Intelligent Design and Evolution Awareness Center

FAQ:
Is ID just a rehash of William Paley's 19th century design arguments, refuted by Hume and Darwin?

The Short Answer: Paley argued only from a philosophical notion of "purposeful perfection," not a mathematical form of specified complexity. His arguments for design were not rigorous like those of modern day design theorists, and had philosophical overtones related to Christian theism. That is fine as a philosophical proposition, but as a scientific proposition it could not withstand Darwin's mechanism of law and chance, and Darwin's appeals to biological "imperfection," arguments for "dysteleology," and his mechanism for how evolution could create things with the appearance of purpose. Today we are in the midst of an entirely different debate. ID seeks to find complex objects which are specified to some pattern. This is the essence of the products of design, and we can best detect design when we can rule out some competing hypothesis, like Darwinian evolution. Darwin's theory no longer triumphs over the design argument. The breakdown of Darwinian evolution to create irreducible complexity represents the breakdown of Darwin's triumph over Paley, and the modern intelligent design argument. Hume simply argued that there is an insufficient analogy between biological design and human design. Again, this objection cannot withstand Dembski's rigorous quantification of the information produced by intelligent agency.

The Long Answer:

Intelligent design theory is criticized as being a "rehash" of the "old design arguments of "William Paley" which David Hume and Darwin clearly refuted in the 18th century (for example see "Not (Just) in Kansas Anymore" by Eugenie C. Scott, Science 2000 May 5; 288: 813-815). This excerpt from an article in American Biology Teacher provides a perfect caricature of this objection:

"The Intelligent Design (ID) movement is a reincarnation of a 200-year-old idea that goes back to William Paley. That theologian wrote that the existence of a watch is tantamount to the existence of a watchmaker, since natural forces could not have created a watch. By analogy, he claimed that complex living things should require direct, divine intervention by a creator. That argument – as science – has been demolished by two centuries of scientific progress." (Intelligent Design Creationism: A Threat to Society – Not Just Biology, American Biology Teacher, Jan 2004, by Marshall Berman)

But what exactly did Paley argue and what exactly did Darwin (and his successors) supposedly refute? Paley's famous argument was that if we find a watch standing alone, we will of course infer that it was designed for some purpose. In fact, Paley even noted that a watch has qualities which are like Behe's notion of irreducible complexity:

> A watch would cease to function "if its different parts had been differently shaped from what they are, or placed after any other manner or in any other order than that in which they are placed." (William Paley, *Natural Theology* as quoted at " http://www.arn.org/docs/williams/pw_idaestheticsanddesignarguments.htm").

Though Paley wrote before Darwin and could never have applied his observations to Darwin's theory of natural selection, Darwin himself wrote:

'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.'

Thus, it would seem that Darwin apparently didn't falsify at least one aspect of Paley's argument--that which had to do with irreducible complexity.

So why does history tell us that Paley was soundly refuted? Paley's argument was much more than about "irreducible complexity," and in many ways, it was scientifically much weaker. As noted at ARN.org, Paley had fairly unrigorous arguments for design. Because Paley argued for a particular philosophical understanding of the designer and the designer's purpose, many of his ideas were rebutted through philosophy and theology, not science. Intelligent design theory does not make many of the philosophical claims about design that Paley did make. This excerpt below explains:

> "Paley argued that we can draw the same conclusion [that something was designed] about many natural objects, such as the eye. Just as a watch's parts are all perfectly adapted for the purpose of telling time, the parts of an eye are all perfectly adapted for the purpose of seeing. In each case, Paley argued, we discern the marks of an intelligent designer. Although Paley's basic notion was sound, and influenced thinkers for decades, Paley never provided a rigorous standard for detecting design in nature. Detecting design depended on such vague standards as being able to discern an object's "purpose." Moreover, Paley and other "natural theologians" tried to reason from the facts of nature to the existence of a wise and benevolent God. All of these things made design an easy target for Charles Darwin when he proposed his theory of evolution. Whereas Paley saw a finely-balanced world attesting to a kind and just God, Darwin pointed to nature's imperfections and brutishness. Although Darwin had once been an admirer of Paley, Darwin's own observations and experiences—especially the cruel, lingering death of his 9-year-old daughter Annie in 1850—destroyed whatever belief he had in a just and moral universe."
> ("What is Intelligent Design?" at "http://www.arn.org/idfaq/What%20is%20intelligent%20design.htm")

William Dembski writes similarly that modern intelligent design is a scientific theory devoid of the philosophical and theological commitments inherent in Paley's arguments:

> "While I fully grant that the history of design arguments warrants misgivings, they do not apply to the present project. The theory of design I envision is not an atavistic return to the design arguments of William Paley and the Bridgewater Treatises. William Paley was in no position to formulate the conceptual framework for design that I will be developing in this book. This new framework depends on advances in probability theory, computer science, the concept of information, molecular biology, and the philosophy of science-to name but a few. Within this framework design promises to become an effective conceptual tool for investigating and understanding the world.
>
> Increased philosophical and scientific sophistication, however, is not alone in separating my approach to design from Paley's. Paley's approach was closely linked to his prior religious and metaphysical commitments. Mine is not. Paley's designer was nothing short of the triune God of Christianity, a transcendent, personal, moral being with all the perfections commonly attributed to this God. On the other hand, the designer that emerges from a theory of intelligent design is an intelligence capable of originating the complexity and specificity that we find throughout the cosmos and especially in biological systems. Persons with theological commitments can co-opt this

> designer and identify this designer with the object of their worship. But this move is strictly optional as far as the actual science of intelligent design is concerned."
> (William Dembski, Intro to No Free Lunch at "http://www.arn.org/docs/dembski/wd_nfl_intro.htm".)

Dembski concludes that a modern theory of intelligent design must come to terms with what is out there:

> "Nature is a mixed bag. It is not William Paley's happy world of everything in delicate harmony and balance. It is not the widely caricatured Darwinian world of nature red in tooth and claw. Nature contains evil design, jerry-built design, and exquisite design. Science needs to come to terms with design as such and not dismiss it in the name of dysteleology. "
> (William Dembski, Intro to No Free Lunch at "http://www.arn.org/docs/dembski/wd_nfl_intro.htm".)

In "refuting" Paley, Darwin, in part, appealed to the imperfections or "evil" found in nature, which refuted Paley's notions of perfection, harmony, and balance. Modern ID theory makes no such appeals.

Darwin also refuted Paley by showing how natural selection could give the appearance of purpose (i.e. adaptation) even if it hadn't been put there by a designer. ID proponents recognize that Darwinian evolution is capable of adapting organisms to certain degrees. However, they recognize that there come points of high complexity at which it seems Darwinian evolution "breaks down," and at which we would expect to find that this form of complexity was designed. Thus, ID recognizes what evolution can do--and what it cannot do--it cannot build irreducible complexity! Darwin himself recognized this in his own time, and this "hole" in Darwin's theory remains to this day.

18th century philosopher David Hume is also often cited as having refuted Paley's ideas because Hume took aim at the design argument, saying that though one may infer that a watch was designed because we can observe humans constructing clocks, one cannot infer that a universe or a life-form was designed because humans lack direct observation of a Creator making such entities. Immanuel Kant later agreed that direct observation through human experience is necessary to make such causal inferences. But intelligent design begins with the proposition that intelligent agents in general produce certain types of complexity. Dembski does not argue from the standpoint of the degree of complexity alone, but rather for the kind of complexity. As Stephen C. Meyer explains,

> "the 'sequence specificity' or 'specificity and complexity' or 'information content' of DNA suggests a prior intelligent cause, again because "specificity and complexity" or 'high information content' constitutes a distinctive hallmark (or signature) of intelligence. Indeed, in all cases where we know the causal origin of "high information content," experience has shown that intelligent design played a causal role." (Meyer, DNA and Other Designs)

Consider the difference between rocks and computer software. Computer software has specified complexity, it is highly complex and matches a pattern -- it fulfills a function. The average rock is complex, but there is no pattern against which to test the complexity of rocks to see if it could have been designed by an intelligence. However, if you find a stone tool and the rock has a pattern corresponding to a comprehendible function, then you would infer design.

If Hume is correct, then if he were transported from the 18th century to today, having never seen a computer, and he found a computer program floating around, he would not have the philosophical right to say it is designed unless he had previously seen a programmer programming a computer.

Obviously Hume and Kant's objection is deficient.

Hume also argued that the analogy between human design and natural design is deficient. With Dembski's rigorous quantification of the information produced by design, it would appear that this analogy has been re-established: we can now look in the natural world for the exact sort of information that we recognized in human-made intelligently designed objects.

Science works based upon our empirical understanding of cause-and-effect relationships. As Meyer says, "Design theorists infer a past intelligent cause based upon present knowledge of cause and effect relationships." Thus, by understanding what designed objects look like, we can scientifically say something was designed.

In the end, however, it was not Hume who disposed of design arguments, but rather it was Darwin. People still argued for design, and were listened to by academics, after Hume. It was Darwin's flawed theological arguments that alleged sub-optimal design couldn't be created by a good, loving, God did more to convinced people that there was no design through his "dysteleological arguments" than anything else.

While Paley's arguments may have been dismissed by many in the past, that does not imply that his arguments were inherently wrong or that Paley's arguments might not be reinvigorated by new data which has come into view under the microscope in recent years. Neither Paley nor his critics knew about the full complexity of DNA, the cell, the flagellum, the eye, or a whole host of other biological entities. In fact, John Angus Campbell sees logically compelling reasons for why the ID movement has arisen in recent years to "resurrect" old design arguments:

> "As critics of ID are quick to point out, design arguments are not new. The basic insight on which such arguments rest is one side in an ancient philosophic controversy. That is, the complexity of the world, order, particularly as seen in the study of life, appears to have been produced by intelligence or mind rather than by self-sufficient material forces. In ancient times, Heraclitus, Empedocles, Democritus, and Anaximander upheld the self-sufficiency hypothesis, while Plato and Aristotle argued for mind.
>
> Why this argument should reemerge now is easy to understand. At a time when contemporary cosmology speaks of "anthropic fine-tuning" and biology seeks to understand the "code of life" and the design of "molecular machines," the rise of the design hypothesis is as appropriate to our time as were the ideas of "natural selection" and "survival of the fittest" to the period of capitalist expansion and industrialization during the middle-nineteenth century. "Information' and the nonmaterial products of intelligence are part of our daily speech, as is evident by our use of such terms as *software*, *programs*, *gigabytes*, or RAM and our questions about the "compatibility" of computers and printers.
>
> What is new about the theory of intelligent design is the shock it administers through its creative restatement in contemporary scientific terms, of an old and presumably extinct intellectual tradition."
> (John Angus Campbell, Professor and Director of Graduate Studies in the Dept of Communication at the University of Memphis in *Darwinism, Design, and Public Education*, pg. xii)

Whether the arguments behind intelligent design are new or old is irrelevant. What is relevant is that there is data supporting it, and the fact that many people--of both religious and non-religious persuasions--have begun to take it seriously only in the past decade, might show that the data is relatively new.