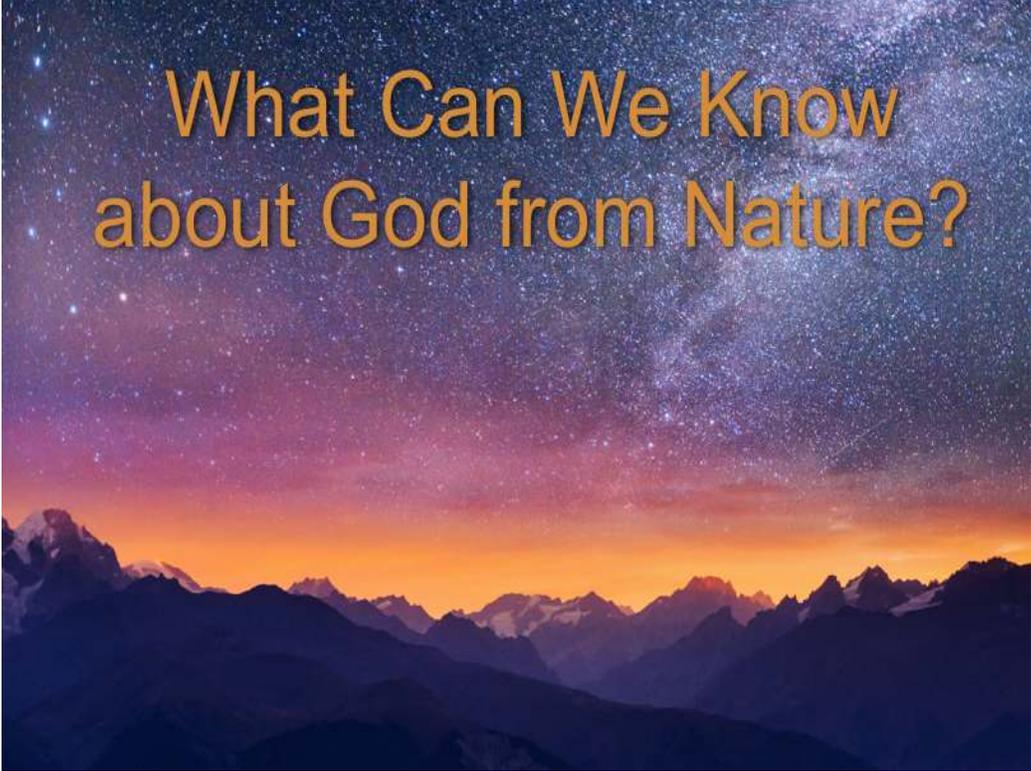


From the Catechism, paragraph 32 The world: starting from movement, becoming, contingency, and the world's order and beauty, one can come to a knowledge of God as the origin and the end of the universe.



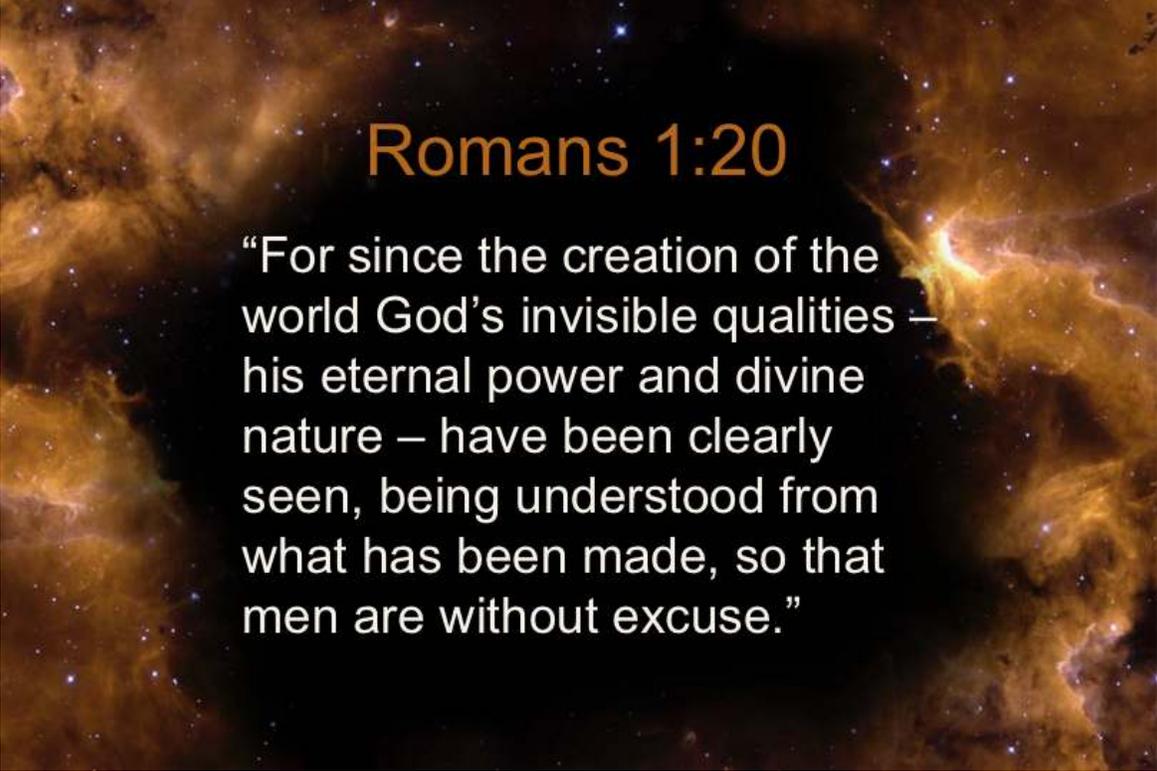
## What Can We Know about God from Nature?

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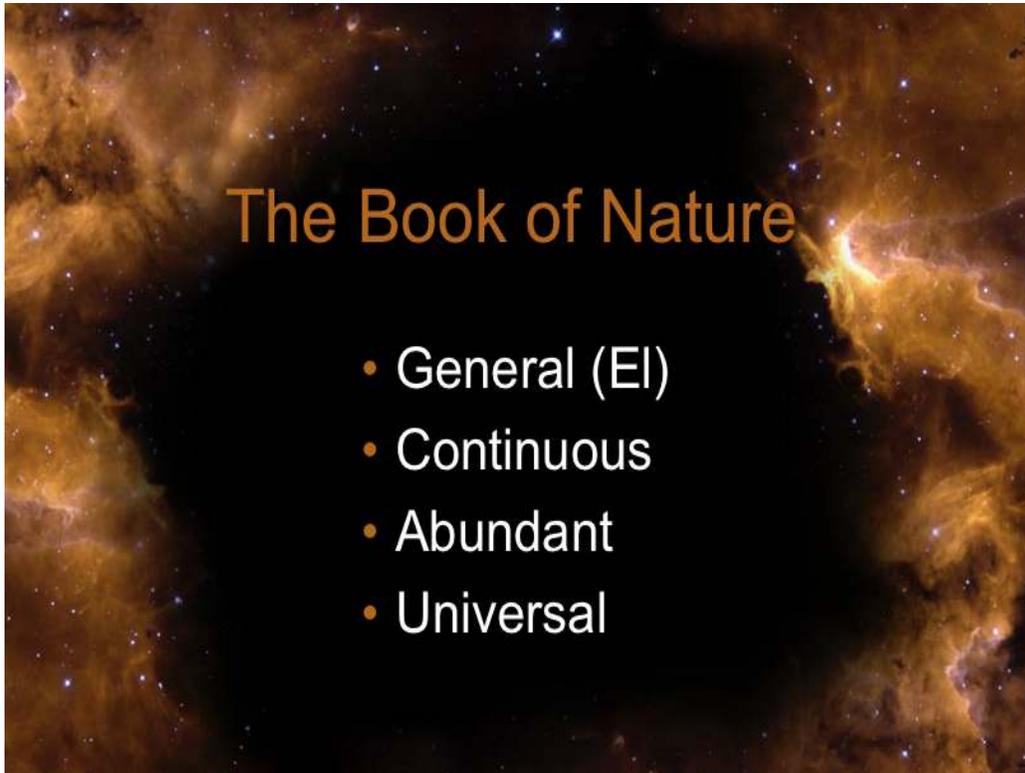
## Psalm 19:1-4

“The heavens declare the glory of God;  
The skies proclaim the work of his hands.  
Day after day they pour forth speech;  
Night after night they display knowledge.  
There is no speech or language  
Where their voice is not heard.  
Their voice goes out into all the earth,  
Their words to the ends of the world.”



## Romans 1:20

“For since the creation of the world God’s invisible qualities – his eternal power and divine nature – have been clearly seen, being understood from what has been made, so that men are without excuse.”

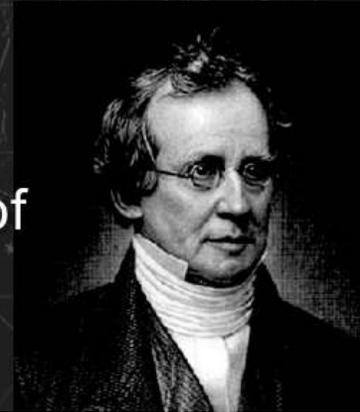


Catechism again: one can come to a knowledge of God as the origin and the end of the universe.

## God's Two "Books"

"Theology is properly distinguished as natural and revealed. The former is concerned with the facts of nature so far as they reveal God and our relation to him, and the latter with the facts of Scripture."

Charles Hodge





of the physical and natural world through  
observation and experiment.”

## Some Definitions

1. Science
2. Natural Science
3. The *Evidence* of Science
4. *Scientism*
5. Applied Materialism

Science is notoriously hard to define, and the meaning of the word has changed and narrowed with time.

William Whewell (1794-1866) first restricted the word “science” to natural science, even though he has been called the “last great natural philosopher.” In fact, in an interesting twist on a traditional formula, he called astronomy—which he revered—the “Queen of the Sciences.” Whewell was one of the most influential scientists in Victorian England. He was deeply influenced by the German philosopher Immanuel Kant.

But let's assume we can agree on some general definition of natural science like the OED. Science at its best gives us public evidence from nature. But we shouldn't confuse it with scientism, which makes the methods of science (whatever they are) the exclusive measure of reason and rationality. Science can be a source of knowledge without being our only source of knowledge.

Whereas scientism makes a claim about knowledge, materialism makes a claim about reality, or at least about what science must be (in the case of methodological naturalism).

Darwin—recognized the appearance of teleology/design, but sought to design in with an impersonal mechanism—apparent rather than real design. He was also important in establishing the idea that science was committed to materialist explanation.

# Key Features of Natural Science

- Based on public evidence from nature
- Theories can be tested
- Systematic
- Standard methods of reasoning
- Openness to nature



Del Ratzsch: We want our theories “to be put in empirical harm’s way.”

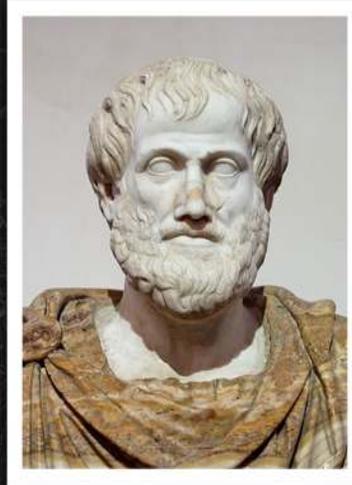
# Is There Scientific Evidence for Intelligent Design? What About Evidence of God?



There's no reason, in principle, that looking testing hypotheses against the evidence of nature should not be able to detect evidence ID, and so provide at least indirect evidence for theism. The only reason we assume that's not possible is because we've accepted a false division in our knowledge that we inherited from the early modern thinkers Bacon and Descartes. We define science in a way that excludes design and teleology, and then insist that science and theology are "non-overlapping magisteria." But there's no good reason to accept this narrow definition of science. It's an historical accident. Before explaining that, you need to understand the Thomistic synthesis that preceded the materialistic redefining of science.

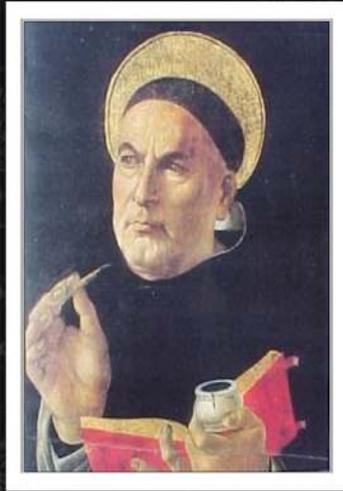
# Aristotle & the Four Causes

- Material
- Efficient
- Formal
- Final

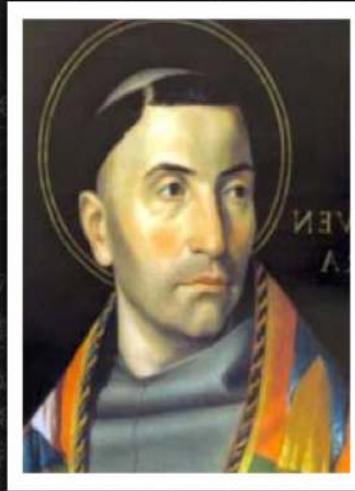


Aristotle's four causes: four positive factors that determine or explain something else: the material cause explains what something is made of; the efficient cause explains where something came from—who or what distinct thing produced or moved it; the formal cause explains what something is; and the final cause explains the ultimate purpose toward which something tends.

## The Causes Expanded



St. Thomas



St. Bonaventure

There was an intense debate among Christian scholars in the Middle Ages when Aristotle's writings became widely available, concerning the compatibility of Aristotle's writings with Christian theology. After the controversy died down, there were Catholic thinkers who inclined more toward Aristotelianism, and others who inclined more toward the Neo-Platonism of Augustine and the Church Fathers. But despite this diversity, there were certain modifications of Aristotle on which all orthodox scholars agreed. In particular, there were two related issues. The first was that the world was created and was not eternal as Aristotle thought (though there was disagreement as to whether this could be shown philosophically). The second concerned the expansion of Aristotle's four categories.

The Neo-Platonists, as well as medieval theologians such as St. Thomas and St. Bonaventure, enriched Aristotle's account by including exemplar causes—divine ideas that corresponded to the forms in created objects. This distinction made the causes more explicitly theistic. Neo-Platonists had spoken in terms of six causes--material, efficient, instrumental, formal, exemplar or paradigmatic, and final. St. Bonaventure (who was the Thomas Aquinas of the Franciscans) insisted that Christian theology required a doctrine of exemplars to prevent Christian Aristotelianism from collapsing into naturalism, and he criticized some whom he thought had conceded too much to Aristotle. With this expansion of Aristotle's categories, the "form" *in* a created object is

understood to be a reflection of the corresponding idea or exemplar in the mind of God. So objects have both an intrinsic and an extrinsic principle of intelligibility, and all trace back, ultimately, to the mind and creative power of God.

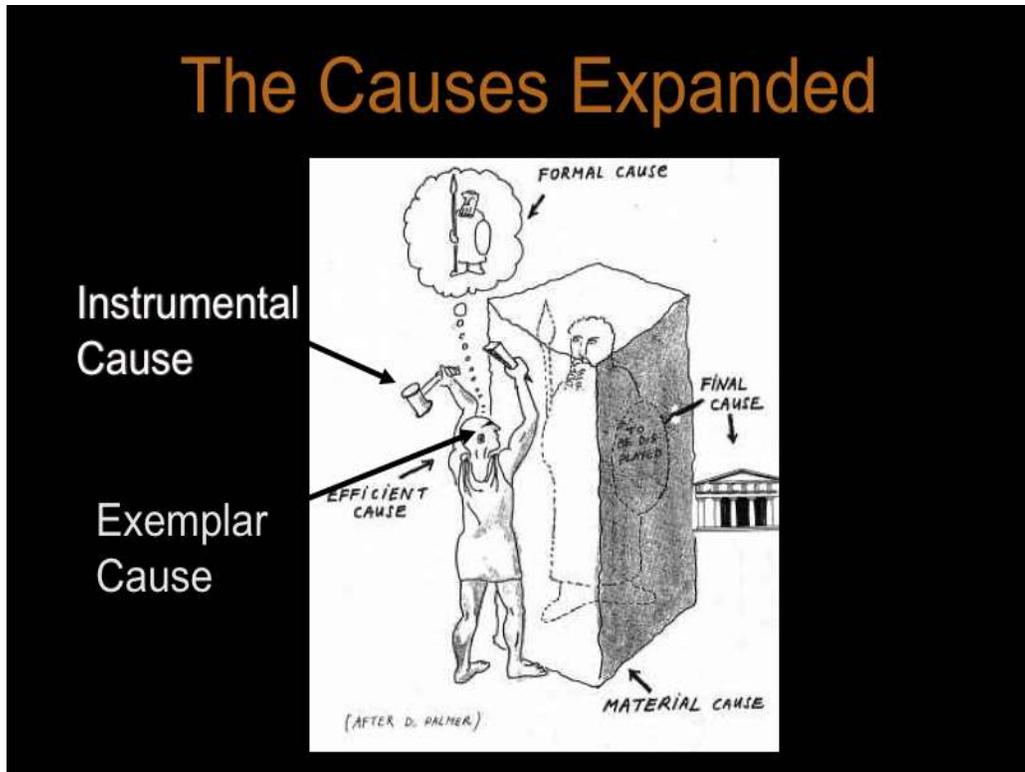
The distinction is important to remember for two reasons.

First, it often drops out in later discussions. The form in the mind of God, and in created objects, are often both referred to as “formal” causes without distinction. And in the Catholic Encyclopedia article on “cause,” the ideas in the mind of God are treated in the section discussing *final* cause. This is confusing, but it does make some sense. In practice, the formal, the exemplar, and final causes hang together, especially when understood theistically. God creates things that have forms, those forms are expressions of his ideas, and he creates these things for a purpose.

Second, there are some ID arguments in the pipeline, such as the Immaterial Genome by Richard Sternberg, that make explicit use of these causal categories.

<http://www.newadvent.org/cathen/03459a.htm>

# The Causes Expanded



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## Bacon/Descartes Divide Reality



- Material
- Efficient
- Formal
- Final



Descartes (1596-1650) and Francis Bacon (1561-1626) Descartes and Bacon banished formal and final causation (which explain, respectively, what something is and its purpose, or the end toward which it tends) from science for leading to dead ends and sterile explanations. Bacon continued to affirm that formal and final causes existed, while Descartes seemed to deny them altogether. In fact, Descartes departed so far from Aristotle's "qualitative" way of describing the natural world that he reduced matter to mere extension. This foreshadowed a tendency in modern science to reduce every material object to mere quantity.

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# Isaac Newton: Mechanism Based on Design



“Though these bodies may indeed continue in their orbits by the mere laws of gravity, yet they could by no means have at first derived the regular position of the orbits themselves from those laws. Thus, this most beautiful system of the sun, planets, and comets, could only proceed from the council and dominion of an intelligent and powerful Being.”

Not everyone agreed with Bacon and Newton’s banishment of formal and final causation, even when the Aristotelian framework had largely disappeared.

Quote from Newton’s General Scholium of the Principia

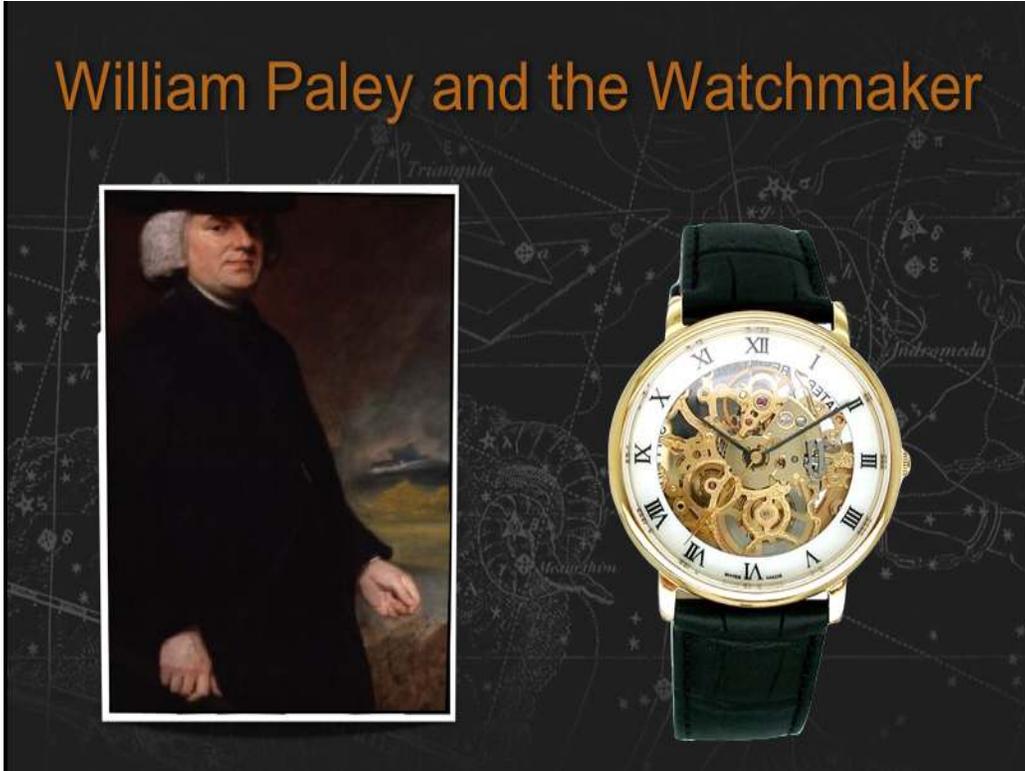
And in his *Opticks* (1704) Newton tried to persuade the Cartesians as best he could by appealing to the idea of ether through which rays of light could propagate. But in doing so, Gilson notes, he

gave as proof of it something which appears today to be a curious process of scientific reasoning. Speaking of those who denied his theory of a gravitational force, he reproached recent philosophers for banishing “the consideration of such a cause out of natural philosophy, feigning hypotheses for explaining all things mechanically, and referring other causes to metaphysics; whereas the main business of natural philosophy is to argue from phenomena without feigning hypotheses, and to deduce causes from effects, till we come to the very first cause, which certainly is not mechanical.”

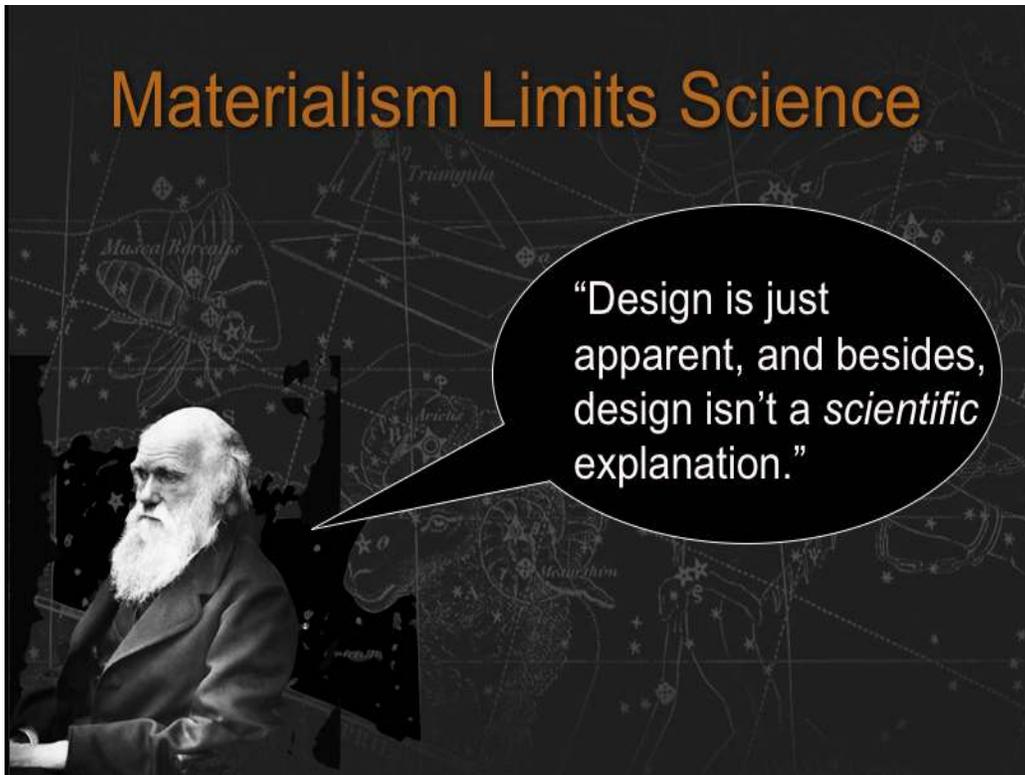
There follows then in Newton’s text a long series of questions that mechanist science leaves without answer, or in view of which, in order to find answers to them, the mechanists invent gratuitous explanations.

We see in Newton an attempt to retain the teleological elements in the earlier Scholastic synthesis, while nevertheless rejecting “Aristotelianism.”

## William Paley and the Watchmaker



Paley argued that just as you would recognize the contrivance of parts in a watch as pointing to a watchmaker, so too, all the contrivances in the biological world ought to lead you to conclude that there is a Grand Designer. Although Paley did write about the order of the cosmos, unlike some earlier thinkers, he focused primarily on the purposeful arrangement of parts in organisms, that is, a purposive sort of complexity.



Darwin—recognized the appearance of teleology/design, but sought to replace design in with an impersonal mechanism—apparent rather than real design. He was also important in establishing the idea that science was committed to materialist explanation. With Darwin, we got both scientism and (methodological) materialism.

Given the sterility and inadequacy of materialist explanation in science in the early 21<sup>st</sup> century, it's time to reconsider the Baconian and Cartesian attempt to divide reality for practical reasons. Even if it was an understandable reaction at the time, it seems to have been an overreaction. After all, the traditional causal categories still make a great deal

of intuitive sense, and we still use them as modes of explanation, even if the philosophical jargon is not commonly used.

## What is Intelligent Design?

- Claim: (At least) some features of nature are best explained as the result of intelligent agency.
- A search for tell-tale patterns in nature.
- Draws on public evidence of nature and uses standard modes of reasoning.
- A revival of formal/exemplar and final causation in science, in more rigorous and testable form.

ID arguments fall within the purview of natural science broadly (and justifiably) defined. But they do constitute a repudiation of the “strategy” devised by Bacon and Descartes. ID proponents, in effect, argue that the toolkit of modern natural science is too limited to account for relevant and observable phenomena within the natural world. If we want an adequate explanation, we need recourse to all the causes. The goal is to provide enough specificity to prevent formal/exemplar and final causation from being used “decadently.”

Concepts such as initial conditions, natural laws and physical constants are important in the current

context, as are distinctions such as order, complexity, specified complexity (of which irreducible complexity is one example), hierarchy, nested complexity, functional integration, and information.

## Is Evidence of Intelligent Design Evidence for God?



In isolation, a single piece of design within nature is evidence for God's existence surely, even if one can't deduce God's existence from, say, the design of the bacterial flagellum.

But, taken cumulatively, from physics, cosmology, origin of life, biology, the human person, etc., and combined with a cosmological argument, we can reasonably conclude that there is a Creator. We can't know everything about God from nature of course. But Scripture claims we *can* know that there is a Creator from nature. There has never been a time in history in which the heavens have more clearly proclaimed the glory of God, for those willing to hear it, and see it.



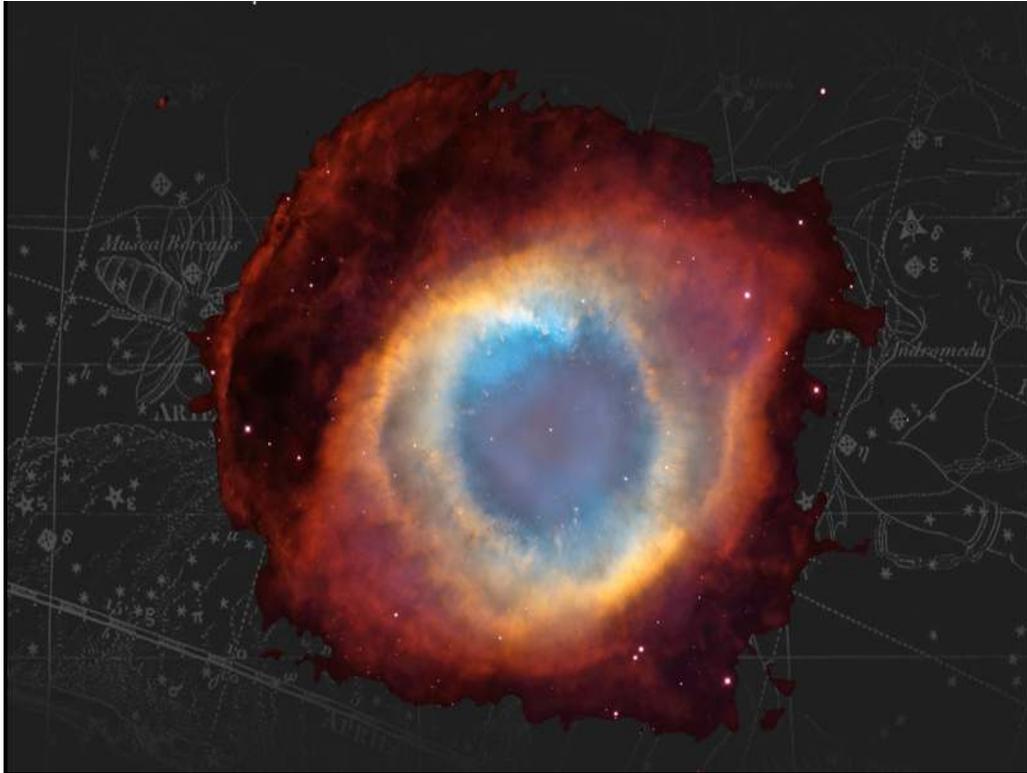
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