What are some observations that evolutionary biologists claim favor arbitrary similarities over linear speciation?

Gould also presents observations that are supposed to favor imperfect adaptation over (nearly) perfect adaptation. What are these?

Before concluding, it is worth emphasizing that Paley may not actually advocate the (nearly) perfectionist theory of intelligent design. For instance, in chapter 5 of *Natural Theology*, he does suggest that even if that watch found on the heath did not keep time perfectly, it would still be rational to conclude the existence of a watchmaker. Similarly, he maintains that imperfect adaptations need not rule out the existence of God. In this vein, Paley seems to adopt a much more minimal theory of intelligent design claiming that life has properties that are due to intelligent design.

If Paley means to defend this minimal form of intelligent design, what sort of problems might he face in claiming the surprise principle favors this theory over evolution?

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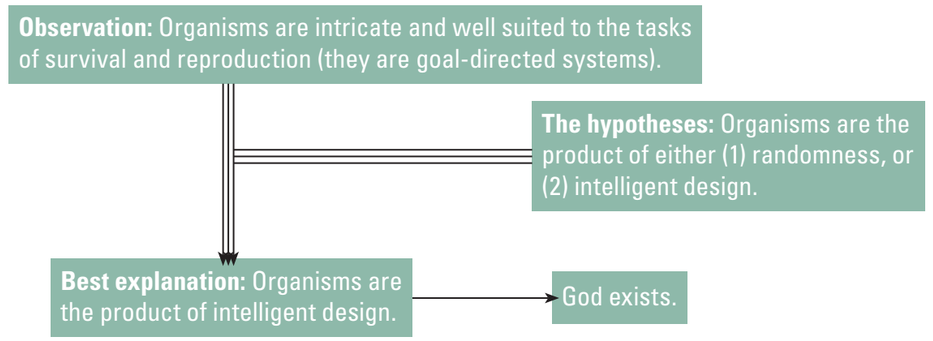
Introduction to Philosophy

Intelligent Design and Evolution

In his *Natural Theology*, William Paley presents a teleological proof of God's existence based on abduction. In particular, Paley's argument had the following structure:

1. It begins with an observation concerning biological organisms as goal-directed systems,
2. It formulates two hypotheses explaining this observation: the random hypothesis and the design hypothesis,
3. It appeals to the surprise principle to choose between these two hypotheses, and, finally,
4. It concludes that the design hypothesis is the best explanation, and that this intelligent designer of organisms is God.

This argument has the following diagram:



The strength of this argument comes from the surprise principle, which suggests that Paley's observation is less surprising when supposing the truth of the theory of intelligent design than when supposing the truth of the random hypothesis. More generally, the surprise principle is defined as follows:

Surprise Principle: For two hypotheses H_1 and H_2, the observation O strongly favors H_1 over H_2, if and only if
If H_1 were true, you would expect O to be true (i.e., O would not be surprising).
If H_2 were true, you would expect O to be false (i.e., O would be surprising).

While this argument from design does avoid some of David Hume's criticisms against the analogical version of the teleological proof, its strength—like any form of abductive reasoning—depends crucially on two important things:

1.

2.

Indeed, this first point is relevant today, now that scientists propose an alternative to the random hypothesis:

The Theory of Evolution: Organisms are the product of a process of natural selection.

Even so, using the surprise principle to compare the theories of evolution and intelligent design with Paley's original observation, may still favor the design hypothesis. Why is that?

The American paleontologist and evolutionary biologist Stephen Jay Gould (1941–2002 CE) is certainly aware of that looking at instances of perfect design favors the theory of intelligent design over evolution. In response to this, how does he propose that scientists should use abduction to

In order to carry this task out, it is necessary to specify both theories in more detail and how they are connected (or unconnected). To begin with, there are at least three different ways to understand the relationship between evolution and God:

Atheistic Evolution: There is no God. Evolution is sufficient to explain the features of organisms.

Theistic Evolution: God set the mindless processes of evolution into motion, but these processes are then sufficient to explain the features of organisms.

Intelligent Design: God set the mindless processes of evolution into motion, which in turn does explain some features of organisms. Even so, God does intervene directly on organisms to affect their features in ways that these mindless processes are incapable of doing.

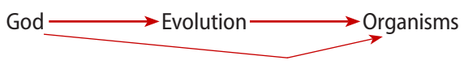
Based on these three options, is belief in evolution the same as atheism? That is, must an evolutionary biologist take a stand on whether God exists?

Is intelligent design compatible with atheistic and/or theistic evolution?

Intelligent design can be further separated into two theories:

The (Nearly) Perfectionist Theory of Intelligent Design: An intelligent designer created each species of organisms separately and made each of them (nearly) perfectly adapted to their environment.

The Minimal Theory of Intelligent Design: An intelligent designer is responsible for some features of each species of organisms.



The (nearly) perfectionist version is what most contemporary advocates of intelligent design have in mind.

The (nearly) perfectionist theory of intelligent design makes two concrete predictions about the natural world. That is, this theory claims that we should find observable evidence of the following:

Linear Speciation:

(Nearly) Perfect Adaptation:

In contrast to this form of intelligent design, there is the theory of evolution. This theory has two major components:

The Tree of Life (The "What" of Evolution):

Natural Selection (The "How" of Evolution):

These lead the theory of evolution to make two predictions of its own about the natural world:

Arbitrary Similarities:

Imperfect Adaptation:

Notice that the (nearly) perfectionist theory of intelligent design and the theory of evolution each makes predictions that are incompatible with the other theory. Therefore, we must sift through the observable evidence to see which theory best explains these observations (with the help of the surprise principle, of course).