



THE DESIGN ARGUMENT: AQUINAS VS. PALEY

Richard G. Howe, Ph.D.

Provost

Norman L. Gelsler Chair of Christian Apologetics
Professor of Philosophy and Apologetics, Southern Evangelical Seminary



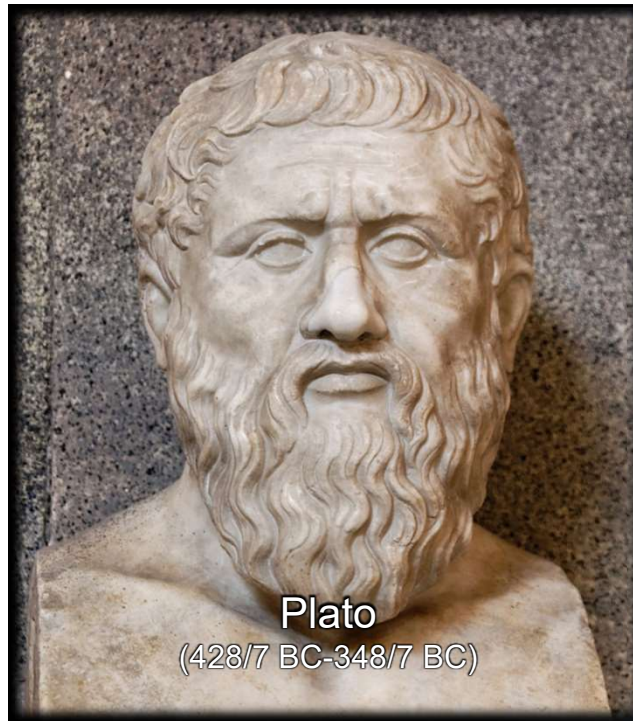
***The conclusion
directly stated ...***



Teleology:
goal directedness



τέλος (telos)
end, goal

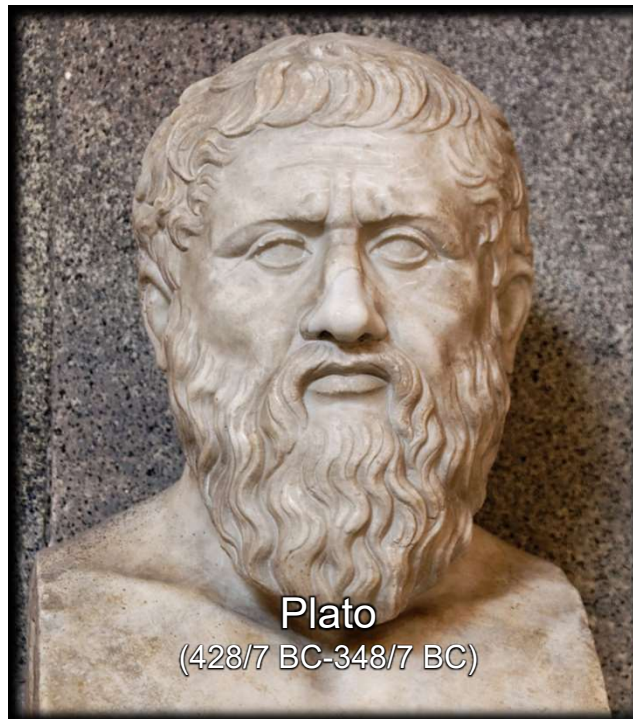


Plato
(428/7 BC-348/7 BC)

∞ Plato ∞

extrinsic teleology

things are directed toward their goal by something entirely extrinsic to (outside) the thing.

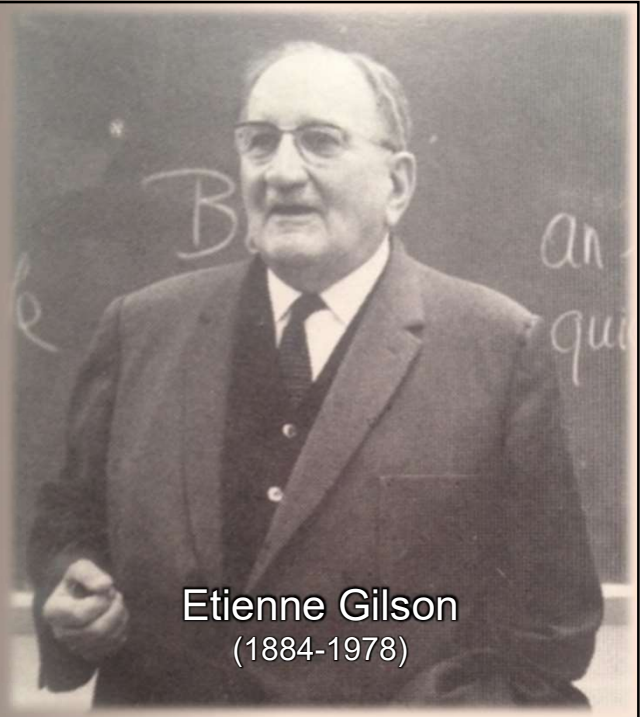


Plato
(428/7 BC-348/7 BC)

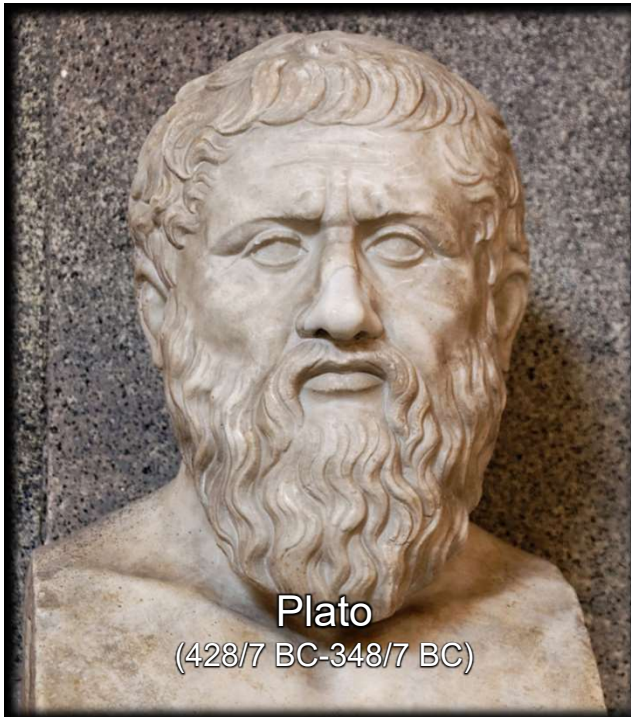
*"Now everything that becomes or is **created** must of necessity be **created** by some cause, for without a cause nothing can be **created**. The work of the **creator** (δημιουργός, dēmiourgos)"*

"It has become difficult for us to read Greek philosophers otherwise than through their mediaeval interpretations. No English translator of Plato will hesitate in calling the Demiurge of Plato a 'creator,' nor in designating his work as 'creation;' yet, even when a Christian theologian expressly invokes Plato's authority on this point, he is not at all speaking of the same things."

[Etienne Gilson, Preface to 1st ed. of *The Doctrine of Being in the Aristotelian Metaphysics* by Joseph Owens (Toronto: Pontifical Institute of Mediaeval Studies, 1978), vii]



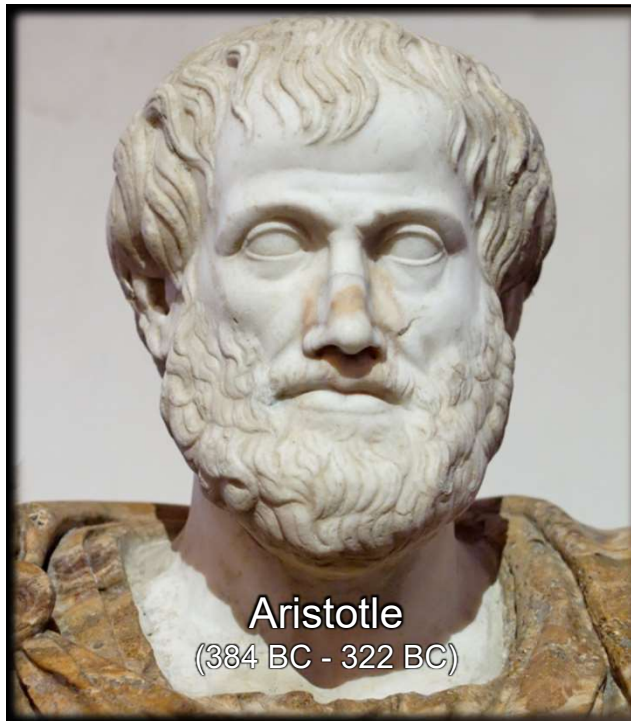
Etienne Gilson
(1884-1978)



Plato
(428/7 BC-348/7 BC)

*"Now everything that becomes or is **created** must of necessity be **created** by some cause, for without a cause nothing can be **created**. The work of the **creator** (δημιουργός, dēmiourgos), whenever he looks to the unchangeable and fashions the form and nature of his work after an unchangeable pattern, must necessarily be made fair and perfect, but when he looks to the created only and uses a created pattern, it is not fair or perfect."*

[Plato, *Timaeus*, 28a, trans. Benjamin Jowett in Edith Hamilton and Huntington Cairns, eds. *Plato: The Collected Dialogues* (Princeton: Princeton University Press, 1961), 1161]



Aristotle
(384 BC - 322 BC)

∞ Aristotle ∞

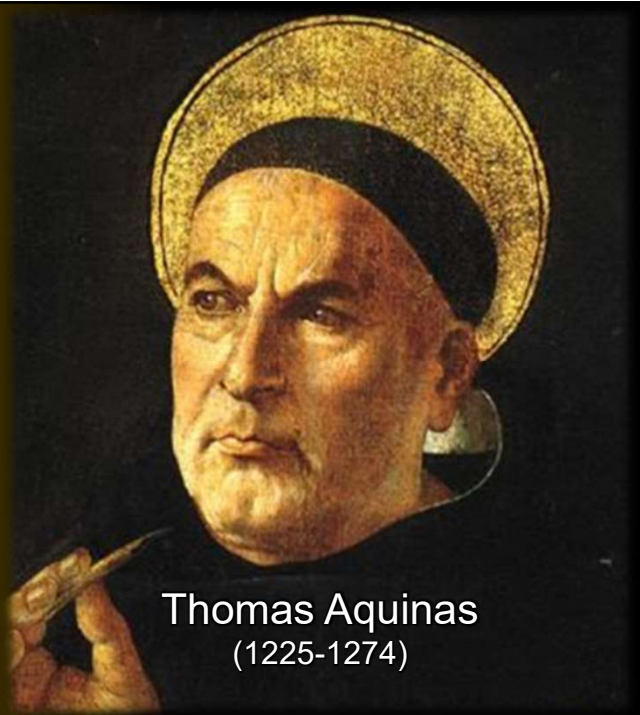
intrinsic teleology

things are directed
toward their goal by
something entirely
intrinsic to (inside)
the thing.

∞ Aquinas ∞

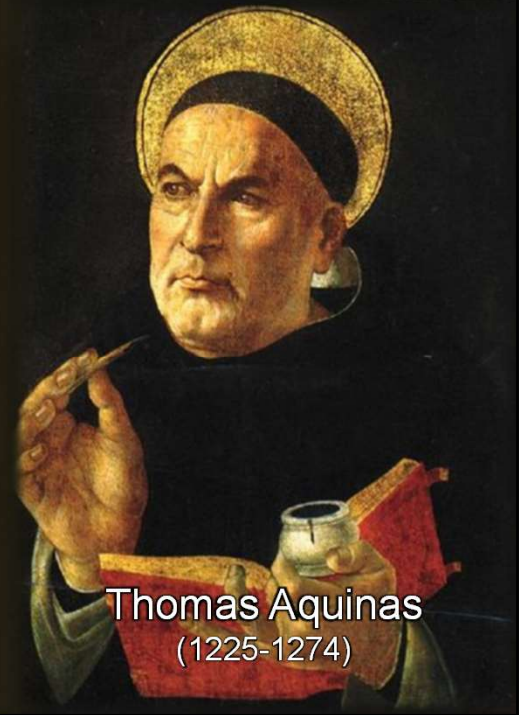
intrinsic / extrinsic teleology

things are directed
toward their goal by both
something intrinsic to
(inside) the things and
extrinsic to (outside)
the thing.



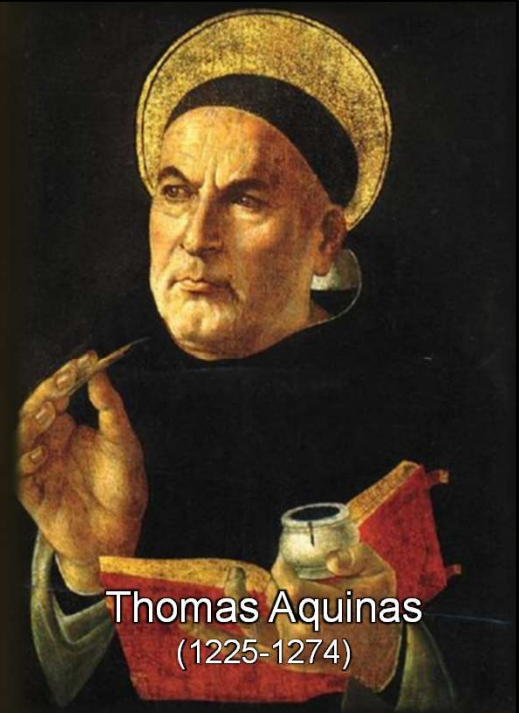
Thomas Aquinas
(1225-1274)

As an Argument for God's Existence



Thomas Aquinas
(1225-1274)

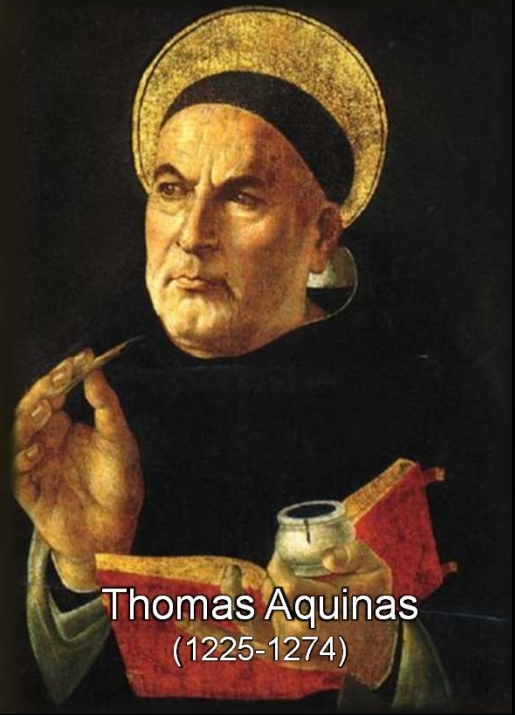
"We see that things which lack intelligence, such as natural bodies, act for an end, and this is evident from their acting always, or nearly always, in the same way, so as to obtain the best result. Hence it is plain that not fortuitously, but designedly, do they achieve their end."



Thomas Aquinas
(1225-1274)

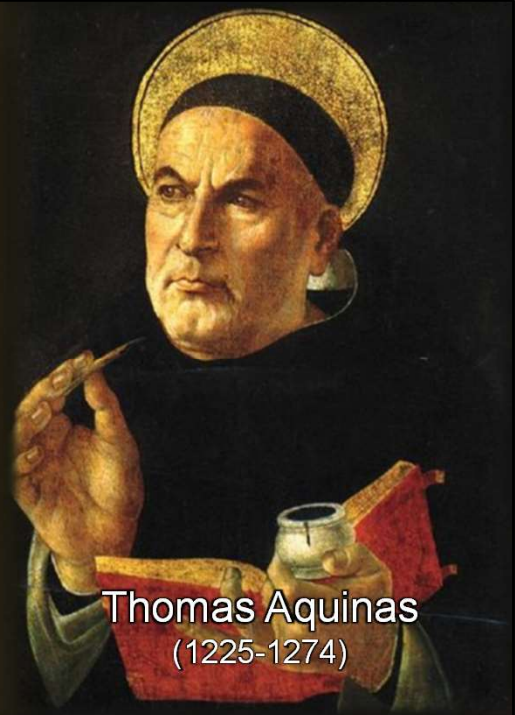
***"Now whatever lacks intelligence
cannot move toward an end,
unless it be directed by some
being endowed with knowledge
and intelligence; as the arrow is
shot to its mark by the archer.
Therefore some intelligent being
exists by whom all natural things
are directed to their end; and this
being we call God."***

[ST, Q2, art. 3, trans. Fathers of the English Dominican Province (Westminster: Christian Classics, 1981)]



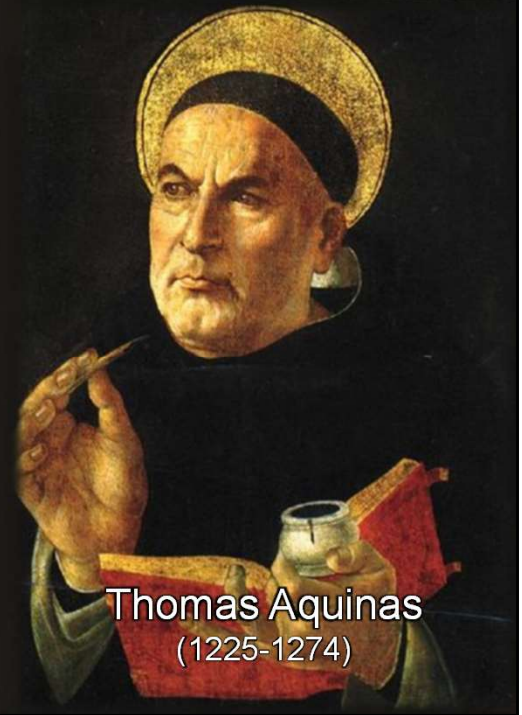
Thomas Aquinas
(1225-1274)

***As an Argument
for God's
Providence***



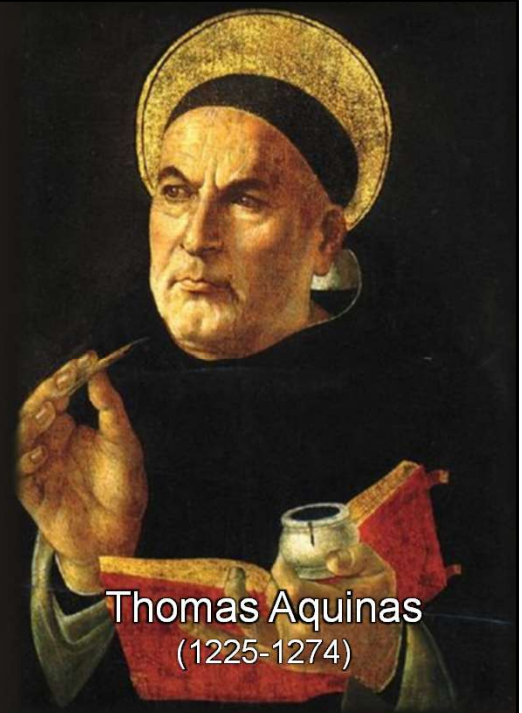
Thomas Aquinas
(1225-1274)

"The natural necessity inherent in those beings which are determined to a particular thing, is a kind of impression from God, directing them to their end;



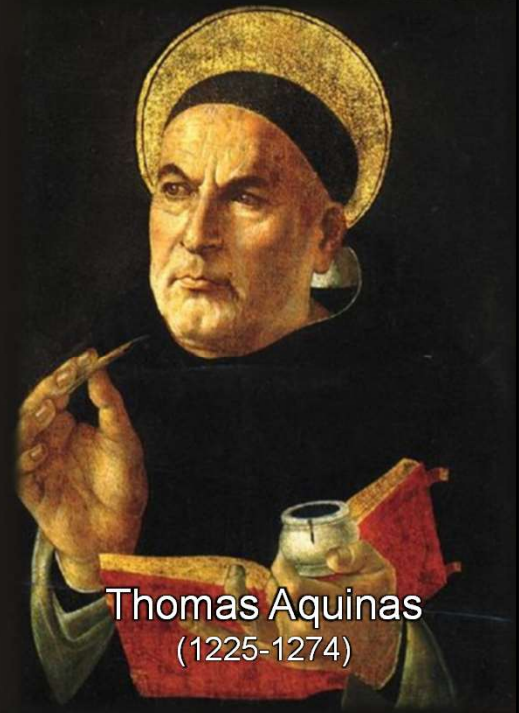
Thomas Aquinas
(1225-1274)

"as the necessity whereby an arrow is moved so as to fly towards a certain point is an impression from the archer, and not from the arrow.



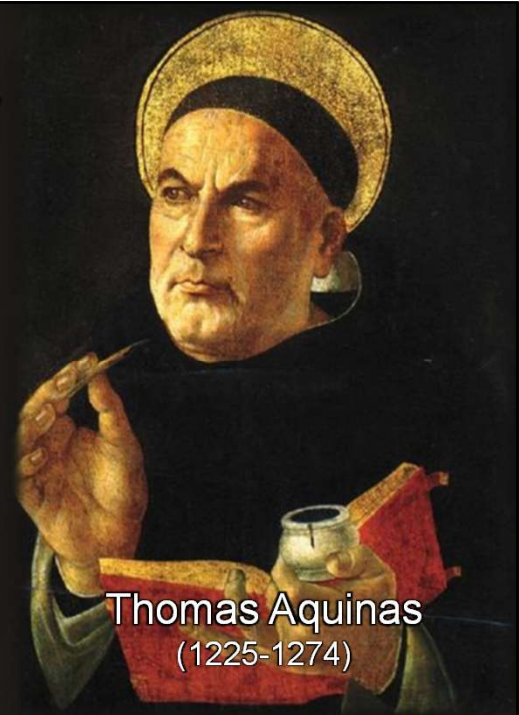
Thomas Aquinas
(1225-1274)

"But there is a difference, inasmuch as that which creatures receive from God is their nature, while that which natural things receive from man in addition to their nature is somewhat violent."



Thomas Aquinas
(1225-1274)

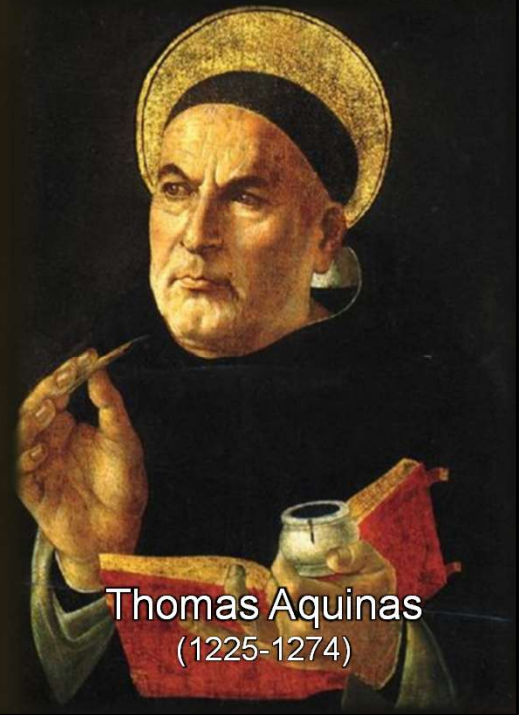
"Wherefore, as the violent necessity in the movement of the arrow shows the actions of the archer, so the natural necessity of things shows the government of Divine Providence."



Thomas Aquinas
(1225-1274)

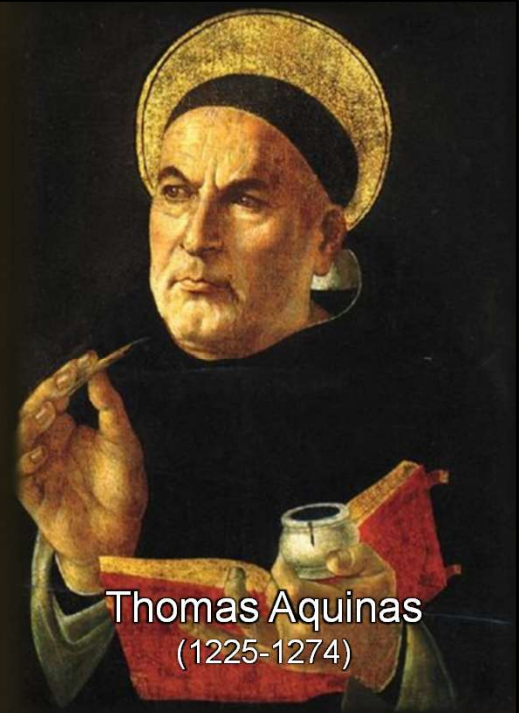
[STI, Q. 103, art. 1, ad. 3, trans. Fathers of the English Dominican Province]

***As an Argument
for God's
Knowledge of
Things Other
than Himself***



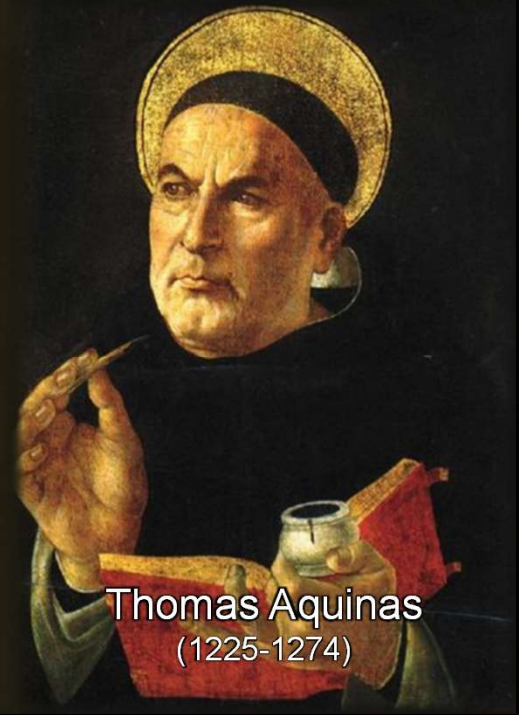
Thomas Aquinas
(1225-1274)

***"Whatever naturally
tends toward another
must have this tendency
from someone directing
it toward its end;
otherwise, it would tend
toward it merely by
chance."***



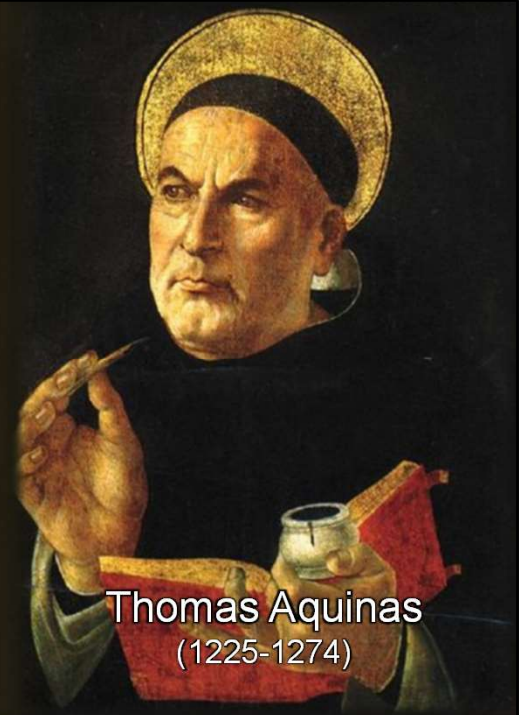
Thomas Aquinas
(1225-1274)

"Now, in the things of nature we find a natural appetite by which each and every things tends toward its end."



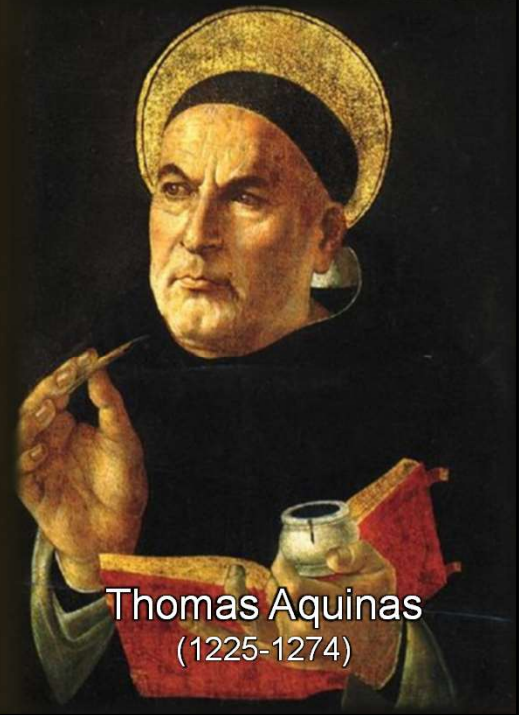
Thomas Aquinas
(1225-1274)

"Hence, we must affirm the existence of some intellect above natural things, which has ordained natural things to their end and implanted in them a natural appetite or inclination."



Thomas Aquinas
(1225-1274)

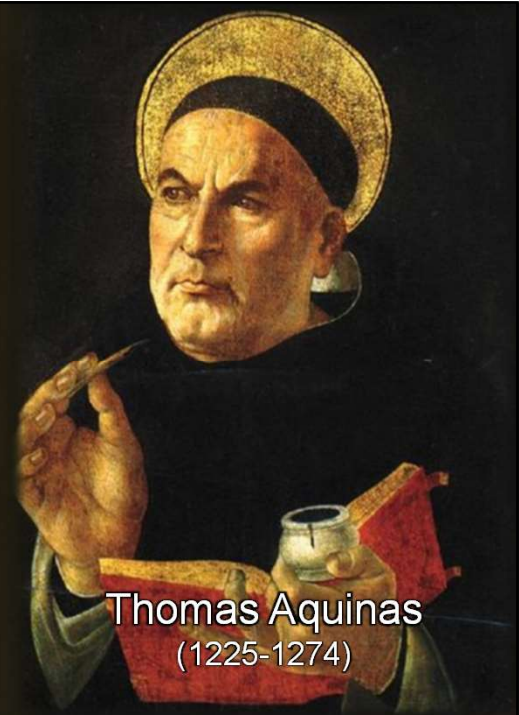
"But a thing cannot be ordained to any end unless the thing itself is known, together with the end to which it is ordained."



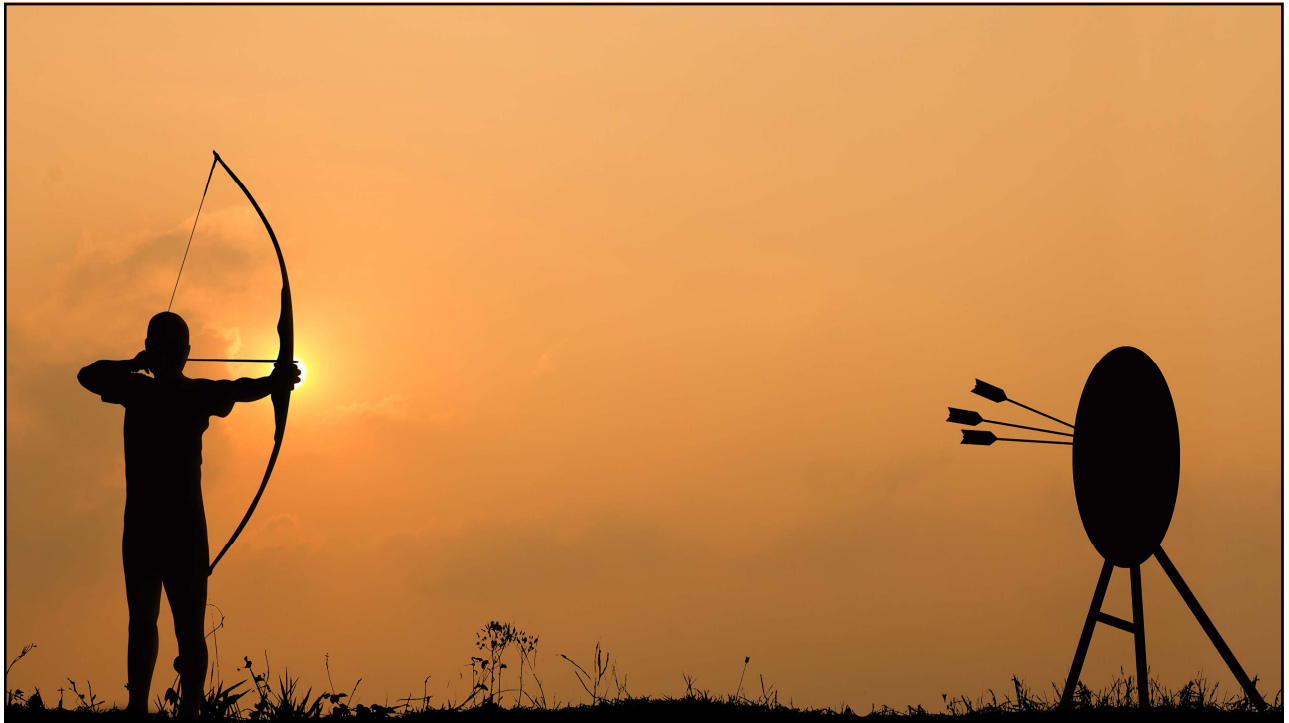
Thomas Aquinas
(1225-1274)

"Hence, there must be a knowledge of natural things in the divine intellect from which the origin and the order of nature come."

[*On Truth (de veritate)*, Q 2, art. 3, trans. Robert W. Mulligan (Indianapolis: Hackett, 1994), Vol. 1, p. 70]



Thomas Aquinas
(1225-1274)





∞ Some Issues Before Us ∞

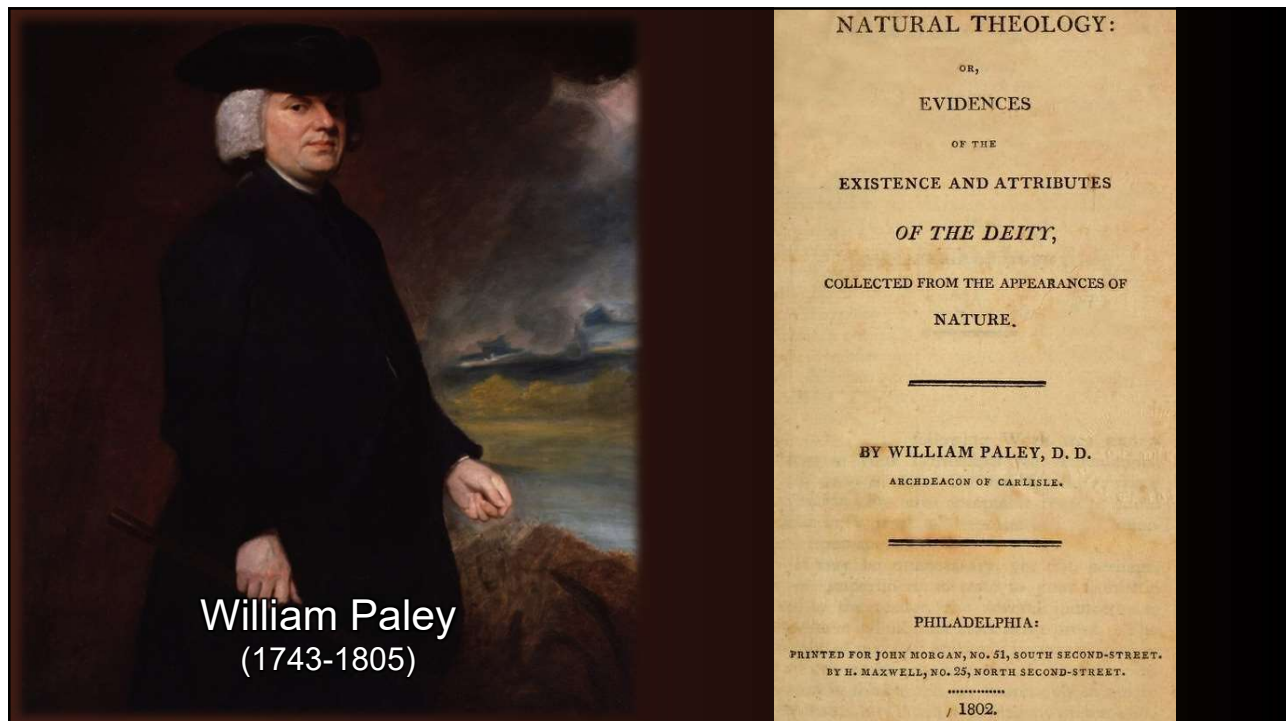
- ❖ *What is meant by 'design'?*
- ❖ *Why is the design argument sometimes called the teleological argument?*
- ❖ *Is there an important difference between the notion of teleology and the notion of design?*

❧ Some Issues Before Us ❧

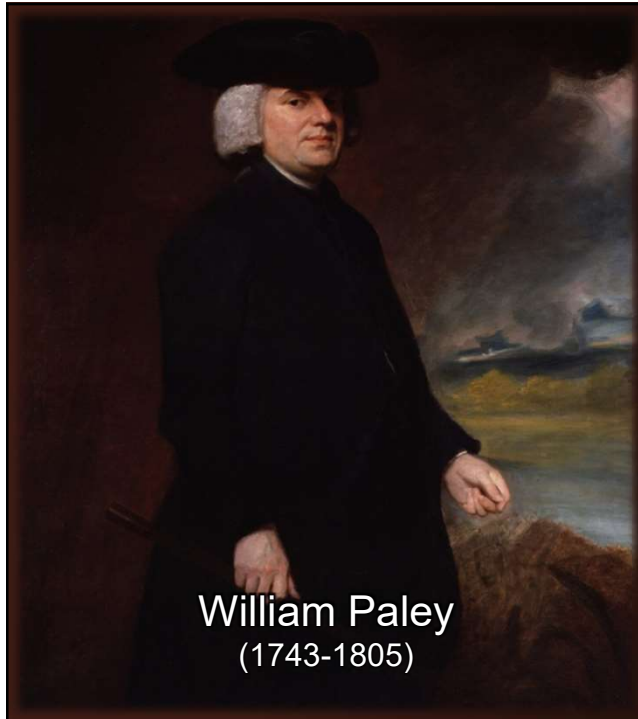
- ❖ *Exactly what is teleology?*
- ❖ *Don't arguments for God's existence from earlier centuries suffer from being tethered to an antiquated, invalidated, and obsolete science?*
- ❖ *Does an argument from design identify the designer as God?*

The modern design argument has been variously described as that argument (or corroborating evidence) that appeals to the presence of order, complexity, or purpose within the universe to support the conclusion that the universe (or some part within the universe) was created or otherwise fashioned by a mind, an intelligence, or God.

***The modern design argument
was pioneered by Rev.
William Paley (1743-1805) in
his work Natural Theology.***



**William Paley
(1743-1805)**

A portrait of William Paley, an English theologian, wearing a black academic or clerical robe and a black cap. He is standing against a dark, cloudy background.

William Paley
(1743-1805)

- ❖ English theologian
- ❖ Born in Peterborough
- ❖ Degree from Christ College, Cambridge
- ❖ Elected fellow of Christ College, 1766
- ❖ Lectured on metaphysics, morals, and the Greek New Testament
- ❖ Ordained a priest in 1767
- ❖ Became chancellor of Carlisle, 1789-1792
- ❖ Active opponent of the slave-trade

Paley bequeathed to subsequent generations of both protagonists and antagonists his now famous "watchmaker" example.

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 any thing 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 before given, that, for any thing I knew, the watch might have always been there.



Yet why should not this answer serve for the watch as well as for the stone? Why is it not as admissible in the second case, as in the first?



For this reason, and for no other, viz. 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; ...*



***Paley-like design arguments
have achieved quite a high
level of scientific
sophistication in recent
decades.***



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A Biochemical Watch Found in a Cellular Heath

By Dr. Fazale Rana

January 11, 2008




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Winding Up Paley's Watch, One More Time

By Dr. Fazale Rana

December 11, 2008

New Discovery adds to Evidence for Biochemical Design

When I was growing up, it was still common for people to have mechanical watches that had to be wound up periodically. Battery-powered, digital watches were a rare sight.

This week, I would like to return to the past and revisit an [earlier article](#) I wrote on biochemical evidence for intelligent design. This evidence centers on the discovery of a protein complex found in cyanobacteria that functions, literally, as a mechanical watch in both a structural and operational sense.

This watch regulates metabolic processes such as nitrogen fixation and photosynthesis as well as overall gene expression within the cyanobacterial cell in

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Biochemical Turing Machines "Reboot" the Watchmaker Argument

By Dr. Fazale Rana

May 1, 2012



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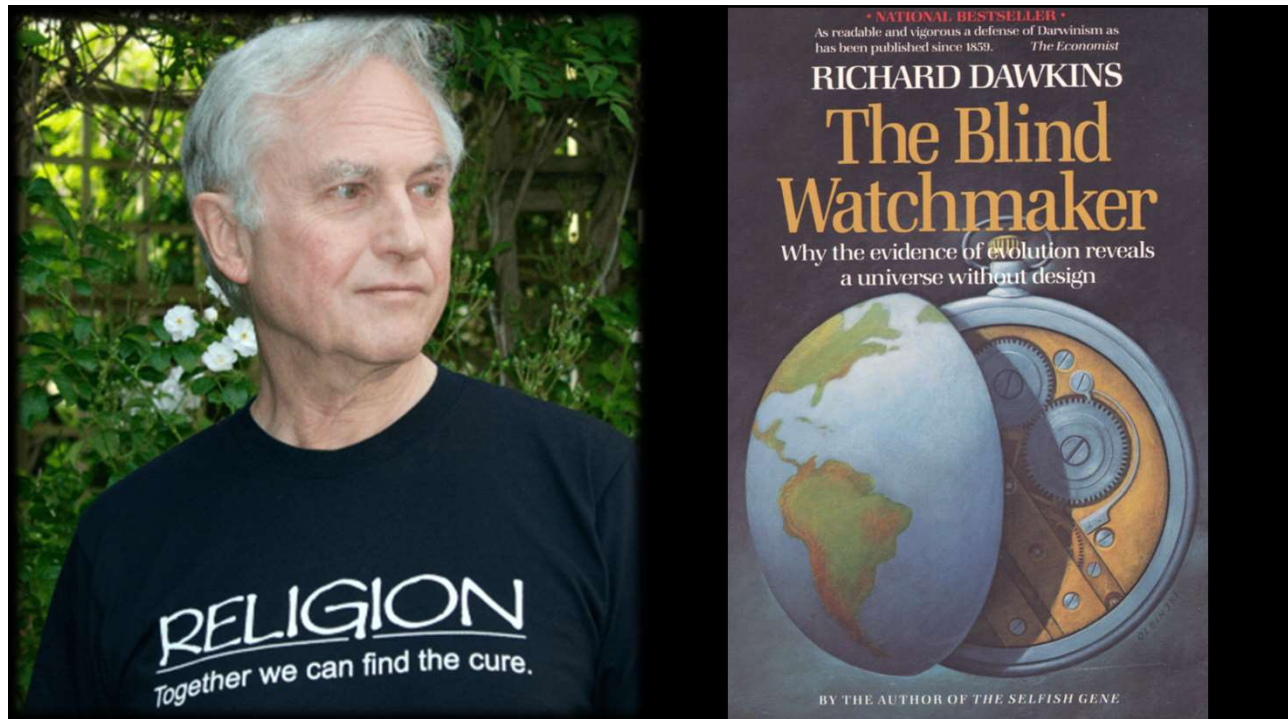
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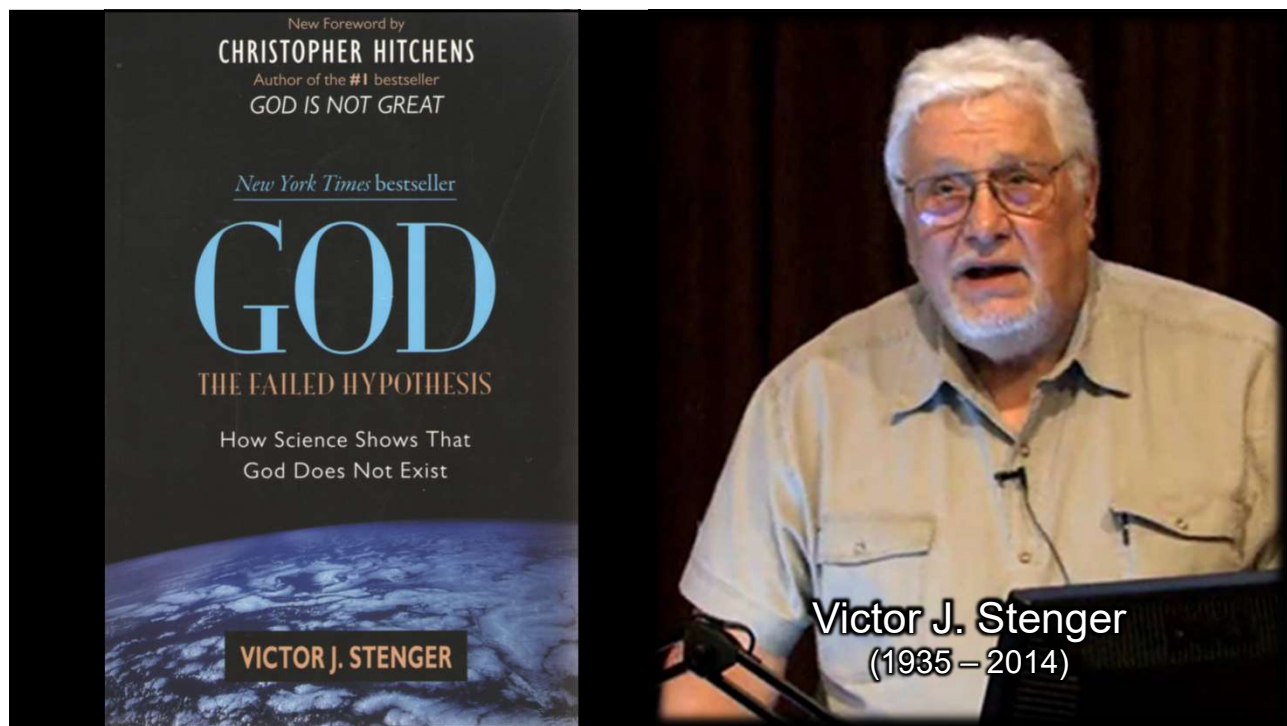


Shock: Darwinian Biologist Notices Evolution Is Irrelevant to Research

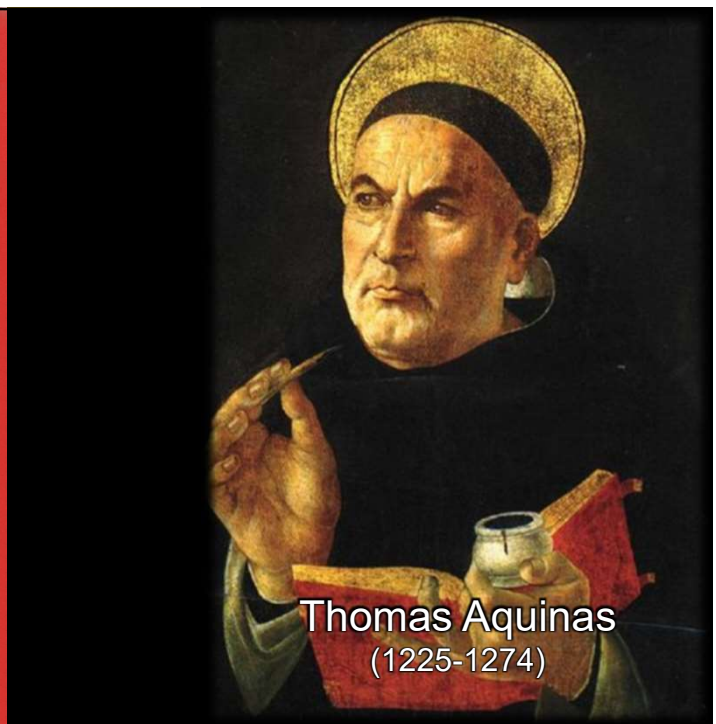
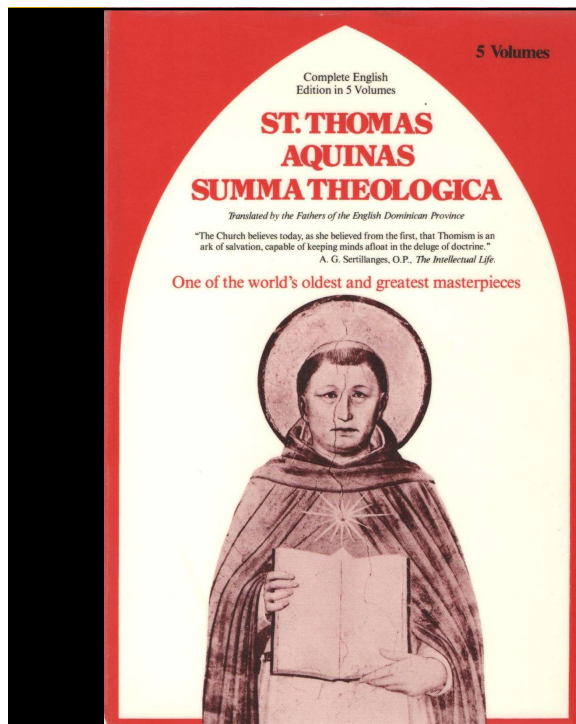
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The surge of scientific design arguments has not gone unnoticed by the critics.

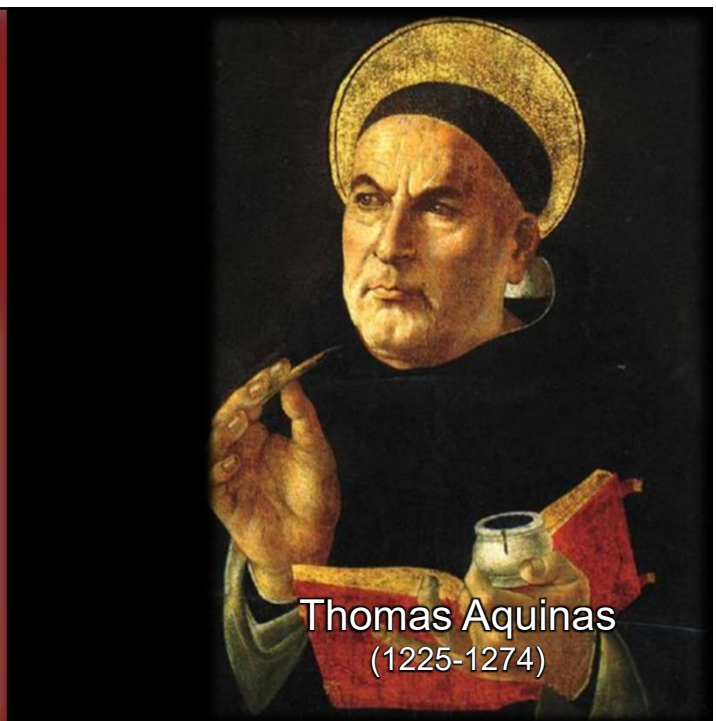




Sneaking closer to the topic at hand, some maintain that Paley's design argument was anticipated by Thomas Aquinas (1224/5-1274) in the fifth of his famous "Five Ways"—his five concise demonstrations for the existence of God found in his magnum opus Summa Theologiae.

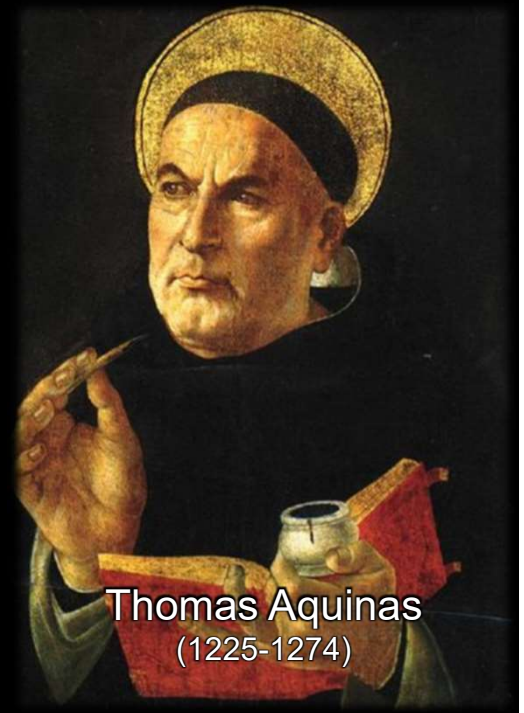


Thomas Aquinas
(1225-1274)



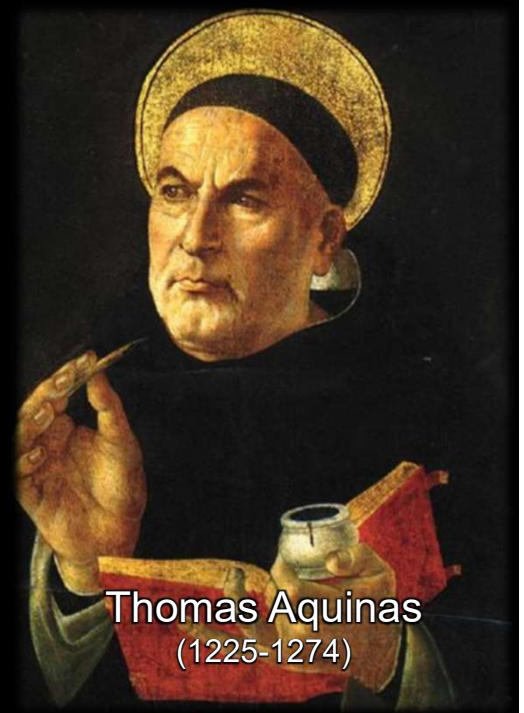
Thomas Aquinas
(1225-1274)

*We see that things
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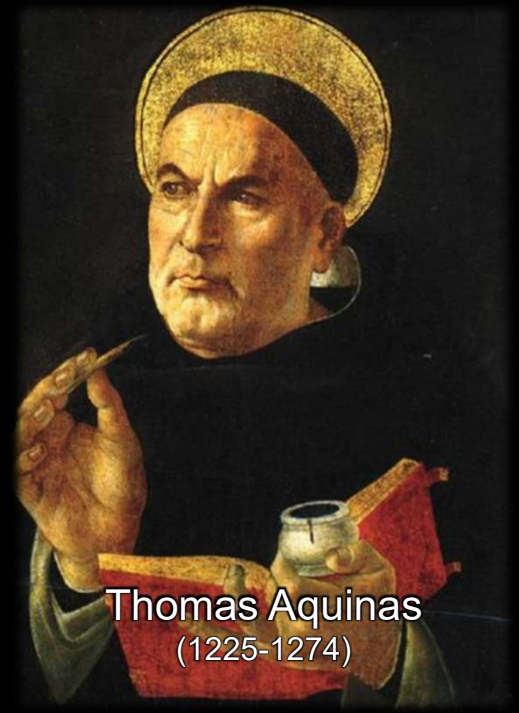
Thomas Aquinas
(1225-1274)

*Hence it is plain that
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Thomas Aquinas
(1225-1274)

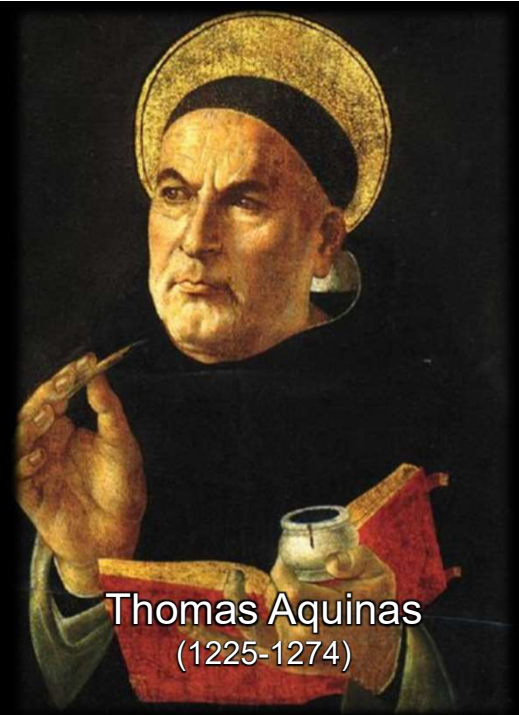
*Now whatever lacks
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Thomas Aquinas
(1225-1274)

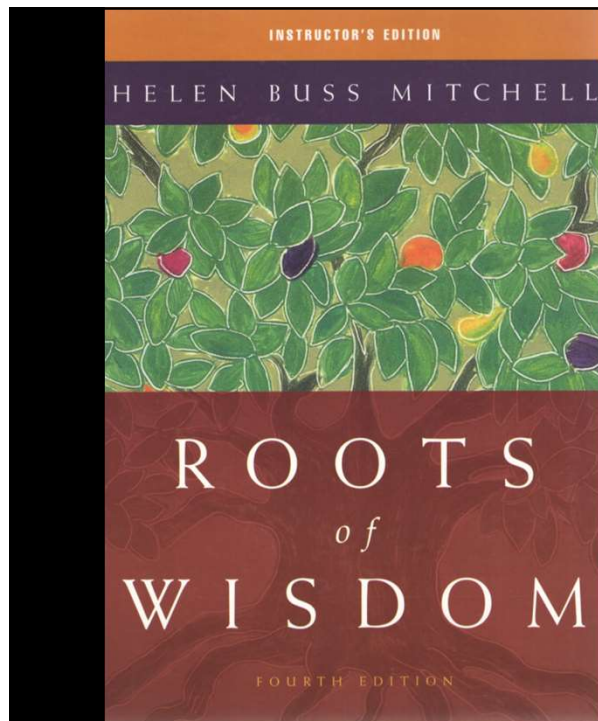
*Therefore some
intelligent being
exists by whom all
natural things are
directed to their end;
and this being we
call God."*

[*Summa Theologica*, I, 2, iii]

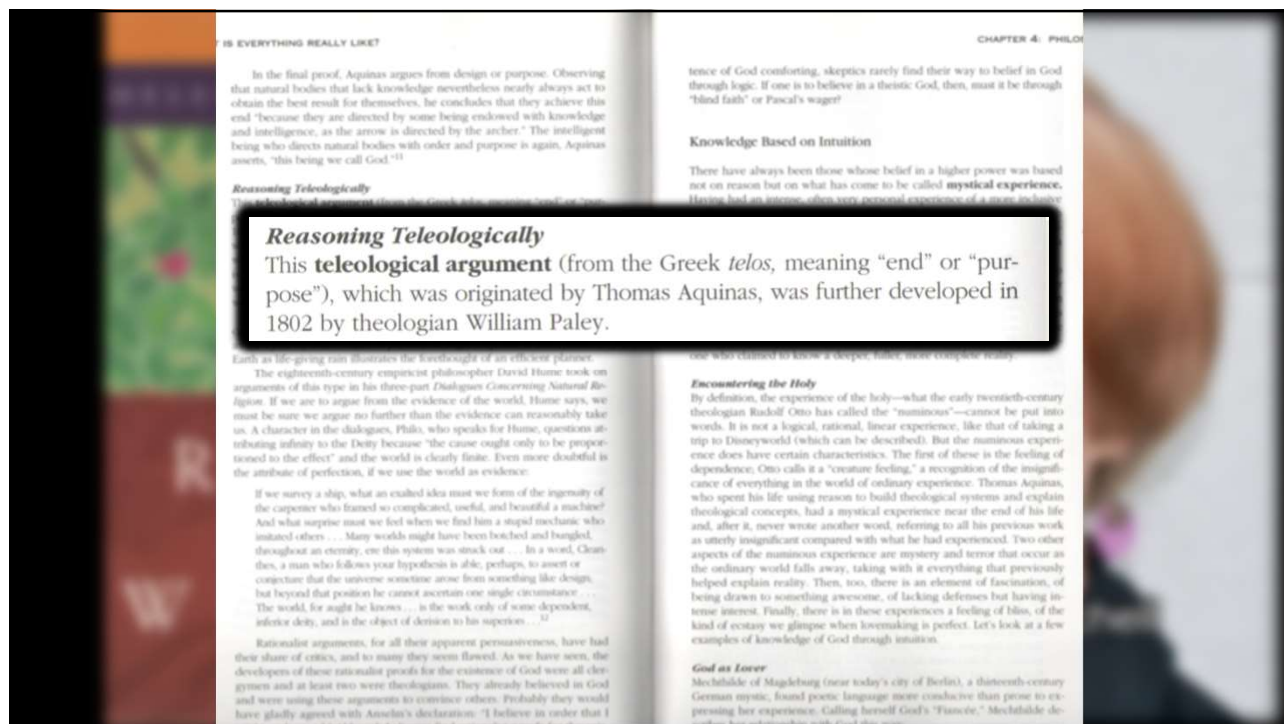


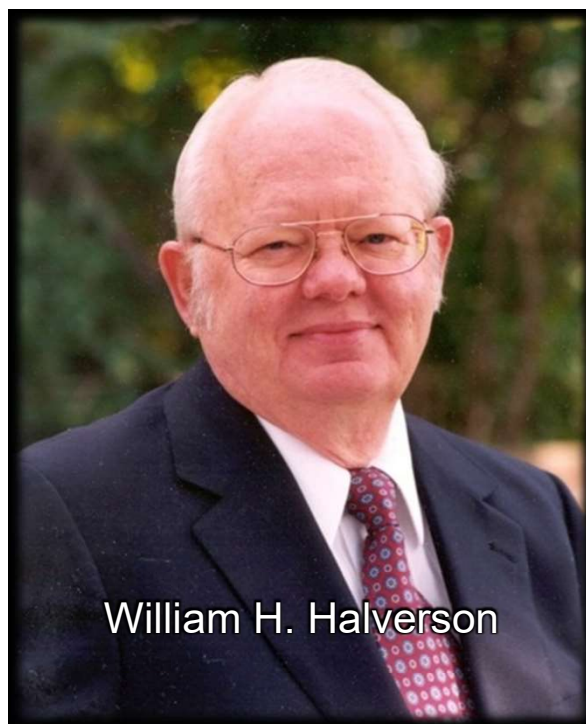
Thomas Aquinas
(1225-1274)

This equating (or at least connecting) Paley's and Aquinas's arguments is not uncommon in the philosophical, apologetical, and skeptical literature.



Helen Buss Mitchell

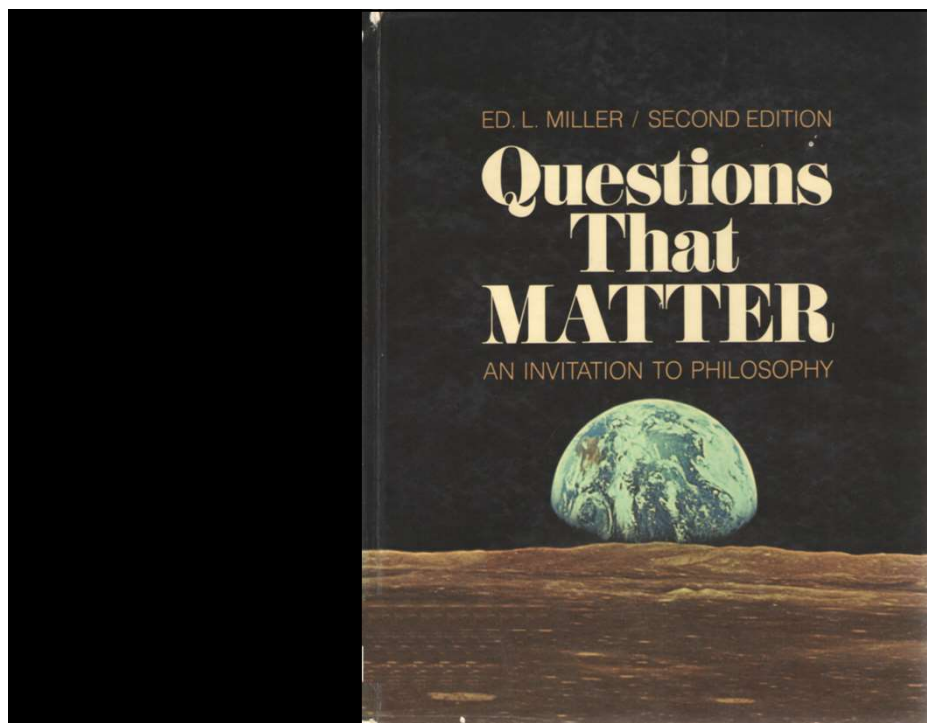




William H. Halverson

"The argument ... is commonly called the teleological argument ... Aquinas's fifth way is a version of this argument, but the 'classical' statement of the argument is in William Paley's *Evidences of the Existence and Attributes of the Deity*."

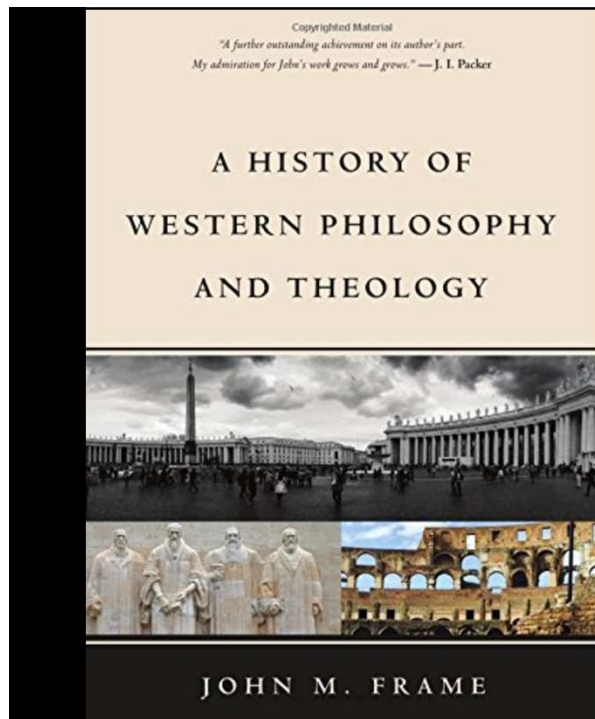
[*Questions that Matter: An Invitation to Philosophy* (New York: McGraw-Hill, 1987), 290, 291]



Ed. L. Miller

"**St. Thomas** listed [the design argument] as the **Fifth Way** One of the best-known, though now out-of-date, statements of this argument is provided by the Anglican divine **William Paley** ..."

[*Questions that Matter: An Invitation to Philosophy* (New York: McGraw-Hill, 1987), 290, 291]



"The fifth way, the *teleological*, is an argument that has remained popular since Aquinas's time, associated with apologists such as William Paley and F. R. Tennant. The contemporary 'intelligent design' movement of Phillip Johnson, William Dembski, Michael Behe, and others seeks to show that this argument survives the challenge of evolutionary theory."

[*A History of Western Philosophy and Theology* (Phillipsburg: P &R, 2015), 149]



John M. Frame

"This is Paley's Famous 'watchmaker' illustration of the teleological argument, which, we may recall, was the fifth of Aquinas's five ways of demonstrating the existence of God."

[*A History of Western Philosophy and Theology* (Phillipsburg: P &R, 2015), 239, emphasis in original]



John M. Frame

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Development of Design

By Krista Bontrager May 1, 2012

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Medieval scholar **St. Thomas Aquinas** (1225–1274) long ago laid the foundational ideas for the modern conception of the teleological argument:

The next step in the maturity of the teleological argument built on Aquinas' thought. Seventeenth and eighteenth century scholars such as **William Paley** (1743–1805) developed a more sophisticated version of design by incorporating the idea of analogy as a reliable indicator of intelligent design. Paley's Watchmaker argument is the quintessential example of this progression.

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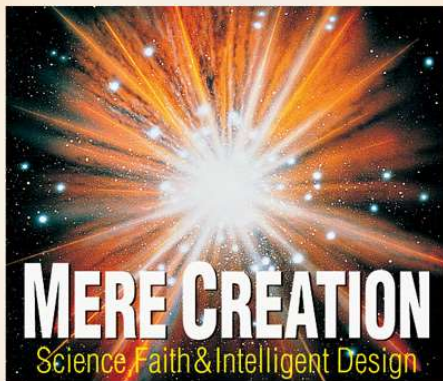
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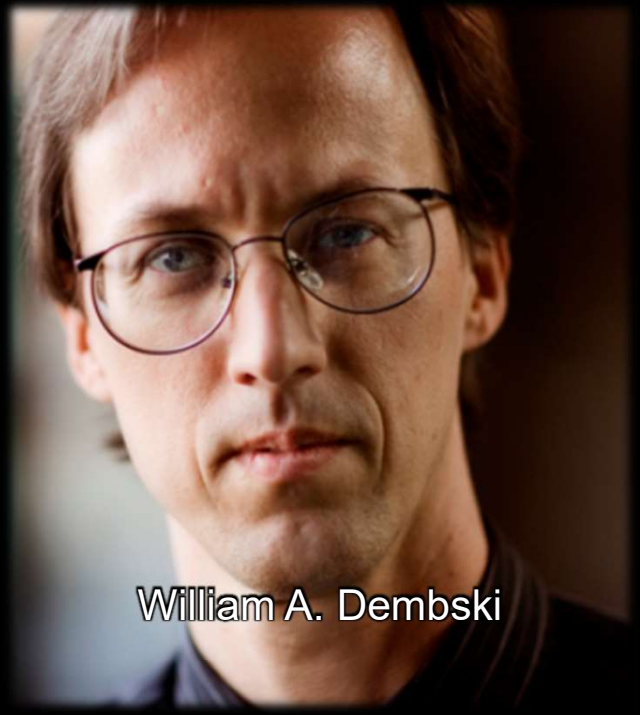
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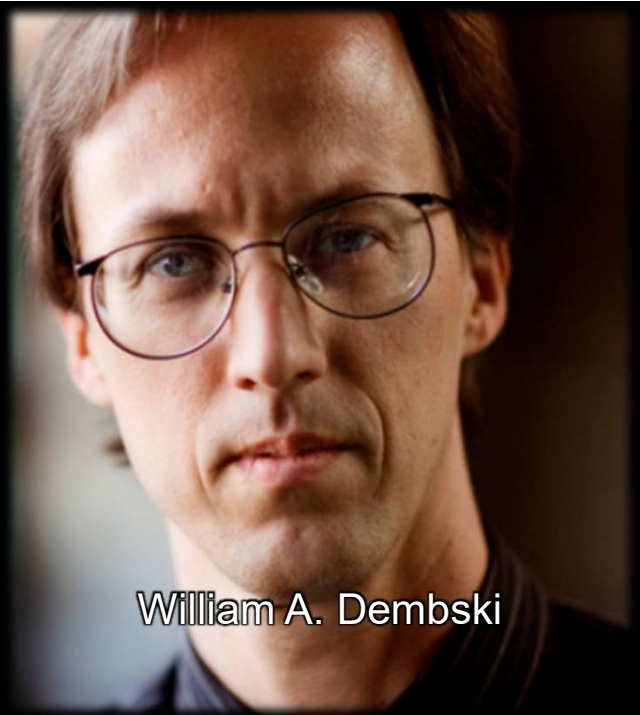
edited by
William A. Dembski



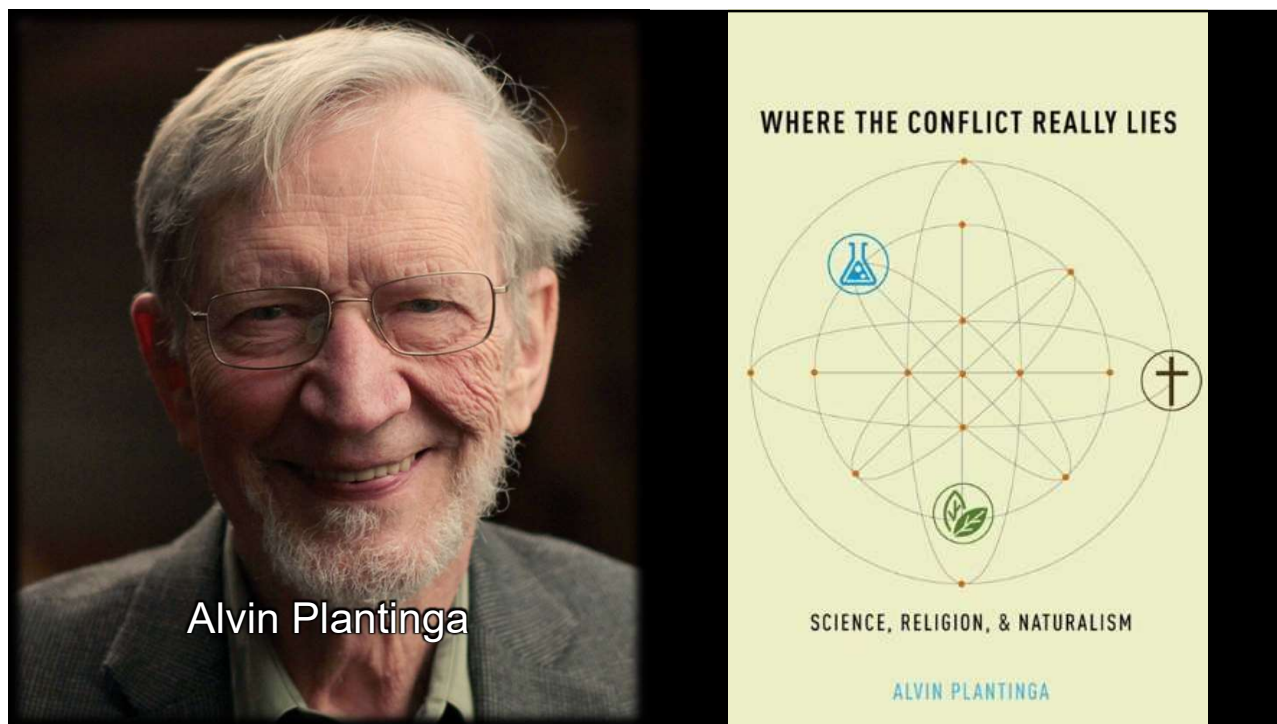
William A. Dembski

"From Church Fathers like Gregory of Nazianzus ... to medieval scholars like ... **Thomas Aquinas** ... to Reformed thinkers like ... Charles Hodge, we find theologians making design arguments. ... The most famous ... is **William Paley's watchmaker** argument."

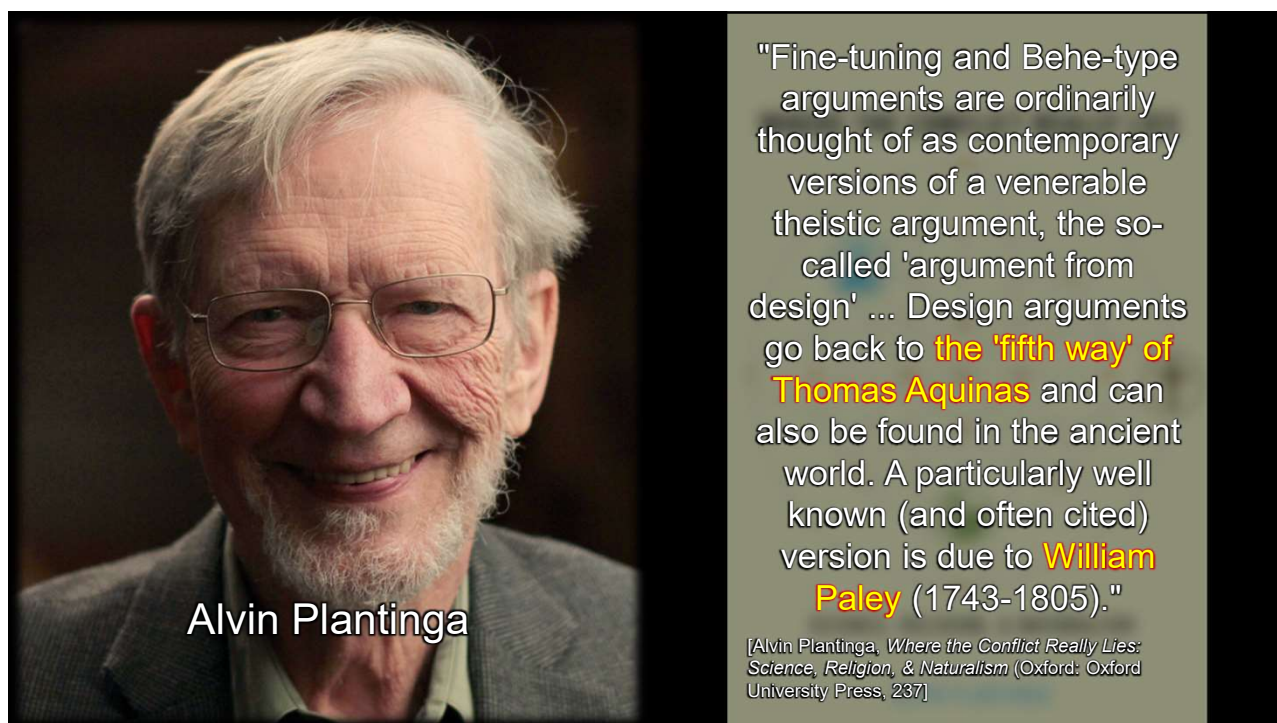
["Introduction: Mere Creation" in *Mere Creation: Science, Faith and Intelligent Design* (Downers Grove, InterVarsity, 1998), 16]



William A. Dembski



Alvin Plantinga



Alvin Plantinga

"Fine-tuning and Behe-type arguments are ordinarily thought of as contemporary versions of a venerable theistic argument, the so-called 'argument from design' ... Design arguments go back to the 'fifth way' of Thomas Aquinas and can also be found in the ancient world. A particularly well known (and often cited) version is due to William Paley (1743-1805)."

[Alvin Plantinga, *Where the Conflict Really Lies: Science, Religion, & Naturalism* (Oxford: Oxford University Press, 237)]



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Argument from design

“ It would *have* to mean that the designer of this plan was *unbelievably* lazy and inept, or *unbelievably* callous. And cruel. And indifferent. And capricious. And *that* is the case with every argument for design, and every argument for *revelation* and *intervention*, that has *ever* been made. ”

—Christopher Hitchens, on what by necessity follows from all arguments from design^[1]

The **argument from design**, also known as the **teleological argument**, is an argument for the existence of *God* (or life-

The divine comedy
Creationism

Running gags

- Biblical literalism
- Young/Old Earth
- Intelligent design
- Creation scientists

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Argument from design

It is equally an error to charge Paley with *plagiarism* on this count: he was writing about an opinion so widely known in his time that it was not necessary for him to disclaim originality; and it is not his fault that subsequent generations have tended to give him the credit for the argument. **Indeed the argument from design dates back at least as far as Thomas Aquinas.**

every argument for *revelation* and *intervention*, that has *ever* been made. ”

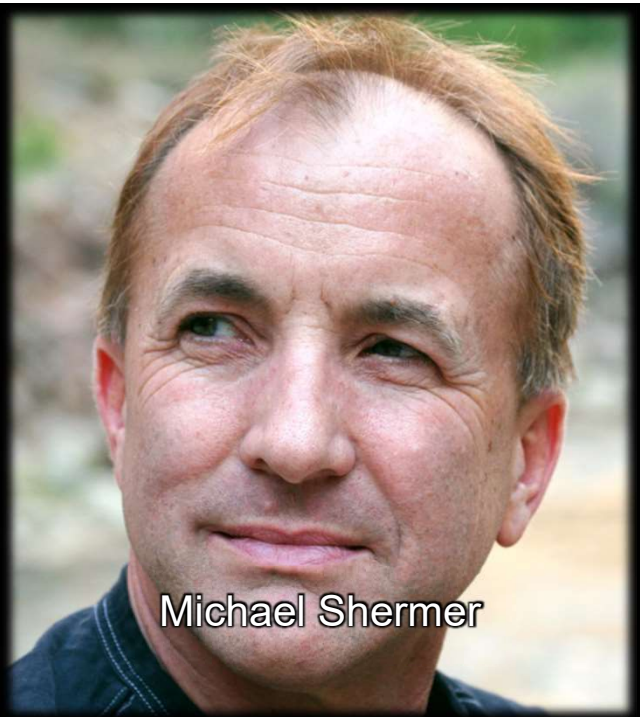
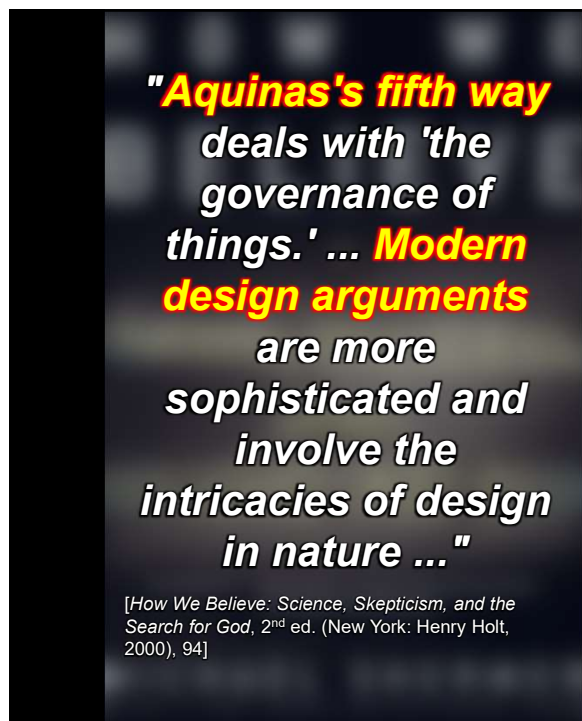
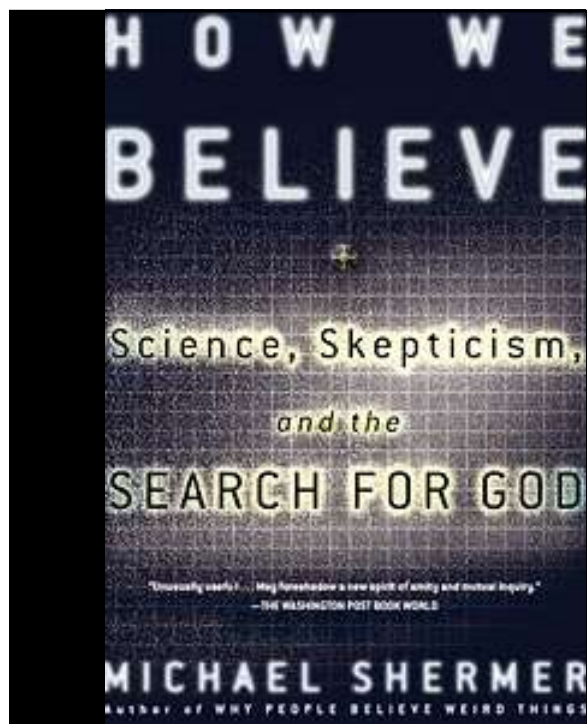
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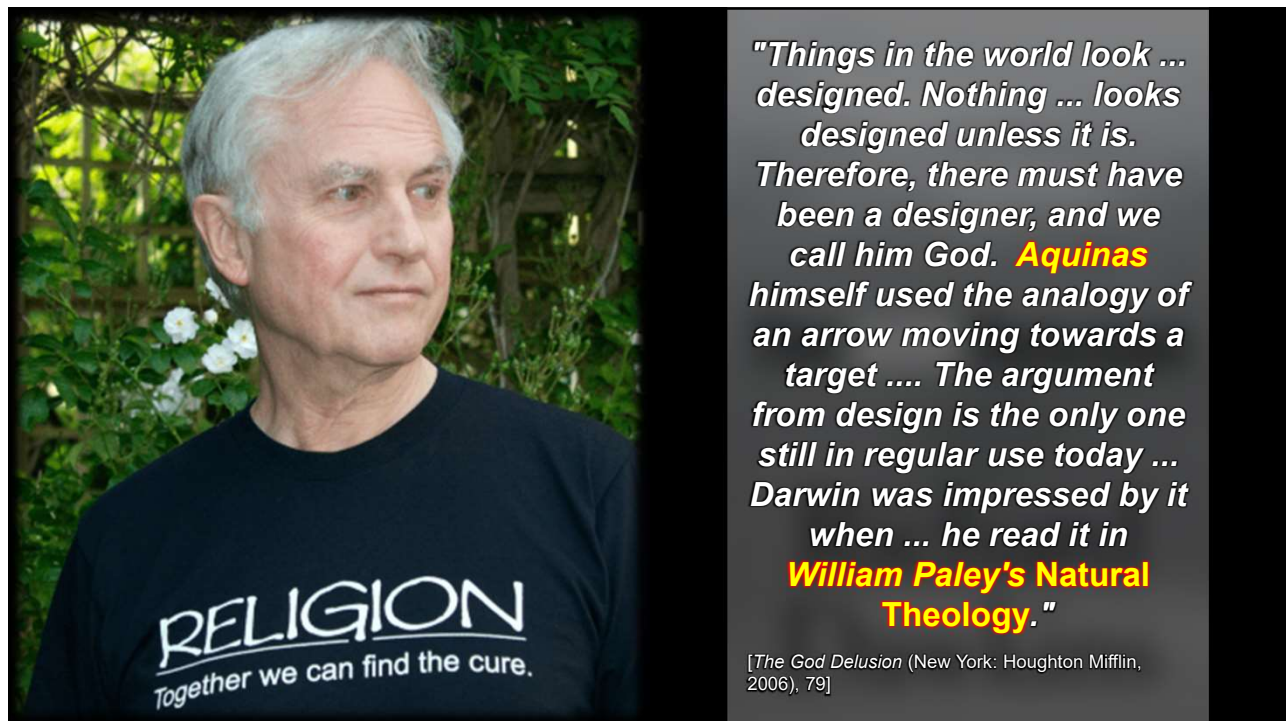
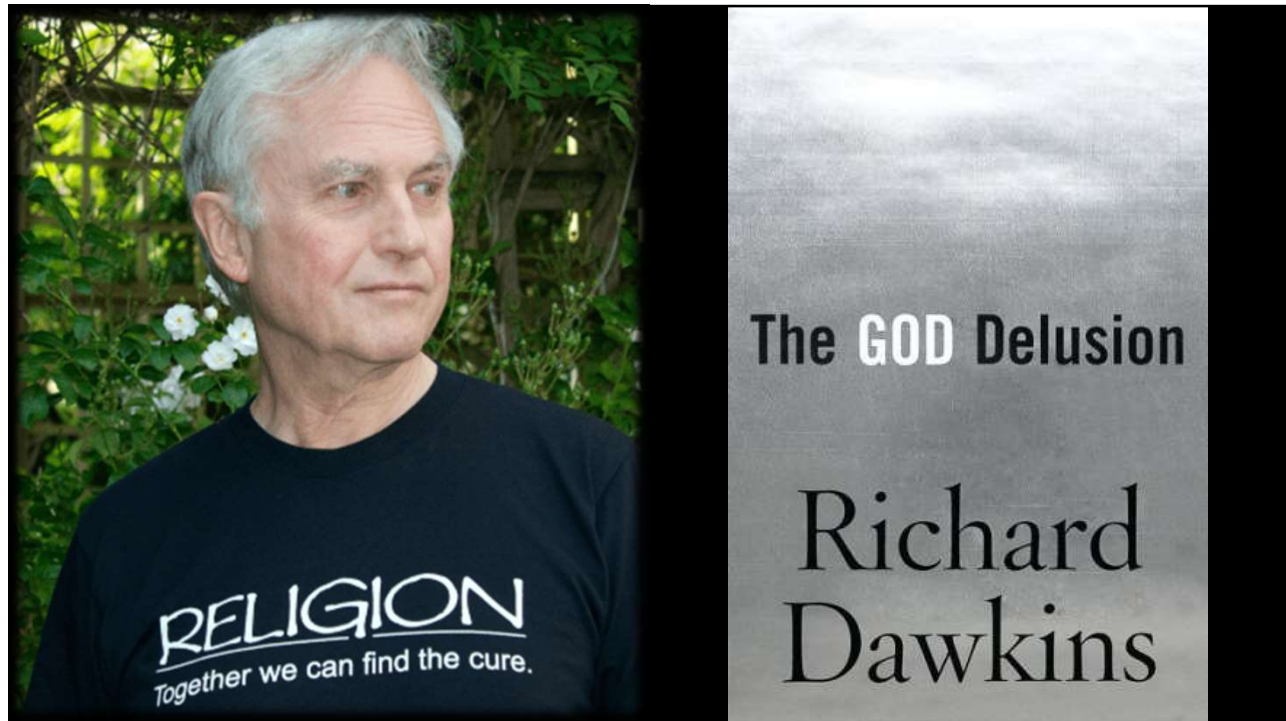
Running gags

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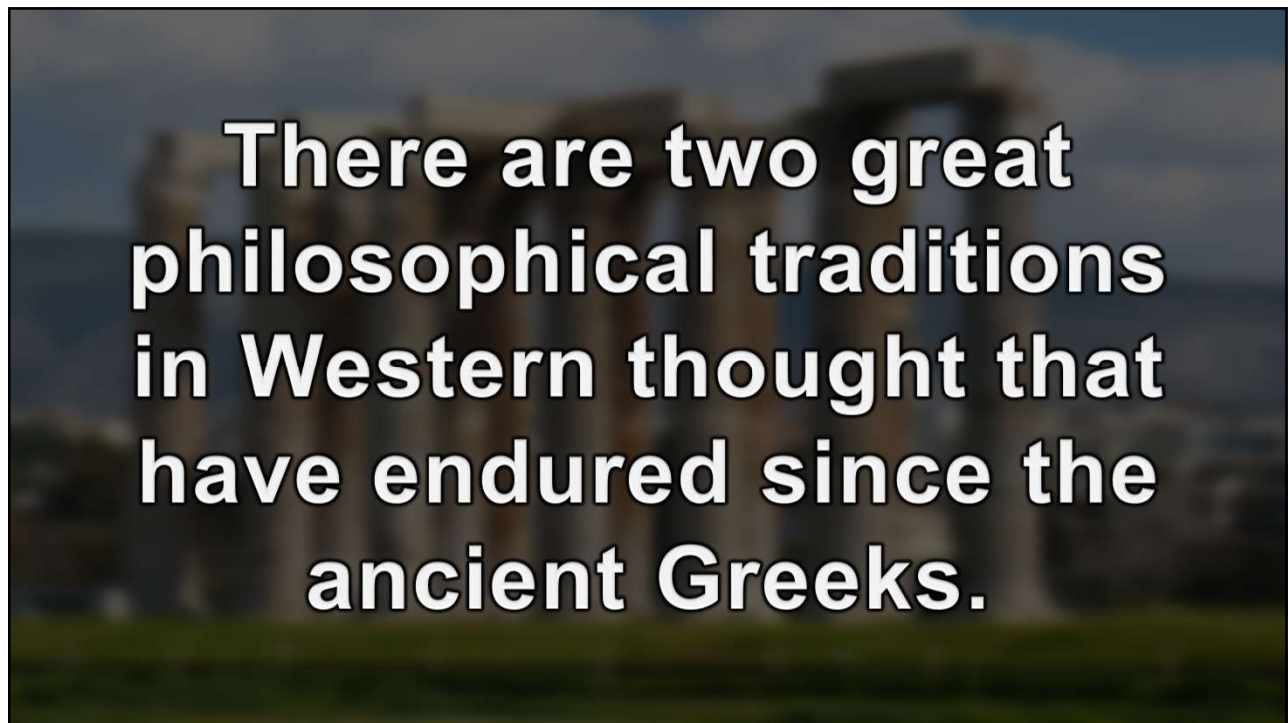


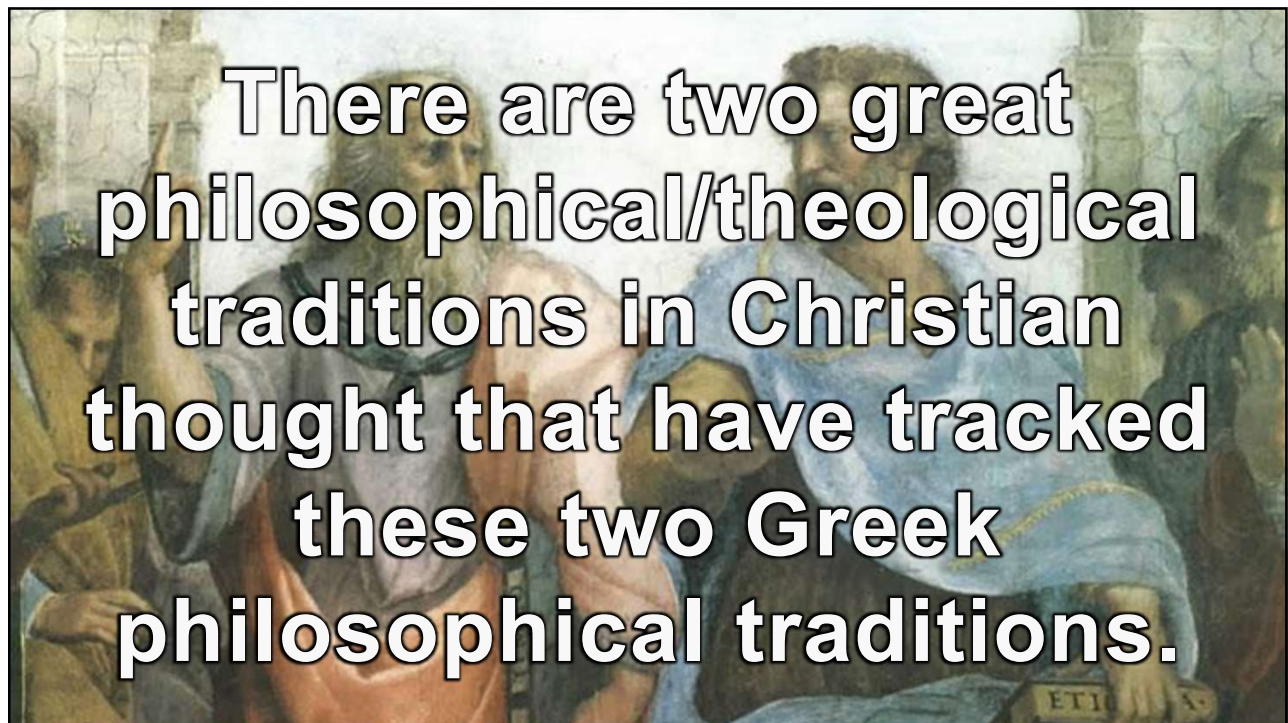
Michael Shermer



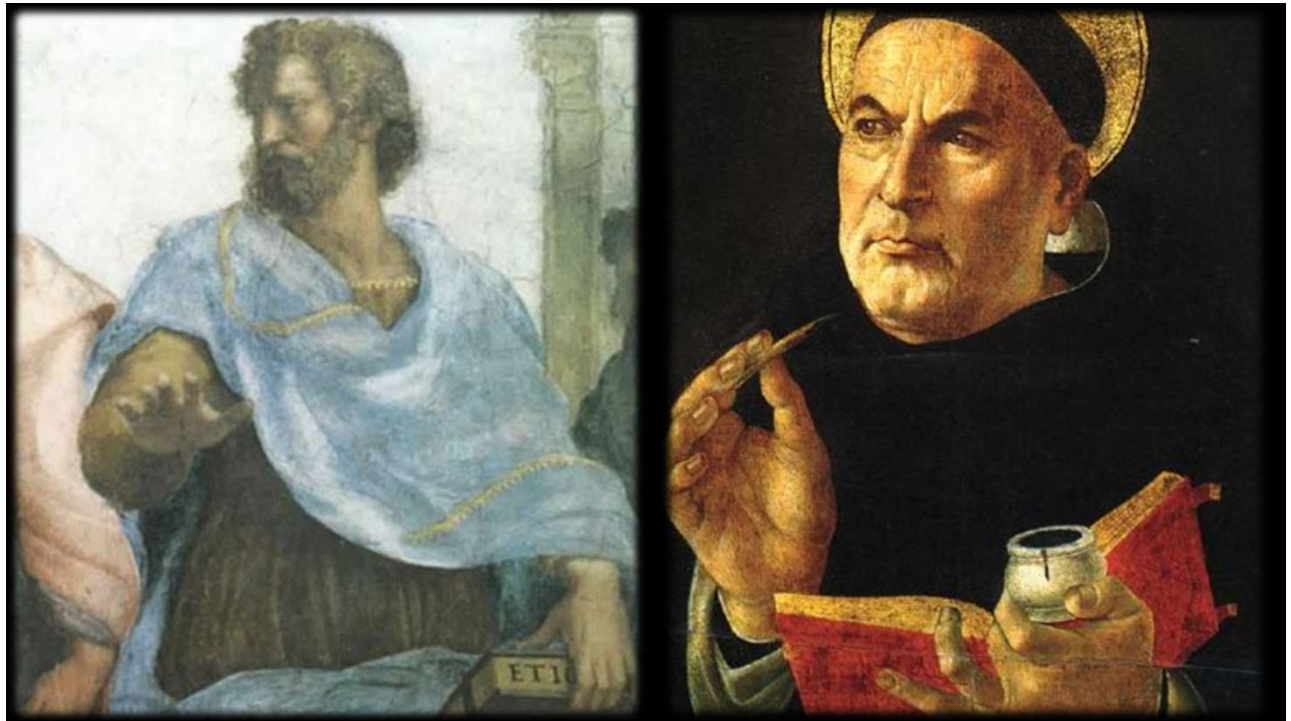
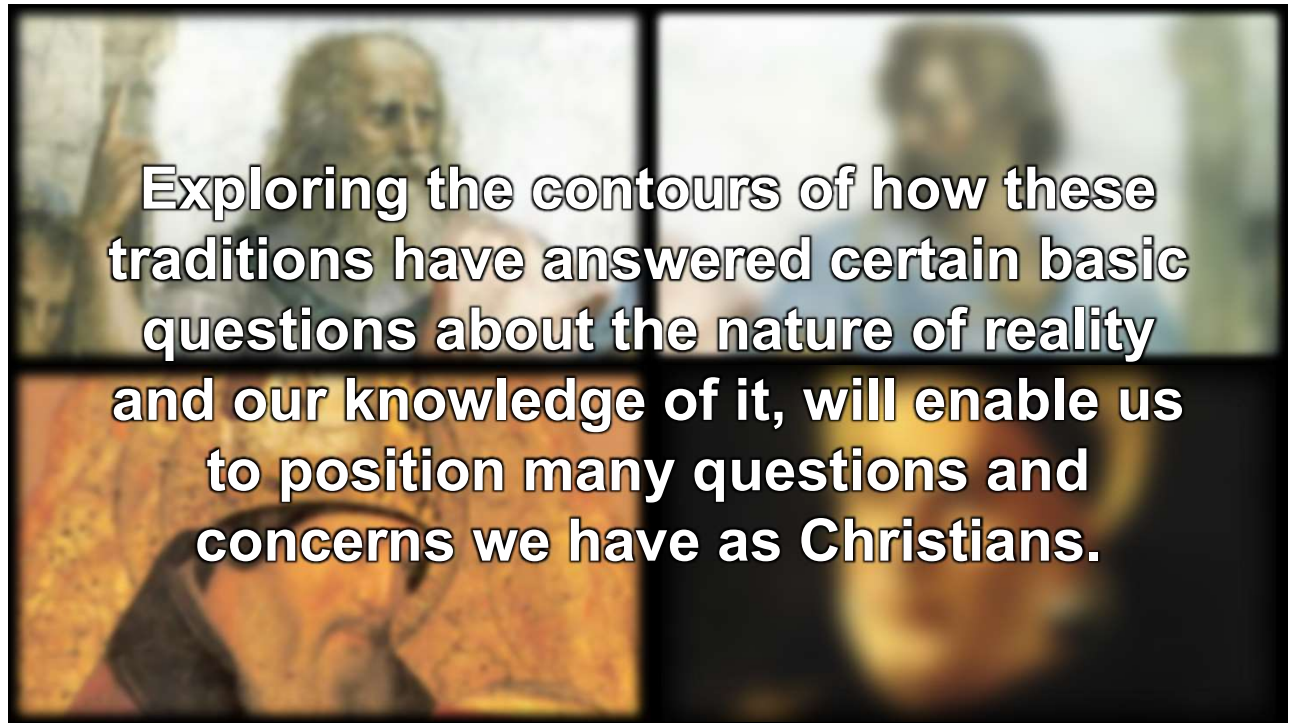
THE DESIGN ARGUMENT: AQUINAS VS. PALEY

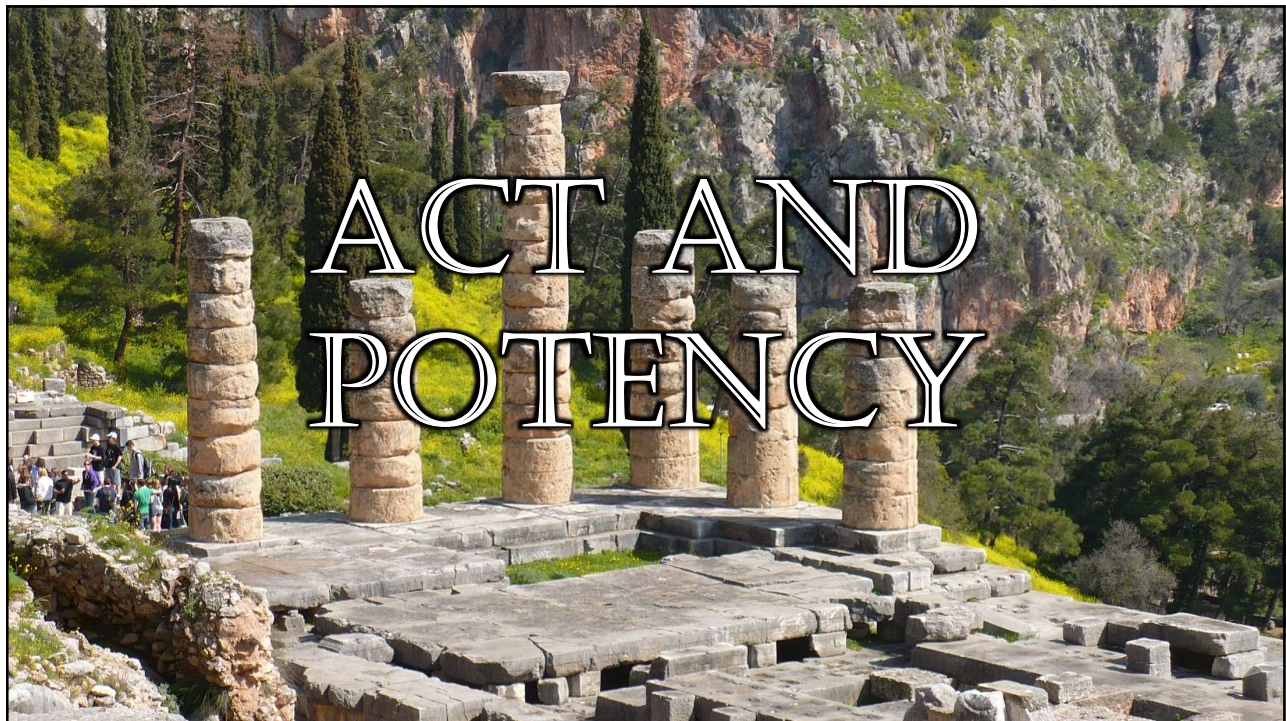
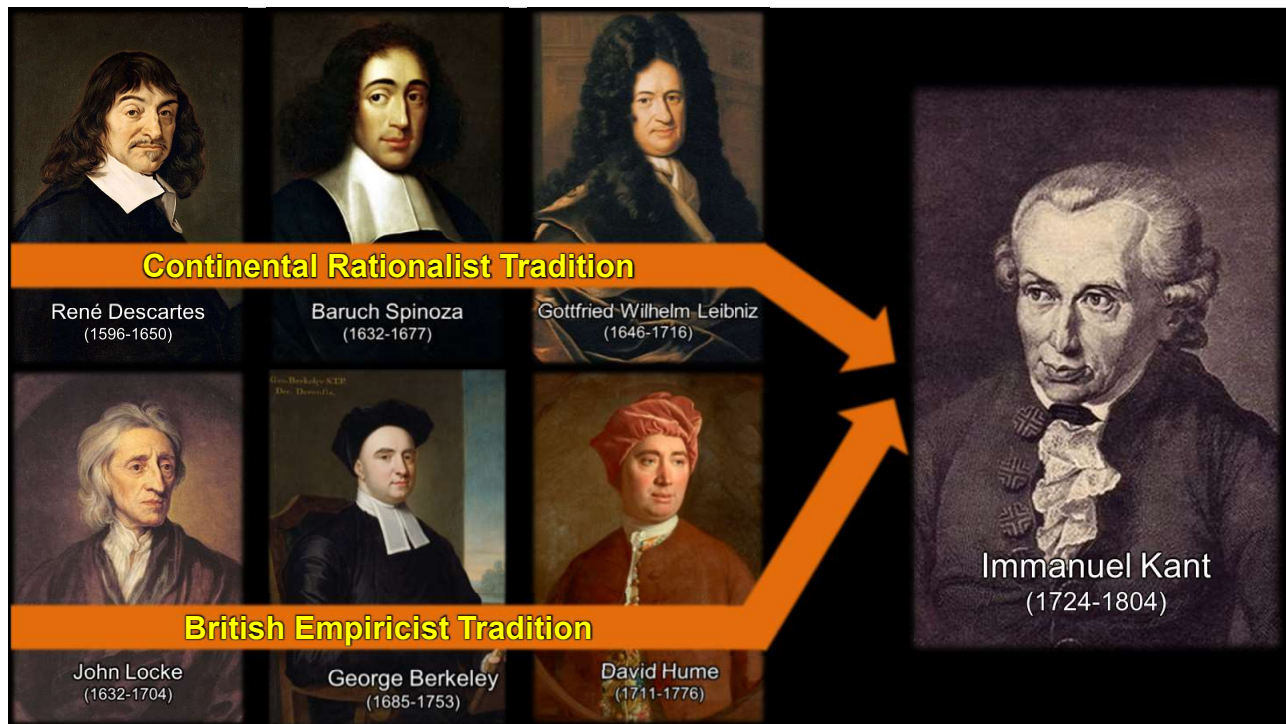










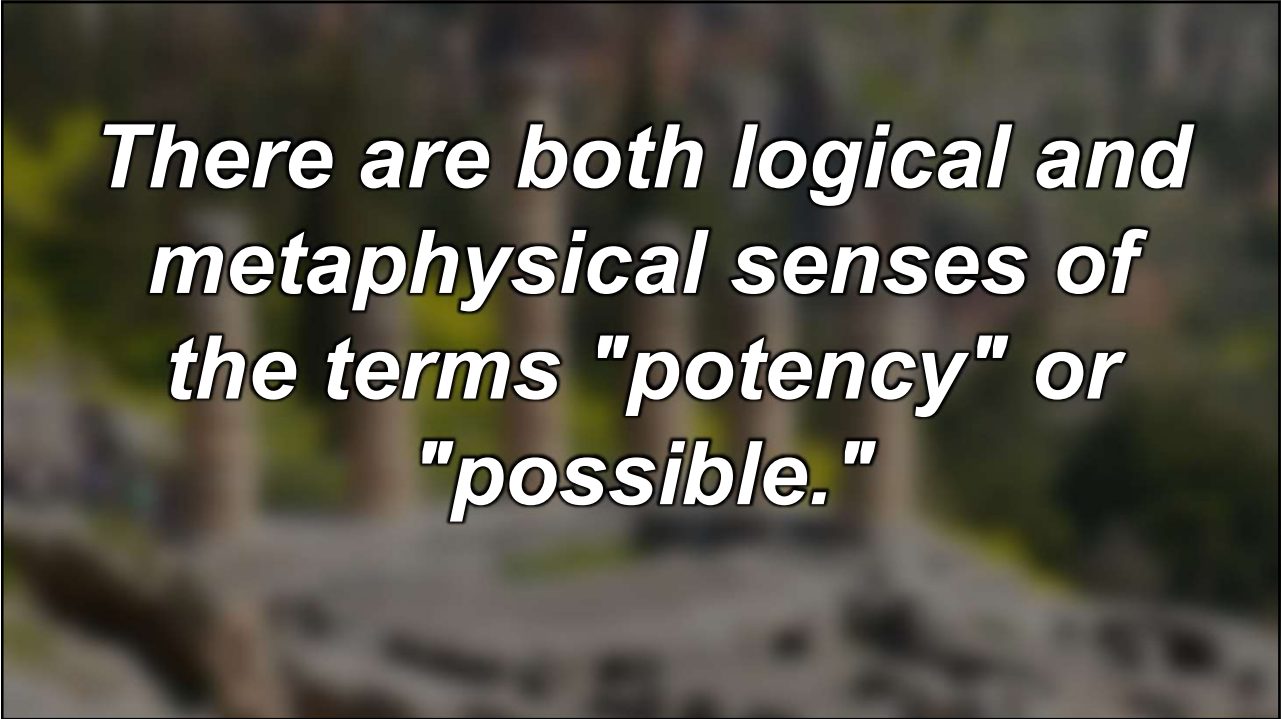


**Act and potency are sometimes
referred to as actuality
and potentiality.**

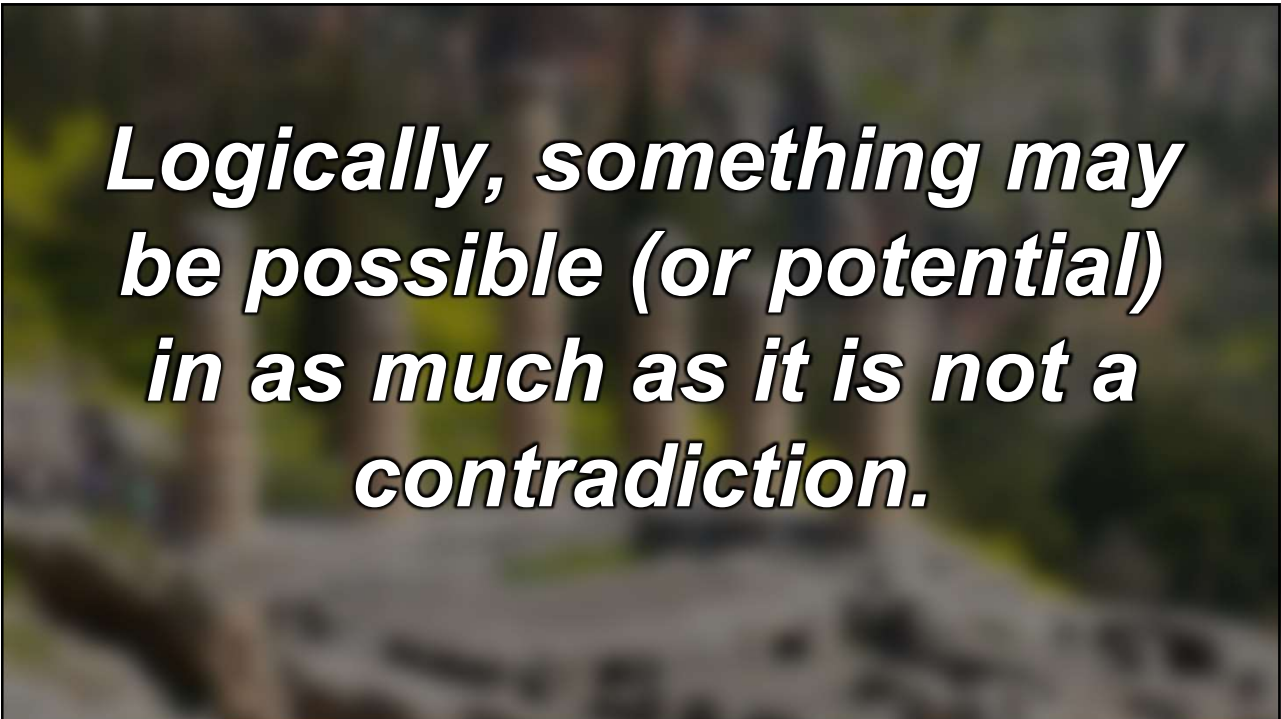
**This is how Aristotle and Aquinas
account for change.**

∞Potency∞

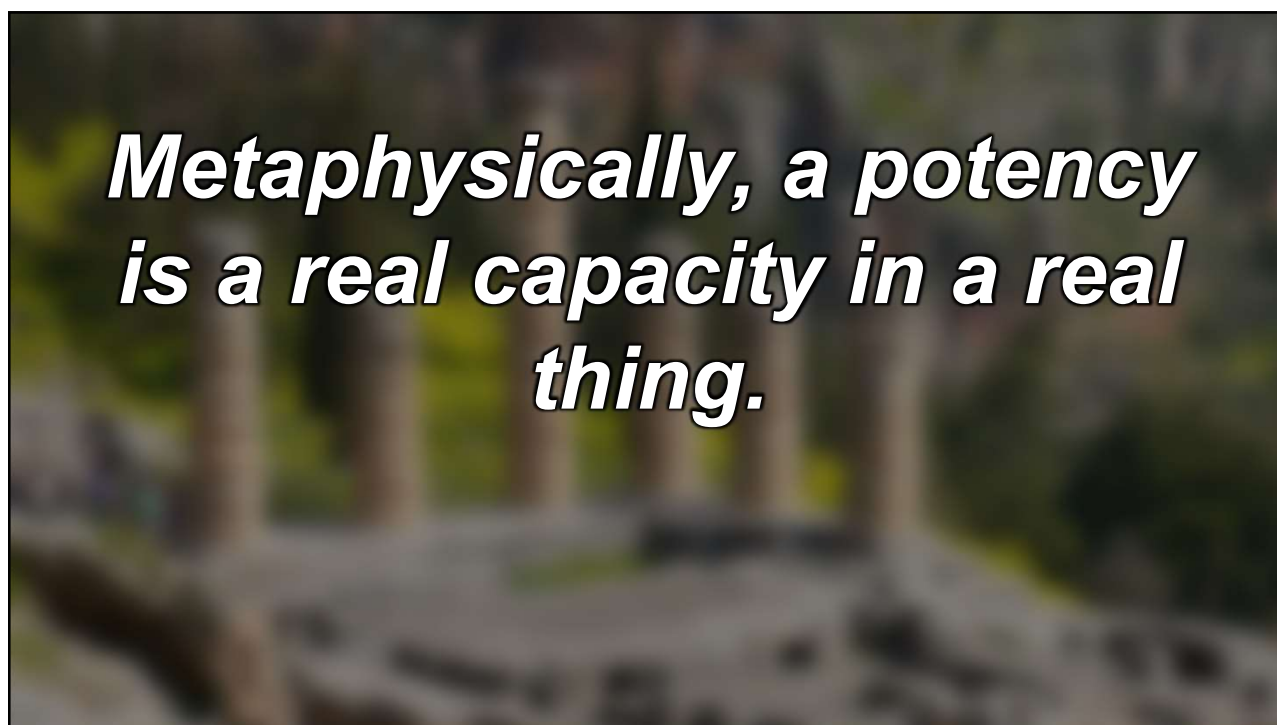
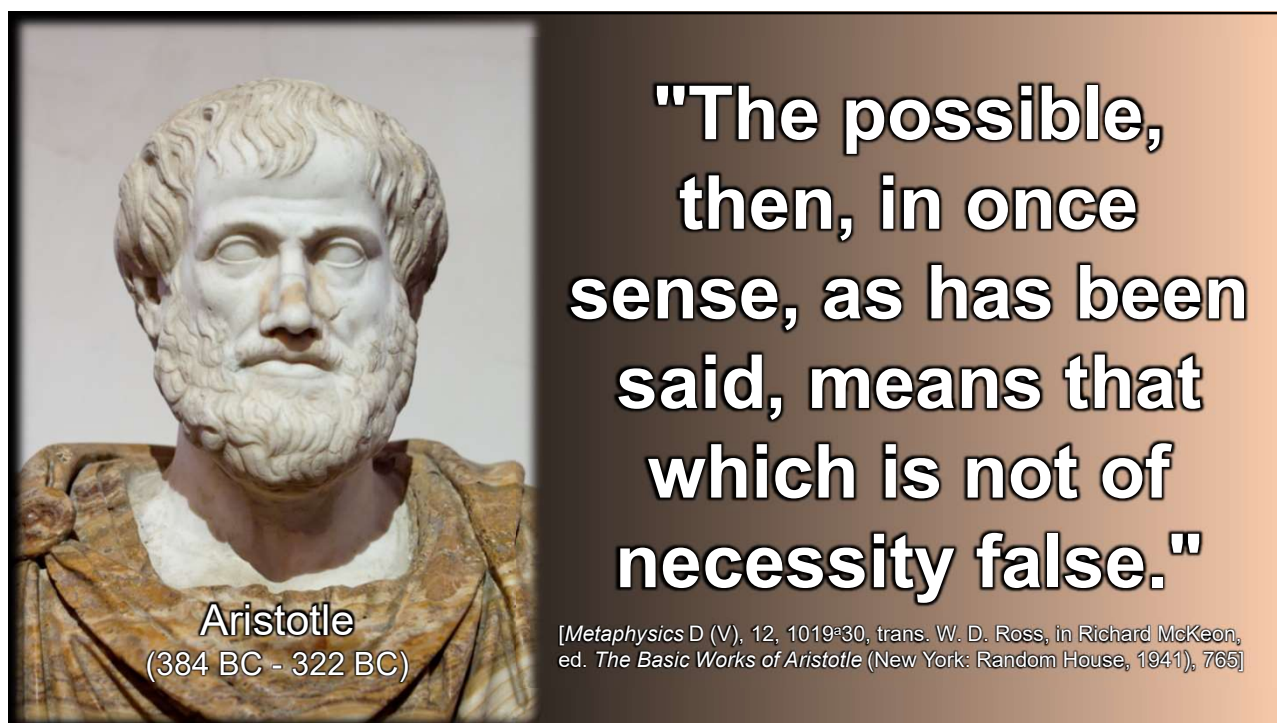
**= the power or capacity or
possibility to be actual or
real**

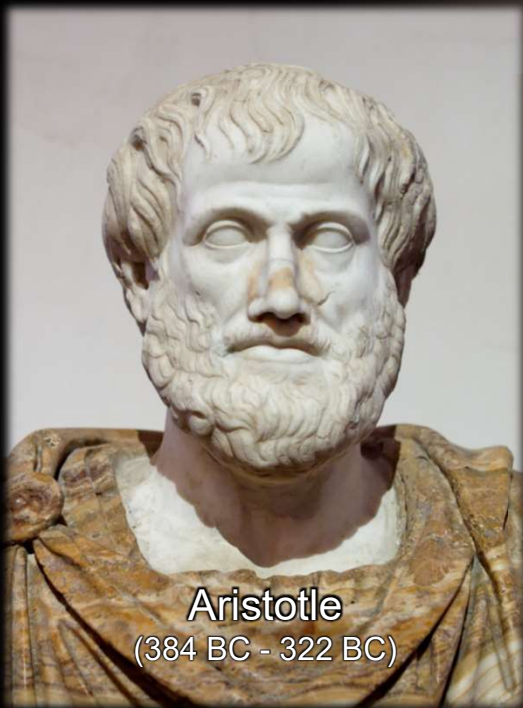


There are both logical and metaphysical senses of the terms "potency" or "possible."



Logically, something may be possible (or potential) in as much as it is not a contradiction.





**"Potency' then means
the source, in general, of
change or movement in
another thing or in the
same thing *qua* other."**

[*Metaphysics* D (V), 12, 1019^a15 - 1019^a20, trans. W. D. Ross, in Richard McKeon, ed. *The Basic Works of Aristotle* (New York: Random House, 1941), 765]

Aristotle
(384 BC - 322 BC)

∞Act∞
(or Actuality)

= to be real

**A potency is actualized
by a cause.**

A person who is actually sitting but not actually standing, nevertheless has the potential or power or capacity to stand.



Upon standing, the person actualizes his potential to stand, his standing becomes actual and his sitting now becomes potential.

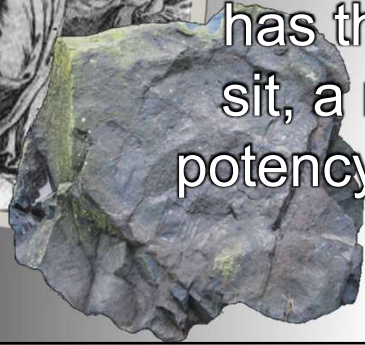
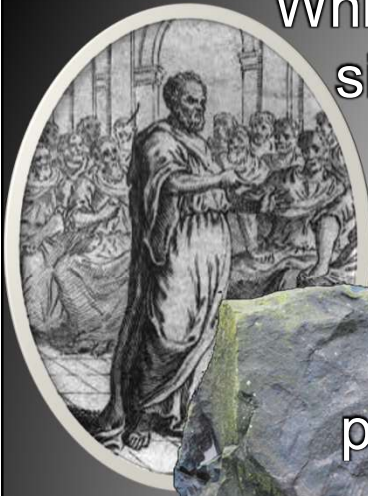
While a man who is actually
sitting has the potential
to stand,



While a man who is actually
sitting has the potential
to stand, or who is
actually standing
has the potential to
sit,

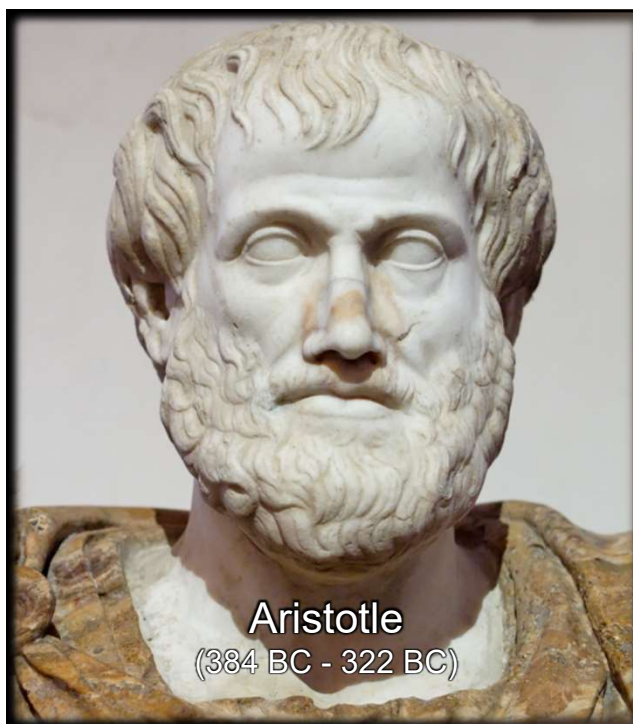


While a man who is actually sitting has the potential to stand, or who is actually standing has the potential to sit, a rock lacks the potency to stand or sit.



Note, therefore, the difference between the non-existence of the standing in a sitting man and the non-existence of the standing in the rock.





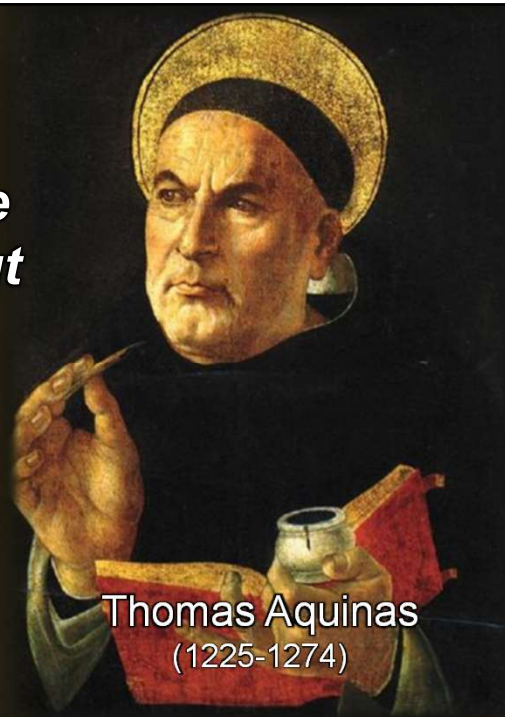
Aristotle
(384 BC - 322 BC)

"Actuality, then, is the existence of a thing not in the way which we express by 'potentially'; we say that potentially, for instance, a statue of Hermes is in the block of wood and the half-line is in the whole, because it might be separated out ... ; the thing that stands in contrast to each of these exist actually. Our meaning can be seen in the particular cases by induction, and we must ... be content to grasp the analogy, that it is as that which is building is to that which is capable of building ... and that which is seeing to that which has its eyes shut but has sight, and that which has been shaped out of the matter to the matter Let actually be defined by one member of this antithesis, and the potential by the other."

[*Metaphysics* Θ (IV), 6, 1048^a31 - 1048^a5, trans. W. D. Ross, in Richard McKeon, ed. *The Basic Works of Aristotle* (New York: Random House, 1941), 826]

"By non-existence we understand not simply those things which do not exist, but those which are potential, and not actual."

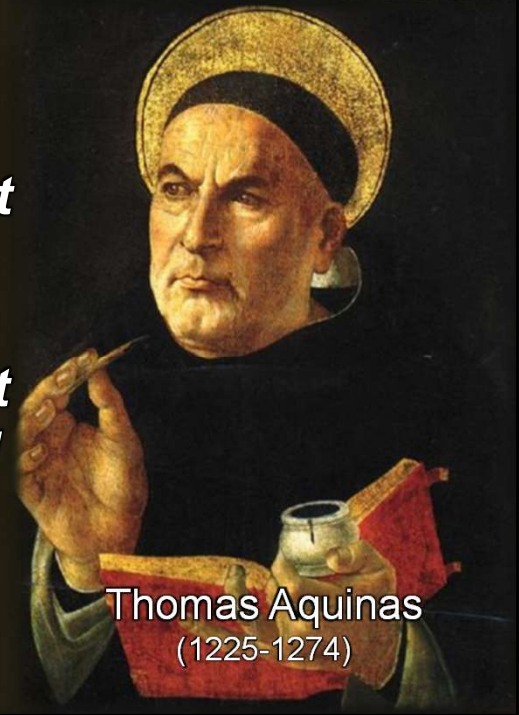
[*Summa Theologiae*, I, 5, 2, trans. Fathers of the English Dominican Province (Westminster: Christian Classics, 1948), 12]



Thomas Aquinas
(1225-1274)

"Observe that some things can exist though they do not exist, while other things do exist. That which can be is said to exist in potency; that which already exists is said to be in act."

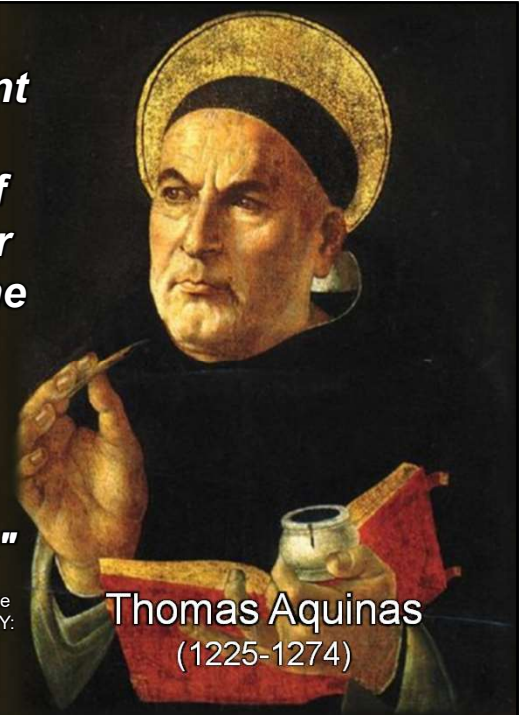
[On the Principles of Nature, trans. Vernon J. Bourke in *The Pocket Aquinas* (New York: Washington Square Press, 1960), 61]



Thomas Aquinas
(1225-1274)

"Now, from the foregoing it is evident that in created intellectual substances there is composition of act and potentiality. For in whatever thing we find two, one of which is the complement of the other, the proportion of one of them to the other is as the proportion of potentiality to act; for nothing is completed except by its proper act."

[*Summa Contra Gentiles*, II, 53, §1-2, trans. James F. Anderson (University of Notre Dame Press Edition) vol. 2, p. 155. Reprint of *On the Truth of the Catholic Faith* (Garden City, NY: Hanover House)]



Thomas Aquinas
(1225-1274)



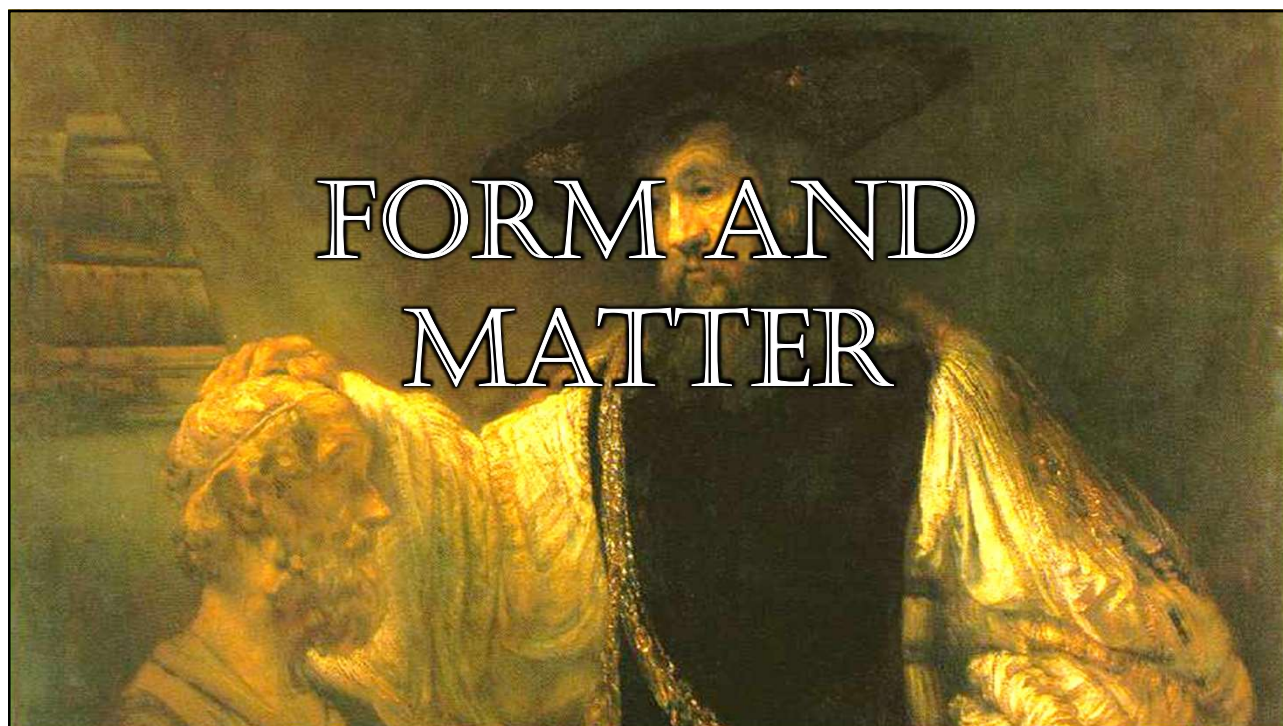
***"Howsoever anything
acts, it does so
inasmuch as it is in act;
howsoever anything
receives, it does so
inasmuch as it is in
potency."***

[Bernard J. Wuellner, *Summary of Scholastic Principles* (Chicago: Loyola University Press, 1956), 5]

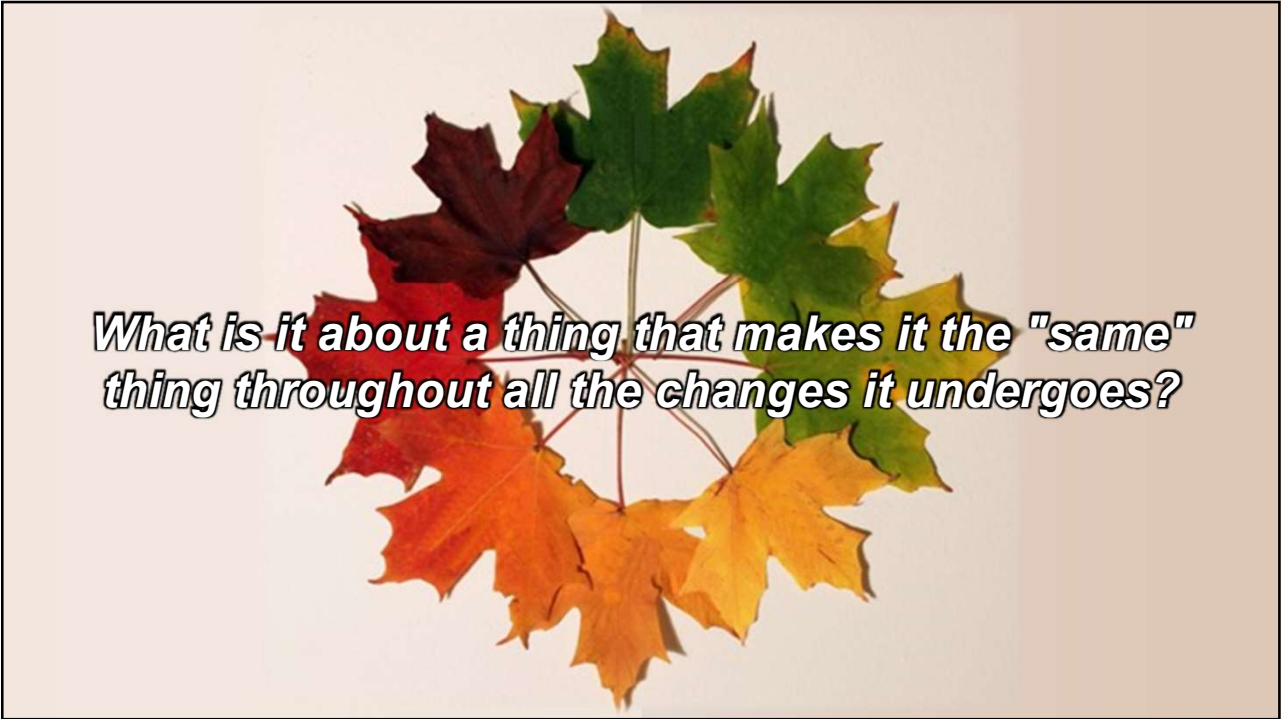
SUMMARY OF SCHOLASTIC
PRINCIPLES



BERNARD J. WUELLNER



In Greek thought the metaphysical doctrines of Form and Matter arose out of several compelling questions.



What is it about a thing that makes it the "same" thing throughout all the changes it undergoes?



*If (since?) things
change, how is
knowledge of things
possible at all?*

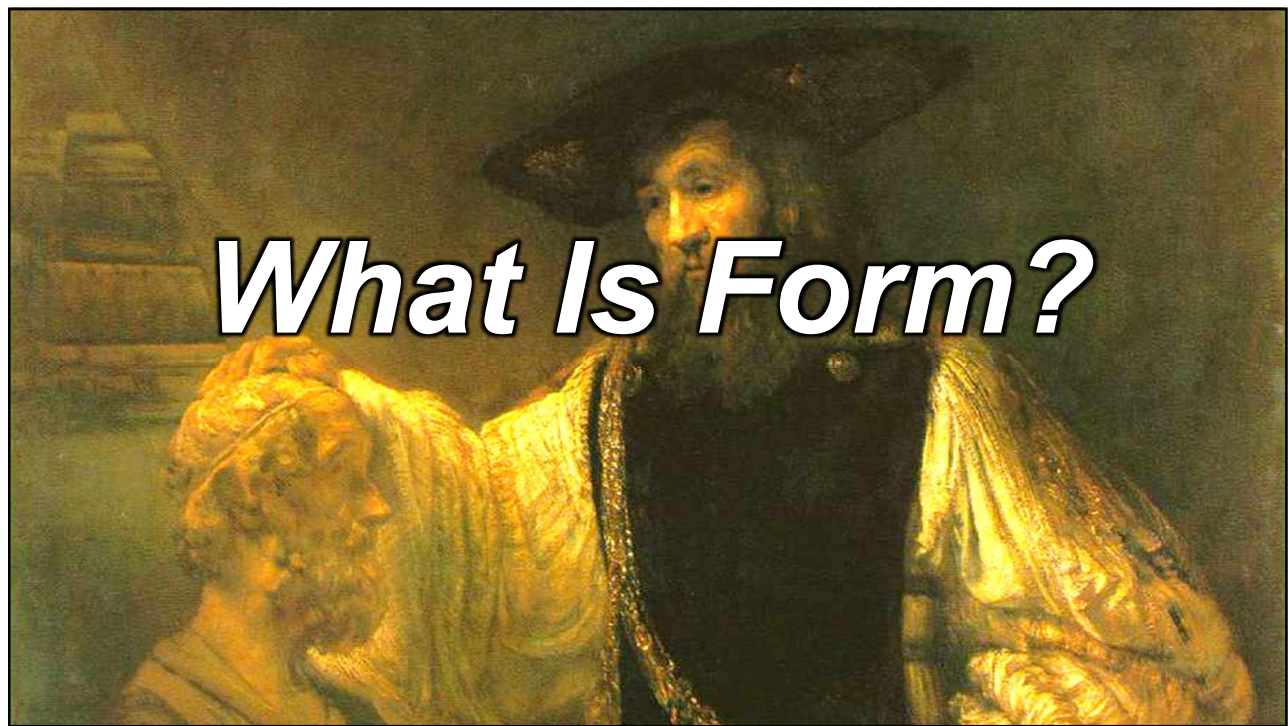


**denied
PERMANENCE**

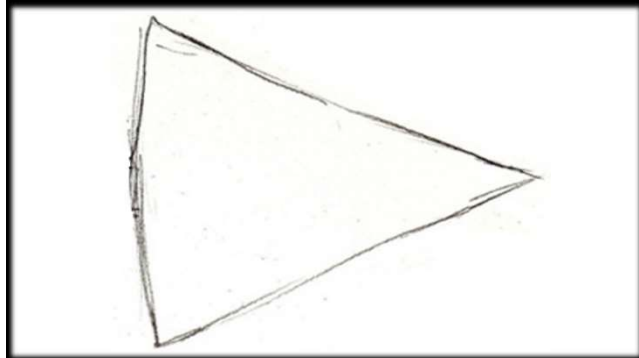
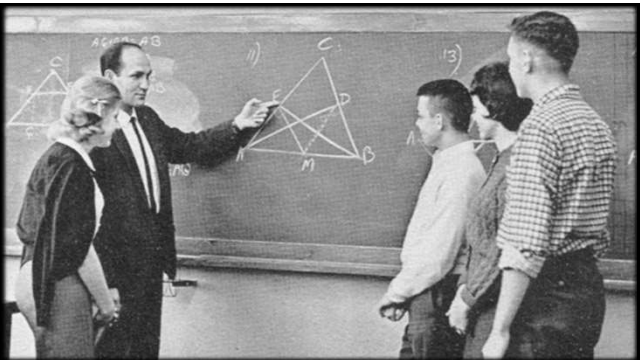
Heraclitus
504 BC – 480 BC

**denied
CHANGE**

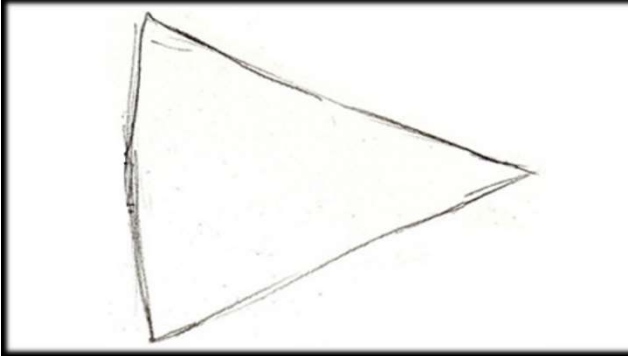
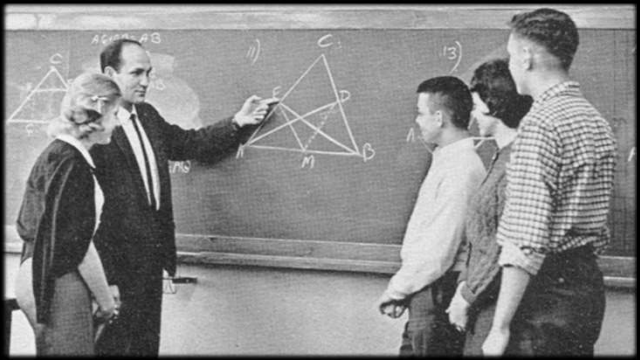
Parmenides
515 BC – 450 BC



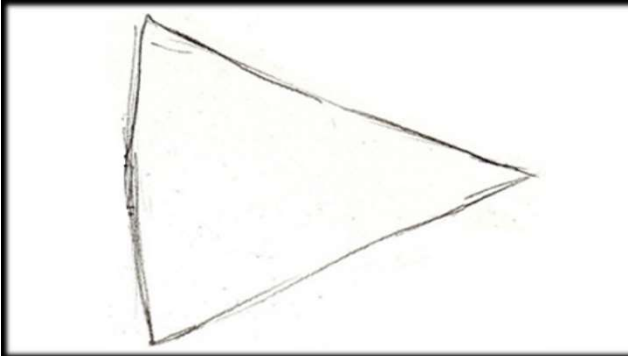
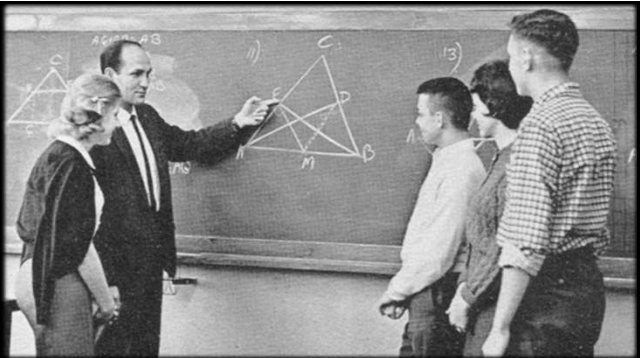
**Consider the
notion of
"triangle."**



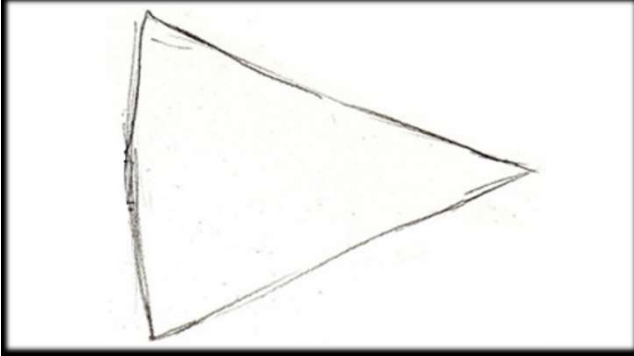
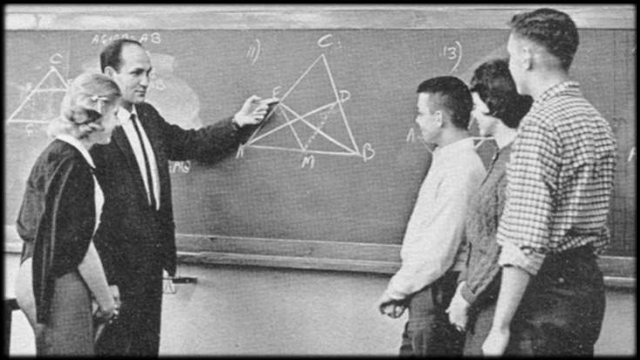
**Each of the triangles
have characteristics
that are not essential to
being a triangle.**



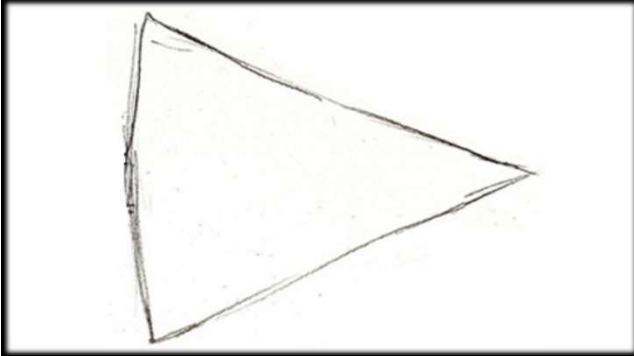
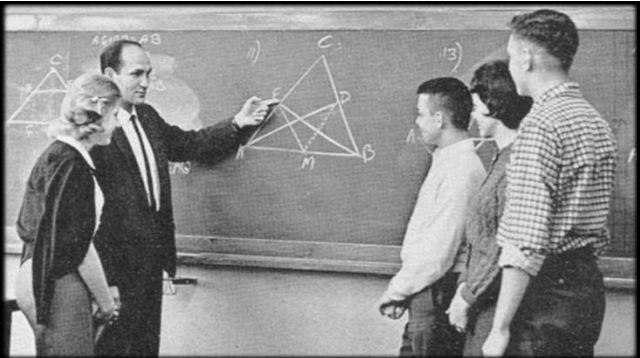
**Each triangle falls short
of being a perfect
triangle, yet we still
know them as triangles.**



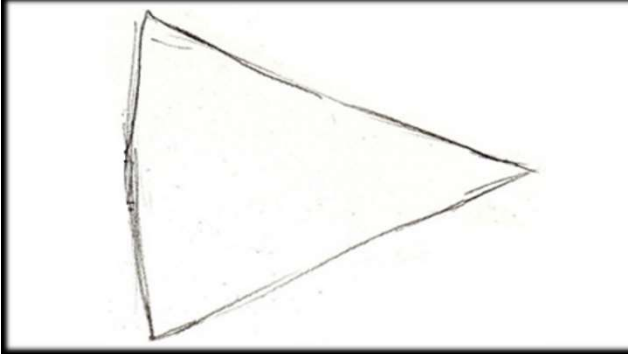
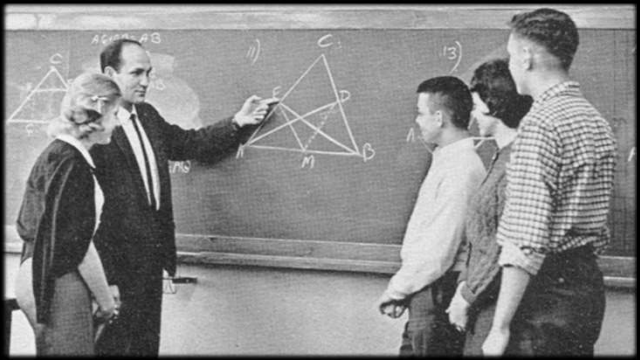
**There is something
common to them all that
makes them all
triangles.**



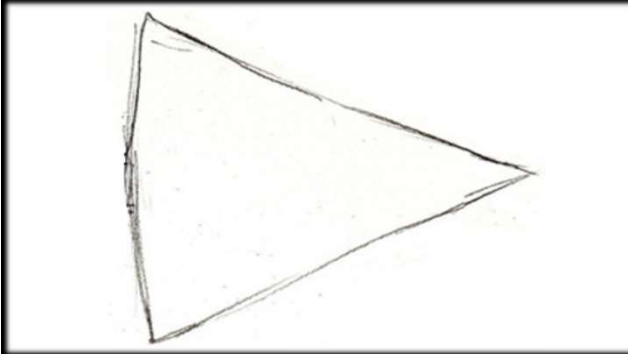
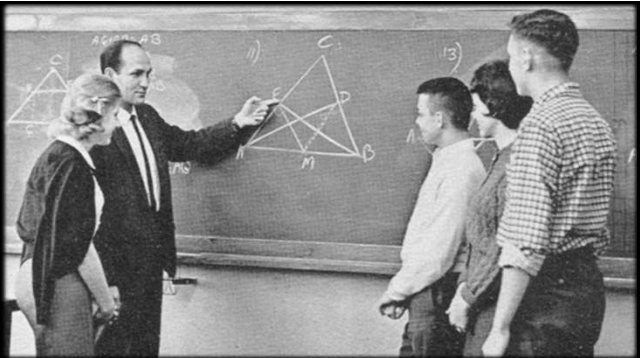
**Plato, Aristotle, and
Aquinas called this
common aspect "Form."**



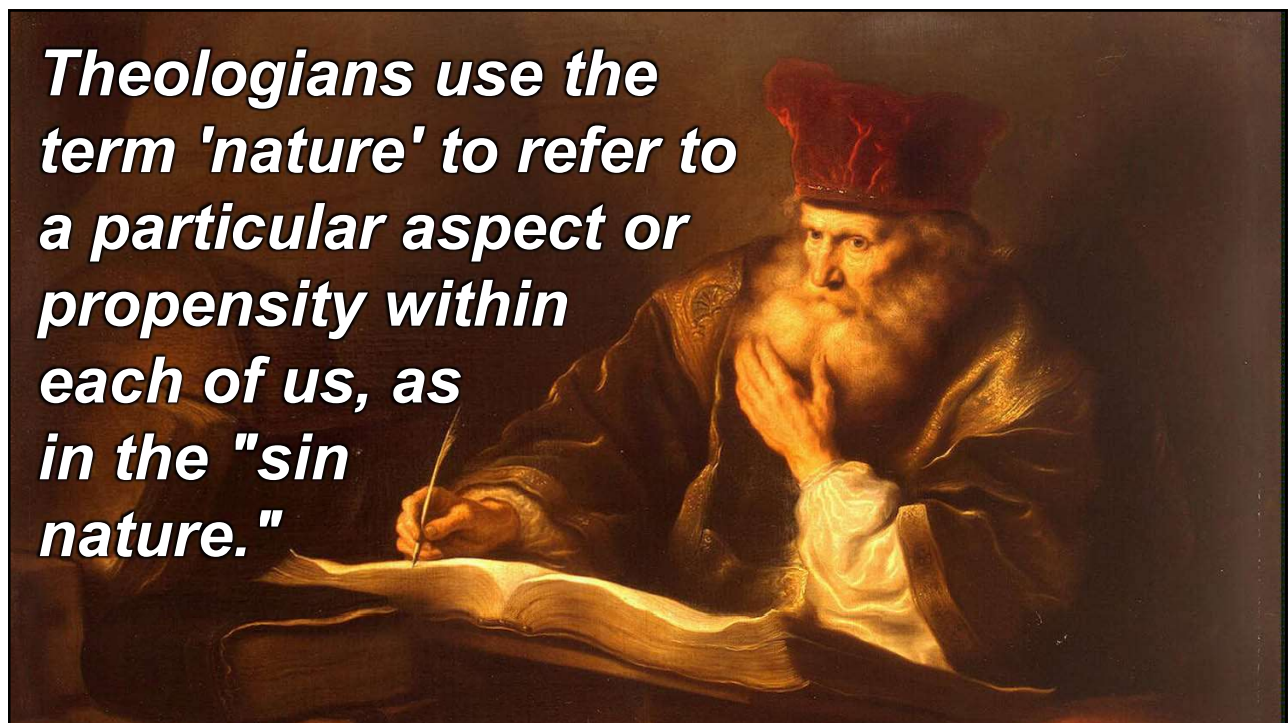
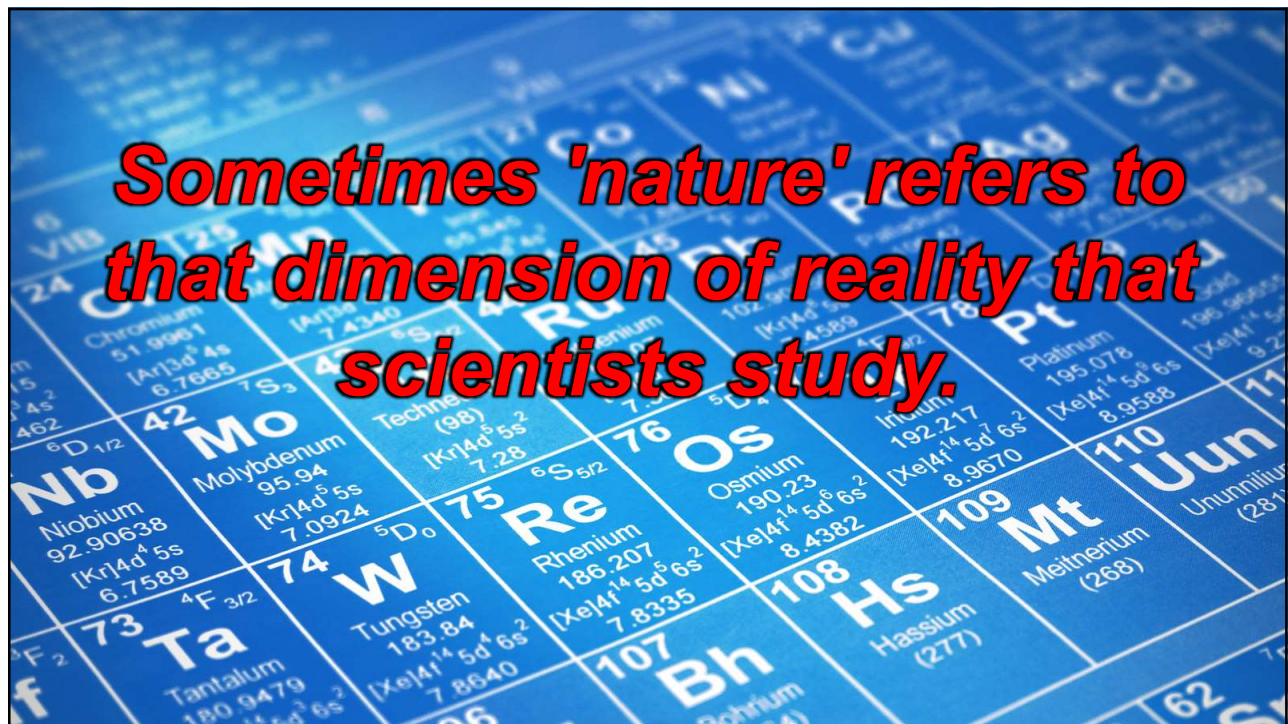
Plato: εἶδος (eidos).
Aristotle: μορφή (morphē).
Aquinas: forma

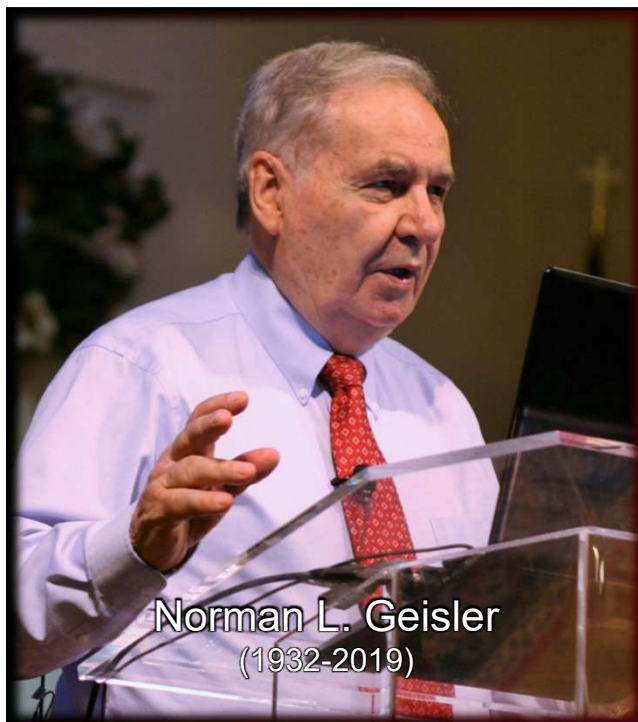


**Lest one mistakenly
think that Form means
"shape," consider
various kinds of trees.**





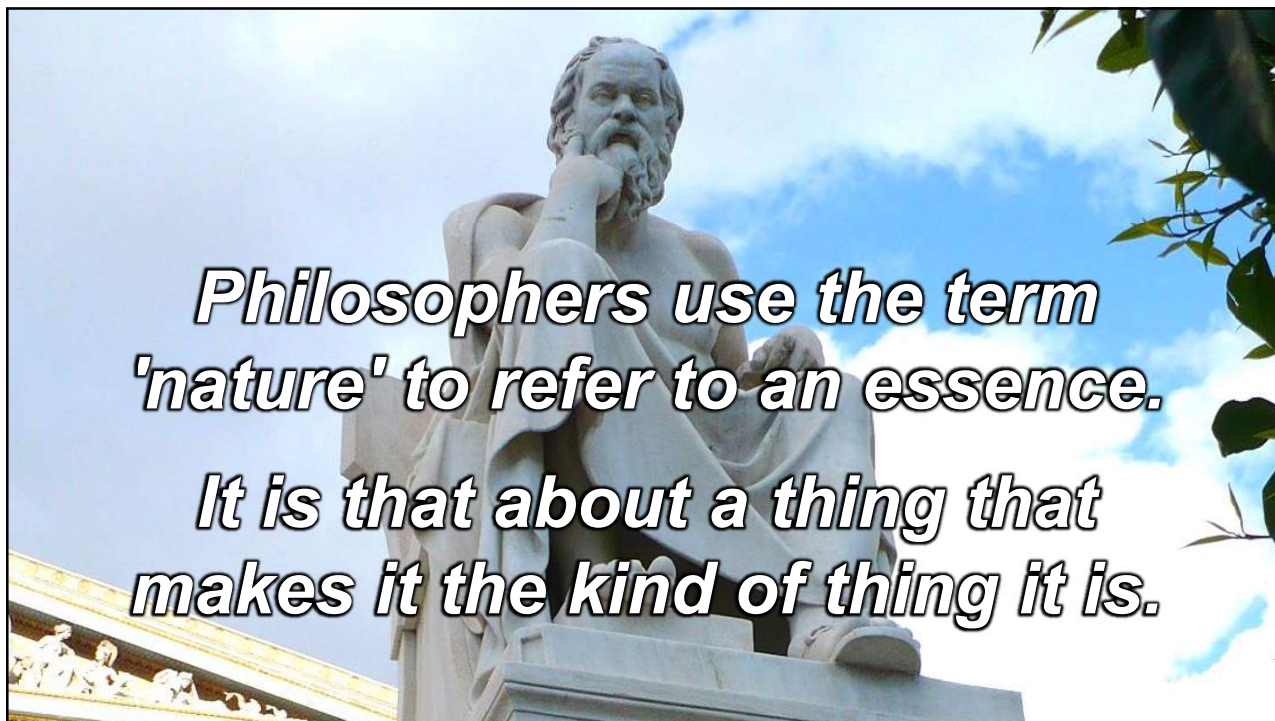


A photograph of Norman L. Geisler, a man with grey hair, wearing a light blue shirt and a red patterned tie, speaking at a clear acrylic podium. He is gesturing with his right hand. The background is slightly blurred, showing some greenery.

"Everyone who is naturally generated from Adam—every human—inherits a sinful nature from him. ... Being sinners by nature, short of and without salvation, we inevitably are and do what comes naturally: We sin."

Norman L. Geisler
(1932-2019)

[Norman Geisler, *Systematic Theology: Vol. Three: Sin Salvation* (Minneapolis: Bethany House, 2004, 125.)]

A photograph of a white marble statue of a philosopher, likely Plato, with a beard and long hair, resting his chin on his hand in a contemplative pose. The statue is set against a blue sky with some clouds. In the background, there are some green leaves and a portion of a classical building with columns.

Philosophers use the term 'nature' to refer to an essence.

It is that about a thing that makes it the kind of thing it is.

"What-ness"

with respect to a thing's operations:

Nature

with respect to a thing's matter:

Form

with respect to a thing's accidents:

Substance

with respect to a thing's intellect:

Quiddity

with respect to a thing's existence:

Essence

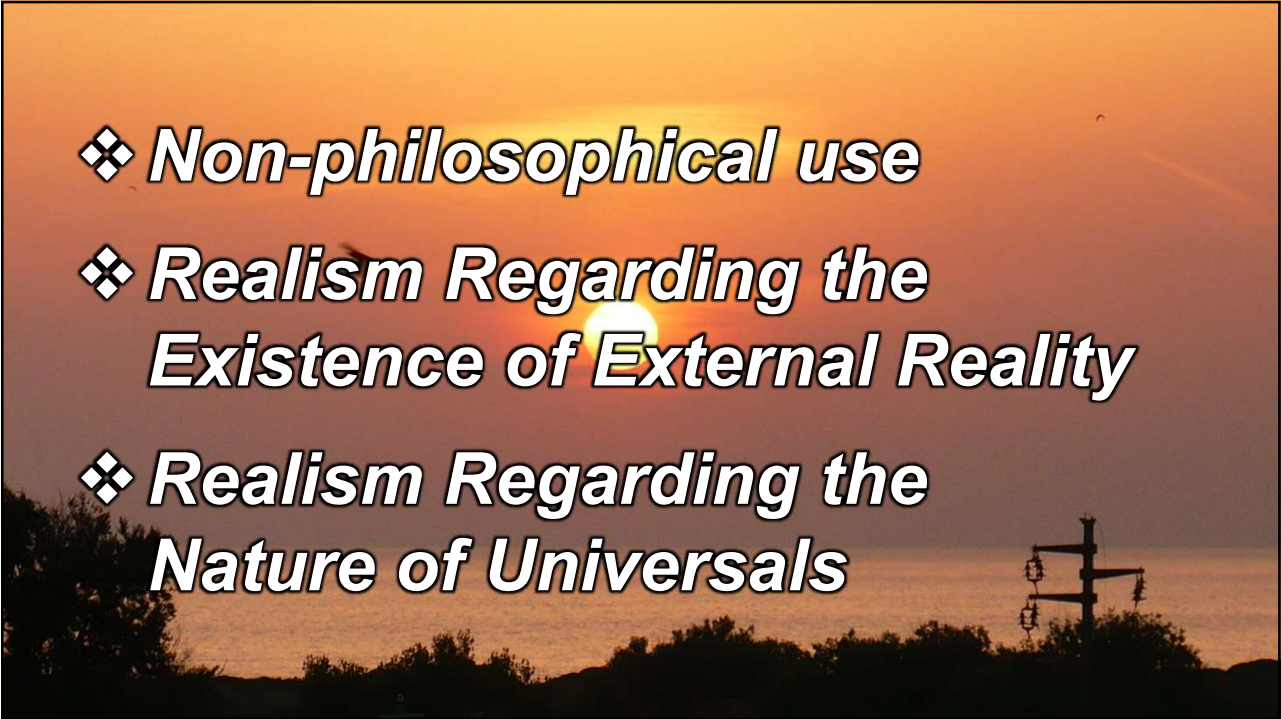


Realism and Universals

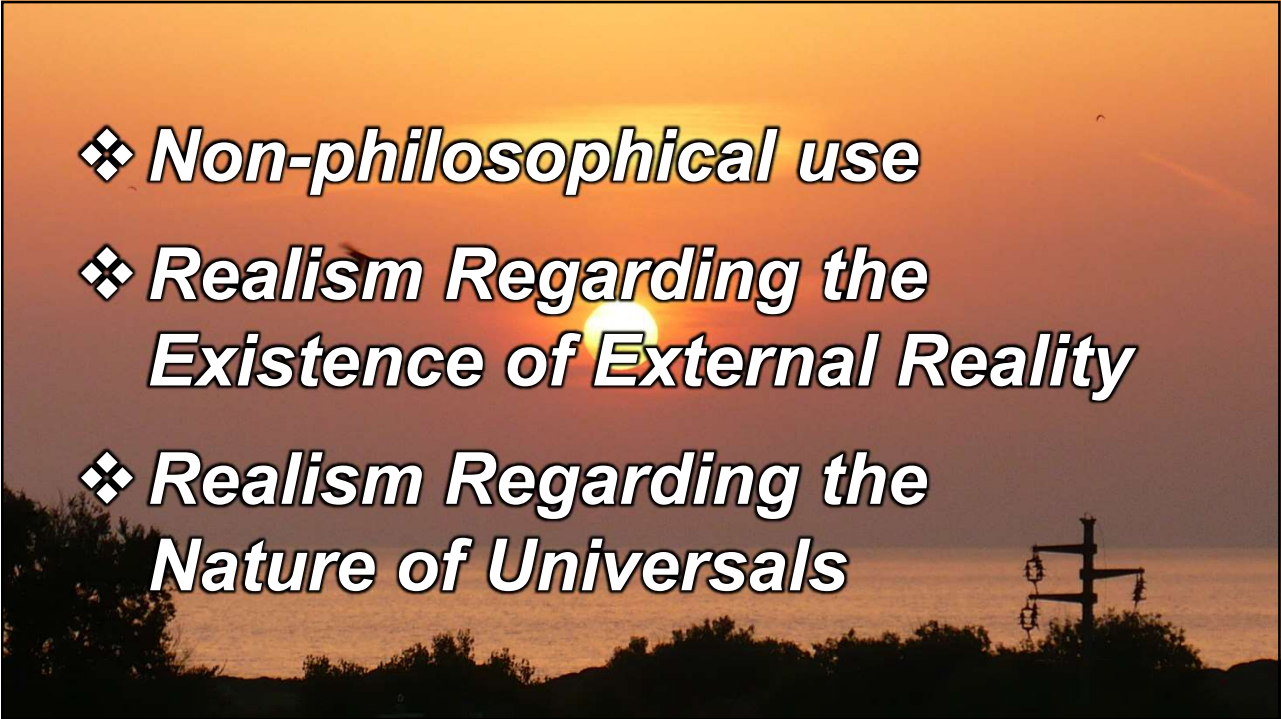


Uses of the Term 'Realism'

- ❖ ***Non-philosophical use***
- ❖ ***Realism Regarding the
Existence of External Reality***
- ❖ ***Realism Regarding the
Nature of Universals***

- 
- ❖ *Non-philosophical use*
 - ❖ *Realism Regarding the Existence of External Reality*
 - ❖ *Realism Regarding the Nature of Universals*

A realist in the non-philosophical sense of the term is one who approaches an issue with common sense, usually devoid of sentimentality and naiveté.

- 
- ❖ *Non-philosophical use*
 - ❖ *Realism Regarding the Existence of External Reality*
 - ❖ *Realism Regarding the Nature of Universals*

Here realism maintains that there is a material reality external to us as knowers and that this material external reality exists whether we are perceiving it or not.

This notion of realism is contrasted with Idealism. Idealism (George Berkeley) maintains that there is no external material reality.

Any view of knowing that maintains that there is a reality external to us as knowers is a form of realism.

Thus, John Locke is a realist even though Locke's view on how we know external reality is quite different from Plato's, Aristotle's and Aquinas's views.

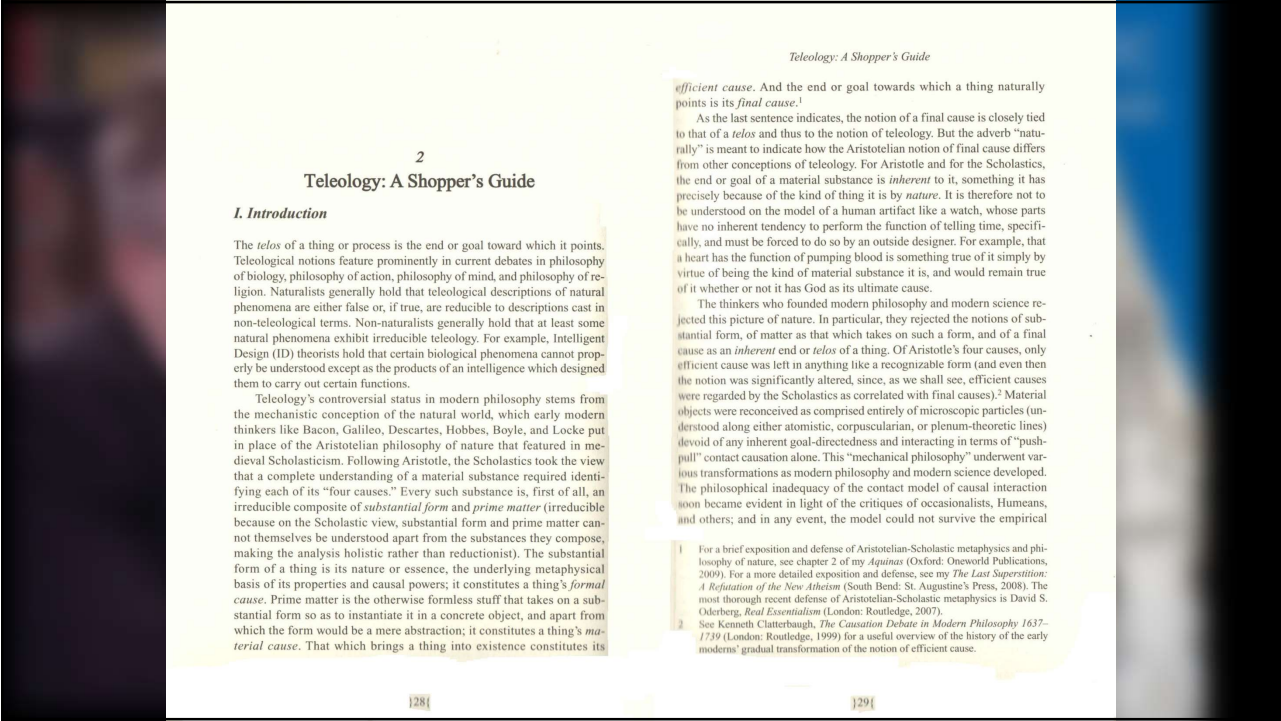
- ❖ *Non-philosophical use*
- ❖ *Realism Regarding the Existence of External Reality*
- ❖ *Realism Regarding the Nature of Universals*

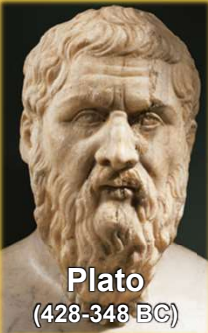
Here realism maintains that universals (e.g., human-ness) are real entities that have existence apart from particulars. (Plato)

This notion of realism is contrasted with anti-realism like conceptualism (William of Ockham) or nominalism (David Hume).





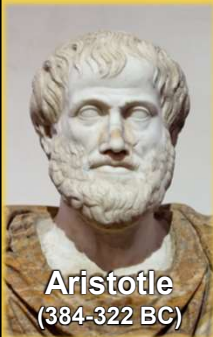


<h2 style="text-align: center;">REALISM: UNIVERSALS</h2> <p style="text-align: center;">Realism regarding universals holds that universals are real and irreducible to particulars</p>	<h2 style="text-align: center;">REALISM: TELEOLOGY</h2> <p style="text-align: center;">Realism regarding teleology (Teleological Realism) holds that teleology is a real and irreducible feature of the natural world.</p>
<h3 style="text-align: center;">Extreme Realism</h3> <div style="display: flex; align-items: center;">  <div style="margin-left: 10px;"> <p>Universals are the only things that are fully real. Particulars are merely "shadows" of their exemplars.</p> </div> </div> <p>Plato (428-348 BC)</p>	<h3 style="text-align: center;">Platonic Teleological Realism</h3> <p>Teleology is irreducible but is entirely derived from an outside (extrinsic) source, as, for example, a divine mind like Plato's demiurge.</p>

REALISM: UNIVERSALS

Realism regarding universals holds that universals are real and irreducible to particulars

Moderate Realism



Aristotle
(384-322 BC)

Universals are real but only exist (as universals) in intellects. They come to exist in the intellect by way of abstraction from something metaphysically real in the particulars (i.e., the Form). Thus, the Form "tree" exists as a universal in the intellect of the knower and as a particular in the tree. The Form is individuated by its Matter.

REALISM: TELEOLOGY

Realism regarding teleology (Teleological Realism) holds that teleology is a real and irreducible feature of the natural world.

Aristotelian Teleological Realism

Teleology is intrinsic to (immanent within) natural substances and does not derive from any divine source. This is not in conflict with Aristotle's Unmoved Mover. While the Unmoved Mover is the telos toward which all motion is directed, it is not the cause of the existence of the natural substances with their teleologies, in as much as the Unmoved Mover (or Movers) is not at all an efficient cause of the universe.

REALISM: UNIVERSALS

Realism regarding universals holds that universals are real and irreducible to particulars

Scholastic Realism



Aquinas
(1225-1274)

Scholastic Realism is the same as Moderate Realism in that the universals can come to exist in the intellects of humans (by abstraction).

Scholastic Realism differs from Moderate Realism in that the universals also exist eternally in the mind of God as their Creator.

REALISM: TELEOLOGY


Realism regarding teleology (Teleological Realism) holds that teleology is a real and irreducible feature of the natural world.

Scholastic Teleological Realism

Teleology is intrinsic to (immanent within) natural substances. In this it is the same as Aristotelian Teleological Realism. However, the existence of final causes (teleology) must ultimately be explained in terms of a divine intellect. In this it differs from both Platonic and Aristotelian Teleological Realism.

Like Platonic Teleological realism (but unlike Aristotelian Teleological Realism) it sees the divine mind as relevant to teleology. Like Aristotelian Teleological Realism (but unlike Platonic Teleological Realism) it sees teleology as intrinsic to (immanent within) natural substances.

REALISM: UNIVERSALS



Aquinas
(1225-1274)


Scholastic Realism differs from Moderate Realism in that the universals also exist eternally in the mind of God as their Creator.

REALISM: TELEOLOGY

Platonic Teleological Realism (not unlike Aristotelian Teleological Realism) views the divine mind as relevant to teleology. Like Aristotelian Teleological Realism (not unlike Platonic Teleological Realism) it views teleology as intrinsic to (permanent) existing natural substances.

Note that many (if not most) textbooks do not make this distinction and, thus, would call the Realism of the Scholastics Moderate Realism (either because they do not notice the distinction or do not regard it as warranting a separate label).

REALISM: UNIVERSALS





Aquinas
(1225-1274)

REALISM: TELEOLOGY

The key here is this: "The difference from the Platonic approach is that the Scholastic view does not take the existence of a divine ordering intelligence to follow *directly* from the existence of teleology in nature. An intermediate step in argumentation is required, for the link between teleology and an ordering intelligence is (with a nod to Aristotle) not taken to be *obvious*."

[Edward Feser, "Teleology: A Shopper's Guide" in *Neo-Scholastic Essays* (South Bend: St. Augustine's Press, 2015): 35, emphasis in original]

REALISM: UNIVERSALS	REALISM: TELEOLOGY
 <p>Aquinas (1225-1274)</p>	<p>For Feser, the problem with Intelligent Design is that it skips this intermediate step, thus rendering the argument (either explicitly or by implication) non-Thomistic in as much as it fails to factor in that the teleology arises primarily from the Form (i.e., it is metaphysically intrinsic to or immanent within the substance) while arising ultimately from God as the Creator of the Form. The reason that this is a problem is because certain of the main proponents of ID claim to be Thomistic.</p>

ANTI-REALISM: UNIVERSALS	ANTI-REALISM: TELEOLOGY
<p>Universals are either reducible to particulars or are unreal altogether.</p> <p>Conceptualism</p>  <p>Ockham (1280-1349)</p> <p>Universals are nothing but concepts in the minds of intellects and have no real grounding in the particulars. It should be noted that some text books label Ockham as a nominalist and would put Hume (dealt with below) entirely outside the discussion of universals as a philosophical skeptic.</p>	<p>Teleology is either reducible to non-teleological phenomena or is unreal altogether.</p> <p>Teleological Reductivism</p> <p>Admits teleology in some sense, but says it can be reduced to non-teleological phenomena.</p>

ANTI-REALISM: UNIVERSALS

Universals are either reducible to particulars or are unreal altogether.

Nominalism



Hume
(1711-1776)

There is no reality to universals. Instead, what are referred to as universals are only names or labels given to certain things or properties.

ANTI-REALISM: TELEOLOGY

Teleology is either reducible to non-teleological phenomena or is unreal altogether.

Teleological Eliminativism

Denies teleology altogether.

A painting by Rembrandt titled 'The Astronomer', showing a man in a dark hat and robe looking down at a celestial globe. The text 'What is Matter?' is overlaid in large, white, italicized font.

***What is
Matter?***

Hylomorphism

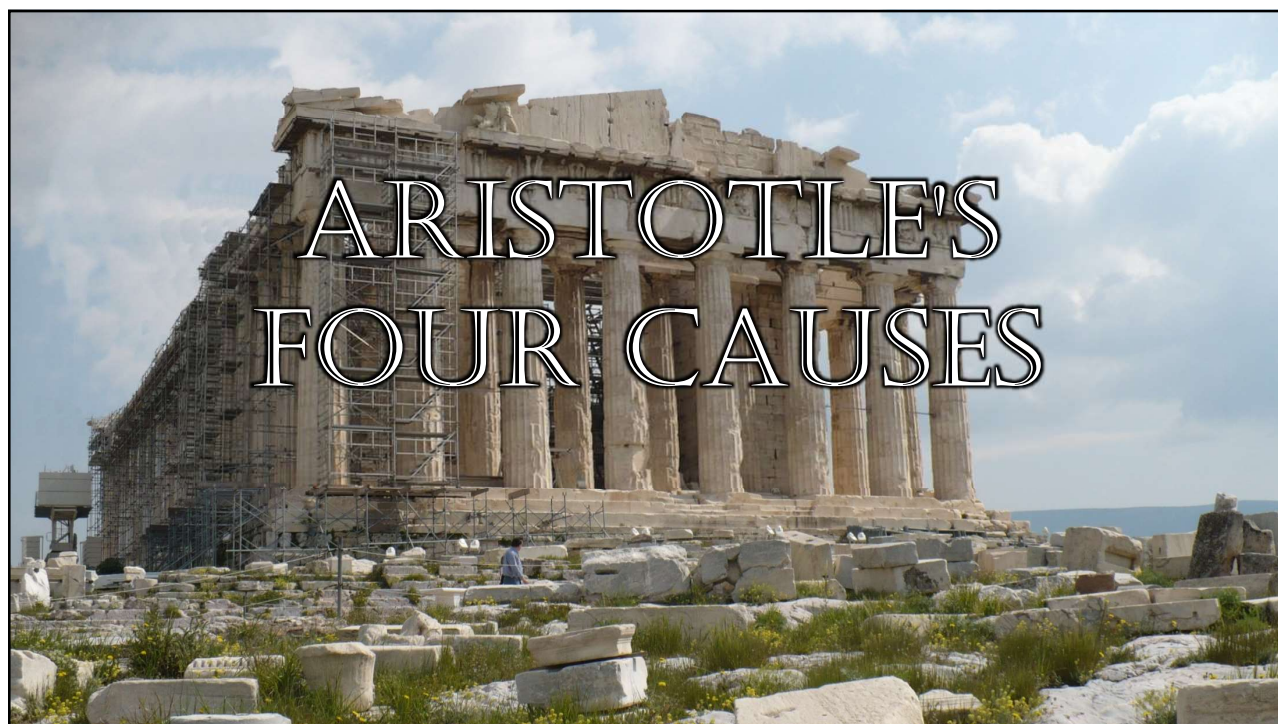
Hylemorphism

hylomorphic composition

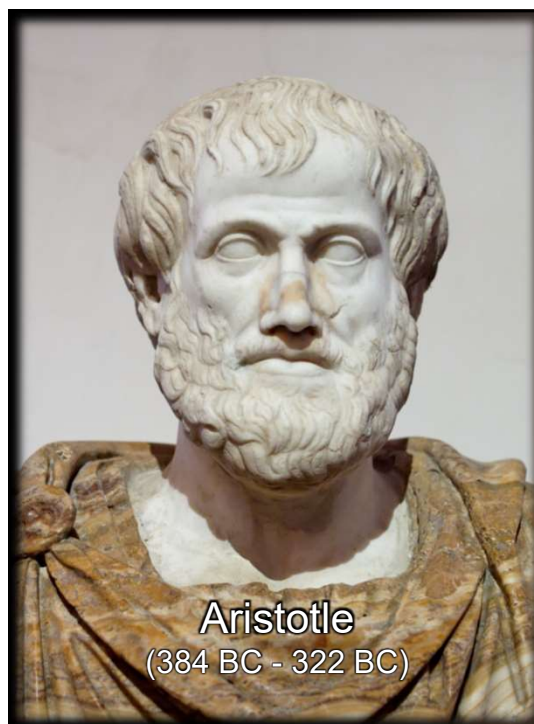
the necessary twofold composition, material and formal, of everything in the sensible world

hule (ὕλη) = matter

morphe (μορφή) = form

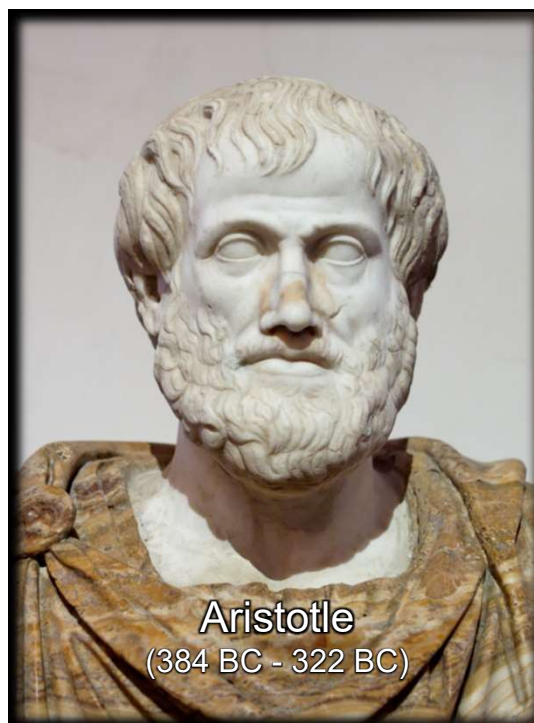


According to Aristotle, there are four principles or causes which are necessarily involved in the explanation of a sensible object.



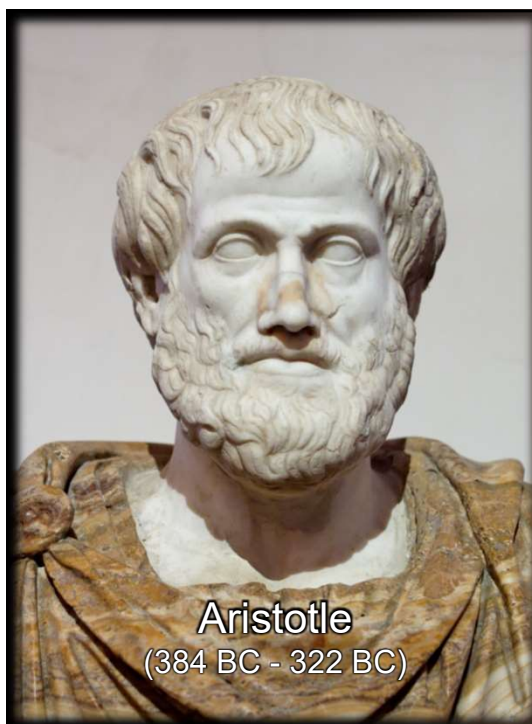
Aristotle
(384 BC - 322 BC)

"'Cause' means (1) that from which, as immanent material, a thing comes into being, e.g., the bronze is the cause of the statue ...



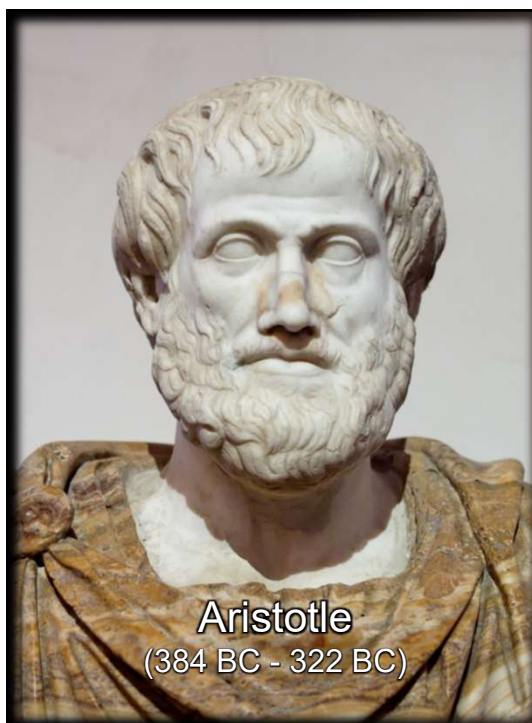
Aristotle
(384 BC - 322 BC)

"(2) The form or pattern, i.e., the definition of the essence, and the classes which include this ..., and the parts included in the definition.



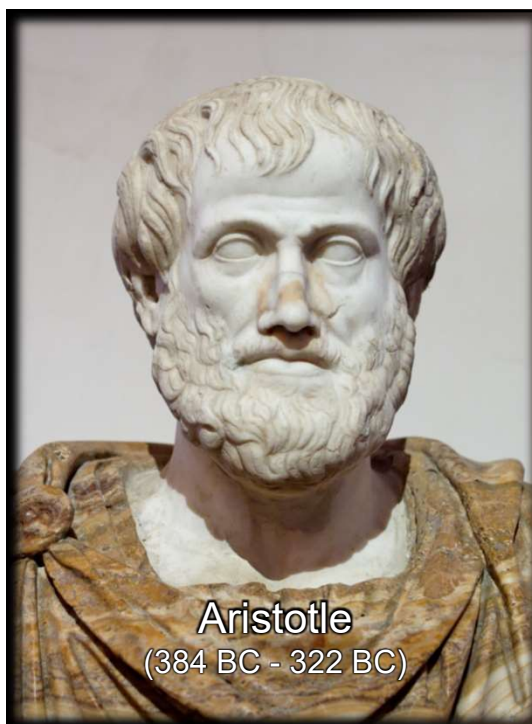
Aristotle
(384 BC - 322 BC)

"(3) That from which the change or the resting from change first begins; e.g., ... the advisor is the cause of the action, and the father a cause of the child



Aristotle
(384 BC - 322 BC)

(4) The end, i.e., that for the sake of which a thing is; e.g., health is the cause of walking.



Aristotle
(384 BC - 322 BC)

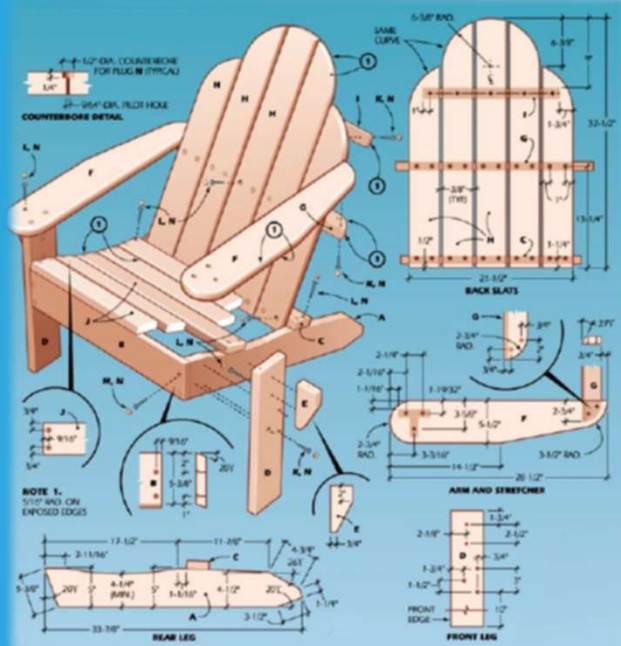
For 'Why does one walk?' we say; 'that one may be healthy'; and in speaking thus we think we have given the cause. These, then, are practically all the senses in which causes are spoken of.'

[Metaphysics, D (5), 2, 1013^a24-1013^b3, trans. Ross, in McKeon, ed., 752-753]



Material Cause
that *out of which*
an effect is
= what the chair is made
of: wood

Formal Cause
that *which*
an effect is
= form, structure, or
nature of the chair:
chair-ness



Efficient Cause
that *by which*
an effect is
= who produced the
chair: the builder

Final Cause
that *for which*
an effect is
= why the chair was built:
to sit on



artifact

MATERIAL CAUSE

FORMAL CAUSE

The carpenter imposes a
"form" from his mind

onto the wood

to "create" a chair

EFFICIENT CAUSE

to sit on.

FINAL CAUSE



natural kind

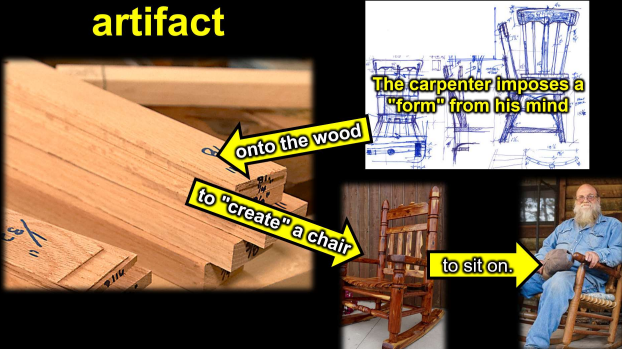
the form (which is intrinsic to the natural kind)

directs
the
natural
kind



to its proper end or telos

artifact

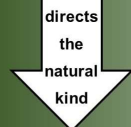


There is nothing intrinsic to the wood that causes it to become a chair.
The "form" is completely accounted for extrinsically by the mind of the carpenter.

natural kind

the form (which is intrinsic to the natural kind)

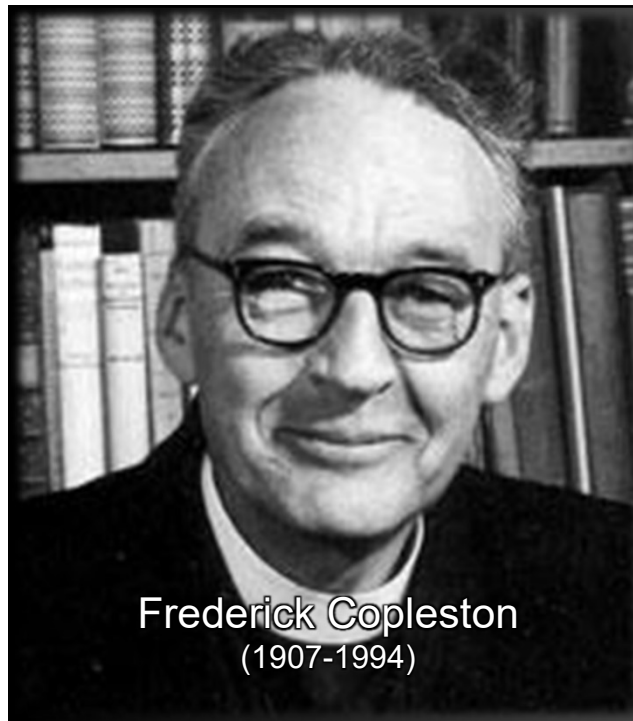
directs
the
natural
kind



to its proper end or telos

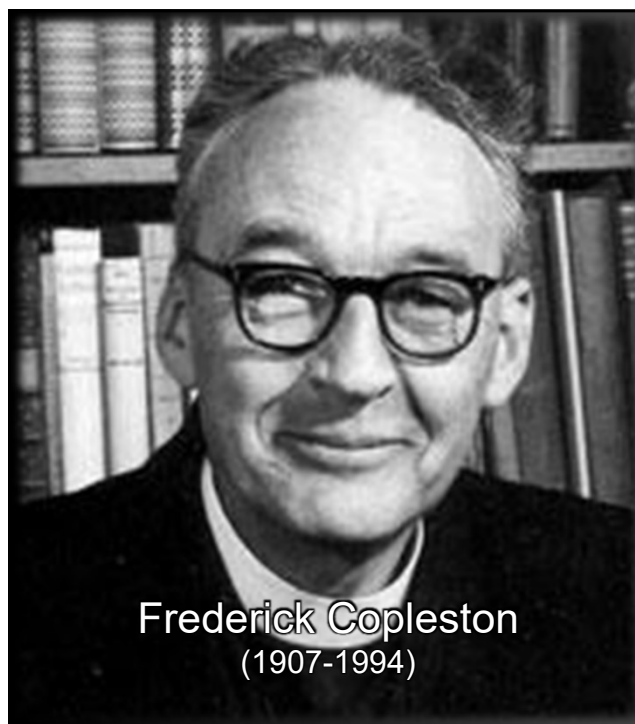
There is something intrinsic to the acorn that causes it to become an oak tree.
The form is intrinsic to the acorn.
However, for the Christian, God accounts for the existence of the form (extrinsically).

It should be noted that the final cause is not necessarily external to (i.e., from the outside of) the thing, and indeed in Aristotle's thinking, the final cause is often not distinct from the thing itself.



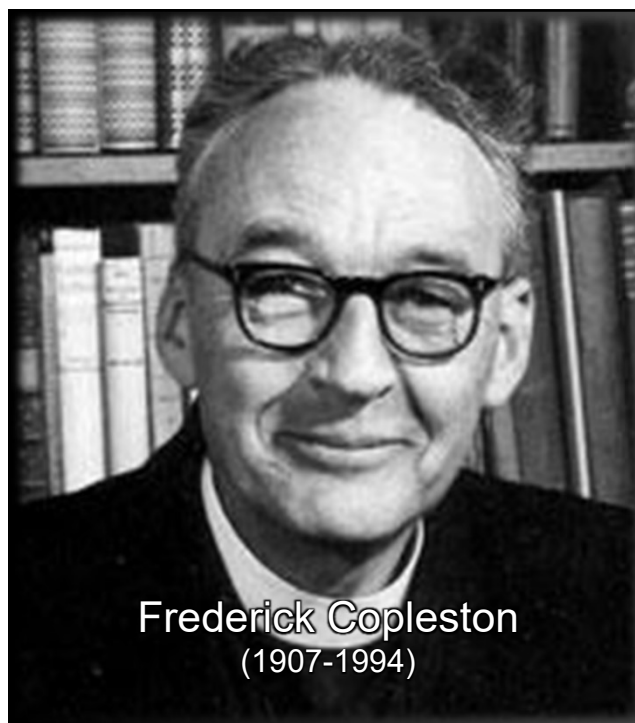
Frederick Copleston
(1907-1994)

"But though [Aristotle] lays great stress on finality, it would be a mistake to suppose that finality, for Aristotle, is equivalent to *external* finality, as though we were to say, for instance, that grass grows in order that sheep may have food.



Frederick Copleston
(1907-1994)

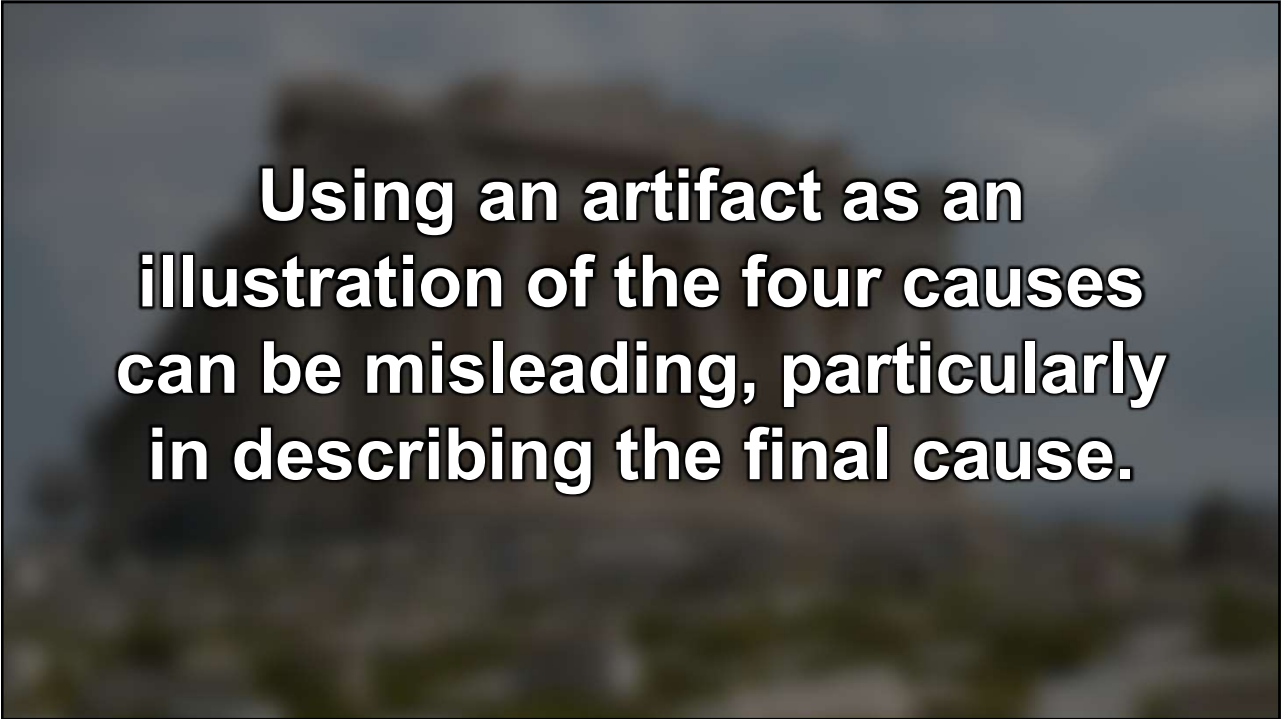
"On the contrary, he insists much more on internal or immanent finality (thus the apple tree has attained its end or purpose, not when its fruit forms a healthy or pleasant food for man or has been made into cider,



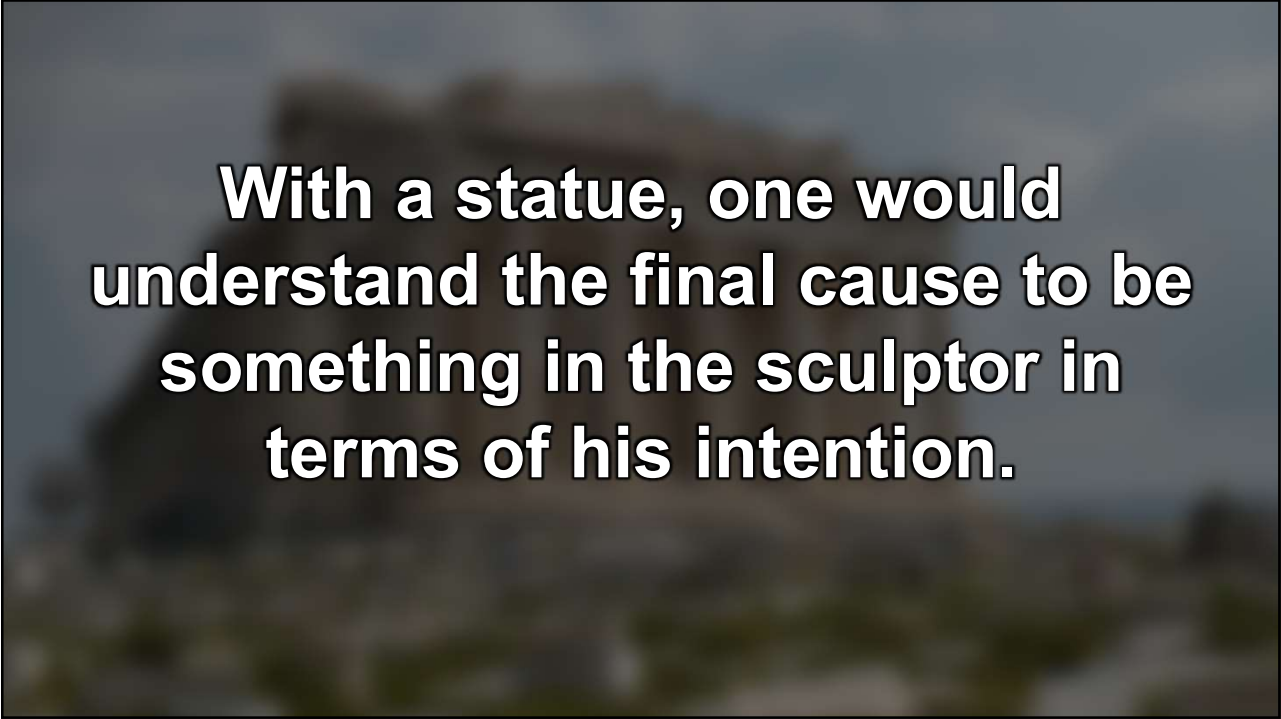
Frederick Copleston
(1907-1994)

"but when the apple tree has reached that perfection of development of which it is capable, i.e., the perfection of its form), for in his view the formal cause of the thing is normally its final cause as well."

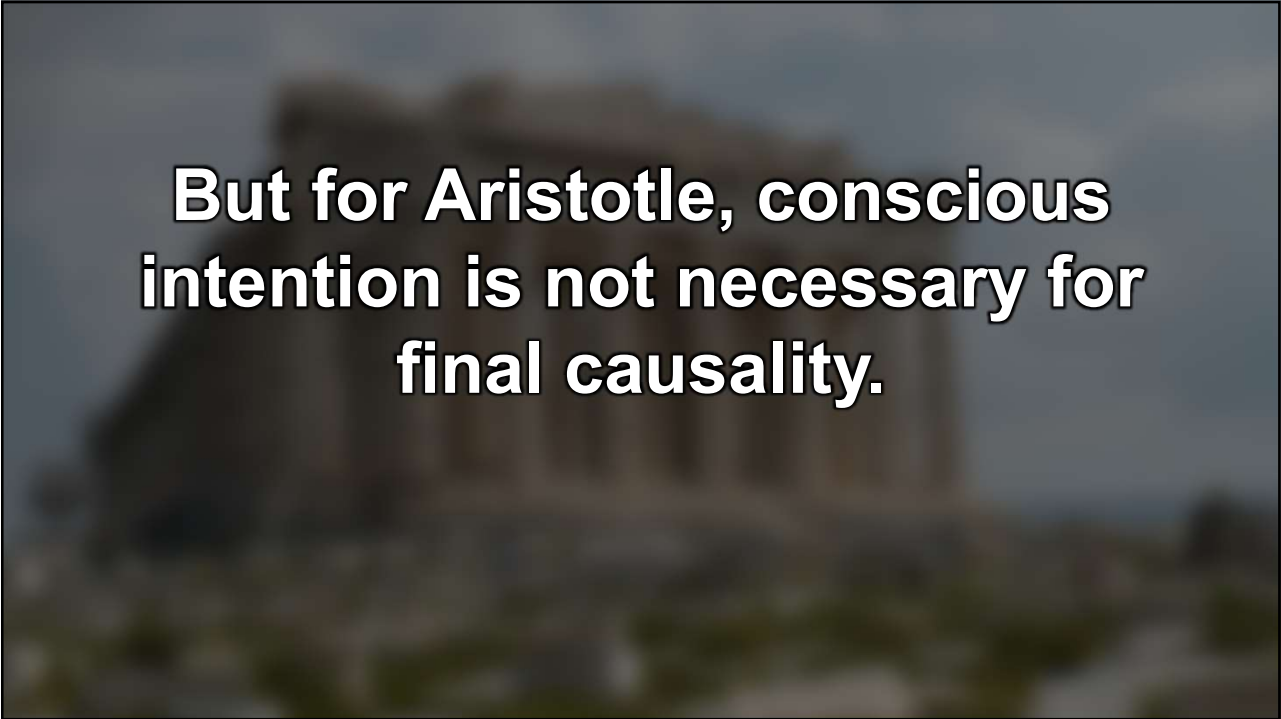
[Frederick Copleston, *A History of Philosophy*, 9 vols., Vol 1: Greece and Rome (New York: Image Books, 1962-62), 313]



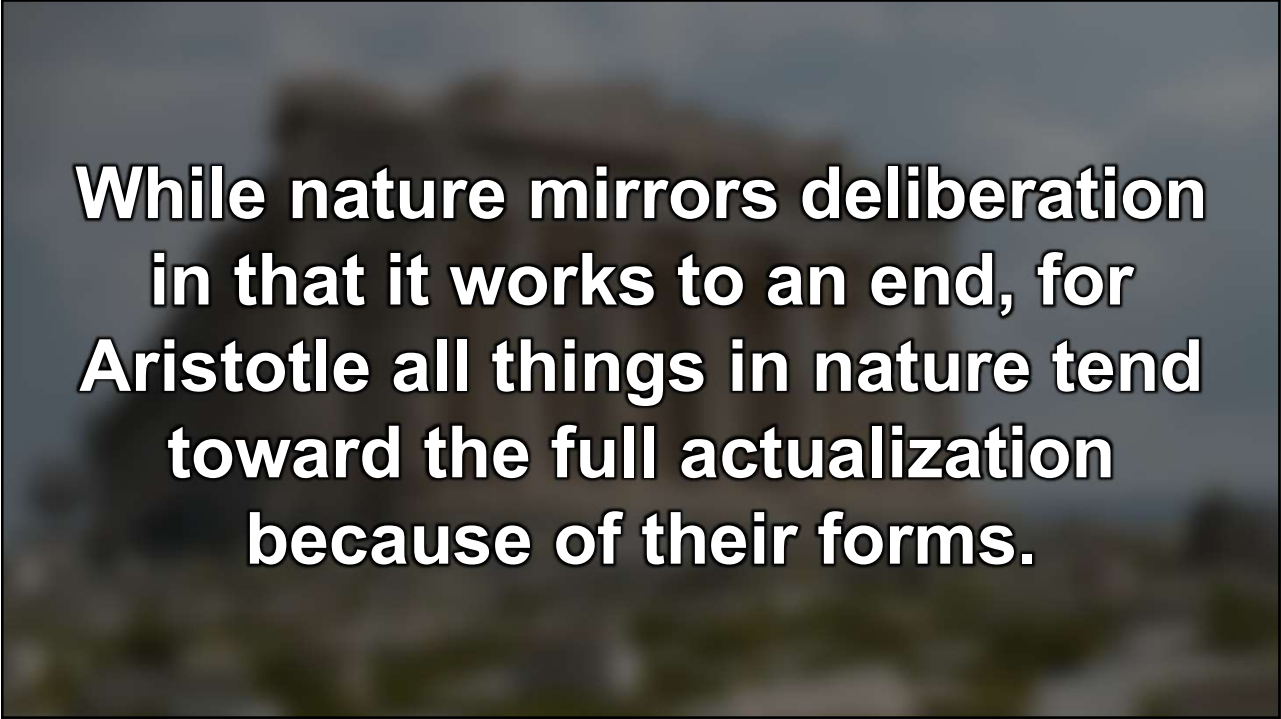
Using an artifact as an illustration of the four causes can be misleading, particularly in describing the final cause.



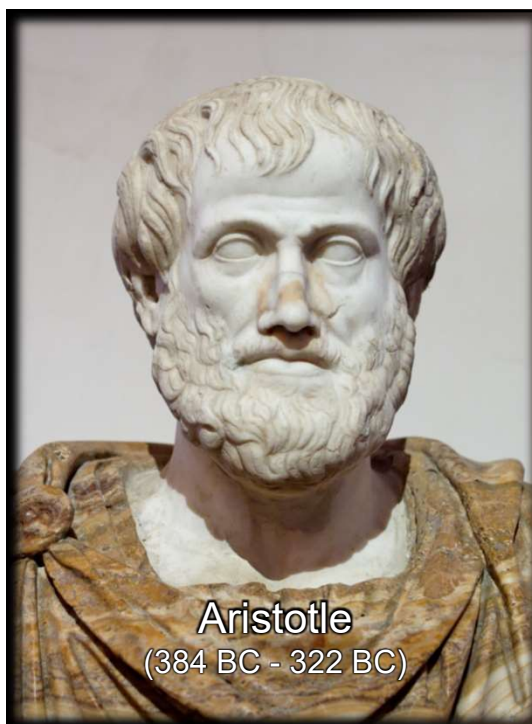
With a statue, one would understand the final cause to be something in the sculptor in terms of his intention.



But for Aristotle, conscious intention is not necessary for final causality.

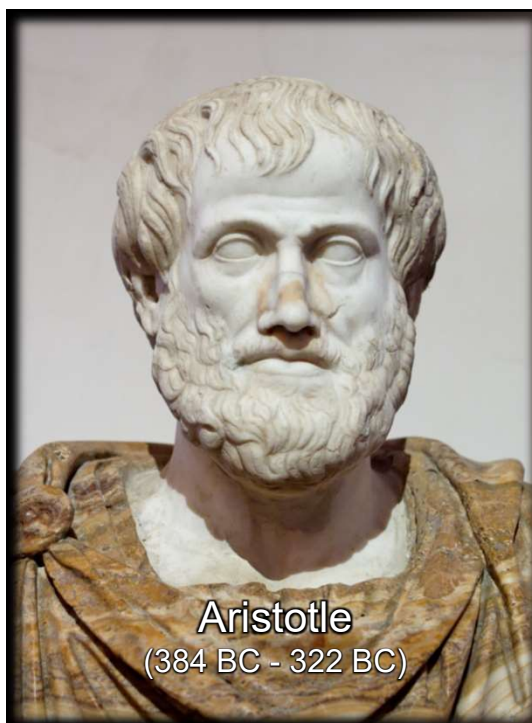


While nature mirrors deliberation in that it works to an end, for Aristotle all things in nature tend toward the full actualization because of their forms.



Aristotle
(384 BC - 322 BC)

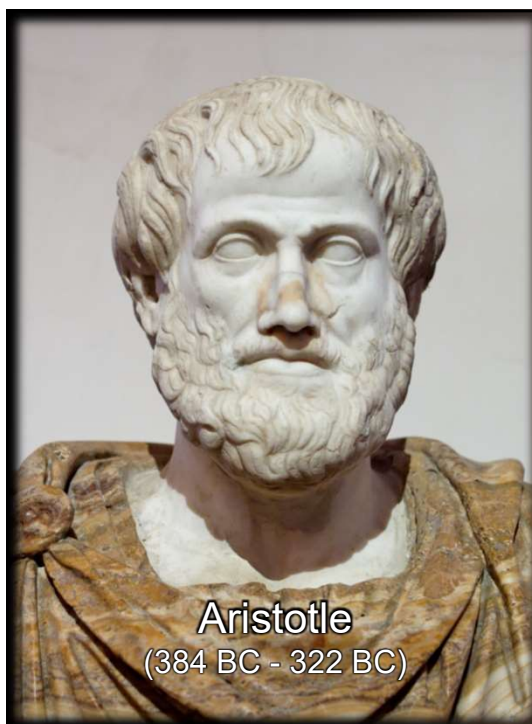
"Further, where a series has a completion, all the preceding steps are for the sake of that. Now surely as in intelligent action, so in nature; and as in nature, so it is in each action, if nothing interferes.



Aristotle
(384 BC - 322 BC)

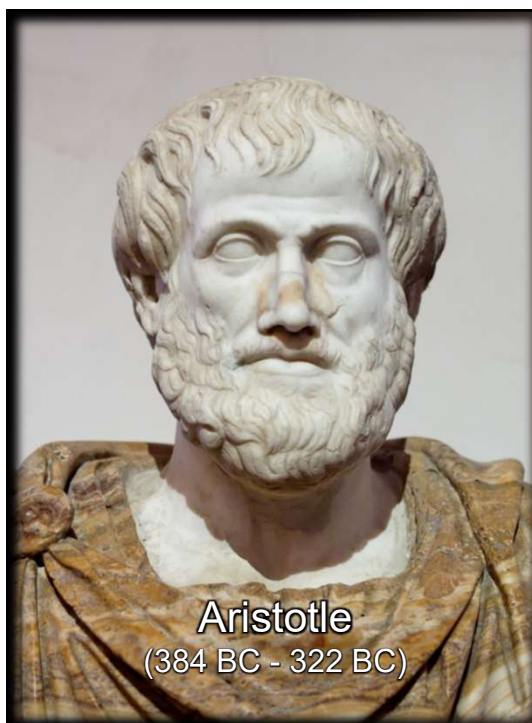
"Now intelligent action is for the sake of an end; therefore the nature of things also is so.... And since 'nature' means two things, the matter and the form, of which the latter is the end, and since all the rest is for the sake of the end, the form must be the cause in the sense of 'that for the sake of which.'"

[Physics, II, 3, 194^b24-33, , trans. R. P. Hardie and R. K. Gaye, in McKeon, 240-241]



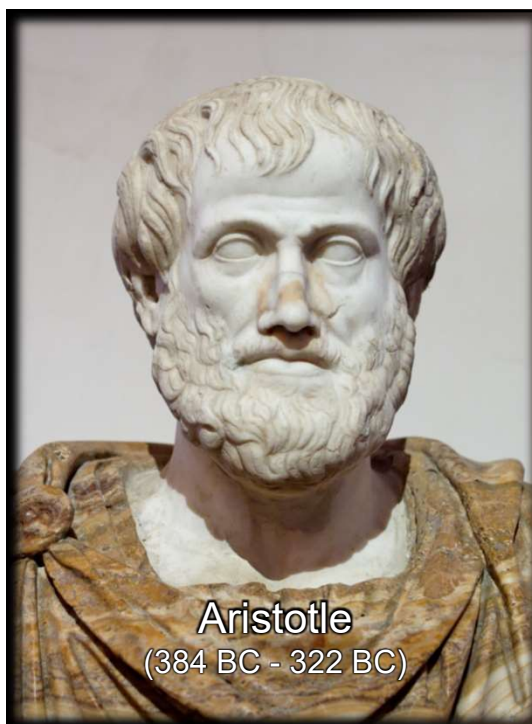
Aristotle
(384 BC - 322 BC)

"A difficulty presents itself:
why should not nature work,
not for the sake of something,
nor because it is better so, but
just as the sky rains, not in
order to make the corn grow,
but of necessity?"



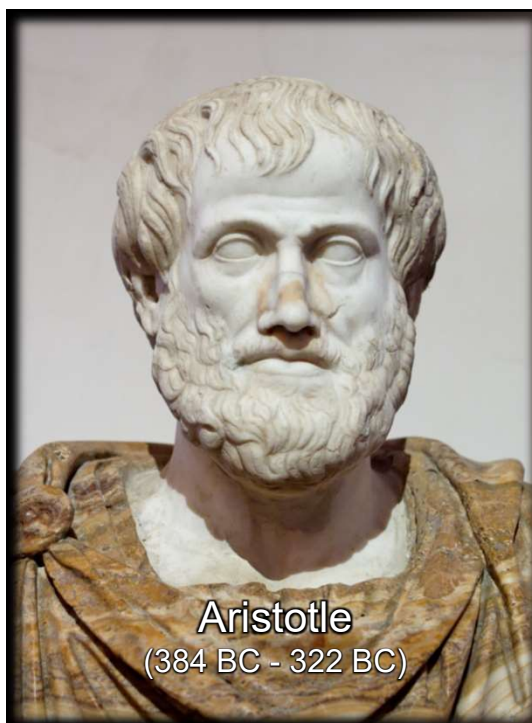
Aristotle
(384 BC - 322 BC)

"What is drawn up must cool,
and what has been cooled
must become water and
descend, the result of this
being that the corn grows.
Similarly if a man's crop is
spoiled on the threshing-floor,
the rain did not fall for the sake
of this—in order that the crop
might be spoiled—but that
result just followed.



Aristotle
(384 BC - 322 BC)

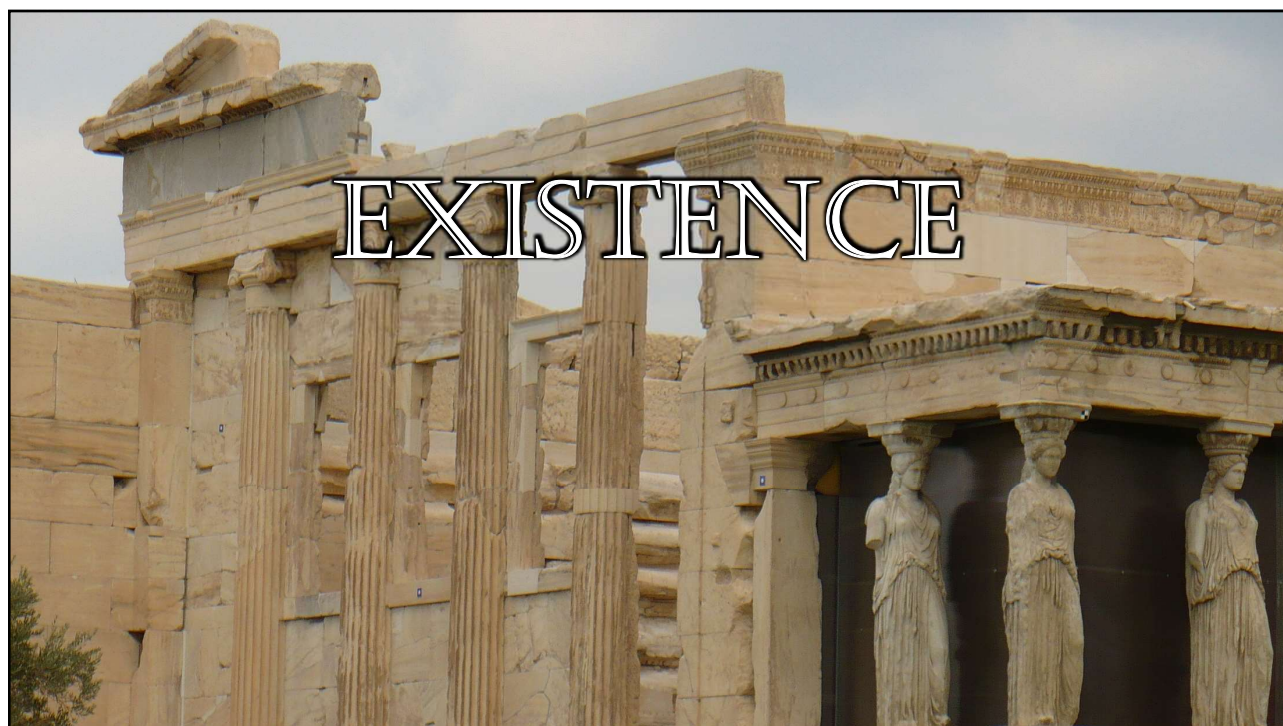
"Why then should it not be the same with the parts in nature, e.g. that our teeth should come up of necessity—the front teeth sharp, fitted for tearing, the molars broad and useful for grinding down the food—since they did not arise for this end, but it was merely a coincident result; and so with all other parts in which we suppose that there is purpose?"

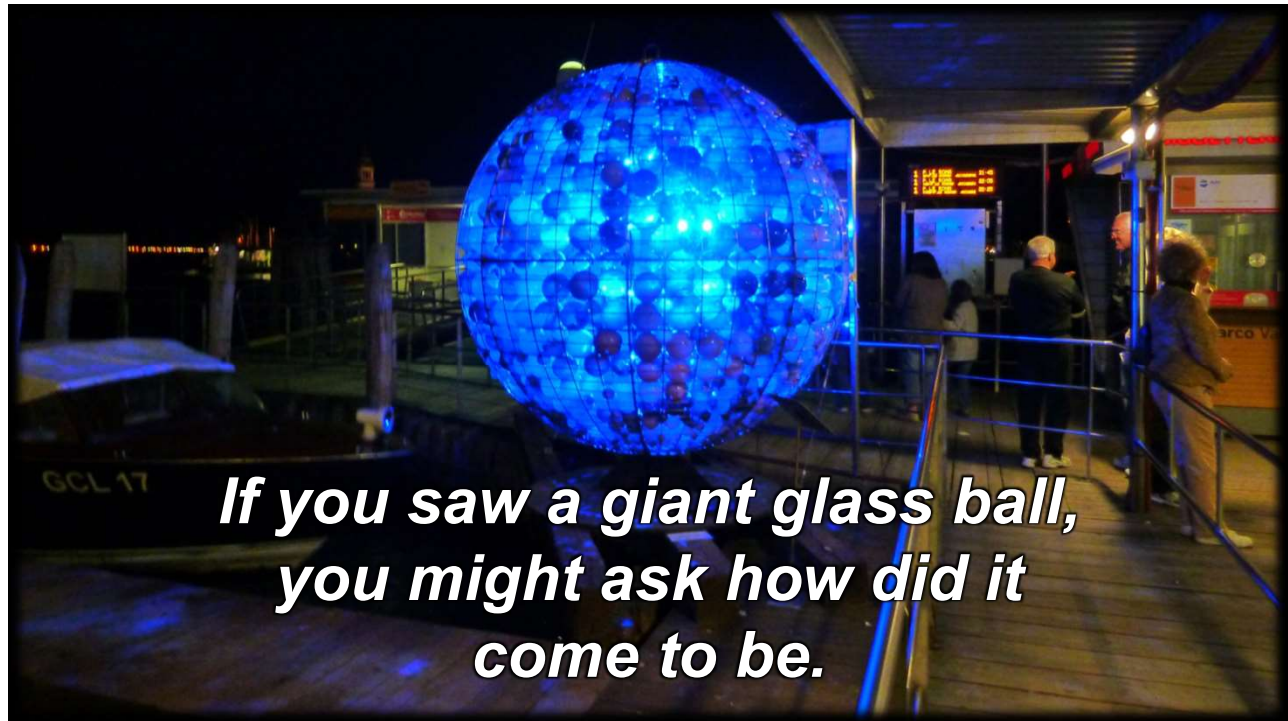


Aristotle
(384 BC - 322 BC)

"Wherever then all the parts came about just what they would have been if they had come to be for an end, such things survived, being organized spontaneously in a fitting way; whereas those which grew otherwise perished and continue to perish . . ."

[*Physics*, II, 8, 198b17-32, trans. Hardie and Gaye, in McKeon, 249]






***If you saw a giant glass ball,
you might ask how did it
come to be.***



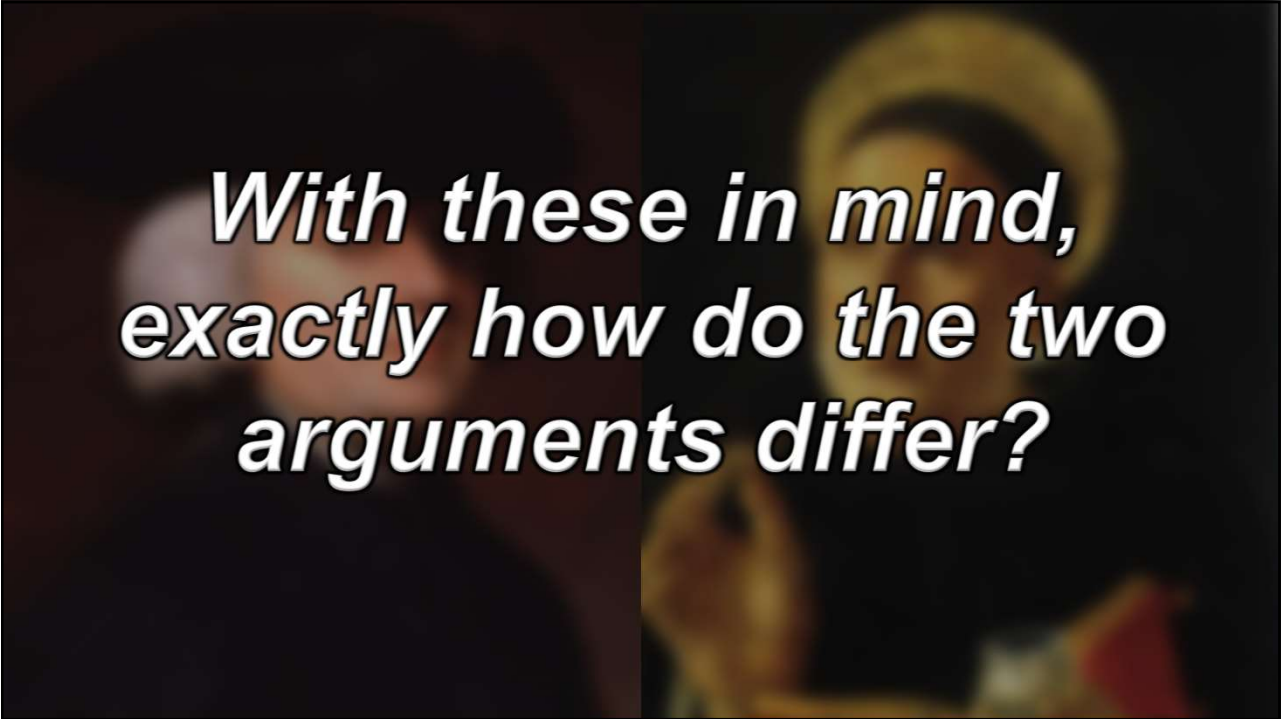
But if you were hearing music,



***But if you were hearing music,
you would not ask how it came to be.***



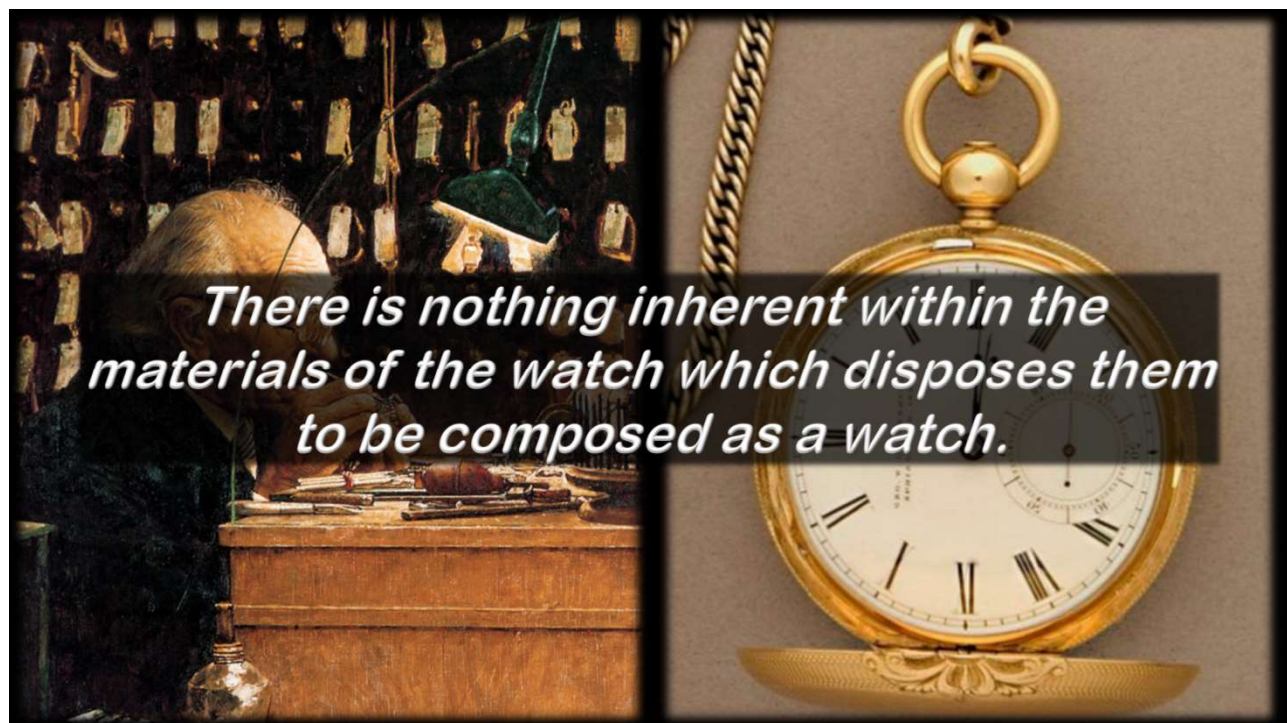
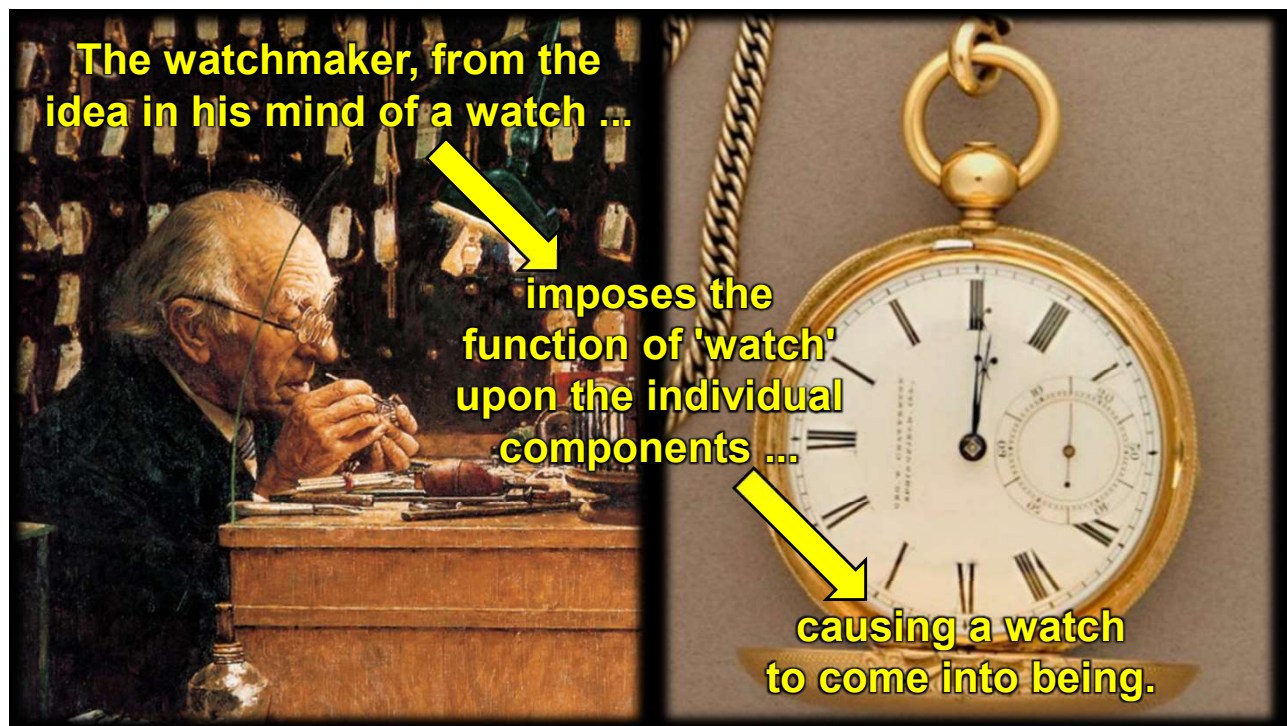
***Rather, you would ask what is causing
the music to be right now.***



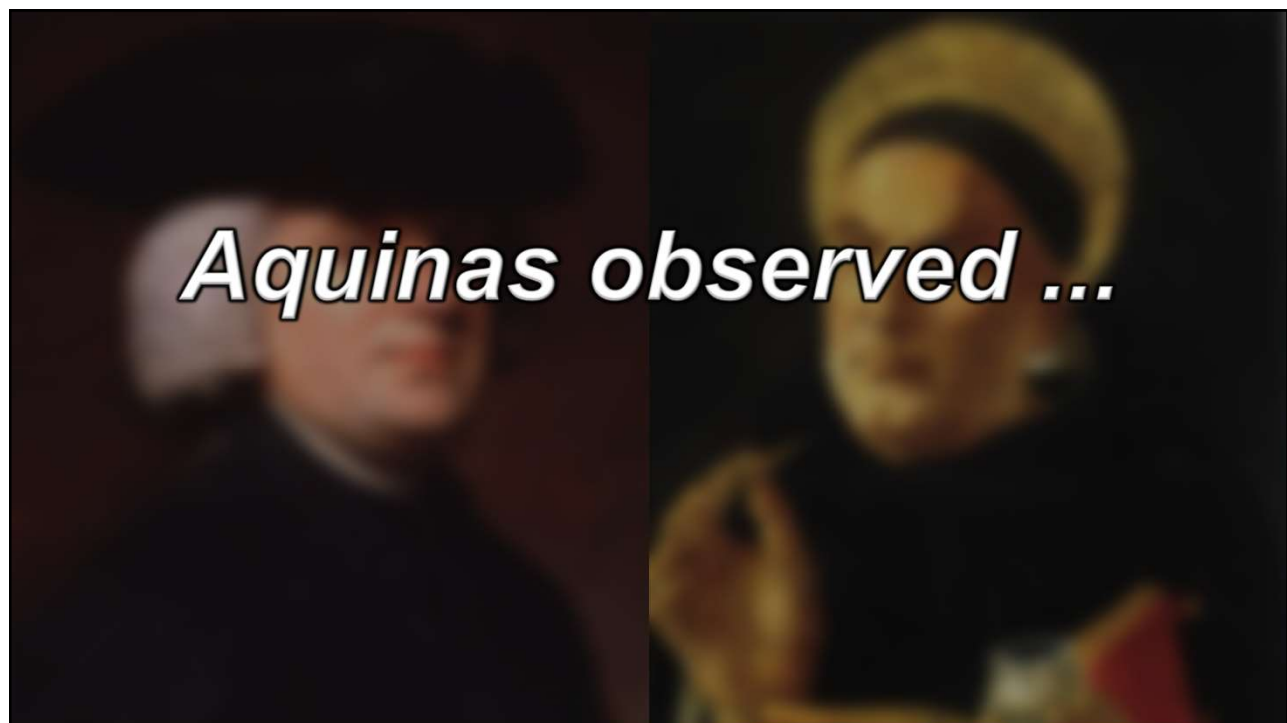
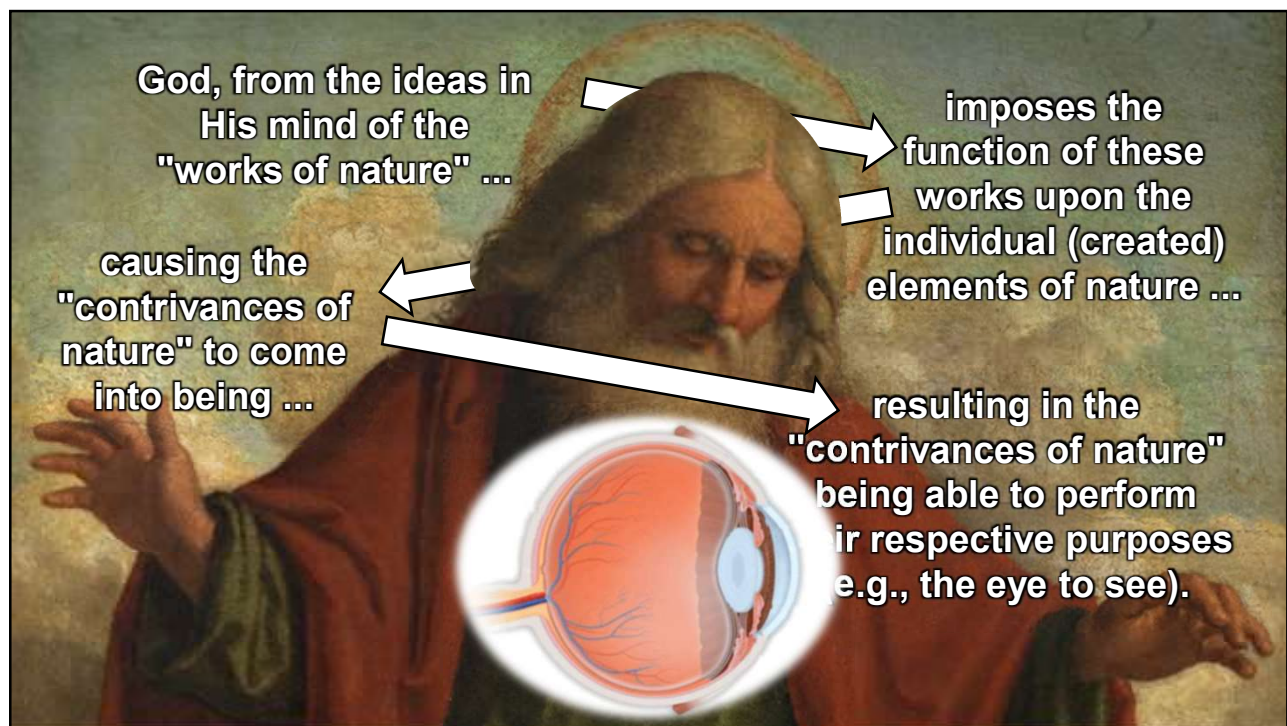
*With these in mind,
exactly how do the two
arguments differ?*



Paley observed ...



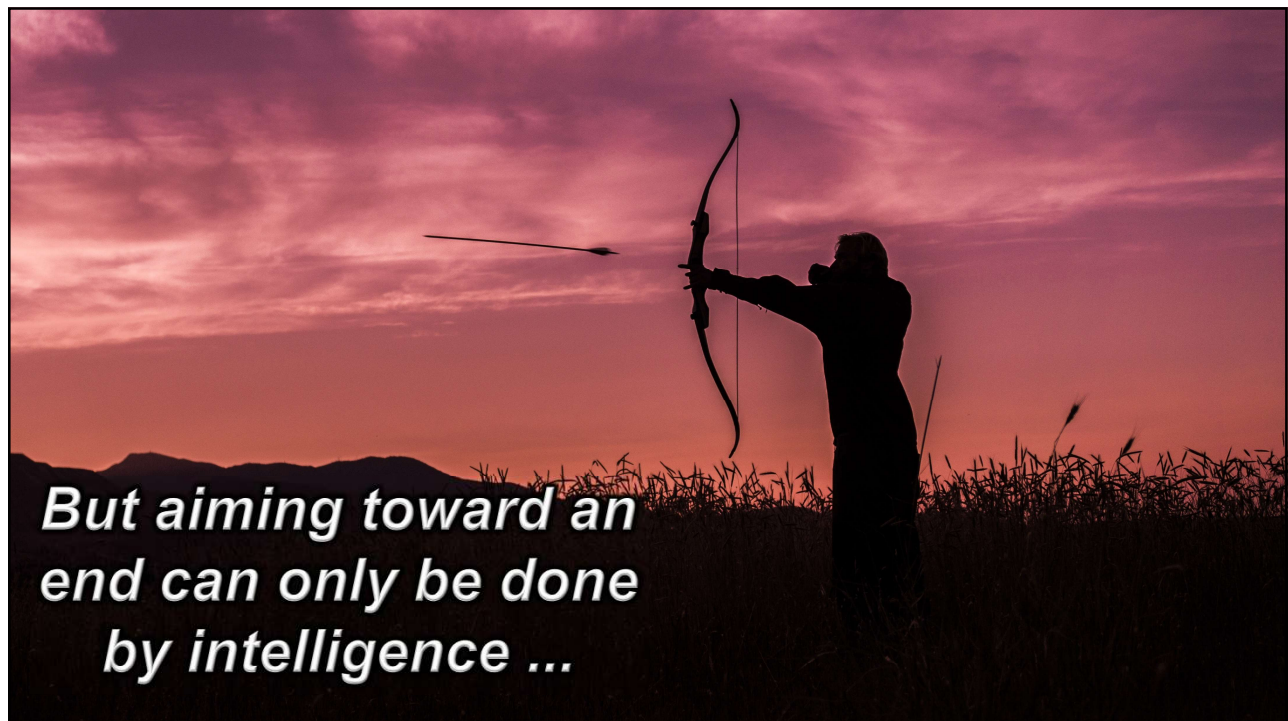




**Everything in
the world aims
toward its
proper end ...**



**resulting in a
world that is
orderly and
governed.**



***But aiming toward an
end can only be done
by intelligence ...***

So Aquinas argued ...

Since there are many things in the world that do not have intelligence and yet always (or nearly always) achieve their proper ends ...



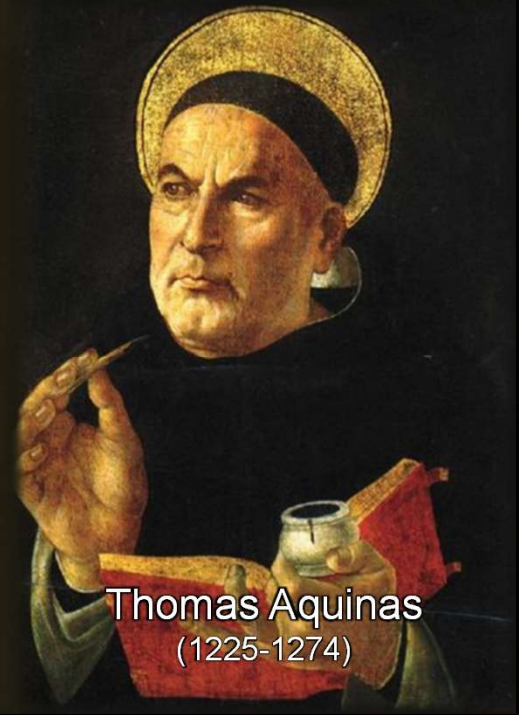
For Aquinas God creates things with natures such that these creatures tend toward their telos by virtue of the teleology that God created their natures to have.



Additionally, since something can only be a cause if it exists, then the final cause of natural kinds must "exist" in the mind of God.

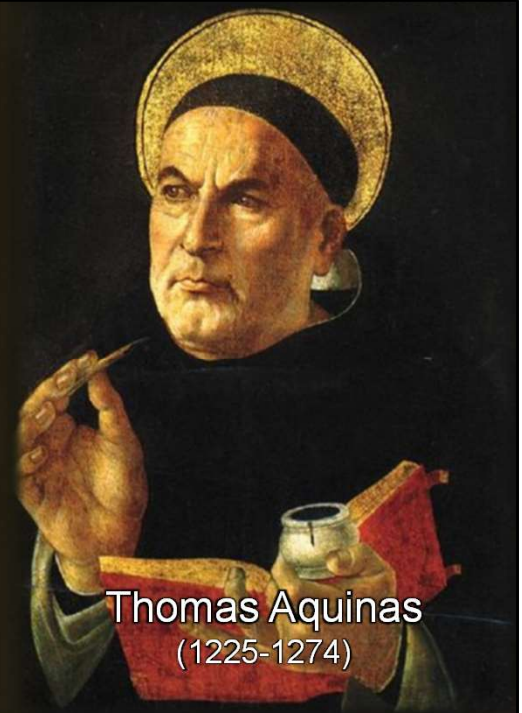


"The natural necessity inherent in those beings which are determined to a particular thing, is a kind of impression from God, directing them to their end;



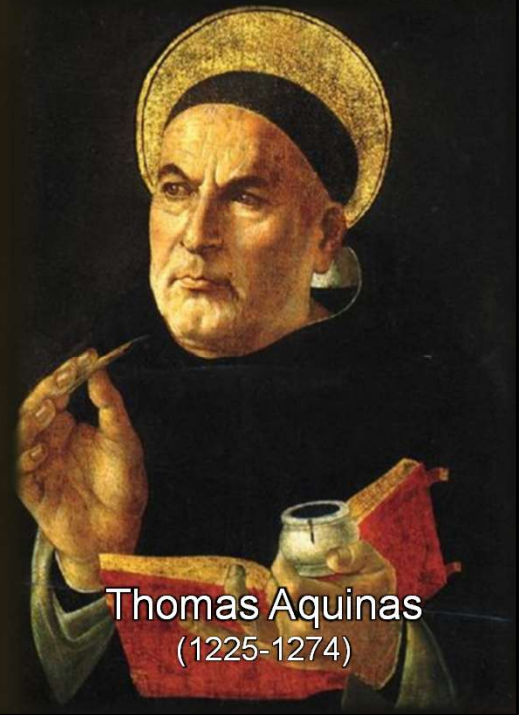
Thomas Aquinas
(1225-1274)

"as the necessity whereby an arrow is moved so as to fly towards a certain point is an impression from the archer, and not from the arrow.



Thomas Aquinas
(1225-1274)

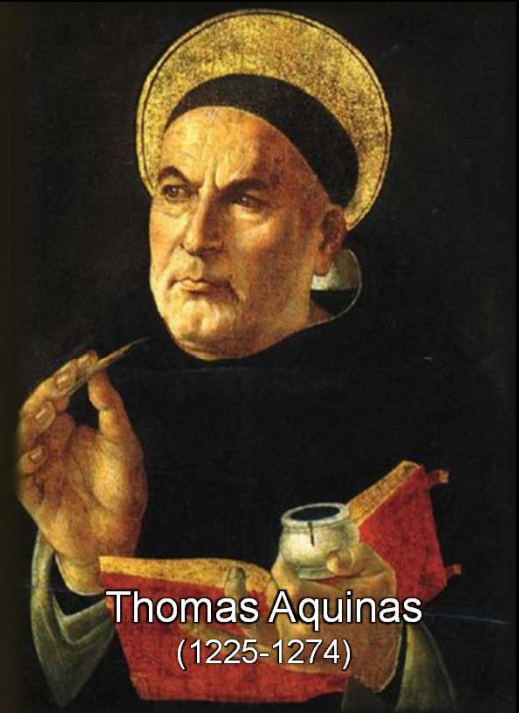
***"But there is a difference,
inasmuch as that which
creatures receive from God
is their nature, while that
which natural things
receive from man in
addition to their nature is
somewhat violent."***



Thomas Aquinas
(1225-1274)

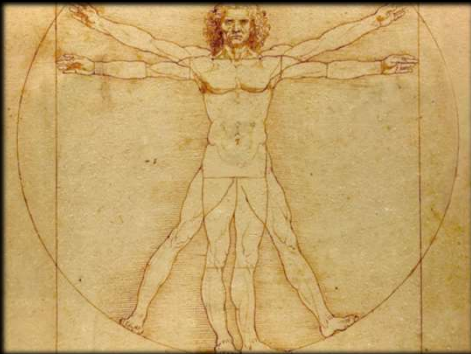
***"Wherefore, as the violent
necessity in the movement
of the arrow shows the
actions of the archer, so
the natural necessity of
things shows the
government of Divine
Providence."***

[ST I, Q103, art. 1, ad. 3]



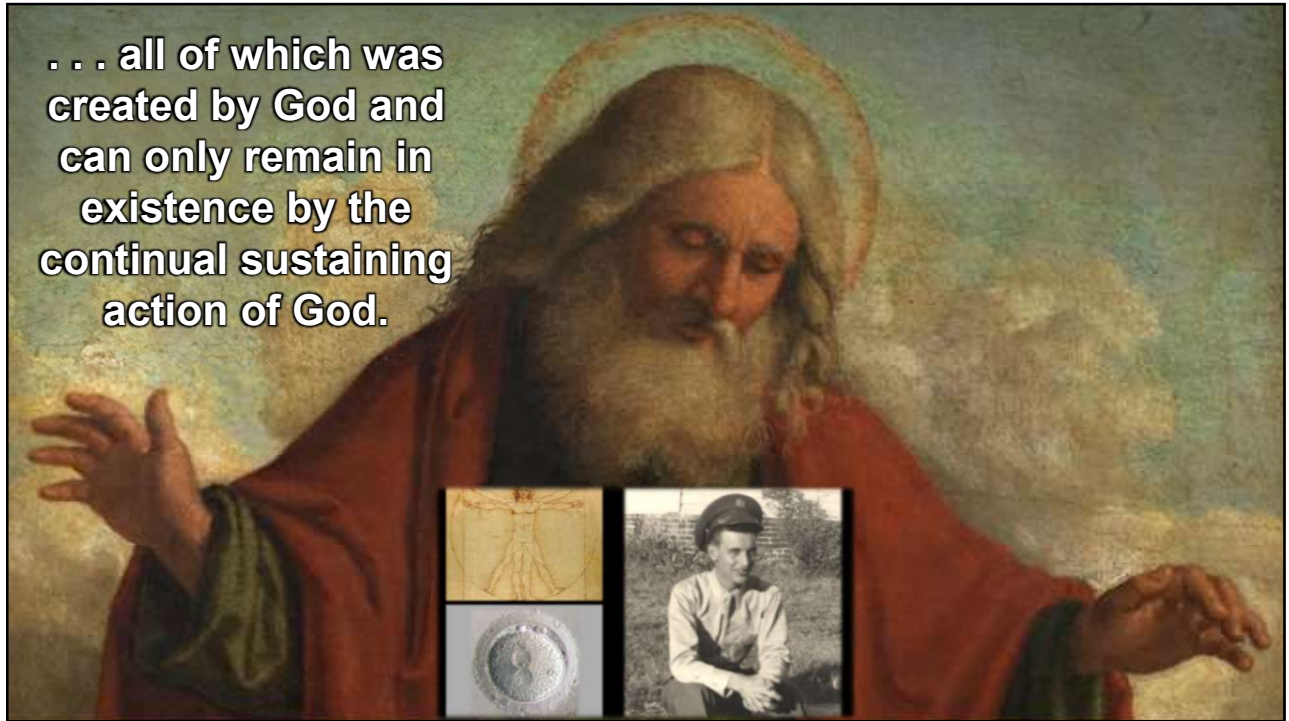
Thomas Aquinas
(1225-1274)

Further, for Aquinas ...



which grows toward its telos as a
mature and **virtuous** human being

. . . all of which was
created by God and
can only remain in
existence by the
continual sustaining
action of God.



Strengths and Weaknesses



Paley	Aquinas
Strength	Weakness
does not depend upon a knowledge of philosophy (metaphysics) in general or Aristotelian / Thomistic philosophy in particular	requires a background in basic Aristotelian / Thomistic metaphysics (act / potency; form / matter; substance / accident; four causes; essence / existence)

Paley	Aquinas
Weakness	Strength
	necessarily entails the attributes of the God of classical theism

Paley	Aquinas
Weakness	Strength
	

Paley	Aquinas
Weakness	Strength
<p>cannot by itself entail the attributes of the God of classical theism</p> <p>(predicated upon the denial of some of the fundamental elements of Thomism, e.g. nature as mechanistic; no teleology; no intrinsic natures)</p>	<p>necessarily entails the attributes of the God of classical theism</p>

"Even if we allow the dubious luxury of arbitrarily conjuring up a terminator to an infinite regress and giving it a name, simply because we need one, there is absolutely no reason to endow that terminator with any of the properties normally ascribed to God."

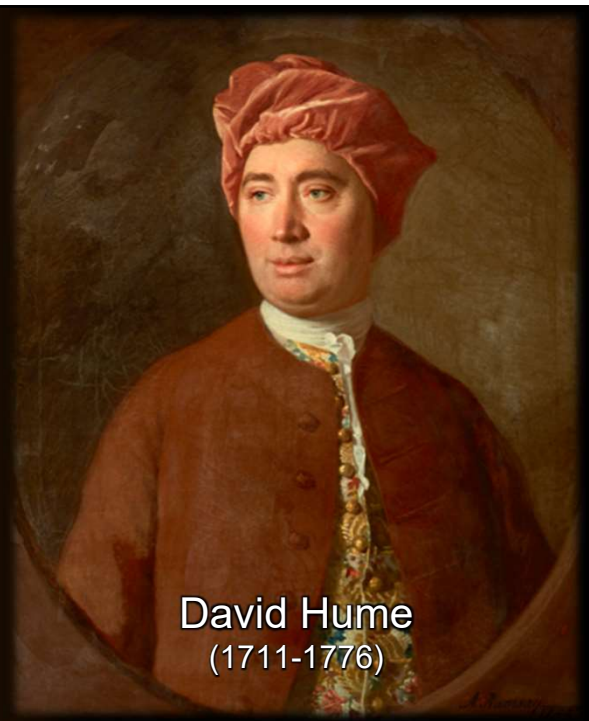
[*The God Delusion* (Boston: Houghton Mifflin, 2006), 77]



Richard Dawkins

"Now, Cleanthes, said Philo, with an air of alacrity and triumph, mark the consequences. First, by this method of reasoning, you renounce all claim to infinity in any of the attributes of the Deity. ... Secondly, you have no reason, on your theory, for ascribing perfection to the Deity. ... And what shadow of an argument, continued Philo, can you produce from your hypothesis, to prove the unity of the Deity?"

[*Dialogues Concerning Natural Religion*, (Amherst: Prometheus, 1989), 50, 51]



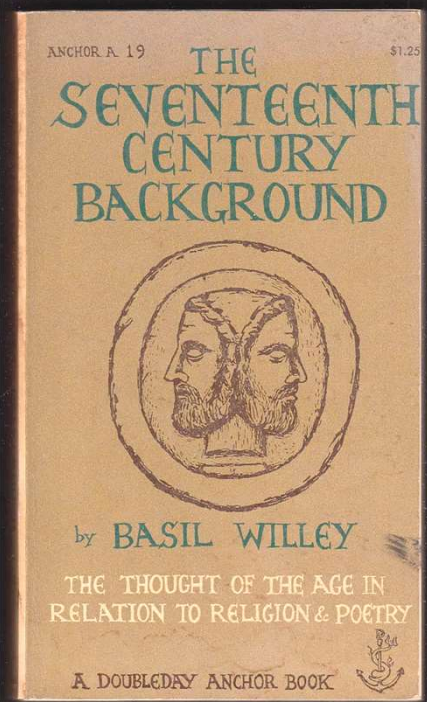
David Hume
(1711-1776)

Paley	Aquinas
Strength	Weakness
appeals to the prevailing views and data of science and thus is able to take advantage of the intellectual and social clout that contemporary science affords	being philosophical rather than scientific, it is unable to take advantage of the intellectual and social clout that contemporary science affords

Paley	Aquinas
Weakness	Strength
reinforces the prevailing false views of nature in its denial of classical metaphysics (e.g., nature as mechanistic; no teleology; no intrinsic natures)	is immune to the relatively transient nature of scientific paradigms (from ancient, to Newtonian, to Relativity, to Quantum, to ?)

"[Modern] science has achieved what it has achieved precisely by abstracting from the whole of 'reality' those aspects which are amenable to its methods."

[Basil Willey, *The Seventeenth Century Background: Studies in the Thought of the Age in Relation to Poetry and Religion* (London: Chatto & Windus, 1934), 23 as cited in Edward Feser, "Hitting the Metaphysical Snooze Button" available at <http://edwardfeser.blogspot.com/2009/07/hitting-metaphysical-snooze-button.html>]



"The fact that a science which focuses only on those aspects of nature which can be analyzed in mechanistic-cum-mathematical terms succeeds mightily in uncovering those aspects (as modern science undeniably has) tells us absolutely nothing about whether nature has any other non-mechanistic, non-mathematically-quantifiable aspects."

[Edward Feser, "Hitting the Metaphysical Snooze Button" available at <http://edwardfeser.blogspot.com/2009/07/hitting-metaphysical-snooze-button.html>]

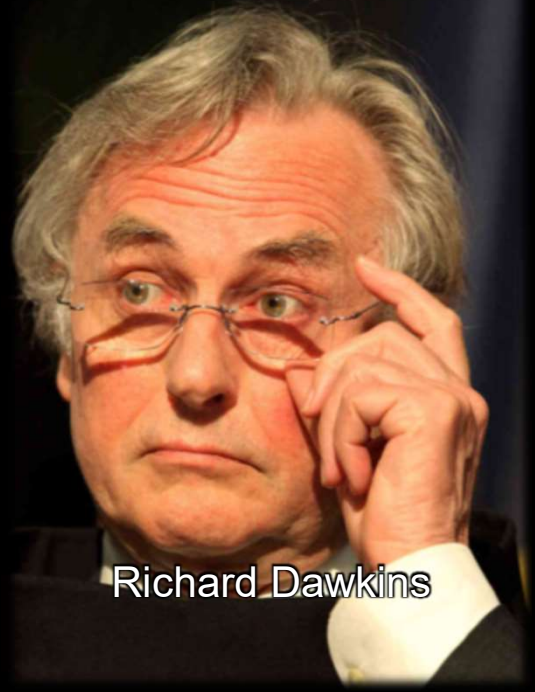


Paley	Aquinas
Strength	Weakness
appeals to certain notions that likely strike people as more or less commonsensical (e.g., categories of contemporary of science)	Because Aristotle's and Aquinas's arguments were sometimes illustrated with examples from an out-of-date, now discredited science, the conclusions of the arguments are illicitly regarded as discredited—a guilt by association fallacy.

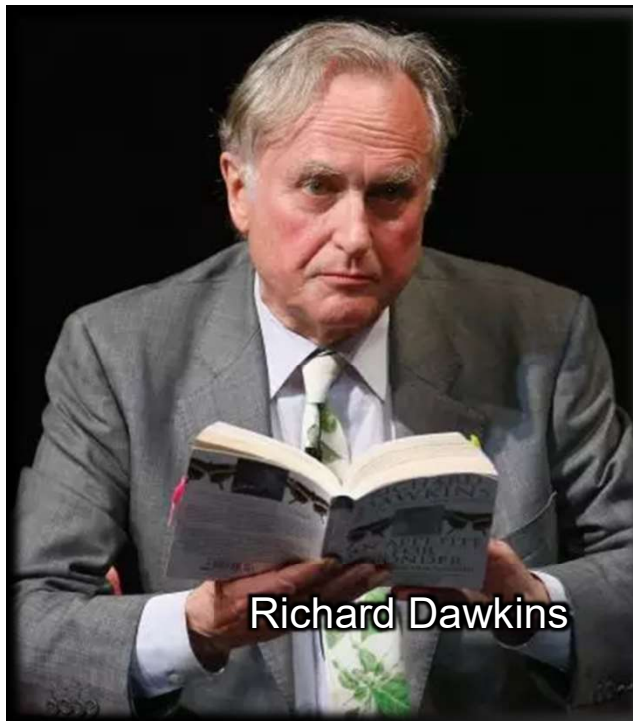
Paley	Aquinas
Weakness	Strength
	immune to the Richard Dawkins type of objections ("Who made God? Who created the creator?")

"However statistically improbable the entity you seek to explain by invoking a designer, the designer himself has got to be at least as improbable."

[*The God Delusion* (Boston: Houghton Mifflin, 2006), 114]



Richard Dawkins



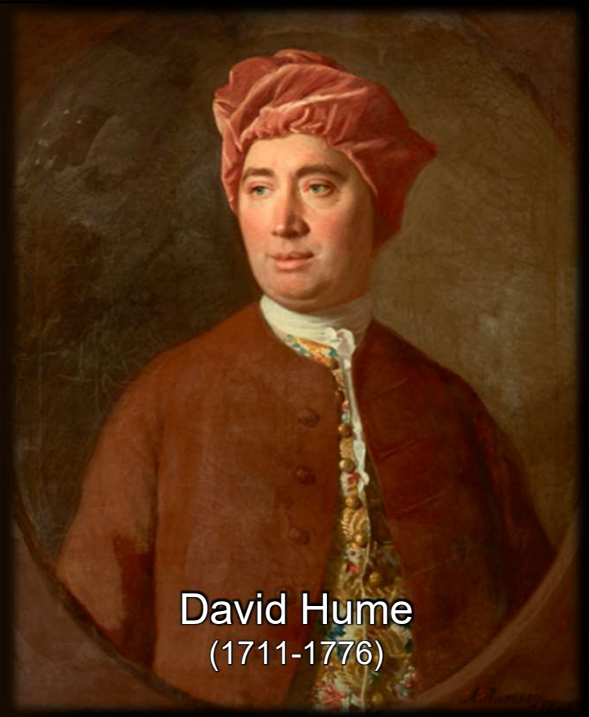
Richard Dawkins

"But of course any God capable of intelligently designing something as complex as the DNA/protein replicating machine must have been at least as complex and organized as that machine itself."

[*The Blind Watchmaker: Why the Evidence of Evolution Reveals a Universe Without Design* (New York: W. W. Norton & Company, 1987), 141]

"Naturalists indeed very justly explain particular effects by more general causes, though these general causes themselves should remain in the end totally inexplicable; but they never surely thought it satisfactory to explain a particular effect by a particular cause, which was no more to be accounted for than the effect itself."

[*Dialogues Concerning Natural Religion*, (Amherst: Prometheus, 1989), 50, 51]



David Hume
(1711-1776)

Paley

Weakness

vulnerable to the Richard Dawkins type of objections ("Who made God? Who created the creator?")

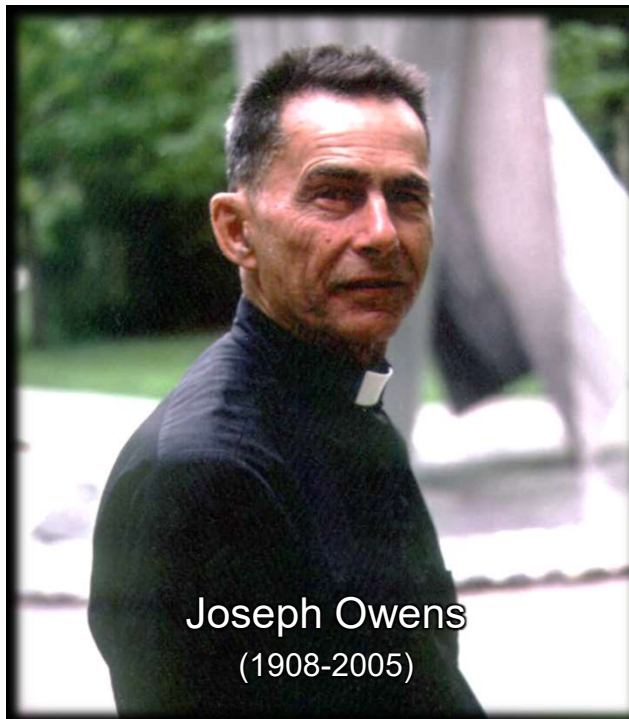
Aquinas

Strength

immune to the Richard Dawkins type of objections ("Who made God? Who created the creator?")

"It is simply not to the point to debate with Darwinians whether or not the cosmic watchmaker is 'blind' (as Richard Dawkins would put it). The fundamental error—made by Darwinian naturalists and ID theorists alike—is to think of the world as a 'watch' in the first place."

[Edward Feser, "Nothing But" available at <http://edwardfeser.blogspot.com/2010/04/nothing-but.html>]



Joseph Owens
(1908-2005)

"Other arguments may vividly suggest the existence of God, press it home eloquently to human consideration, and for most people provide much greater spiritual and religious aid than difficult metaphysical demonstrations. But on the philosophical level these arguments are open to rebuttal and refutation, for they are not philosophically cogent."

[Joseph Owens, "Aquinas and the Five Ways," *Monist* 58 (Jan. 1974): 16-35. [p. 33]]

