier, nocturnal food gatherers like owls have built-in light gatherers to enable them to see in almost complete darkness. We could discuss birds for hours. They exhibit such a fantastic match of form to function. For hundreds of years Christians have seen such occurrences as evidence for a Designer.

Of course, there are a few problems. Owls are not shining vegetarian examples, and much of their superb design is, it seems, to kill. Interestingly, the Bible doesn't worry too much about this problem. God seems no more concerned to be seen feeding the young lions and ravens, than he is about clothing the lilies of the fields. As modern scientifically informed Christians, however, we wrestle a bit with this data.

A BRIEF HISTORY OF DESIGN

It is instructive to review the historical development of the argument from design. It is also interesting to note that not everyone, even within the Christian church, has always agreed on how this argument should be best understood and deployed. In fact the design argument has had a chequered career, and has brought together some strange bedfellows.

It is first found, of course, in the Bible itself; not as an attempt to prove God's existence, but as a demonstration of his awesome power and character. In Job 38–41, in order to demonstrate this power, God details a long litany of His wondrous works: the sea, the treasures of snow and hail, Pleiades and Orion, behemoth and leviathan. Interestingly, right at this early beginning we have a hint of the dilemma already encountered with owls. Whatever the correct identity of the leviathan, it is unlikely to be a peaceful devourer of grass! Psalm 19 directs our focus to the heavens, which are said to declare the glory of God. Proverbs

frequently discusses the wonder of God's works. In Proverbs 30:19 the incredible way of an eagle through the air and the way of a serpent upon a rock evoke the author's wonder. The NT continues to invoke nature in such passages as Matt 6, where Christ urges us to consider the birds of the air and the lilies of the fields.

The Church Fathers, particularly the Latin Fathers, were fond of the argument from design, adapting much of it from pagan works such as Cicero's *On the Nature of the Gods.* In this work the author presents arguments for belief in providence based on "the order and beauty of the heavens, the earth's provision for human need, and the design of the human body".[2] Early church theologians seemed comparatively unconcerned that these arguments originally supported a Stoic, pantheistic identification of God and nature.

By the 3rdCentury, Tertullian could reflect a strong natural theology in his *Contra Marcionem (Against Marcion)*: "God must first be known from nature and afterwards recognized from doctrine; from nature by His works and from doctrine by His revealed words".[3] This gave rise to the concept of **God's two books**: the Bible and the "book" of nature.

In the 13thCentury Thomas Aquinas, influenced by the 12thCentury Maimonides and Lombard, developed his "Five Ways" to demonstrate the existence of God. The first was ontological: the existence of partial truth and goodness must imply absolute Truth and Goodness. Three were forms of the cosmological argument: all earthly motions must derive from an Unmoved Mover, all causality must be predicated on a First Cause, and dependent, ephemeral creatures must come from a self-existent, eternal creator. Last, was the argument from design, where the creation must point to an intelligent, loving Providence.[4]

The Copernican revolution and the rise of western science focussed attention on the natural world as never before. However, the force of the design argument was reduced as Christians, along with others, struggled to adjust to the new cosmology and worldview. Copernicus saw his new theory as not only unopposed to Christian faith, but as an expression of the order and harmony of God.[5] This was even more true of Kepler, who expressed his frustration over those who could not perceive the wonder of God's Copernican universe in the introduction to his *Astronomia Nova*:

If someone is so dumb that he cannot grasp the science of astronomy, or so weak that he cannot believe Copernicus without offending his piety, I advise him to mind his own business, to quit this worldly pursuit, to stay at home and cultivate his own garden.. .[6]

Galileo, too, had a devout faith, and saw the new cosmology as so much

more expressive of the majesty and creative power of God than ever the old Ptolemaic universe could have been.[7]

Francis Bacon was among those who, early in this era, saw in the natural realm a commentary on the Bible. He wrote: "God's two books are… first the Scriptures, revealing the will of god, and then the creatures expressing his power; whereof the latter is the key unto the former". [8] Bacon's affirmation of scientific study as a precise fashion of praise to the Creator was echoed by Boyle and Newton.[9] In 1648 Boyle wrote:

When with bold telescopes I survey the …stars and planets…when with excellent microscopes I discern nature's curious workmanship; when with the help of anatomical knives and the light of chymical furnaces I study the book of nature… I find myself exclaiming with the psalmist, How manifold are thy works, O God, in wisdom hast thou made them all![10]

Despite such an affirmation, however, Boyle was aware of the danger of the pantheistic extreme lurking at the edge of the design argument ever since its Stoic beginnings. He also saw that such arguments were increasingly scorned by unbelievers:

Undervaluation.. of the study of things sacred is grown rife among…students of physics. Our new libertines deny natural theology…namely the existence and providences of a Deity.[11]

Perhaps in response to this trend Boyle bequeathed money to fund a lecture series "for proving the Christian religion" by the use of the design argument.

Newton saw his scientific achievements in a similar light. He wrote of his major work, the Principia, "When I wrote my treatise about our system, I had an eye upon such principles as might work with considering men for the belief of a Deity".[12] Newton wrote as much on religious themes as about natural philosophy. Interestingly, not all Christians agreed with Newton. It was urged by some that he "took from God that direct action on His works so constantly ascribed to Him in Scripture and transferred it to material mechanism", and that he vulgarly "substituted gravitation for Providence"! [13]

Although, as we have seen, the design argument was common among the pioneers of physical science, it was the biologists who argued it the most strongly. John Ray, sometimes called the English Aristotle because of his systematic approach to the classification of animals and plants, gave us the modern working definition of a species: ie, those animals capable of interbreeding. In 1691 he wrote *The Wisdom of God Manifested in the Works of creation* in which he took the argument from biological design to its teleological limit.[14] This book began a genre of biologically derived literature extolling the Creator.

Carl von Linne (Linnaeus) is sometimes called the "second Adam" because he named all the life forms. His *Systema Natura* went through 12 editions during his lifetime, the last running to 2000 pages. The title page of the 10th ed, published in 1758 reads: "O Jehovah, how ample are thy works! How wisely Thou hast fashioned them. How full the earth is of thy possessions". His classification of plants, however, caused offence to some other Christians. He had demonstrated that the reproduction of most plants had a sexual basis, with pollination being accomplished by the male stamens and female pistils. Linnaeus described the double stamen class, the Diandria as "two husbands in the same marriage" and the multi-stamen or Polyandria as "twenty males or more in bed with the same female!" This was difficult for some to accept. "God never would have allowed such odious vice", thundered Johann Siegesbeck, professor of St Petersburg, "as that several males should process one wife or that a true husband should in certain composite flowers besides its legitimate partner have near it illegitimate mistresses".[15] Clearly, nature in the raw spoke more persuasively of God to some than to others!

In 1802 William Paley, Archdeacon at Carlisle, published *Natural Theology: Evidences of the Existence and Attributes of the Deity collected from the Appearances of Nature*. This book is recognised as the ultimate expression, and high point, of the design argument. It begins:

In crossing a heath, suppose I pitched my foot against a stone, and were asked how the stone came to be there. I might possibly answer, that, for all I knew to the contrary, it had lain there for ever, nor would it, perhaps, be very easy to show the absurdity of this answer. But suppose I had found a watch upon the ground, and it should be inquired how the watch happened to be in that place, I should hardly think of the answer which I had given before - that, for anything I knew, the watch might always have been there. Yet why should not this answer serve for the watch as well as for the stone? For this reason and for no other, vis., that when we come to inspect the watch, we perceive (what we could not discover in the stone) that its several parts are framed and put together for a purpose, e.g. that they are so formed and adjusted as to produce motion, and that motion so regulated as to point out the hour of the day… The inference, we think, is inevitable, that the watch must have had a maker.[16]

However, the argument from design had attracted increasing philosophical criticism from about the time of Newton. Descartes had warned against imagining that humans could understand God's inscrutable purposes in creation. David Hume, citing particularly the evil in the world, poured scorn on any notion of design. Kant too, held natural theology to be invalid. [17]

But, it was the evolutionary theory of Charles Darwin which quickly and finally destroyed the design argument for those not independently committed to Christianity. Although he continued to express what could be understood as religious sentiments, perhaps to avoid unnecessary stress to his devout wife Emma, he recognised what he had done. In a memoir of 1876 he wrote:

The old argument from design in nature, as given by Paley, which formerly seemed to me so conclusive, fails now that the law of natural selection has been discovered…. There seems to be no more design in…natural selection, than in the course which the wind blows. Everything in nature is the result of fixed laws. [18]

Then came the 20th Century with the emergence of relativity, quantum mechanics, chaotic dynamics, a revolutionary "big bang" cosmology, and a new world of molecular biology. All of these would have an influence on the reincarnation of the design argument, for far from being dead, it has risen, phoenix-like, from what many were sure were its ashes. Michael Behe and William Dembski, referred to in the article by Ward and Hancock in this volume, are current exponents of the design argument. And as might be expected, opposition has also been renewed, through books and media productions by such as Richard Dawkins, Stephen Hawking, and Carl Sagan.[19]

One thing to note, however, is that, as we have seen, there are many ways of representing the argument, not all of which are logically self- consistent. Paley saw God in the natural systems he could understand. Other authors, both ancient and modern, have seen the greatest evidence as coming from that which cannot be understood. This "God of the gaps" approach, susceptible as it is to scientific progress, has failed to impress many, Christians and non-Christians alike. Charles Coulson FRS has suggested that when we come to the scientifically unknown, our correct policy is not to rejoice because we have found God, it is to become better scientists.[20]

It seems reasonable to conclude that, although the argument from design will always have its adherents and detractors, the discoveries of our age have certainly imparted new life to it. It is not, however, the brief of this article to review that data nor detail the more complex and structured form of the contemporary argument. Ever since Galileo, science has decided between competing theories by the hypothetico-deductive method. Those theories which explain the data with the greatest simplicity, cohesion, consistency, and with the least special pleading, eventually win out.[21] Many scientists today see the notion of a Designer as providing just such an explanation of origins.

REFERENCES

1. Thoresen, A (1971) Designed for Flight, in Utt, R (ed) *Creation: Nature's Design and Designer.* Pacific Press, California. p8–24.

2. Emerton, N (1994) Arguments for the existence of God from nature and science, in Rae, M, Regan, H and Stenhouse, J (eds) *Science and Theology: Questions at the Interface.* Clark, Edinburgh. p74.

3. *Ibid*, p75 (quoted from Tertullian's *Contra Marcionem* 1.18).

4. *Ibid*, p73,74.

5. Kuhn, T (1977) *The Copernican Revolution*. Harvard, Massachusetts. p142,143 (quoted from the preface of *De Revolutionibus Orbium Caelestium*, 1543).

6 Gingerich, O (1994) Is there a role for natural theology today? in Rae, M, Regan, H and Stenhouse, J (eds). *Science and Theology: Questions at the Interface.* Clark, Edinburgh. p47 (quoted from Kepler's *Astronomia Nova*).

7. Finocchiaro, M (1989) *The Galileo Affair*. University of California, Berkeley. p103 (quoted from *Letter to the Grand Duchess Christina*, 1615).

8. Emerton, N (1994), *Op cit*, p76 (quoted from Bacon's *The Advancement of Learning,* 1605).

9. *Ibid*, p76–79.

10. *Ibid*, p76 (quoted from Boyle's *Some Motives and Incentives to the Love of God*, 1648).

11. *Ibid*, p 77 (quoted from Boyle's *The Excellence of Theology*, 1665).

12. *Ibid*, p78 (quoted from Newton's *First Letter to Richard Bentley*, 1692).

13. White, A D (1896) *A History of the Warfare of Science with Theology*, Dover, NY. p16.

14. Emerton, N (1994), *Op cit*, p77. also Blackmore, V and Page, A (1989) *Evolution: the Great Debate.* Lion, Oxford. p15.

15. *Ibid*, p15–19.

16. Clark, F (1885) *Paley's Natural Theology*. Christian Evidence Committee of the Society for Promoting Christian Knowledge, Gilbert and Rivington, London. p9.

17. Emerton, N (1994), *Op cit,* p81.

18. *Ibid*, p83 (quoted from Darwin's Autobiography).

19. See such works as

    Dawkins, R (1985) *The Blind Watchmaker*. Norton, London.

    Dawkins, R (1989) *The Selfish Gene*. Oxford, Oxford.

    Hawking, S (1988) *A Brief History of Time*. Bantam, London.

    Sagan, C *Cosmos* series.

20. Coulson, C A (1955) *Science and Christian Belief.* Oxford, Oxford.

21. Gingerich, O (1992) *The Great Copernicus Chase*. Sky, Massachusetts and Cambridge, Cambridge. p105–122.