

The Existence of God

Richard G. Howe, Ph.D.

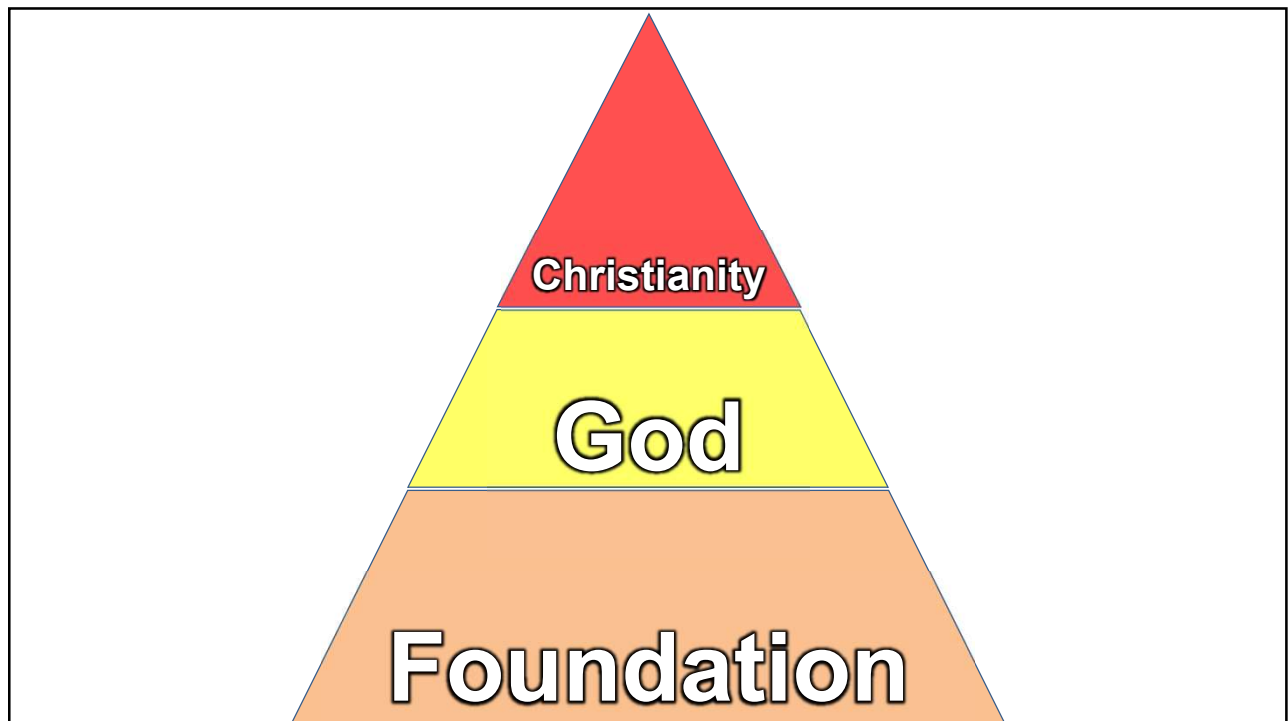
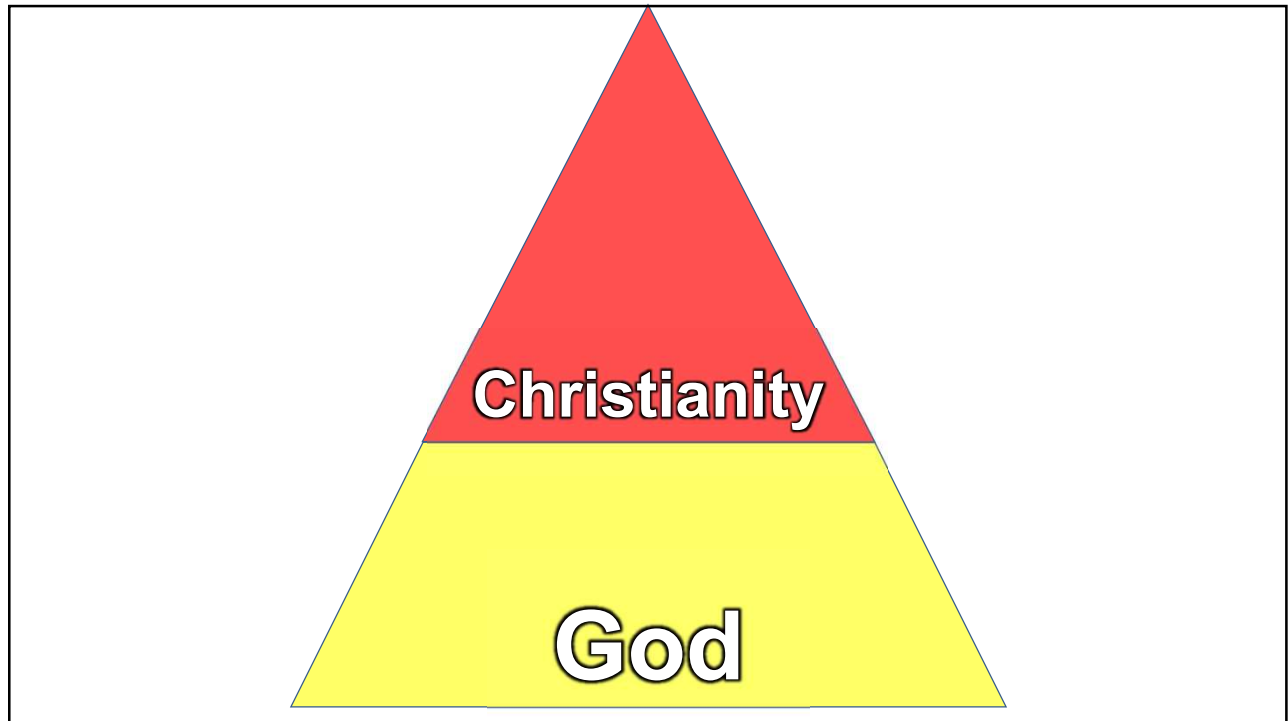
Provost

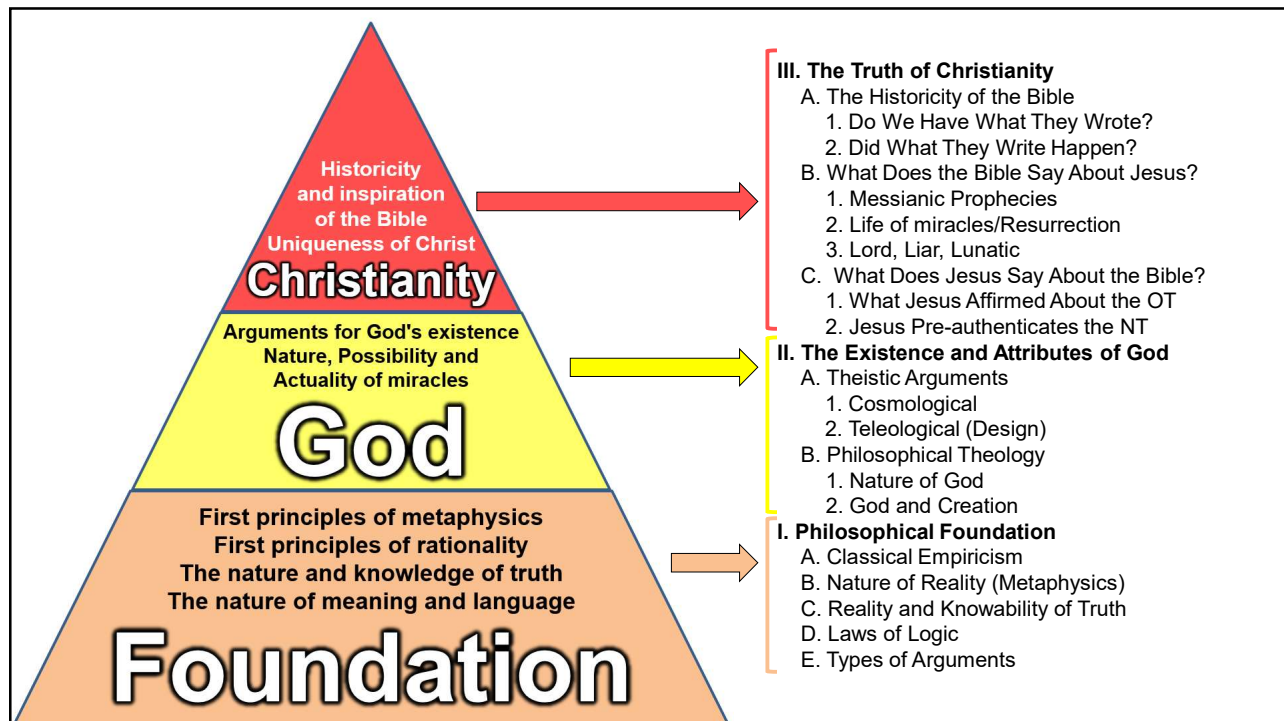
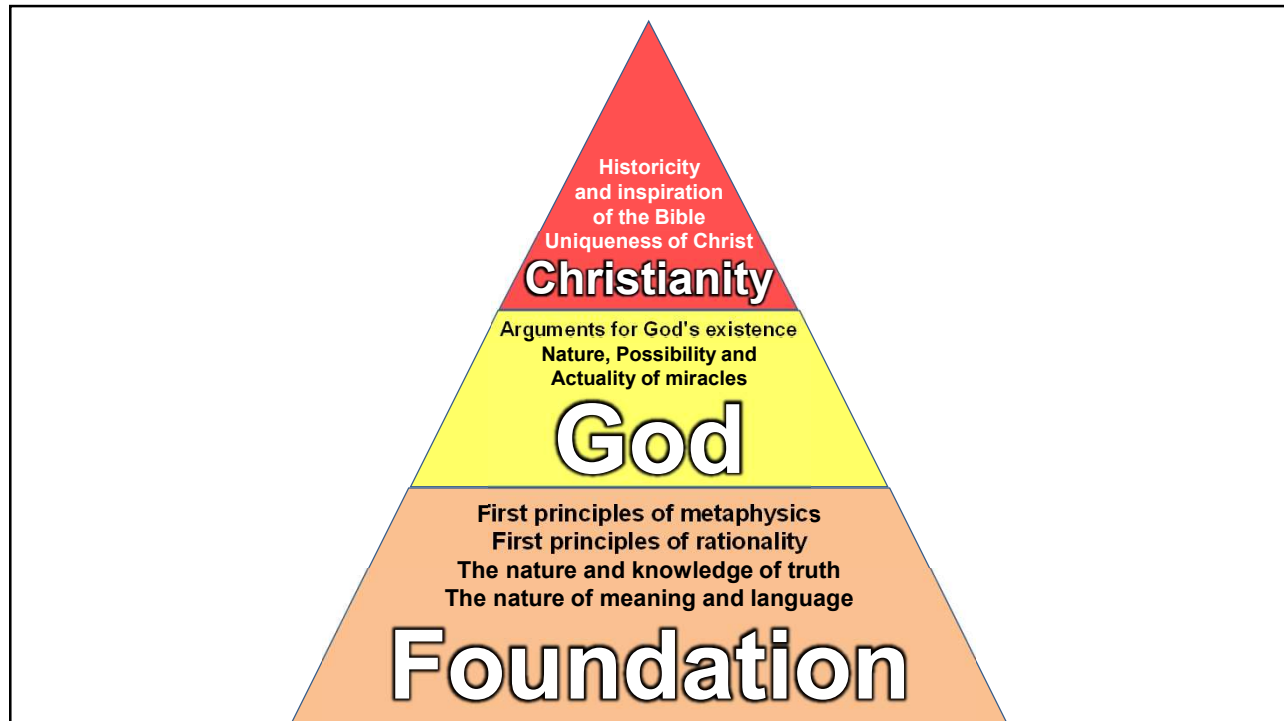
Norman L. Geisler Chair of Christian Apologetics

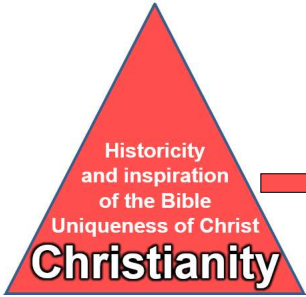
Professor of Philosophy and Apologetics

Southern Evangelical Seminary

Classical Apologetics Three-Step Approach







III. The Truth of Christianity

A. The Historicity of the Bible


1. Do We Have What They Wrote?
2. Did What They Write Happen?

B. What Does the Bible Say About Jesus?

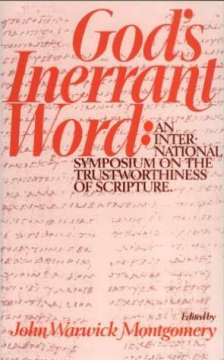
1. Messianic Prophecies
2. Life of miracles/Resurrection
3. Lord, Liar, Lunatic


C. What Does Jesus Say About the Bible?

1. What Jesus Affirmed About the OT
2. Jesus Pre-authenticates the NT



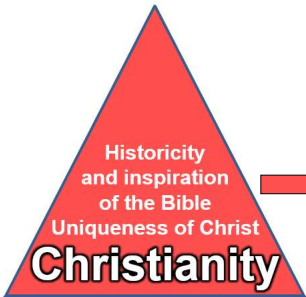
John Warwick Montgomery
(1931-2024)





"The Case for Inerrancy: A Methodological Analysis"

R. C. Sproul
(1939-2017)



III. The Truth of Christianity

A. The Historicity of the Bible

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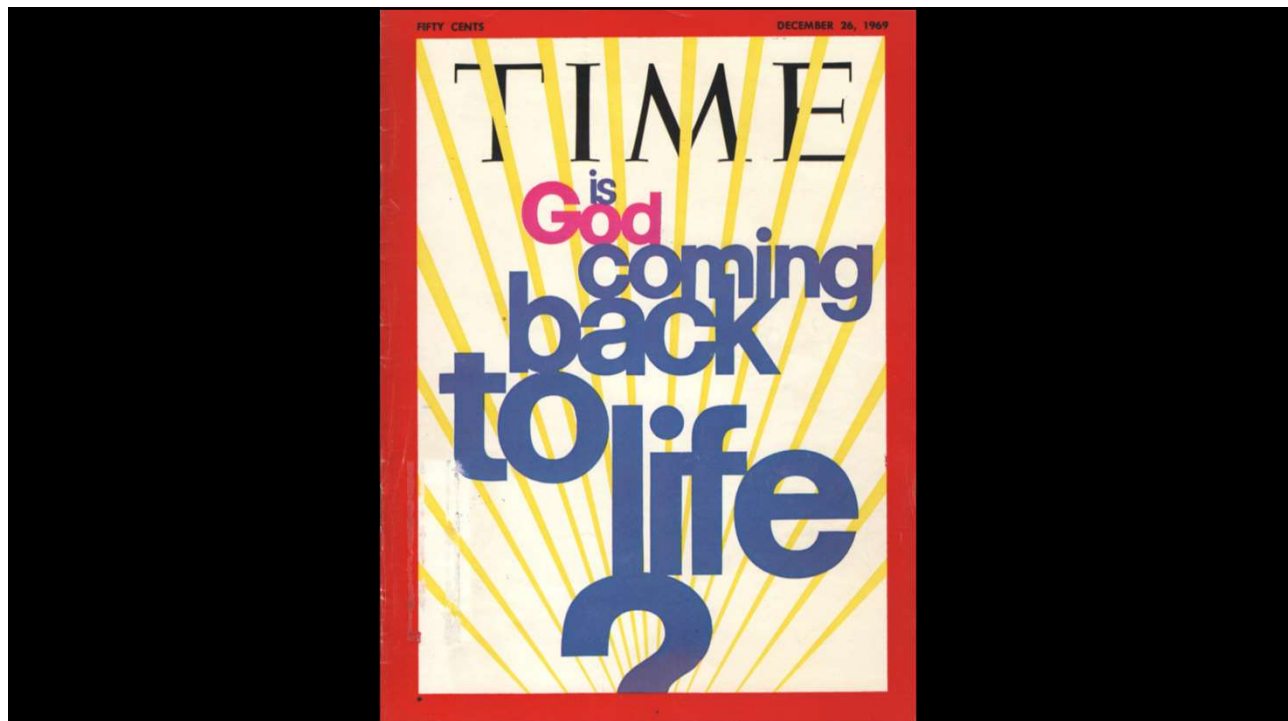
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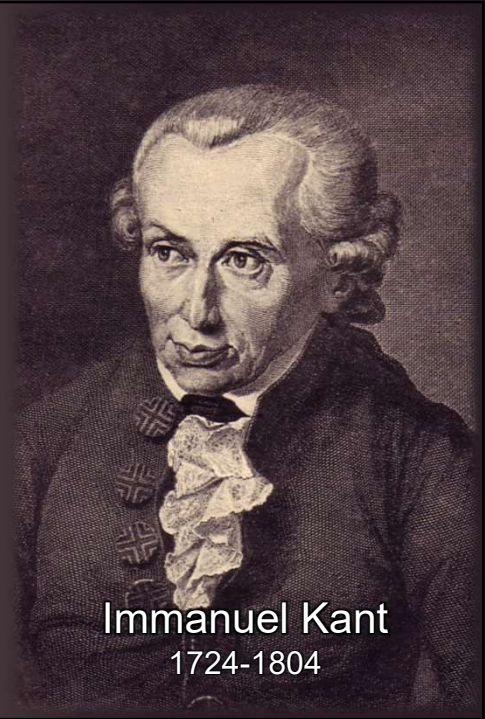
1. What Jesus Affirmed About the OT
2. Jesus Pre-authenticates the NT

It should be observed that this third step in the Classical Model is hardly distinguishable from the Evidentialist Model.



***"Two things fill the mind
with ever new and
increasing admiration and
awe, the oftener and more
steadily we reflect on
them: the starry heavens
above me and the moral
law within me."***

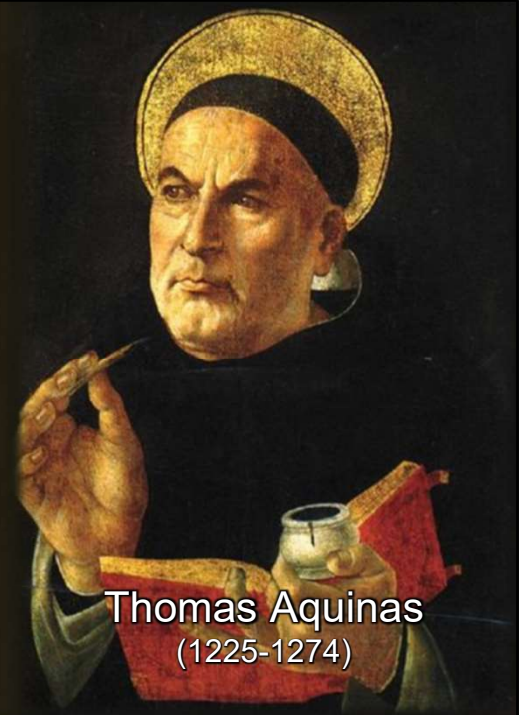
[*Critique of Practical Reason*, trans. Lewis White Beck (New York: Macmillan Publishing, 1956), 166]



Immanuel Kant
1724-1804

***"Beginning with sensible
things, our intellect is led
to the point of knowing
about God that He exists,
and other such
characteristics that must
be attributed to the
First Principle."***

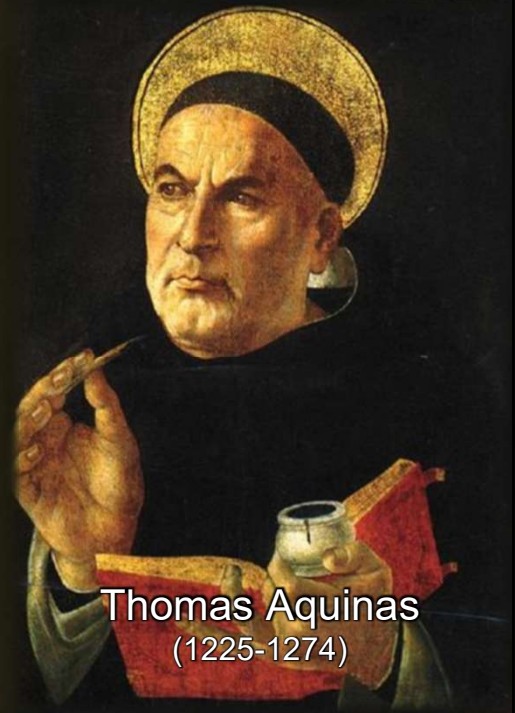
[*Summa Contra Gentiles*, I, 3, §3, trans. Anton C. Pegis (Notre Dame: University of Notre Dame Press, 1975, 64)]



Thomas Aquinas
(1225-1274)

"From every effect the existence of its proper cause can be demonstrated, so long as its effects are better known to us; because since every effect depends upon its cause, if the effect exists, the cause must pre-exist. Hence the existence of God ... can be demonstrated from those of His effects which are known to us.."

[*Summa Theologica*, I, Q2, Art. 2, trans. Fathers of the English Dominican Province (Westminster: Christian Classics, 1948), 12]



Thomas Aquinas
(1225-1274)

Some Terms

Theism

- ✓ from the Greek word θεός (*theos*) meaning 'God'
- ✓ the world view that affirms the existence of God



Theism

the view that
says:

"God exists."



Theism

∞ monotheism ∞

only one God

∞ polytheism ∞

many gods

∞ pantheism ∞

all is god

∞ panentheism ∞

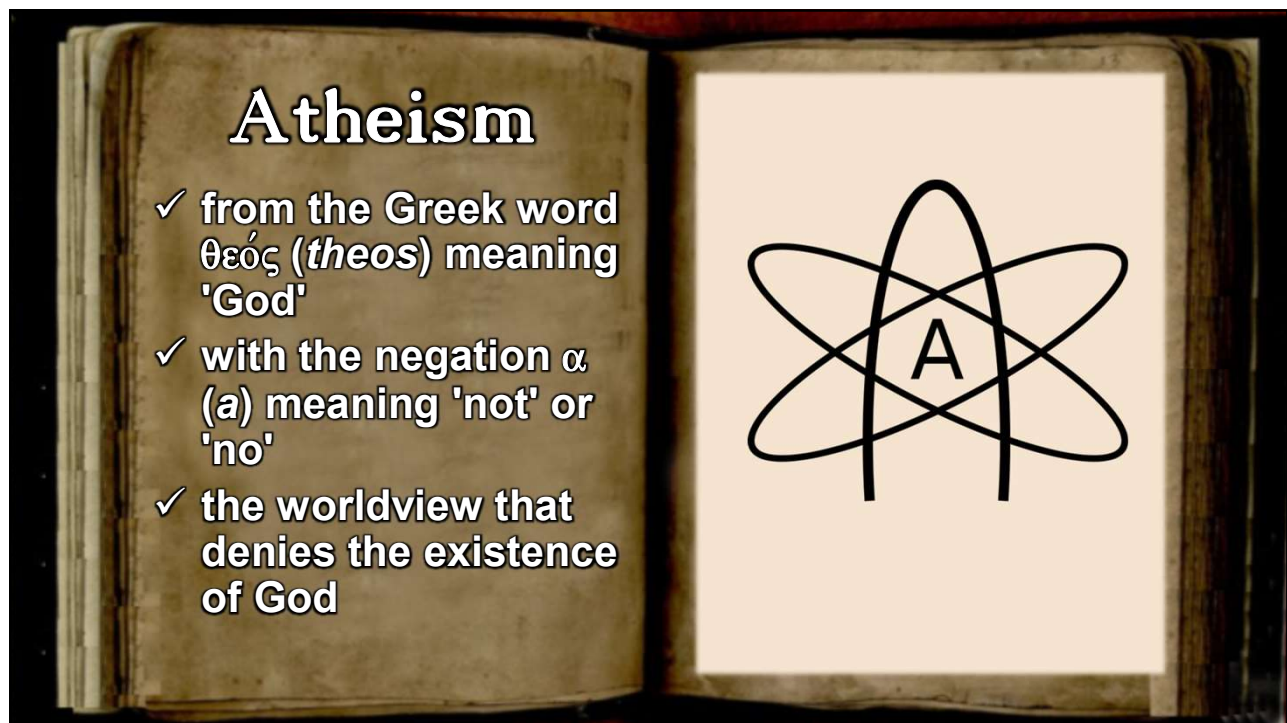
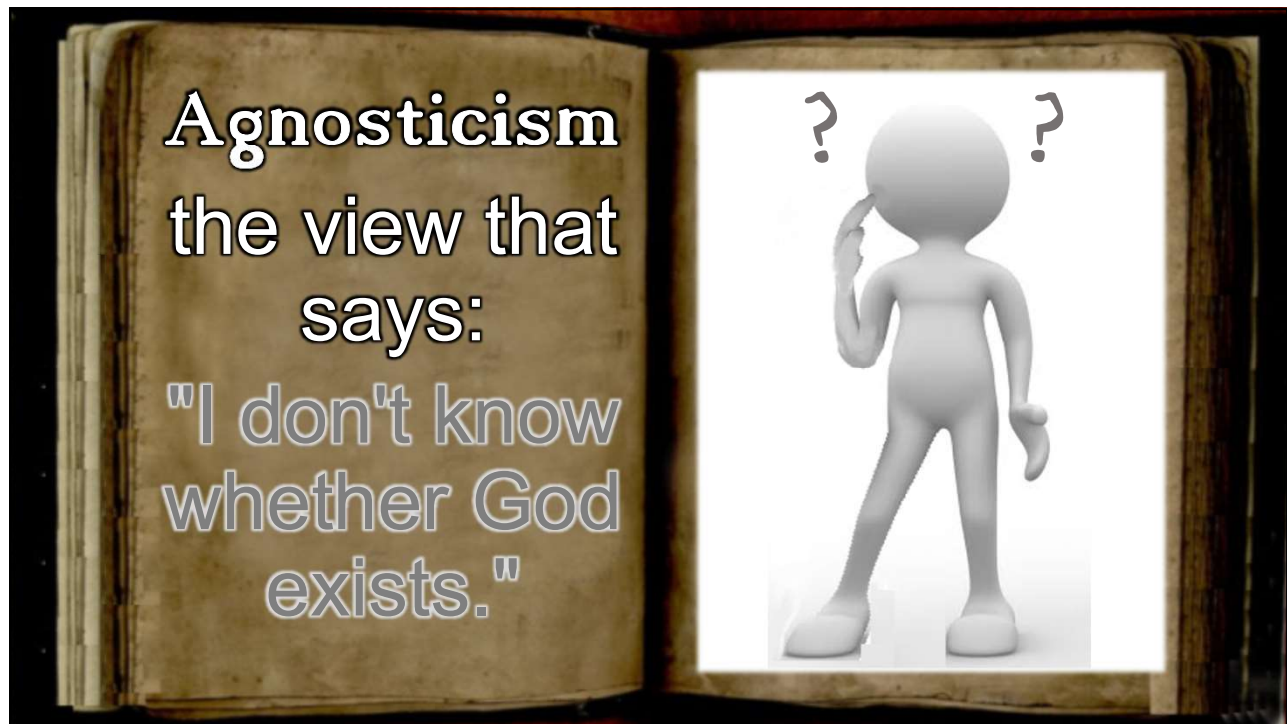
all is in god

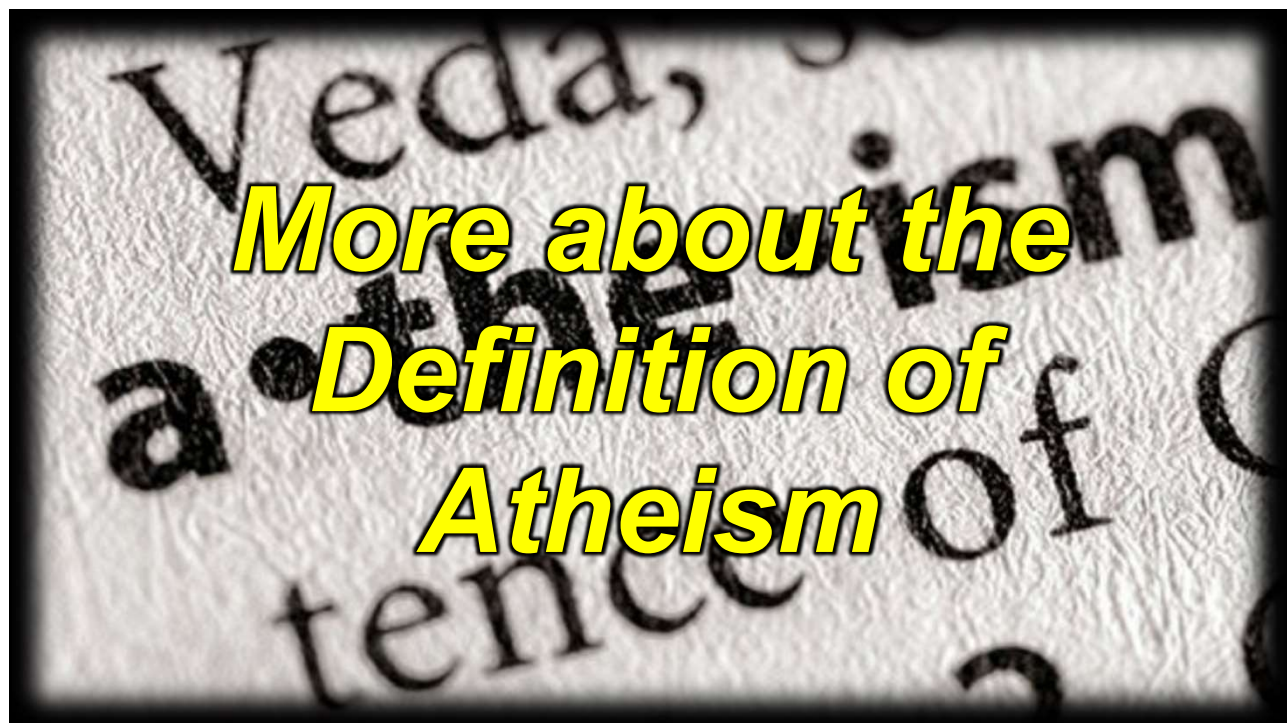
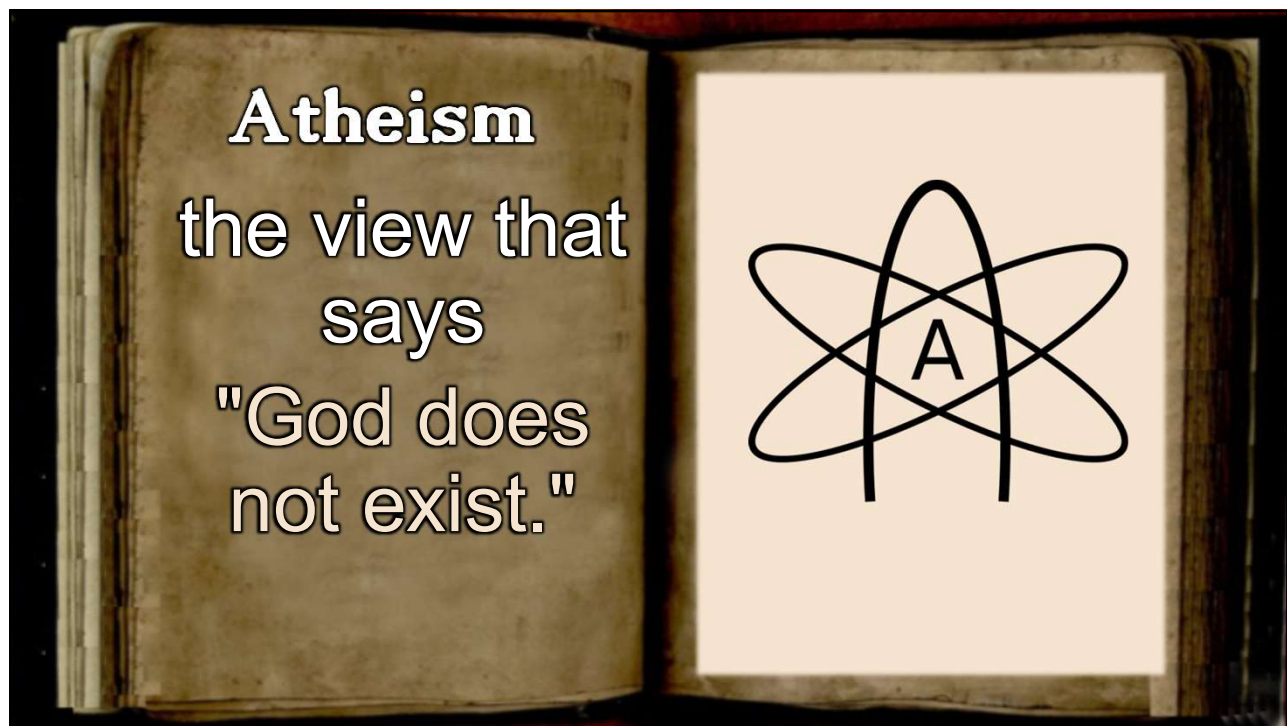


Agnosticism

- ✓ from the Greek word γνῶσις (*gnosis*) meaning 'knowledge'
- ✓ with the negation α (*a*) meaning 'not' or 'no'
- ✓ the suspension of judgment on the question of God's existence



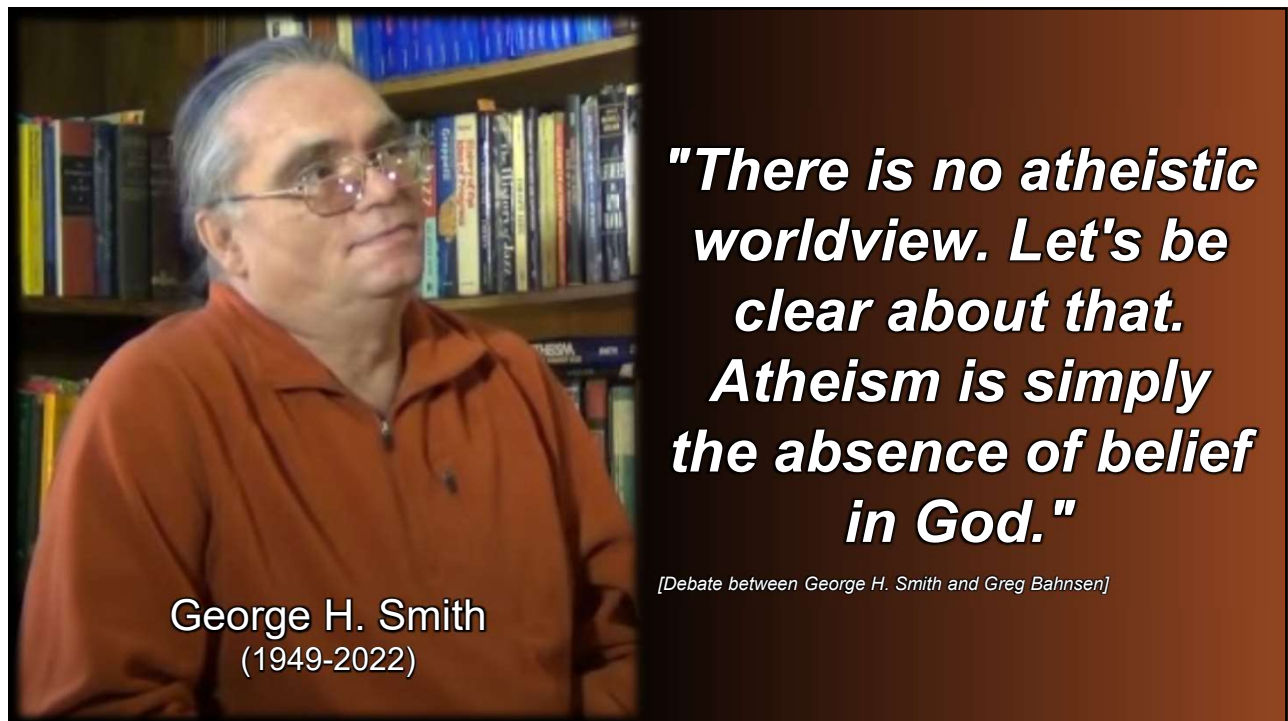






George H. Smith
(1949-2022)

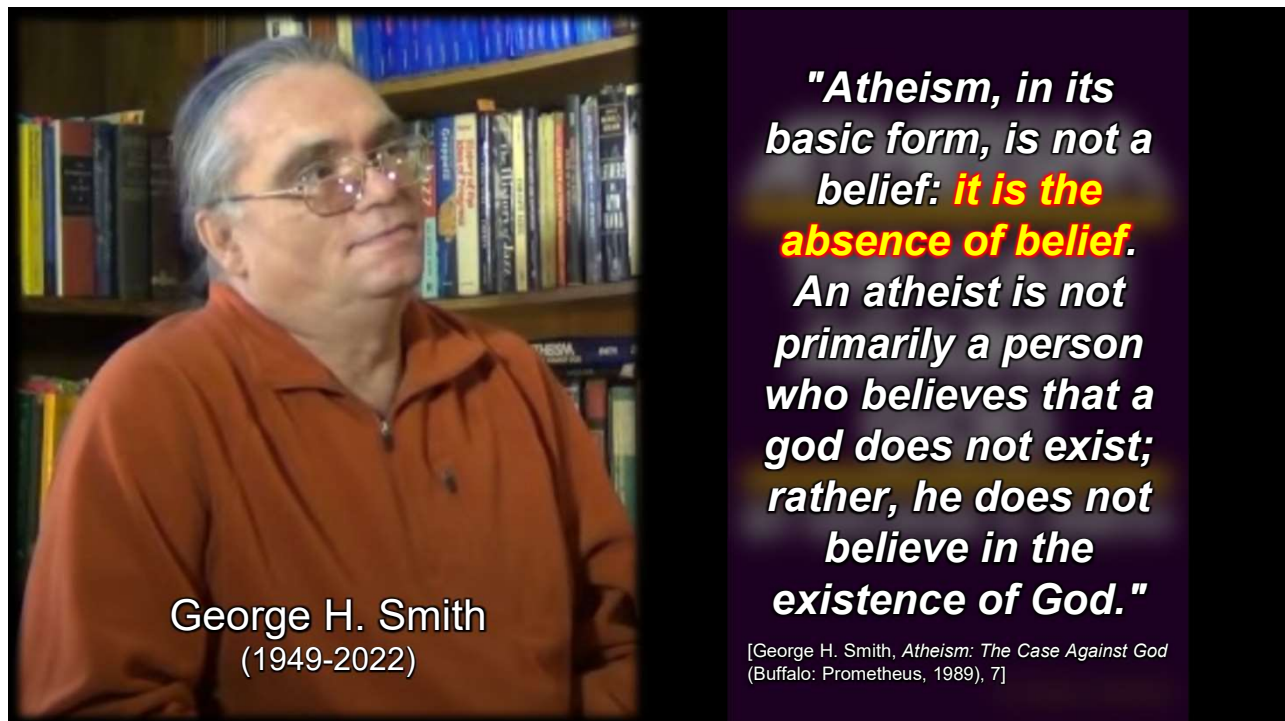
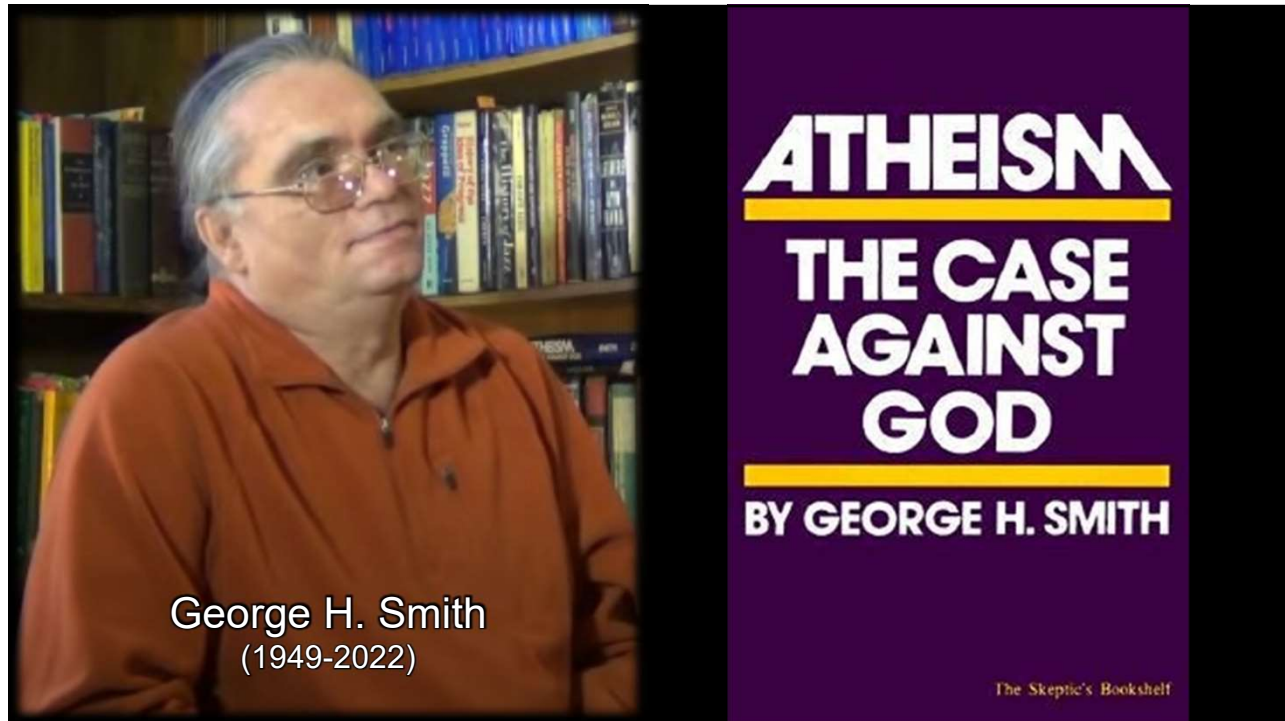
Greg Bahnsen
1948-1995

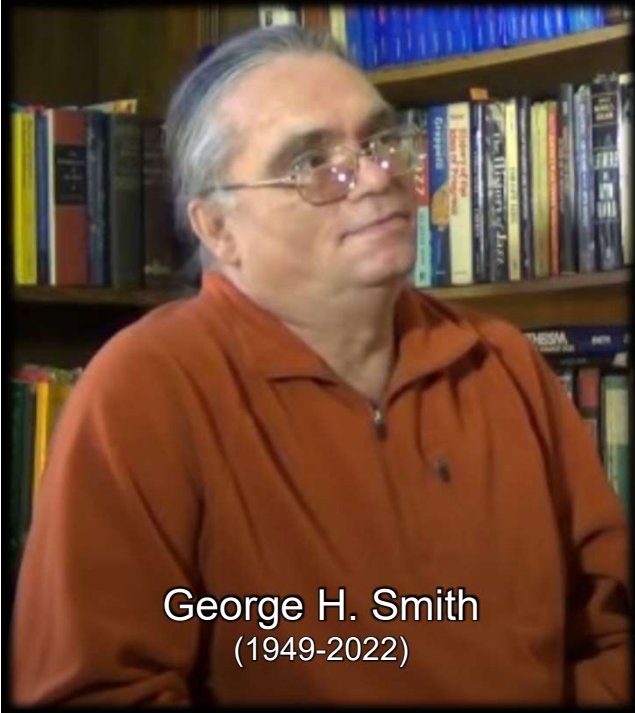


***"There is no atheistic
worldview. Let's be
clear about that.
Atheism is simply
the absence of belief
in God."***

[Debate between George H. Smith and Greg Bahnsen]

George H. Smith
(1949-2022)

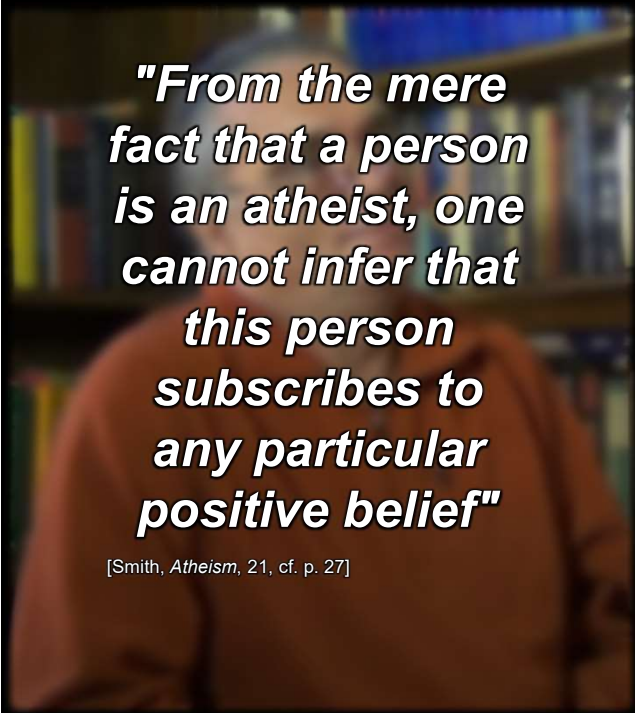




"From the mere fact that a person is an atheist, one cannot infer that this person subscribes to any particular positive belief"

George H. Smith
(1949-2022)

[George H. Smith, *Atheism: The Case Against God* (Buffalo: Prometheus, 1989), 21]

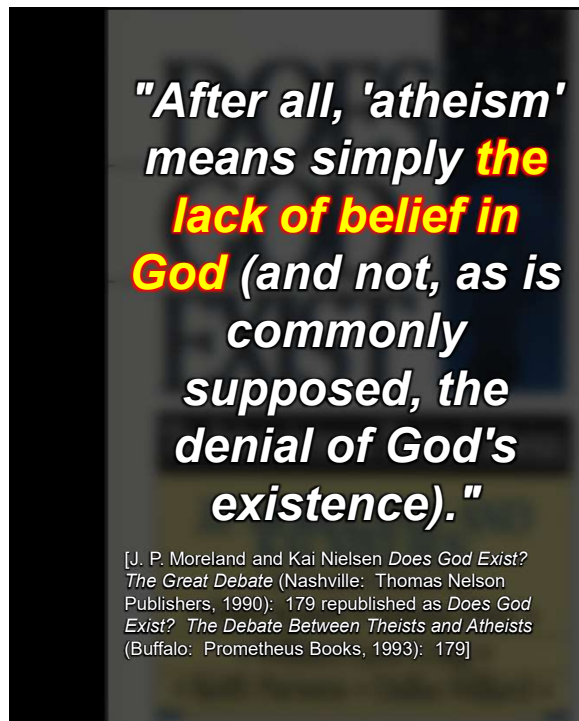
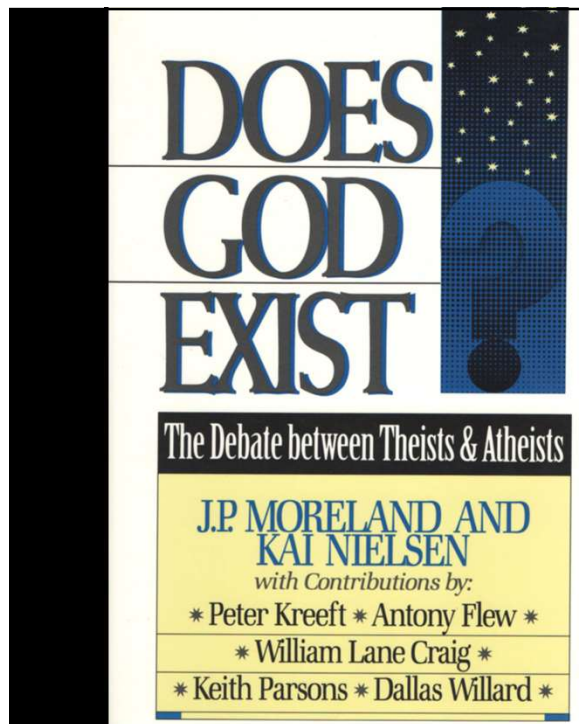


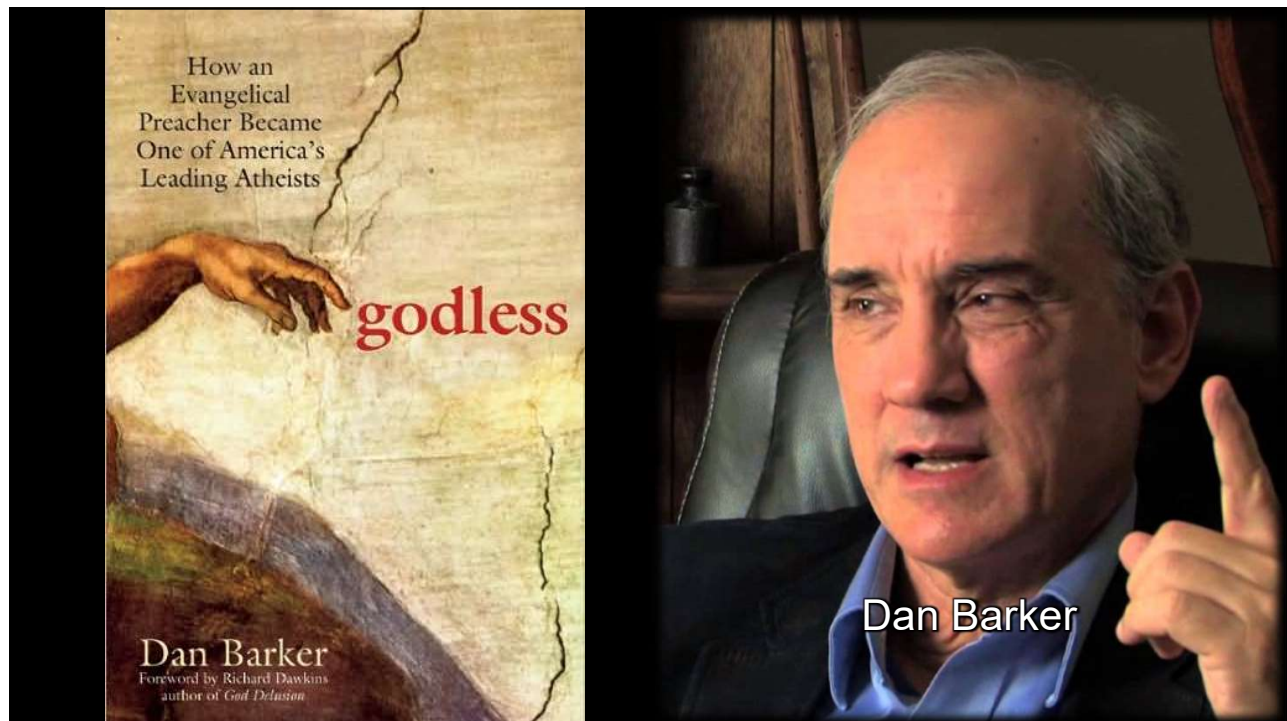
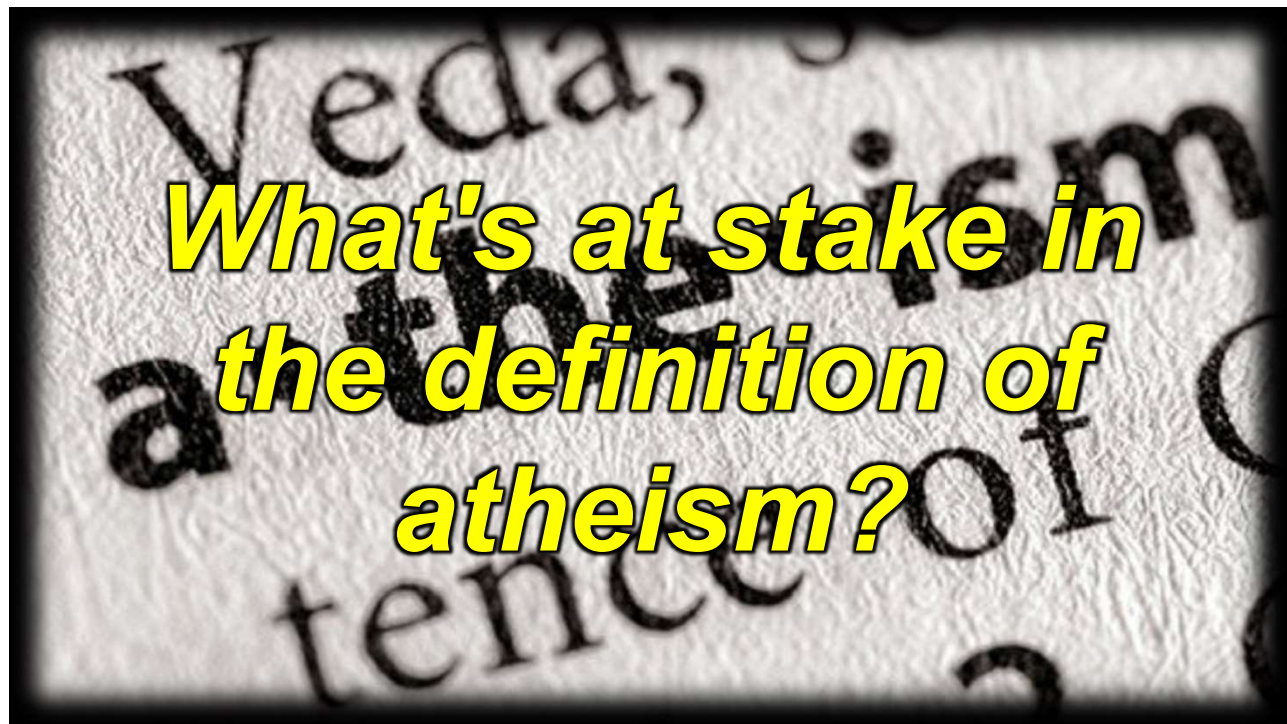
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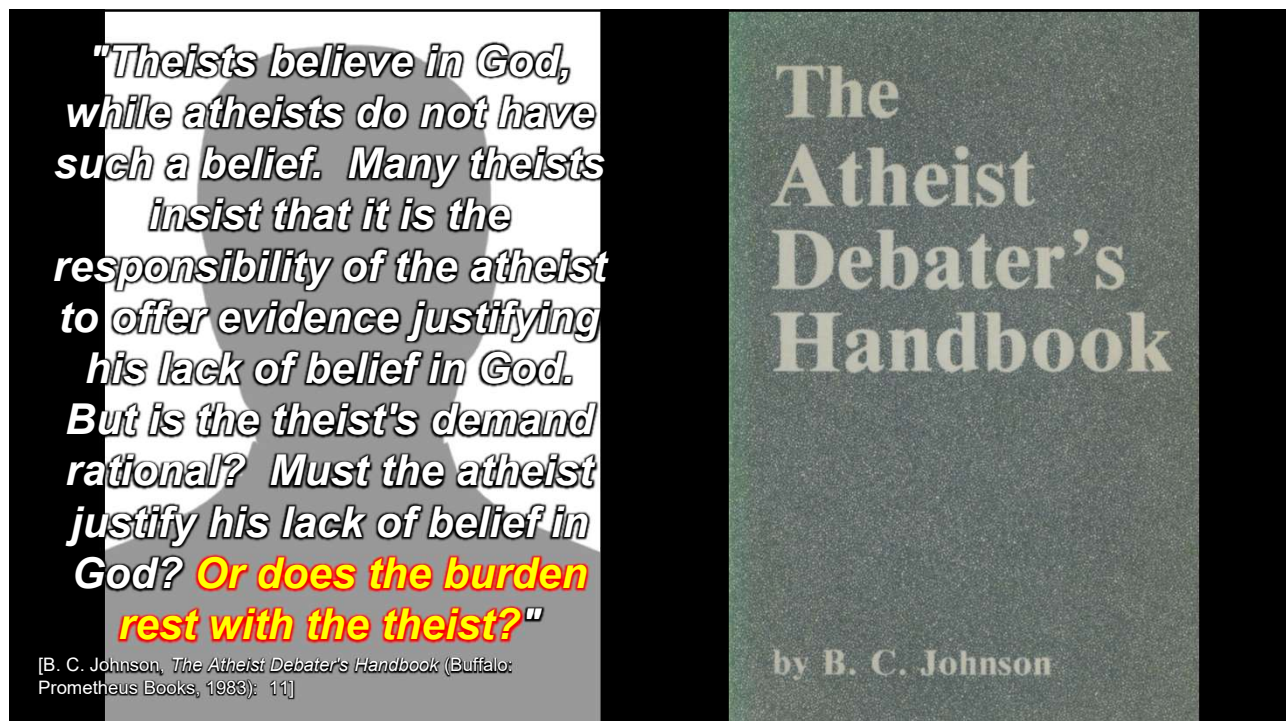
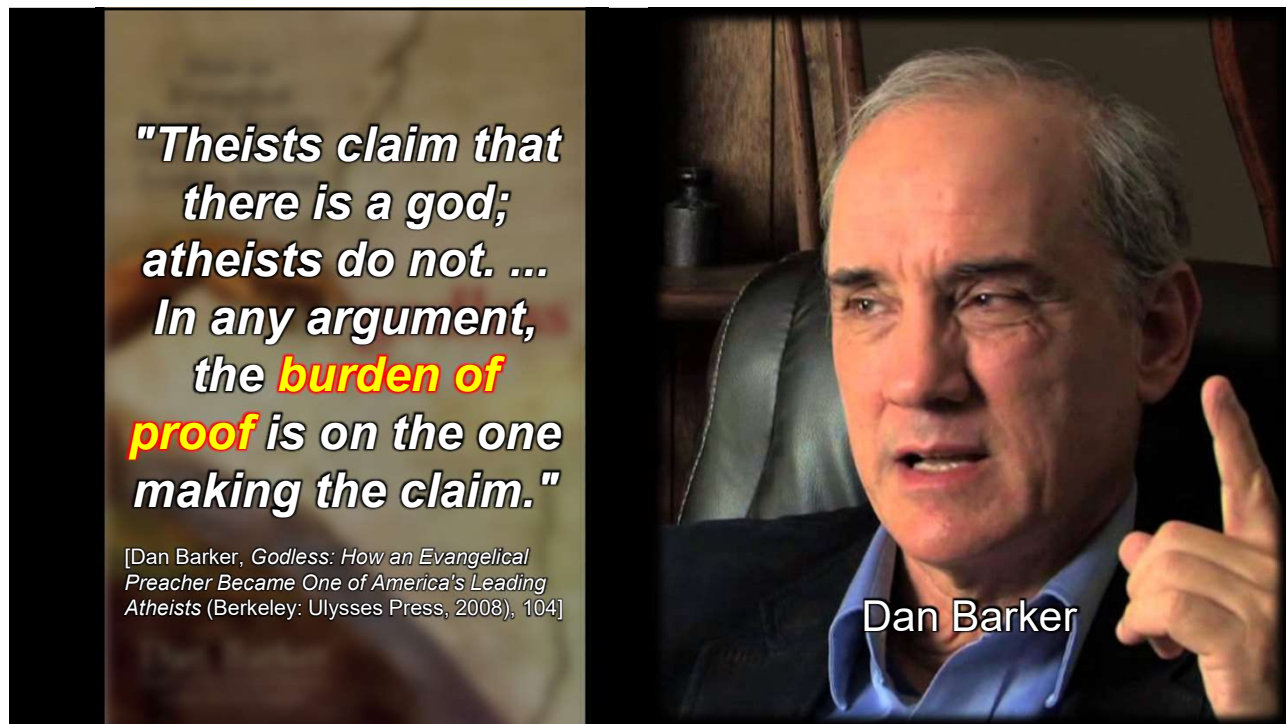
[Smith, *Atheism*, 21, cf. p. 27]

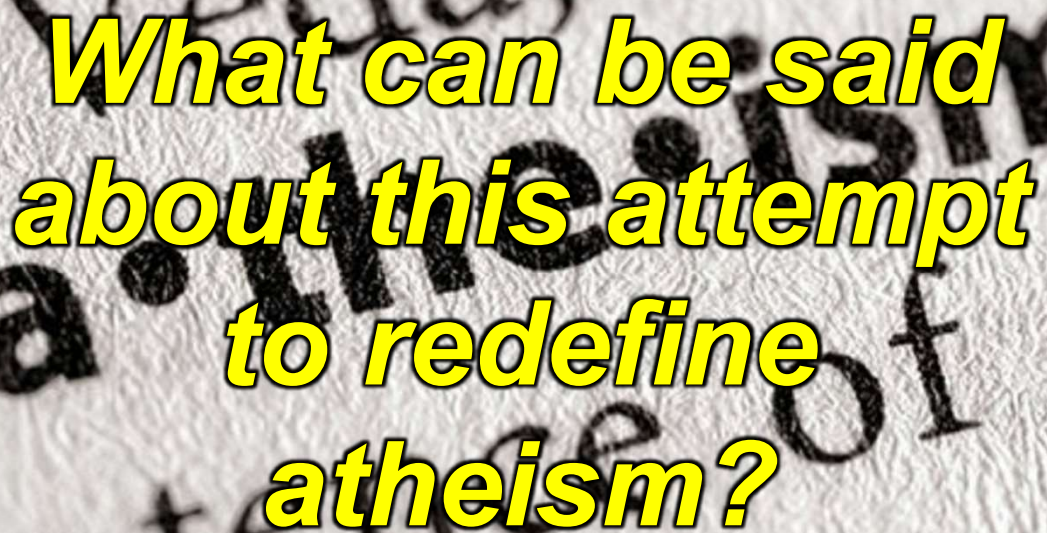
"If atheism is correct,

- *man is alone*
- *there is no god*
- *for knowledge, man must think for himself*
- *for success, man must work*
- *for happiness, man must strive to achieve it*
- *all of these are sole responsibility of man*






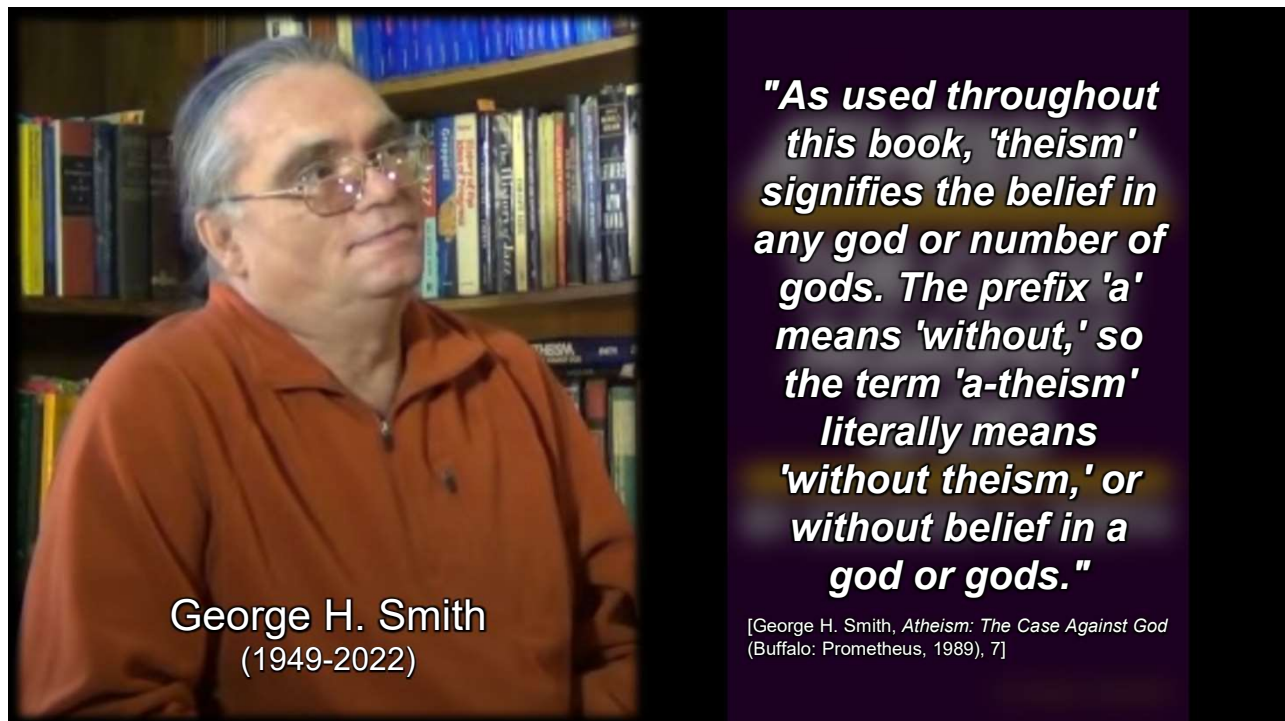
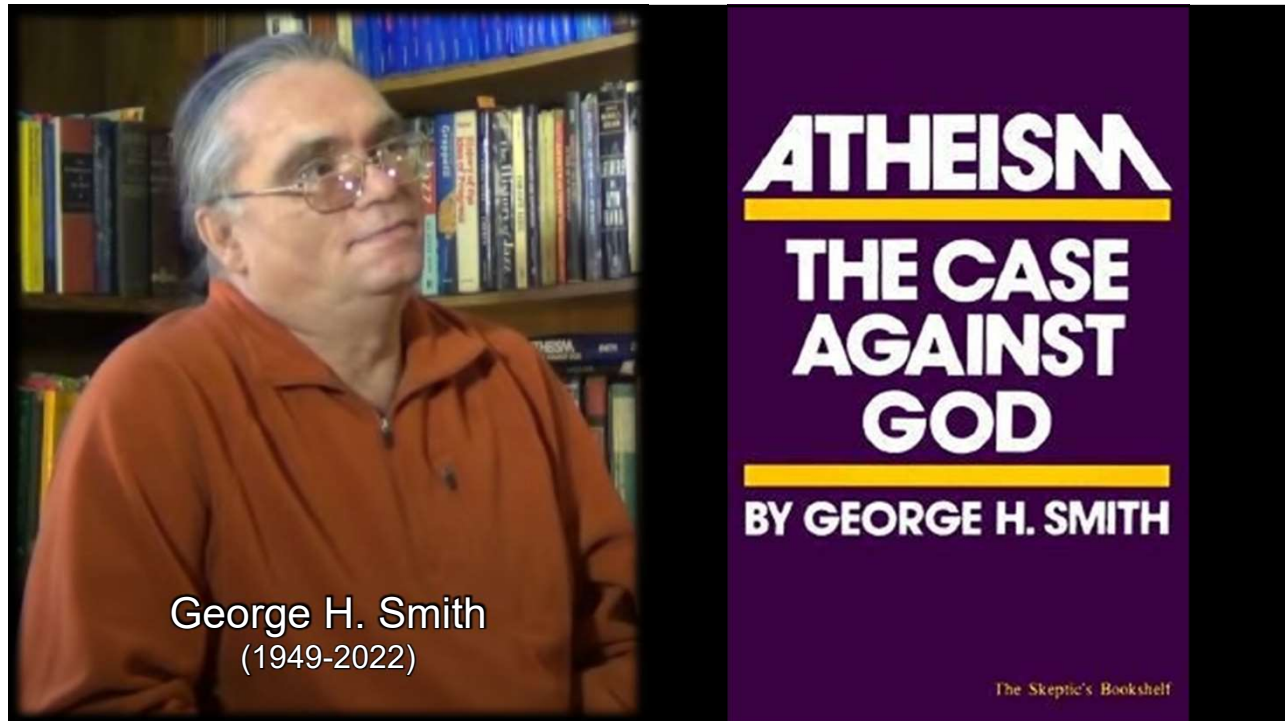




***What can be said
about this attempt
to redefine
atheism?***



***First, some atheists
are using verbal
sight of hand when
they define atheism.***

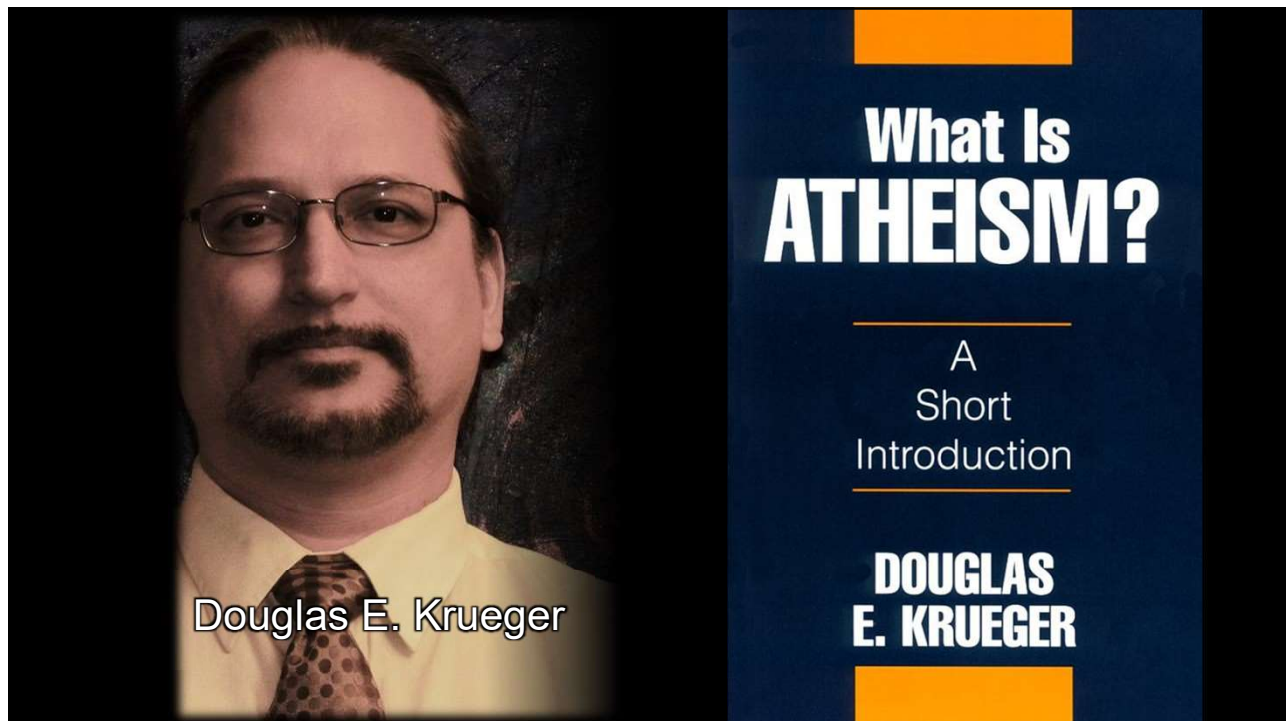



Granted that the suffix "ism" constitutes a belief system, Smith still illicitly has the negation "a" negating "belief" rather than negating "God."

Thus, rather than
"no belief in a God"
 it should be
"a belief in no God."

"As used throughout this book, 'theism' signifies the belief in any god or number of gods. The prefix 'a' means 'without,' so the term 'a-theism' literally means 'without theism,' or without belief in a god or gods."

[George H. Smith, *Atheism: The Case Against God* (Buffalo: Prometheus, 1989), 7]





Douglas E. Krueger

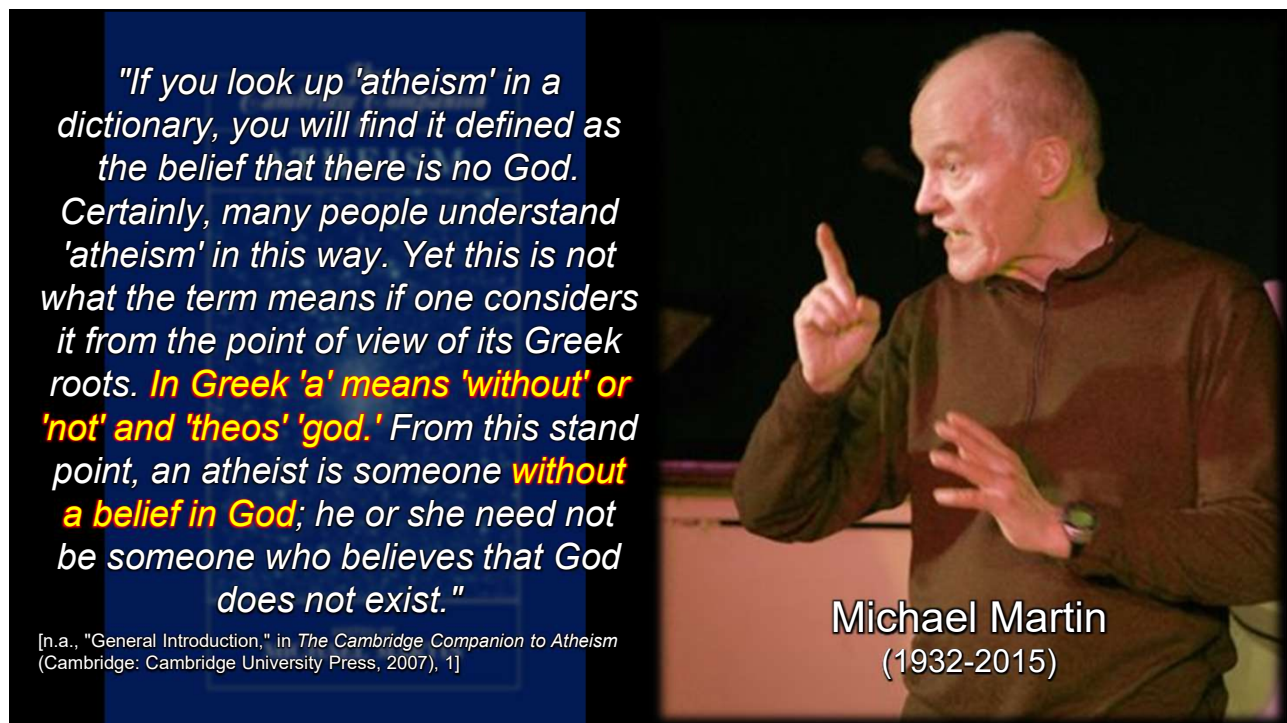
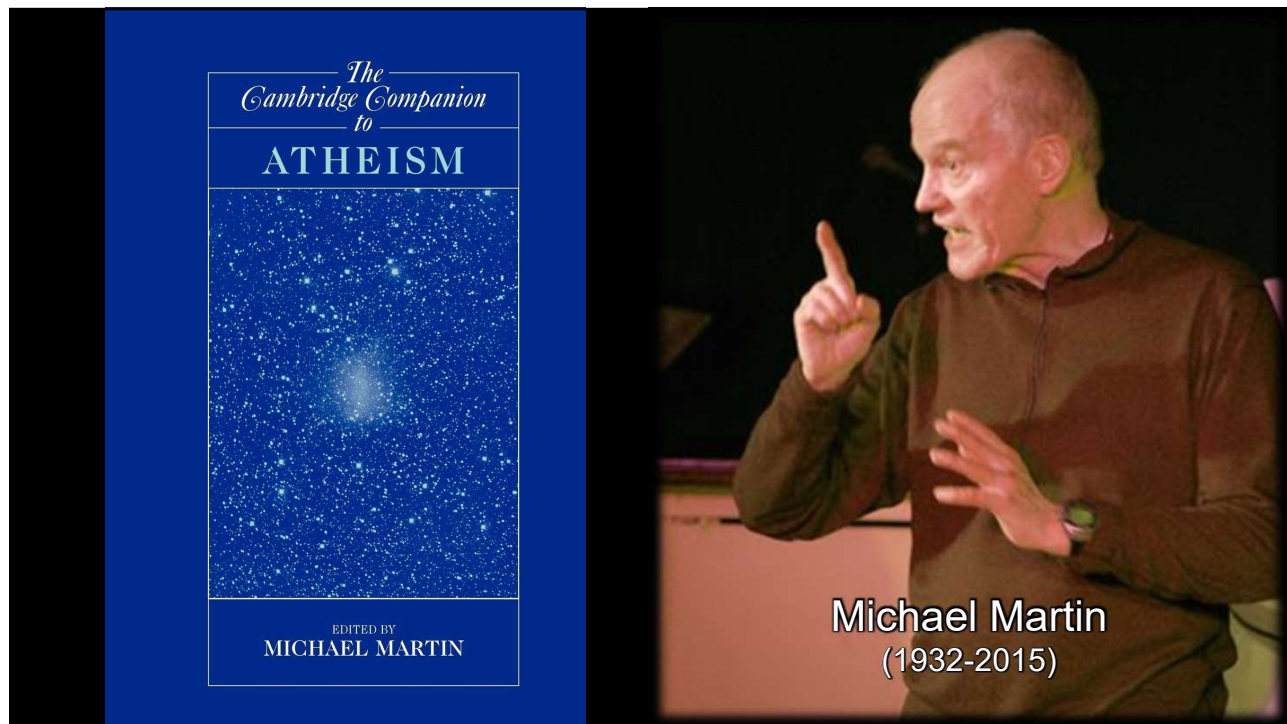
"The term 'atheism' is from the Greek *atheos*. The prefix **'a'** means **'without,'** and the Greek *theos* means 'god,' so atheism means simply **'being without god.'** Theism asserts that there is a god, so atheism is the view which **does not assert** that there is a god."

[Douglas E. Krueger, *What is Atheism? A Short Introduction* (Amherst: Prometheus, 1998), 17]

Notice that Krueger moves from the alpha **negating 'god'** (which would mean **'without god'** or **'not-god'**) to the alpha negating the **assertion** (which means the absence of the assertion of god instead of the absence of god).

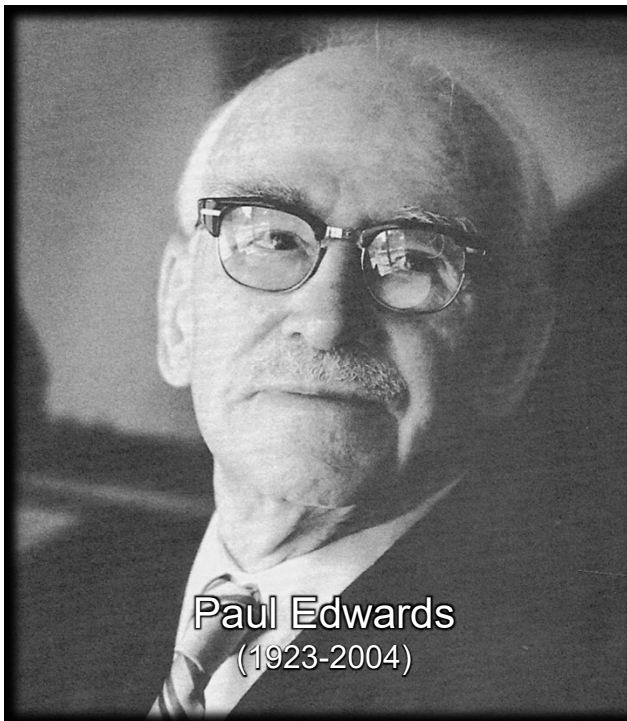
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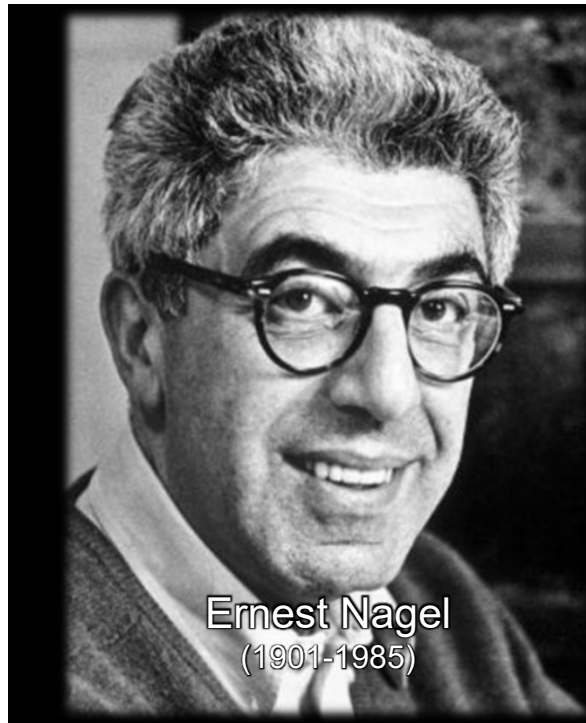
Second, this definition conflicts with the standard academic definition of atheism.



Paul Edwards
(1923-2004)

"According to the most usual definition, an 'atheist' is a person who maintains that there is no God, that is, that the sentence 'God exists' expresses a false proposition."

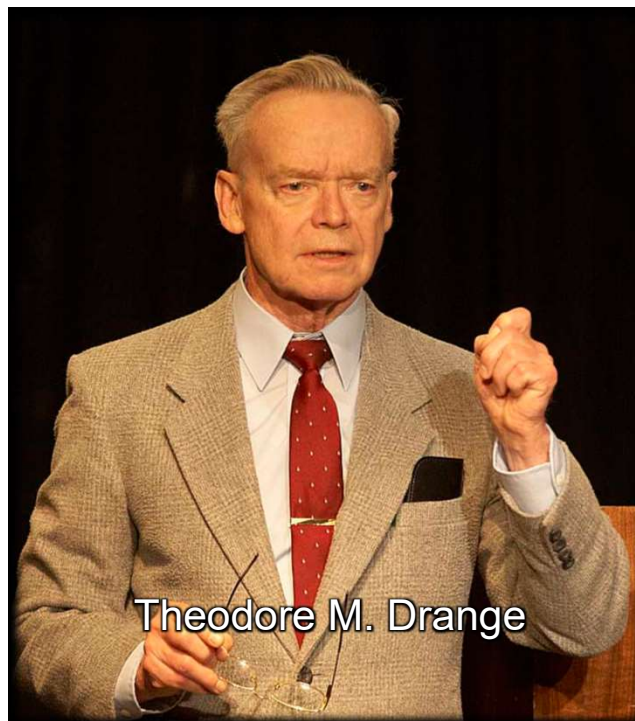
[Paul Edwards ed. in chief, *The Encyclopedia of Philosophy* (New York: Macmillan Publishing Co., Inc., 1967): s.v. "Atheism," p. 175.]



Ernest Nagel
(1901-1985)

"[A]theism is not to be identified with sheer unbelief.... A child who has received no religious instruction ... is not an atheist—for he is not denying any theistic claims."

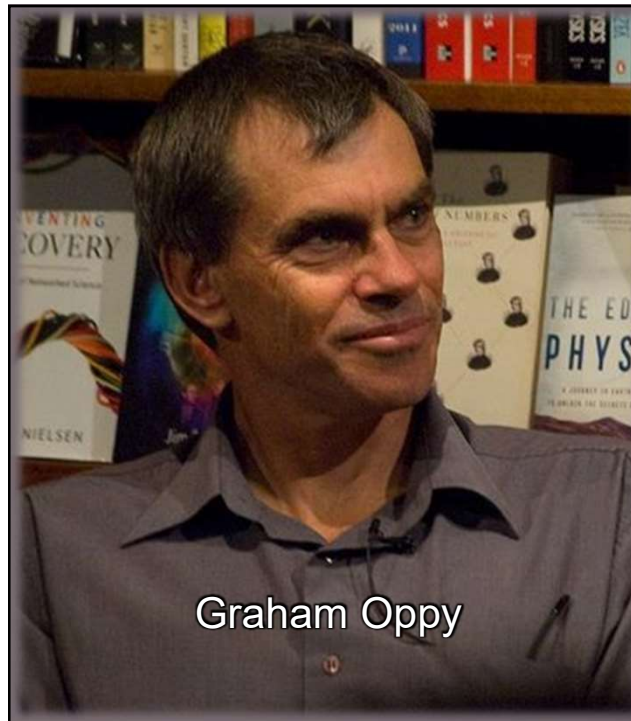
[Ernest Nagel, "Philosophical Concepts of Atheism" in *Critiques of God: Making the Case Against Belief in God*, Peter A. Angeles, ed. pp. 4-5]



Theodore M. Drange

"Is the proposition that God exists true or false? You are a theist if and only if you say that the proposition is true or probably true, you are an atheist if and only if you say that it is false or probably false, and you are an agnostic if and only if you understand what the proposition is, but resist giving either answer, and support your resistance by saying, 'The evidence is insufficient' (or words to that effect)."

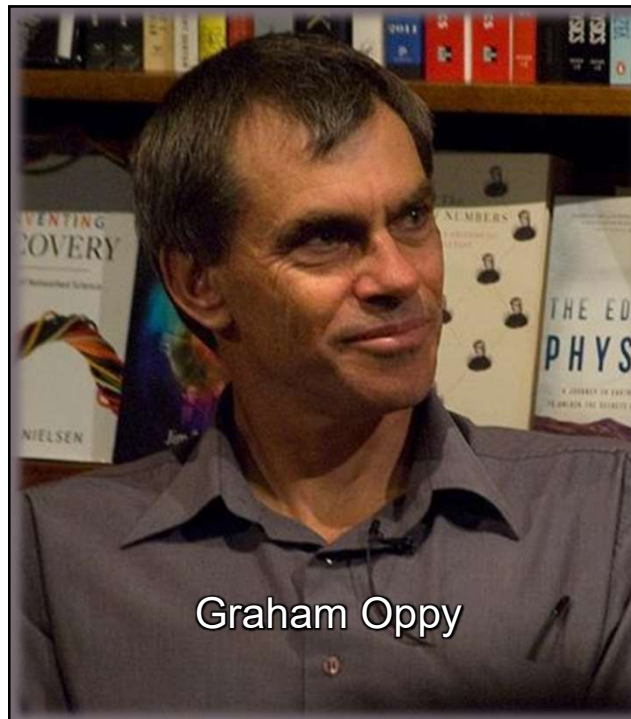
[Theodore M. Drange "Atheism, Agnosticism, Noncognitivism," from https://infidels.org/library/modern/theodore_drange/definition.html, accessed 01/15/19]



Graham Oppy

"Properly, we should define theism as the view that there's at least one god and atheism as the view that there are no gods, and monotheism then as the view that there is exactly one God and we call that one God with a capital 'G'. Atheists then are people who believe that there are no gods and particular in our context, they believe that God doesn't exist.

...



Graham Oppy

"Other people like to say that atheism is just lacking the belief that God exists which lumps together ... the class of agnostics with the class of atheists; if you define it that way, which I don't like."

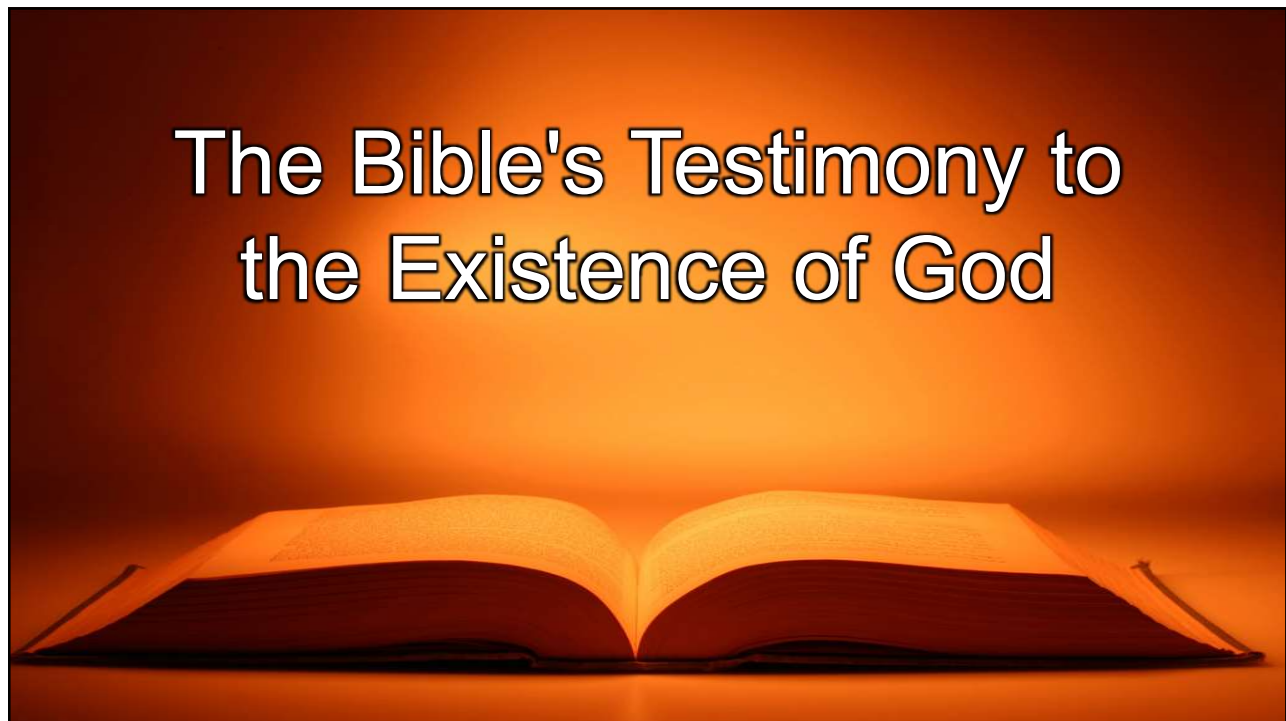
[Graham Oppy vs. Ben Arbour, "The Ontological Argument" on *Capturing Christianity*; YouTube video <https://www.youtube.com/watch?v=udxfuPgq4TY>, @1:05:20, accessed 06/13/22]



Third, this definition entails an absurdity if not an outright contradiction.



The absurdity is that atheism could be true and God still exist. In other words, atheism would be indifferent to the question of God's existence.





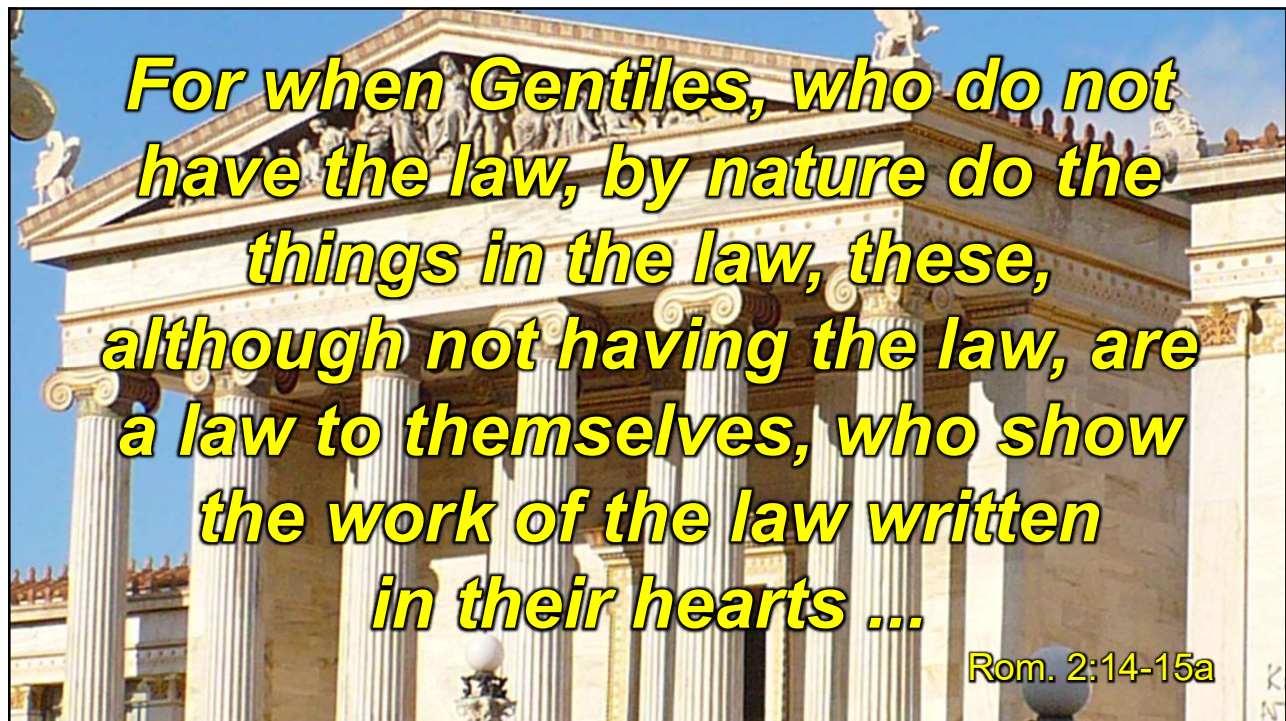
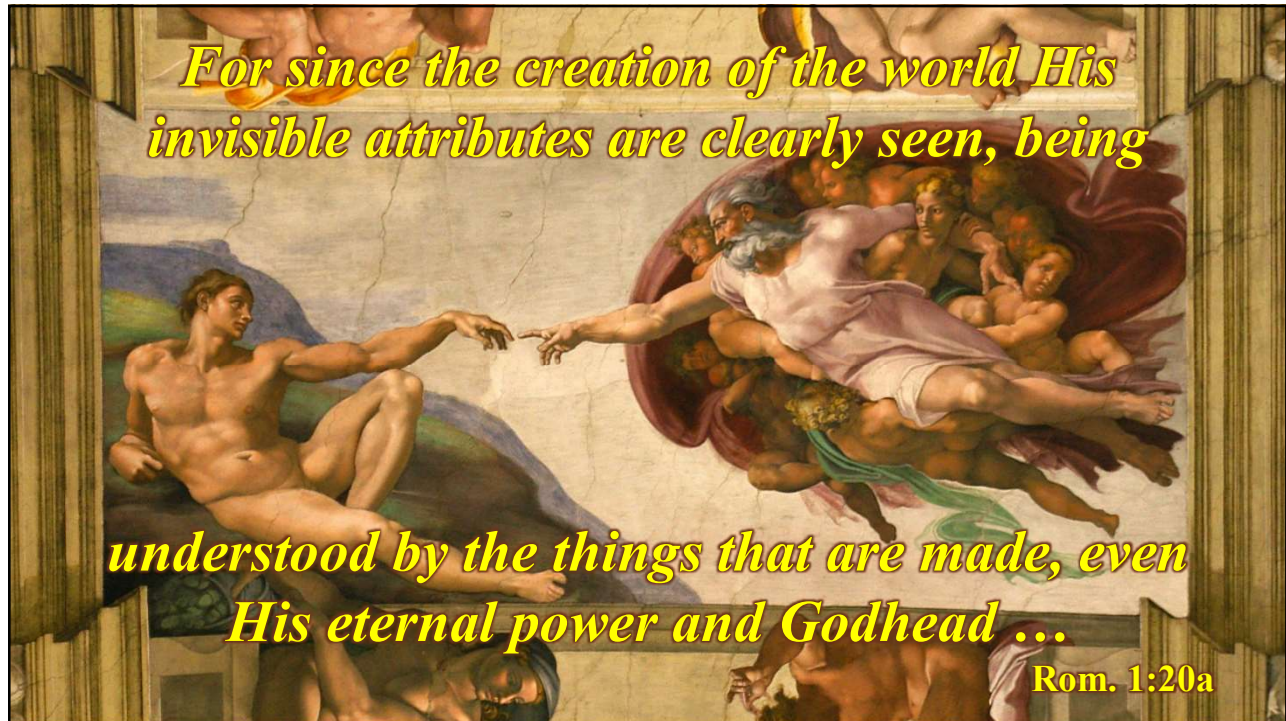
***The heavens declare
the glory of God; and
the firmament shows
His handiwork.***

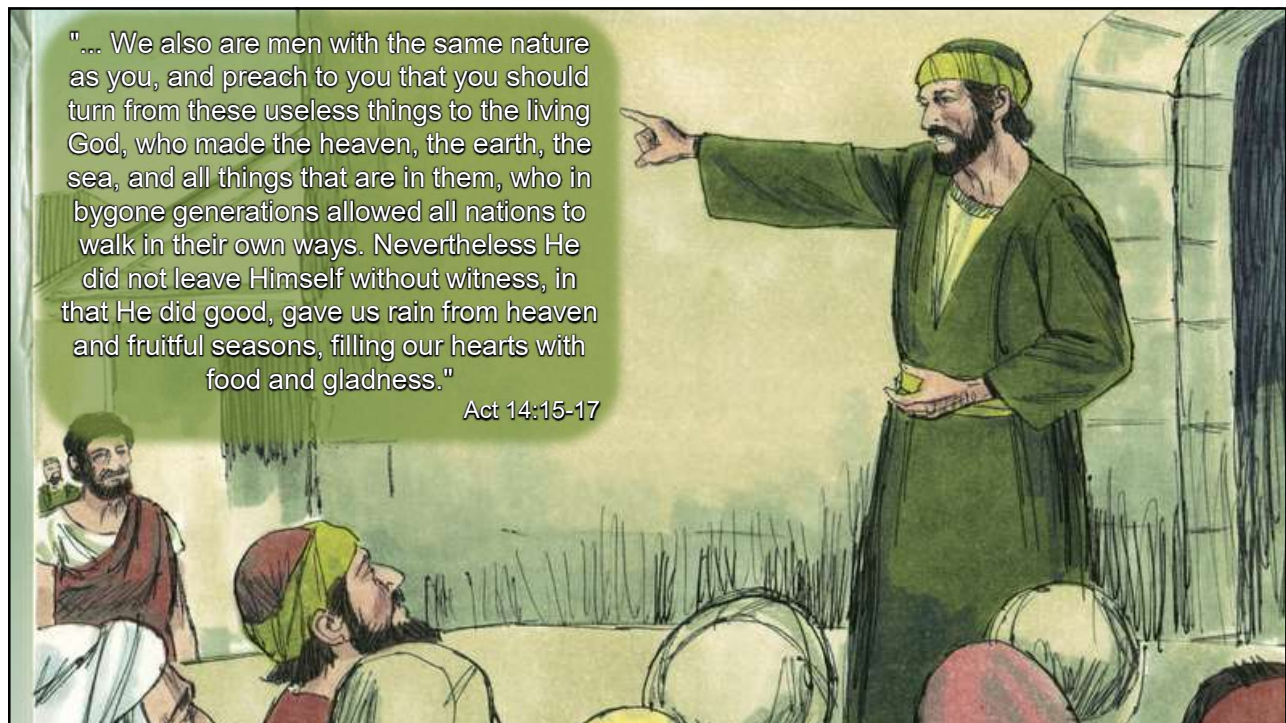
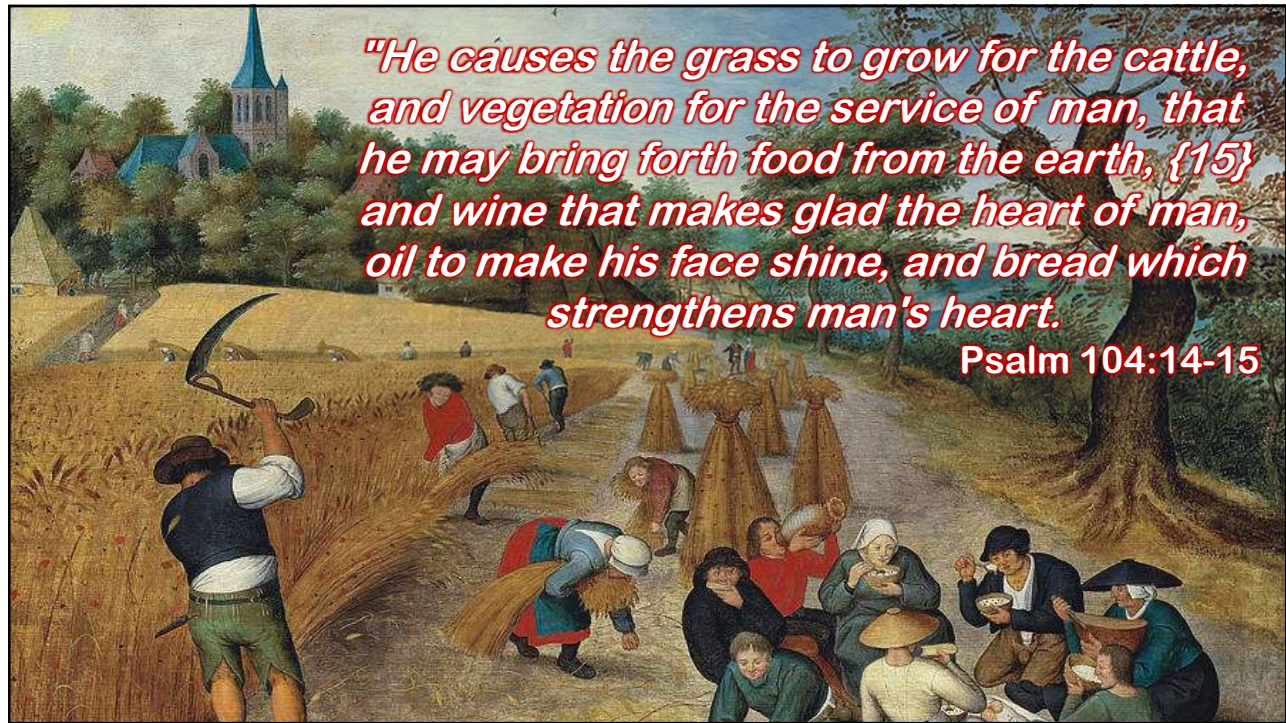
Psalm 19:1

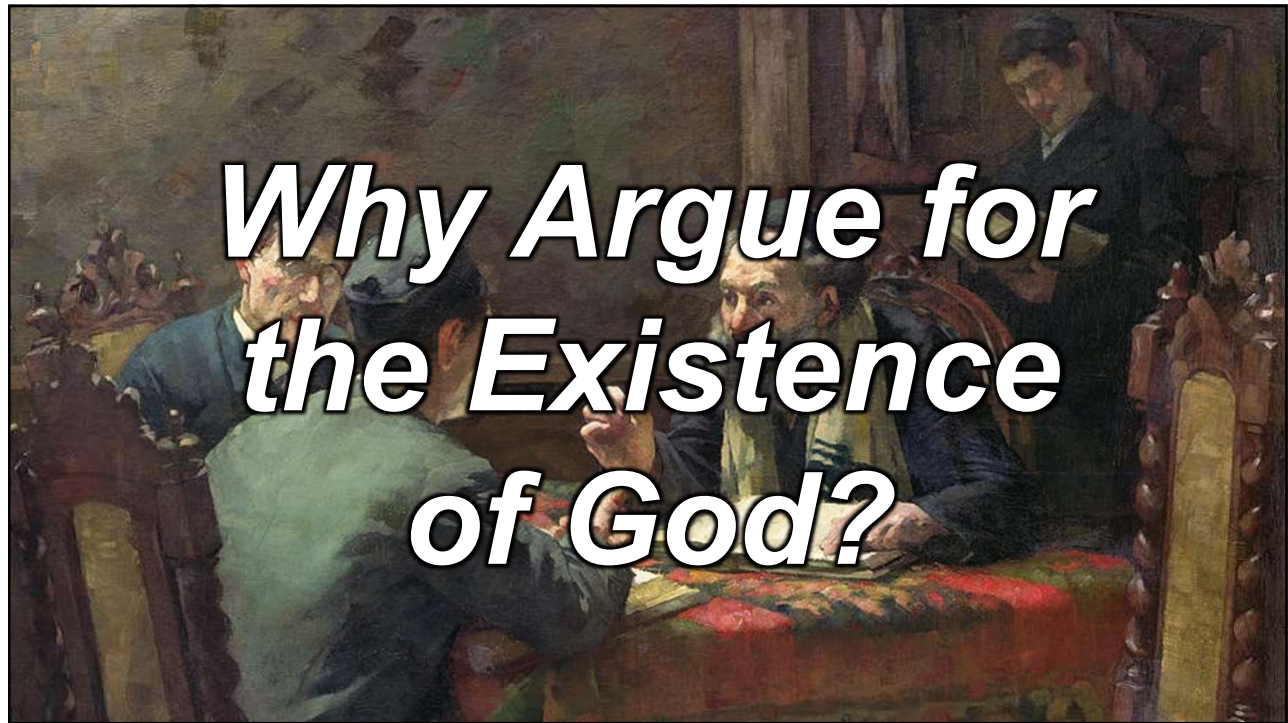


***The heavens declare
His righteousness,
And all the peoples
see His glory.***

Psalm 97:6





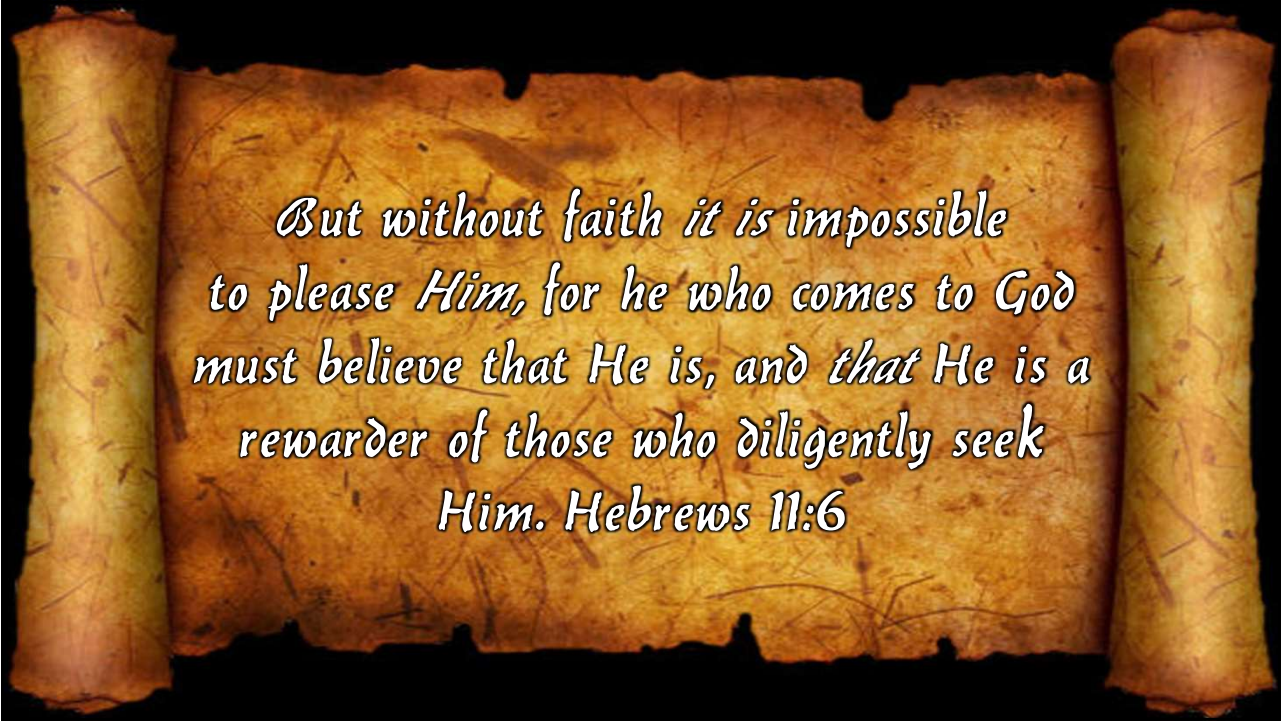


∞ Belief in God and Eternal Life ∞

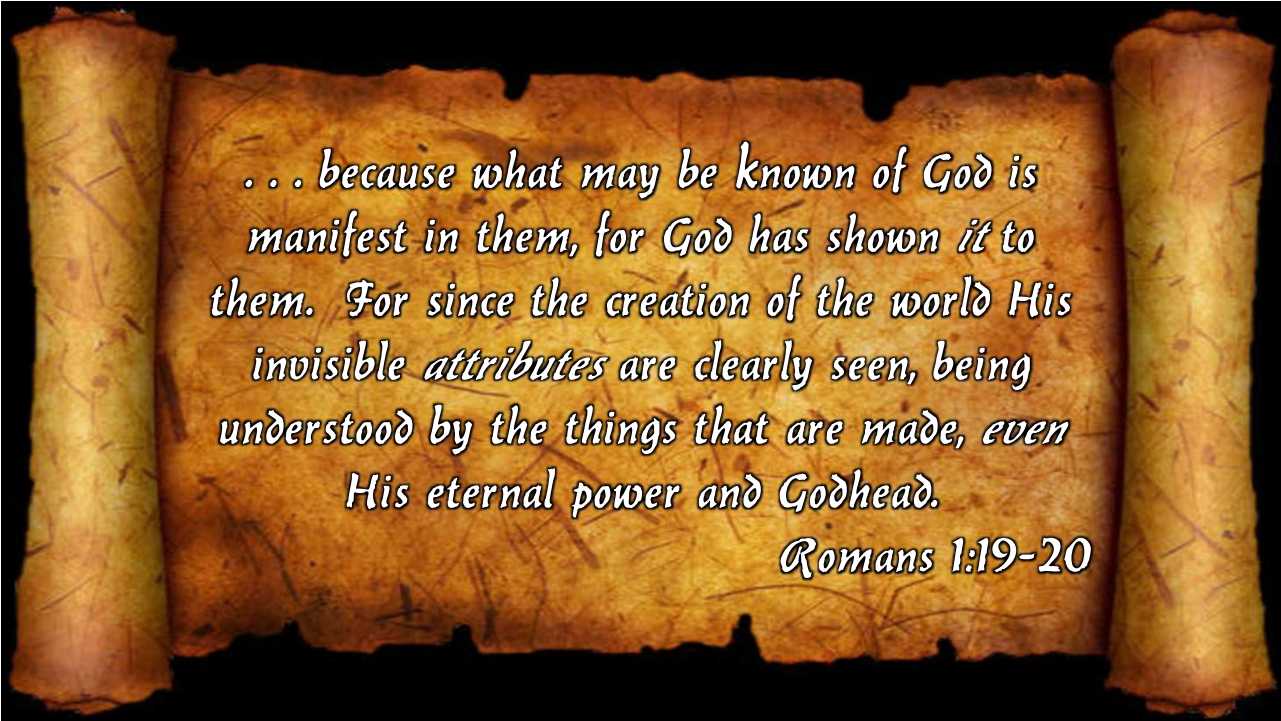
*You can't argue someone into
faith in Christ.*

*Belief in God is a necessary but not
sufficient condition for salvation.*

*One can be lost and still believe in God's
existence, but one cannot get saved
without believing in God's existence.*

A scroll with a textured, aged appearance, featuring a central rectangular panel with a slightly darker, more uniform color than the surrounding scroll material. The scroll is unrolled, showing the edges of the parchment-like material on the left and right sides. The text is written in a stylized, cursive font with a slight shadow effect, making it stand out against the scroll's background.

*But without faith it is impossible
to please Him, for he who comes to God
must believe that He is, and that He is a
rewarder of those who diligently seek
Him. Hebrews 11:6*

A scroll with a textured, aged appearance, featuring a central rectangular panel with a slightly darker, more uniform color than the surrounding scroll material. The scroll is unrolled, showing the edges of the parchment-like material on the left and right sides. The text is written in a stylized, cursive font with a slight shadow effect, making it stand out against the scroll's background.

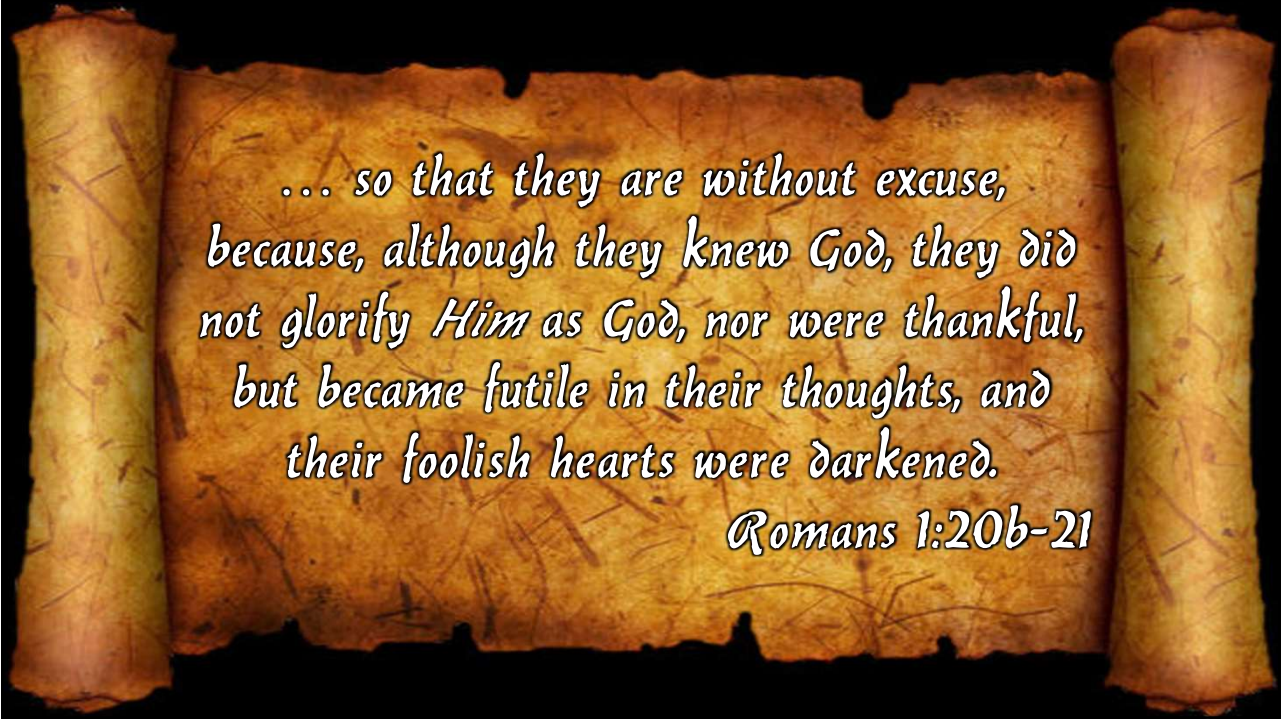
*. . . because what may be known of God is
manifest in them, for God has shown it to
them. For since the creation of the world His
invisible attributes are clearly seen, being
understood by the things that are made, even
His eternal power and Godhead.
Romans 1:19-20*

✧ Belief in God and the Evidence ✧

God may use the evidence to bring some to believe that God exists.

Evidence can expose the fact that, for some, the problem of unbelief is not a matter of their intellect.

Evidence can help strengthen the faith of those who already believe.

A scroll with a textured, aged appearance, featuring a central rectangular panel with text and two vertical side panels. The text is written in a stylized, cursive font.

*... so that they are without excuse,
because, although they knew God, they did
not glorify Him as God, nor were thankful,
but became futile in their thoughts, and
their foolish hearts were darkened.*

Romans 1:20b-21

*Now a certain Jew named Apollos, born at Alexandria, an eloquent man and mighty in the Scriptures, came to Ephesus. ... And when he desired to cross to Achaia, the brethren wrote, exhorting the disciples to receive him; and when he arrived, **he greatly helped those who had believed through grace**; for he vigorously refuted the Jews publicly, showing from the Scriptures that Jesus is the Christ.*

Acts 18:24, 27-28



∞ Belief in God and the World ∞

Belief in God is virtually universal geographically (all over the world) and chronologically (throughout all time).

This does not prove that God exists, but it may be an indicator that God exists.

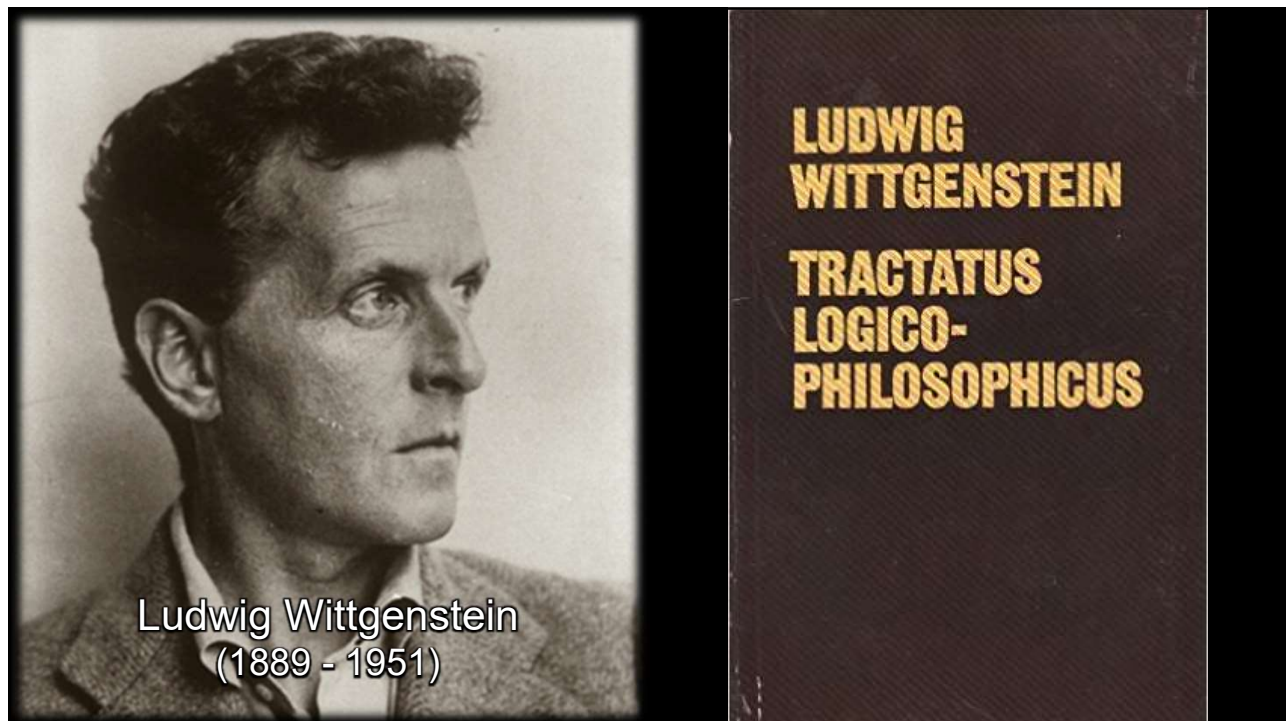
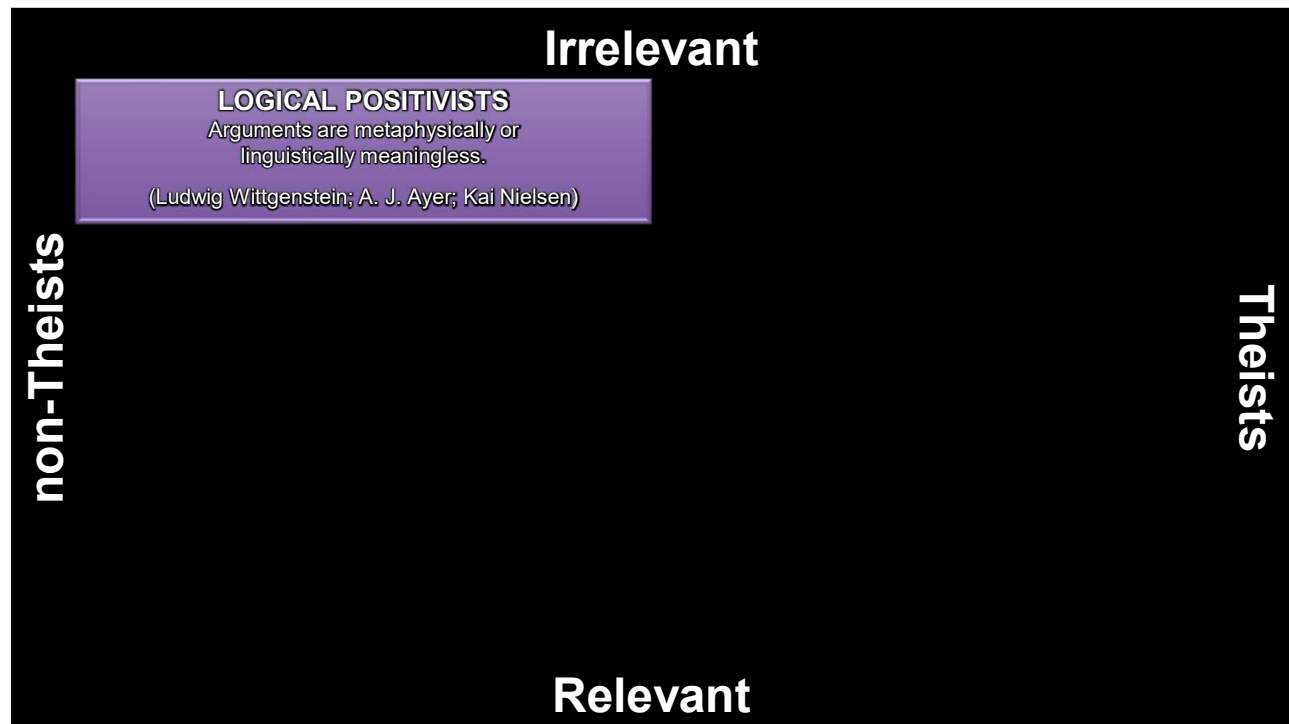


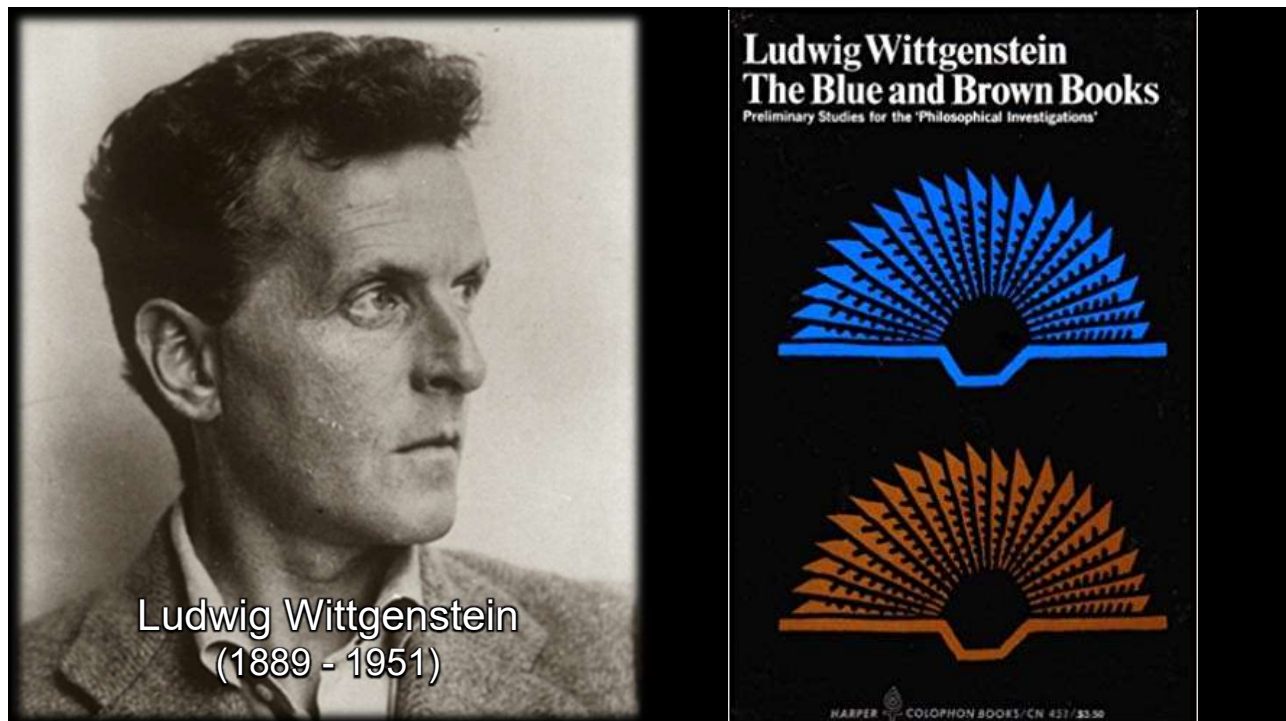
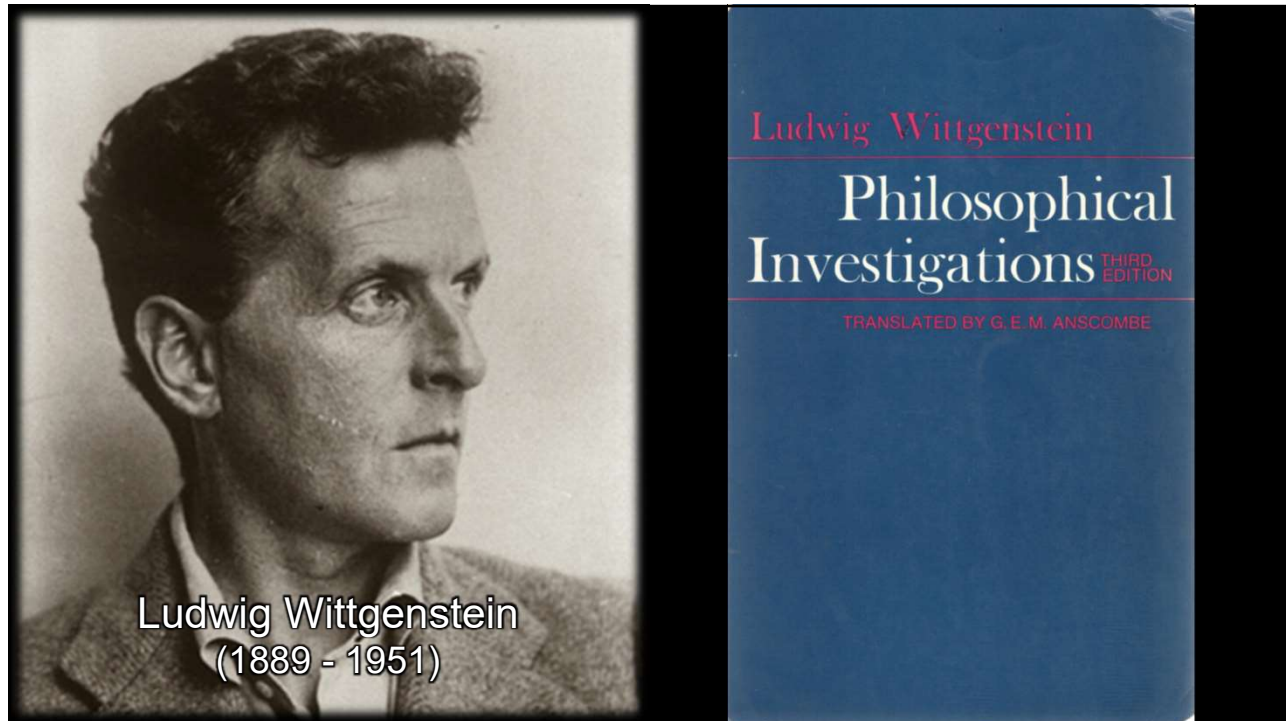
Perhaps it is not surprising that there are different views on whether or how there is any relevance for the arguments for the existence of God.

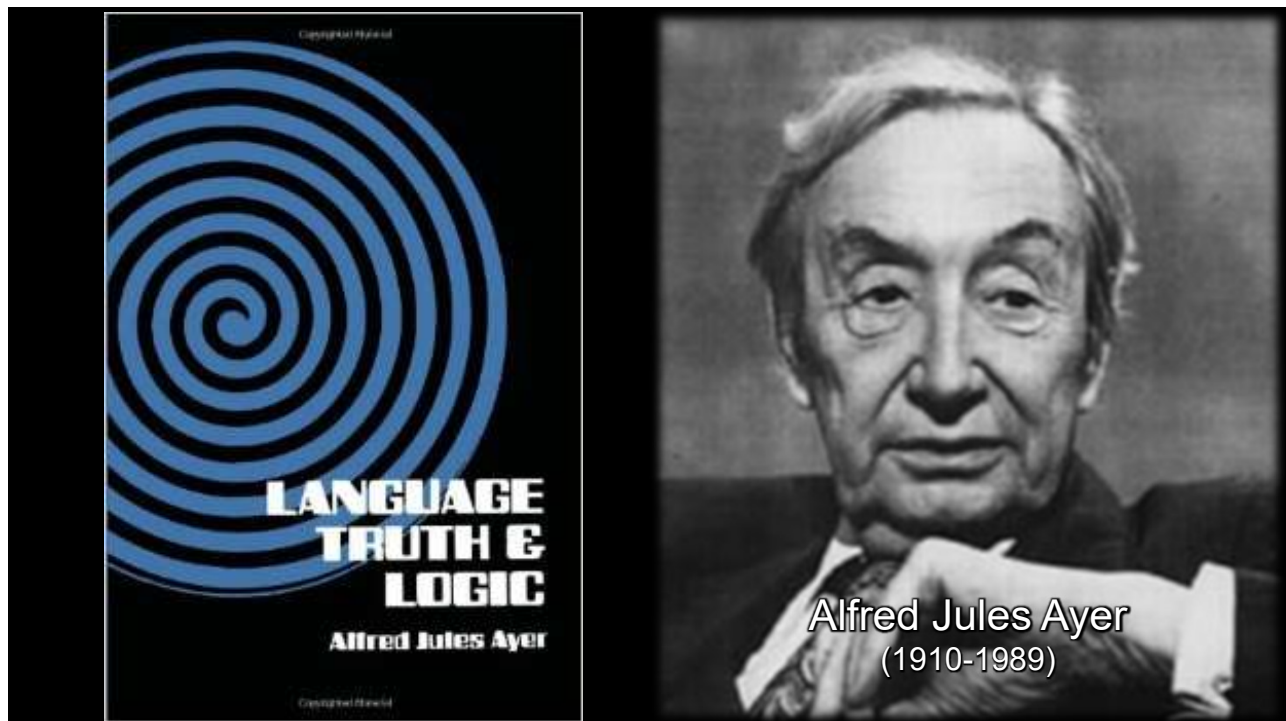
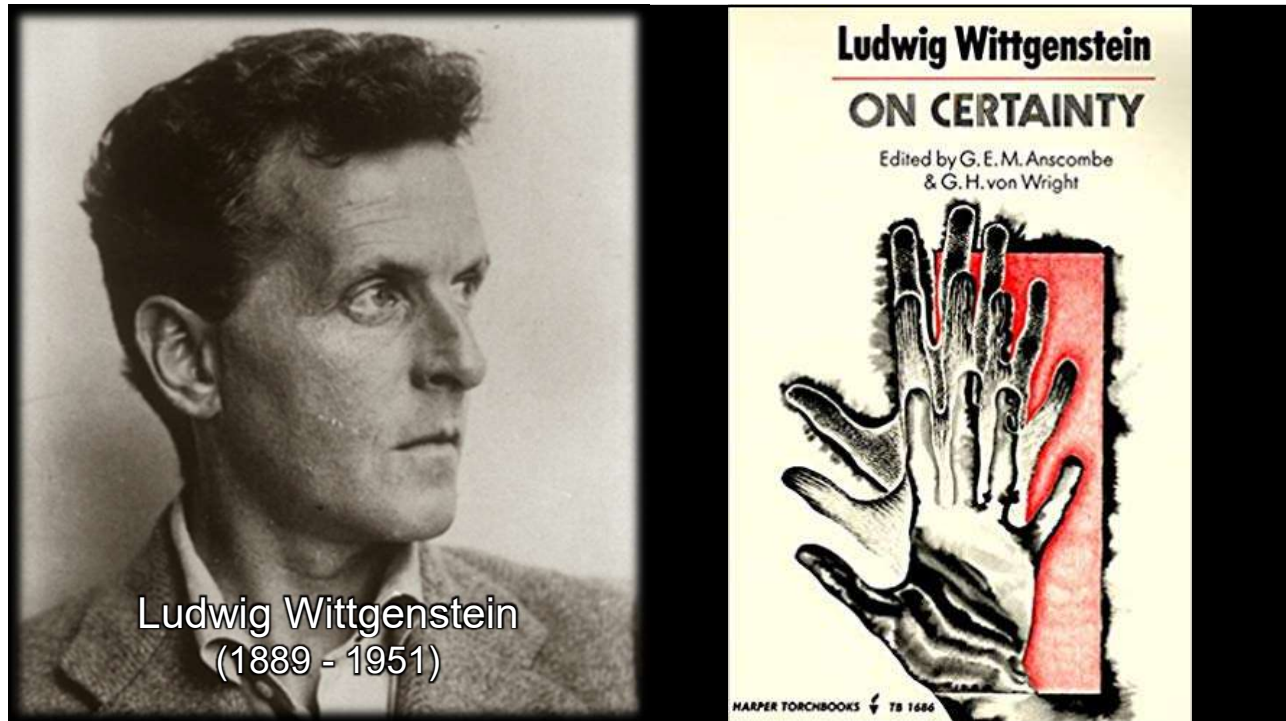
It might be surprising to some, however, that the different views do not fall along the lines of theists and non-theists.

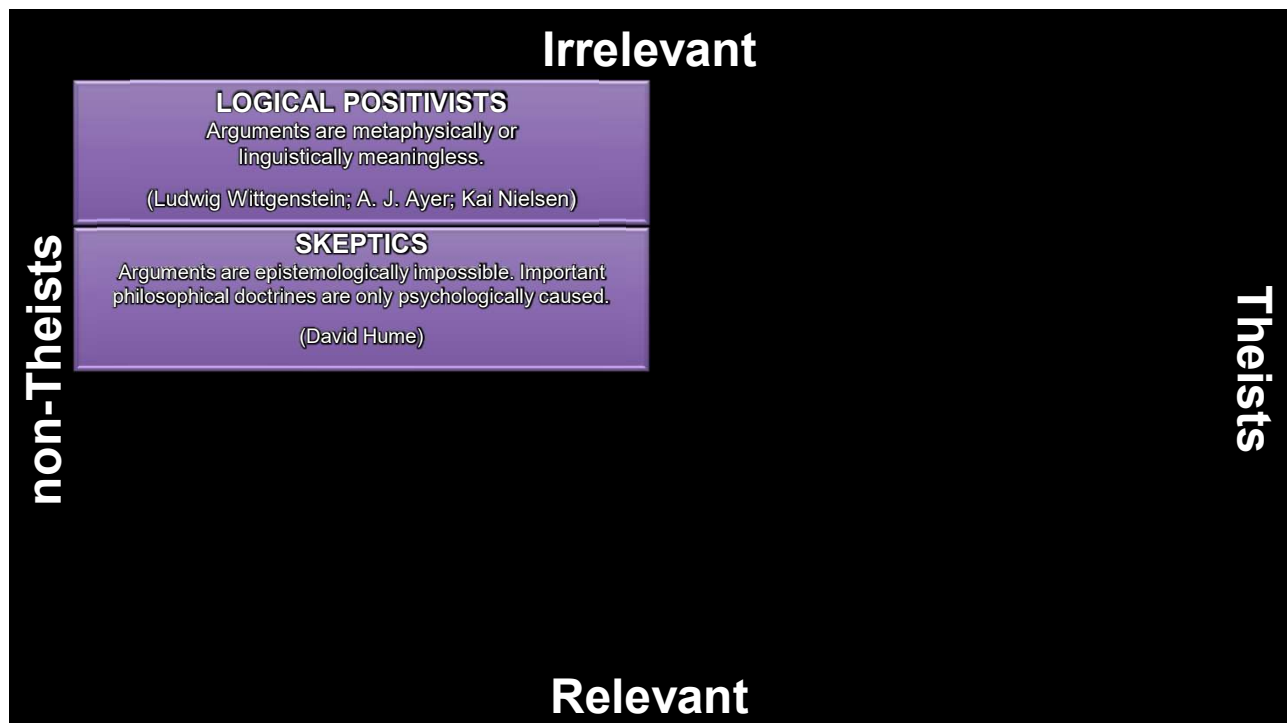
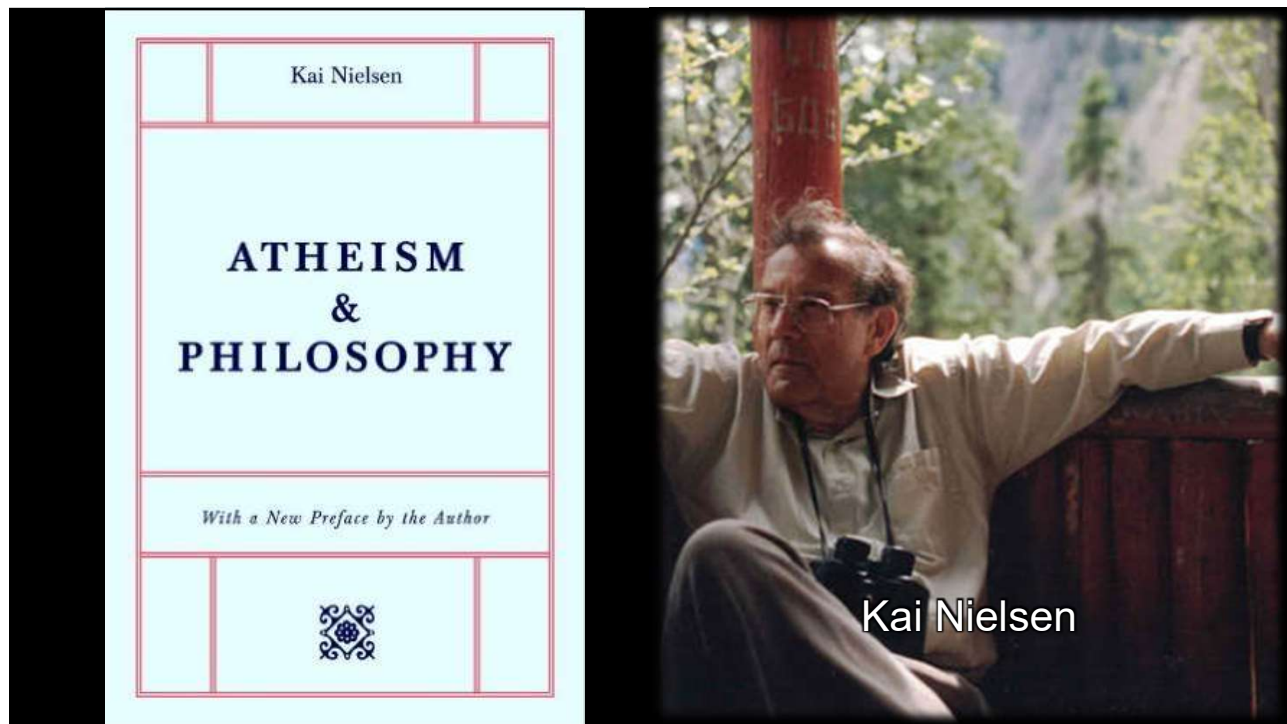
In combining the options of theists and non-theists together with the options of relevant and irrelevant we get these results.

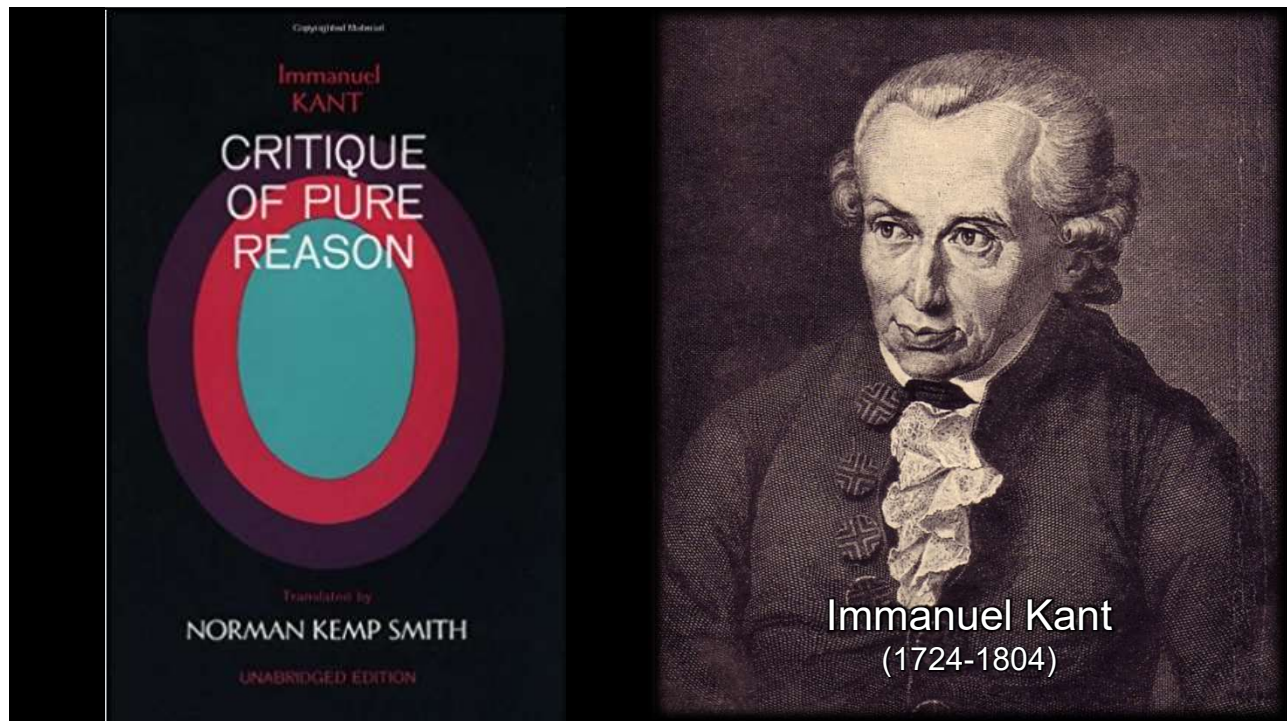
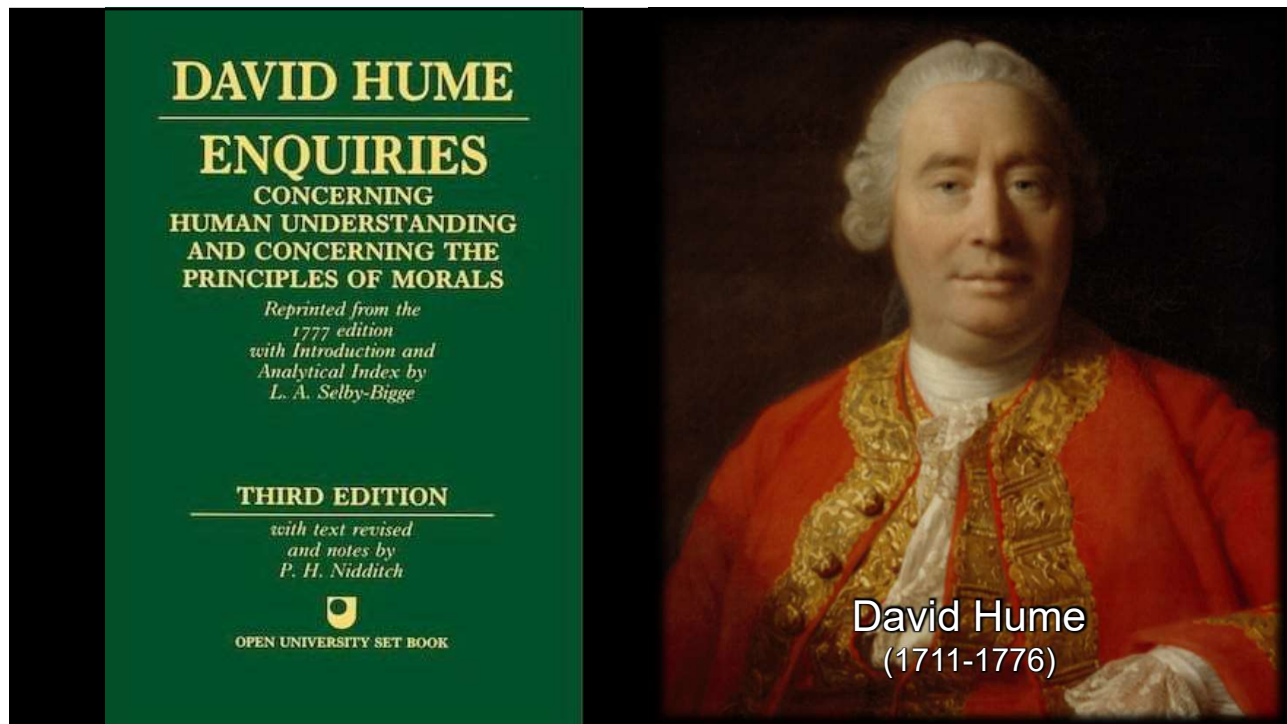
		Irrelevant		
non-Theists	non-Theists / Irrelevant		Theists / Irrelevant	Theists
	non-Theists / Relevant		Theists / Relevant	
		Relevant		

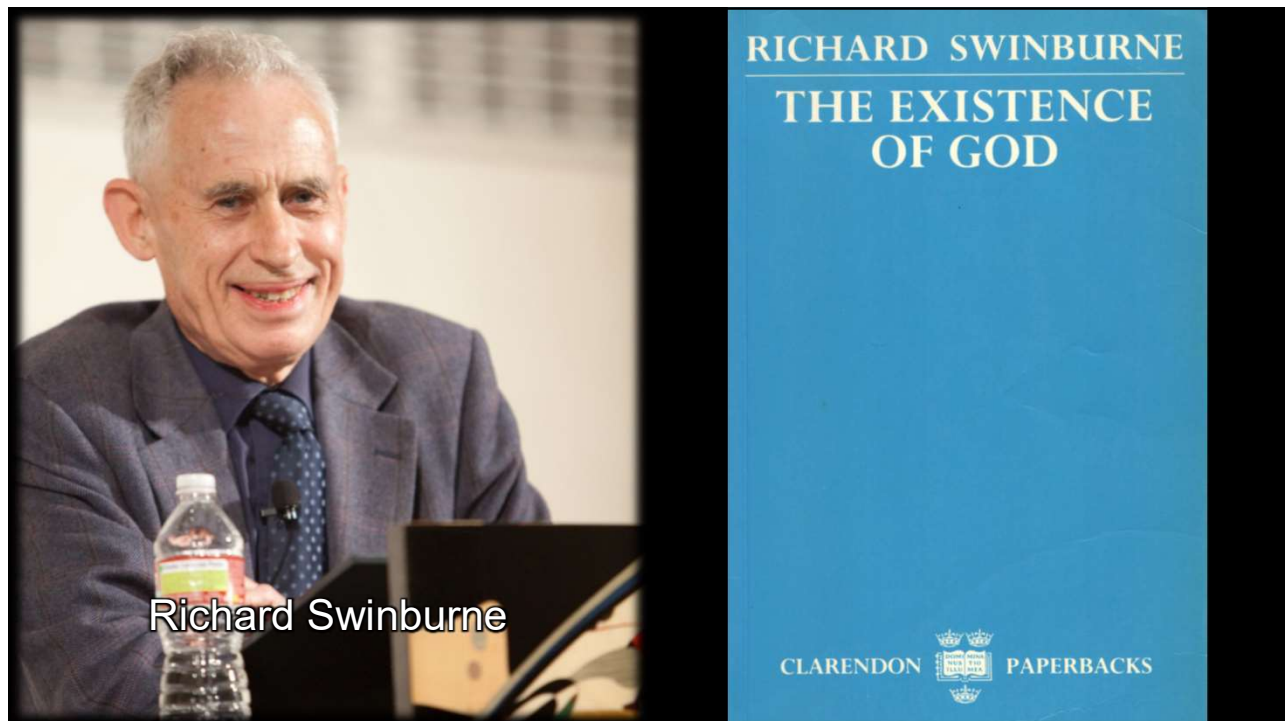
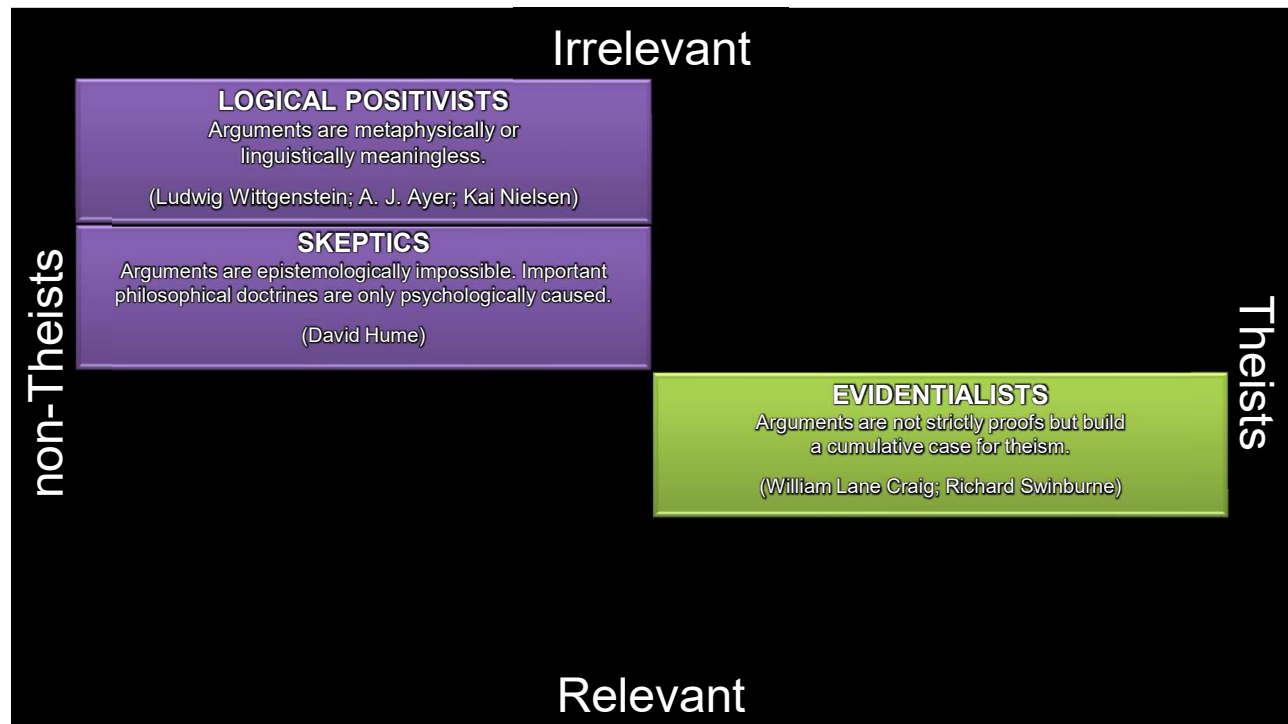


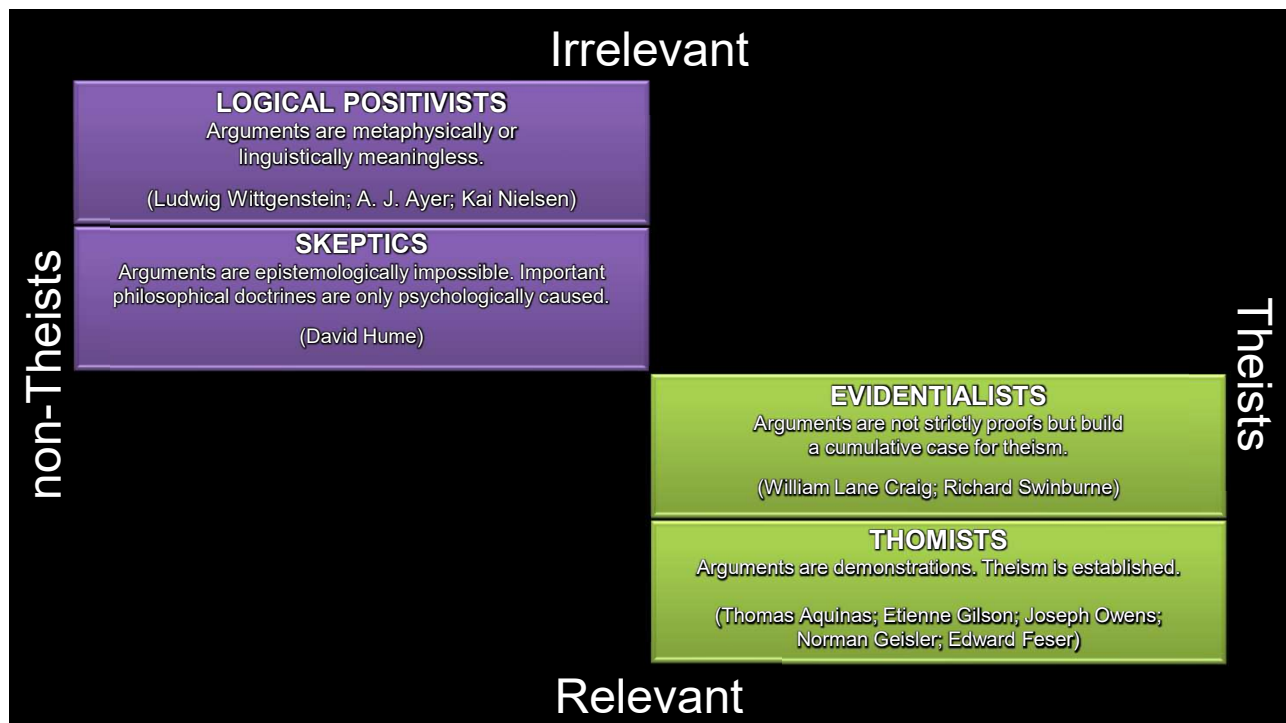
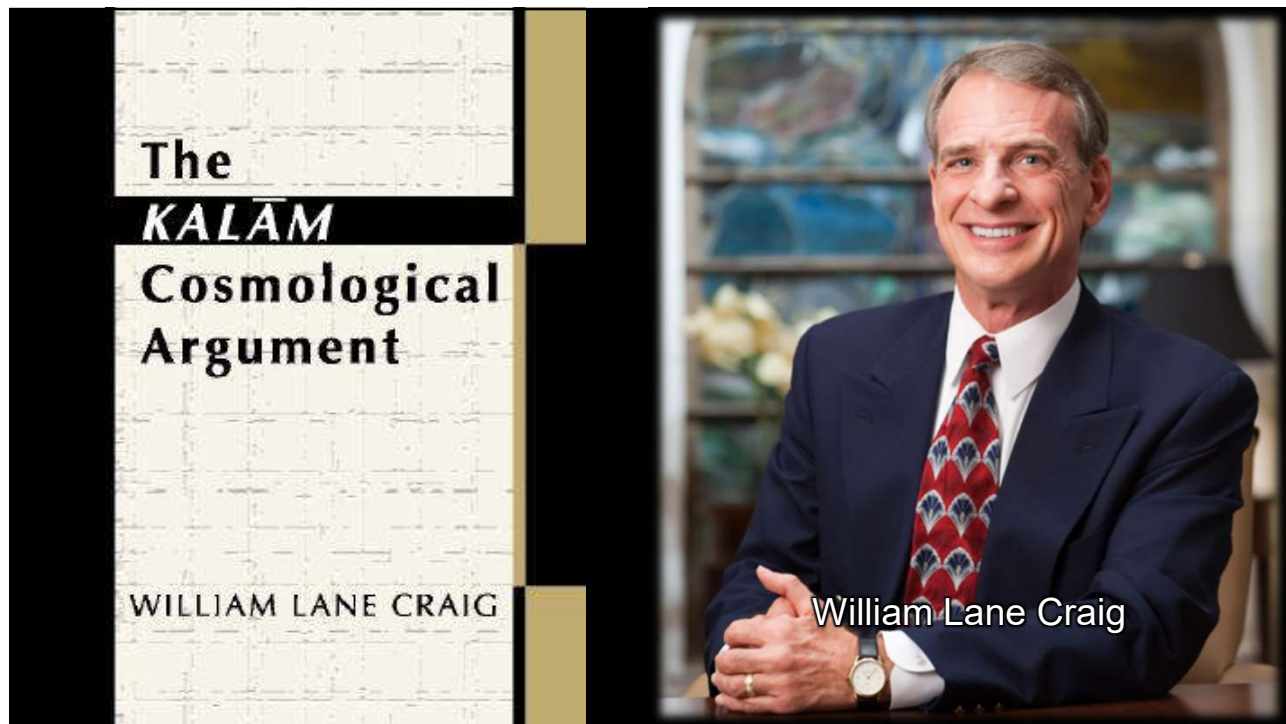


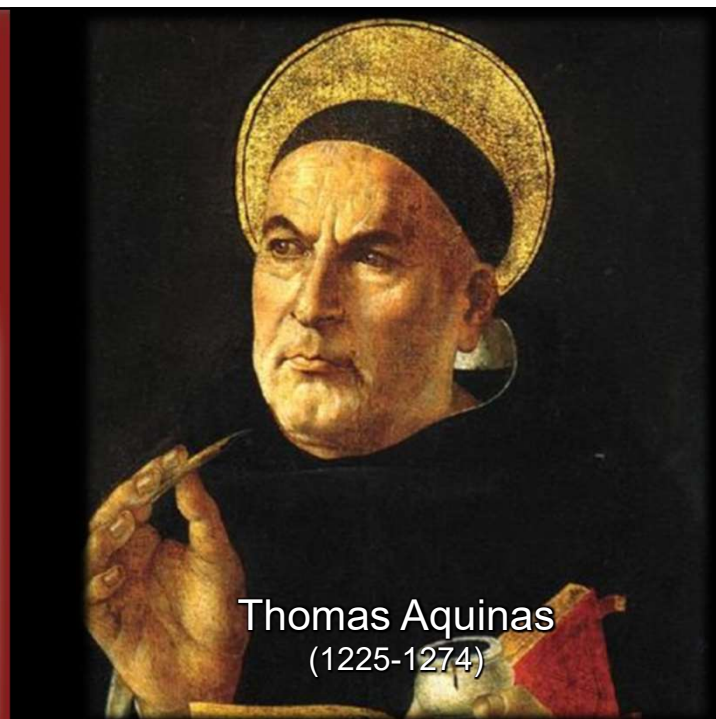
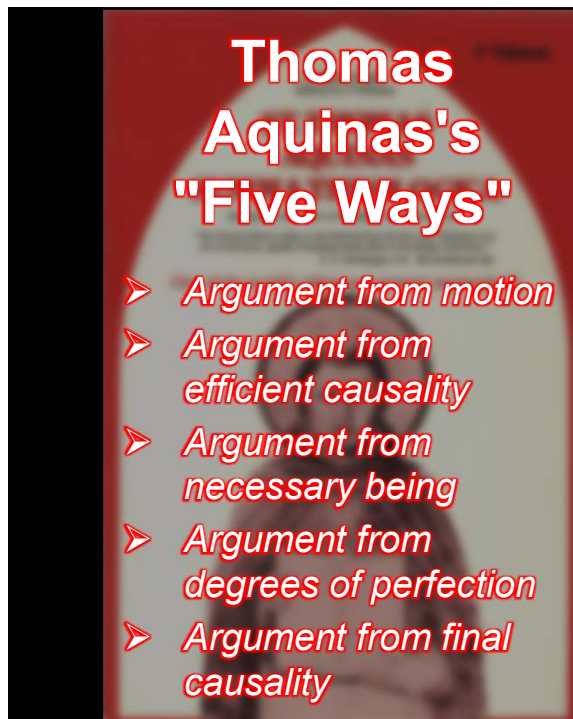
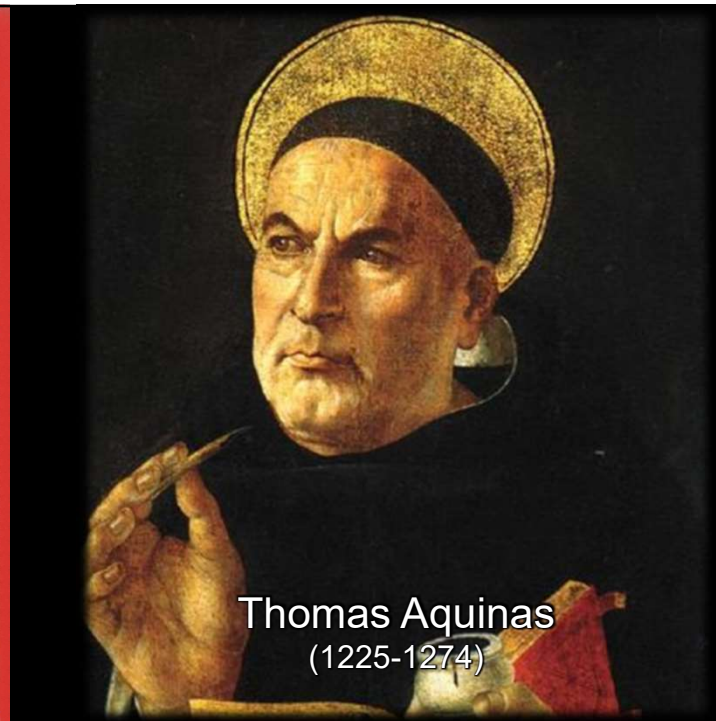
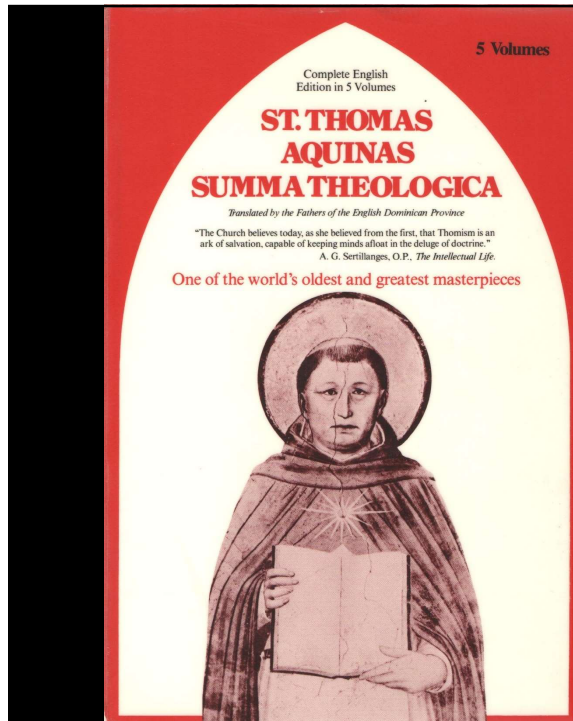


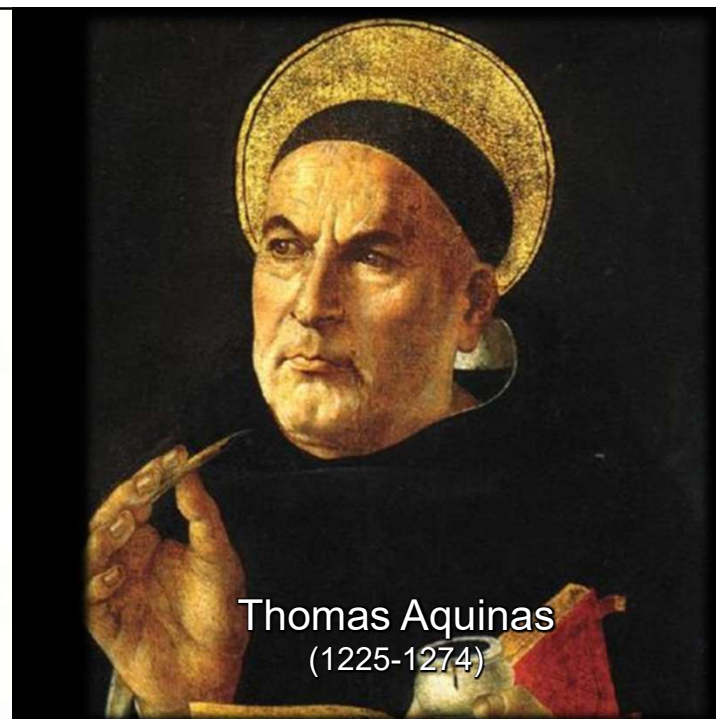
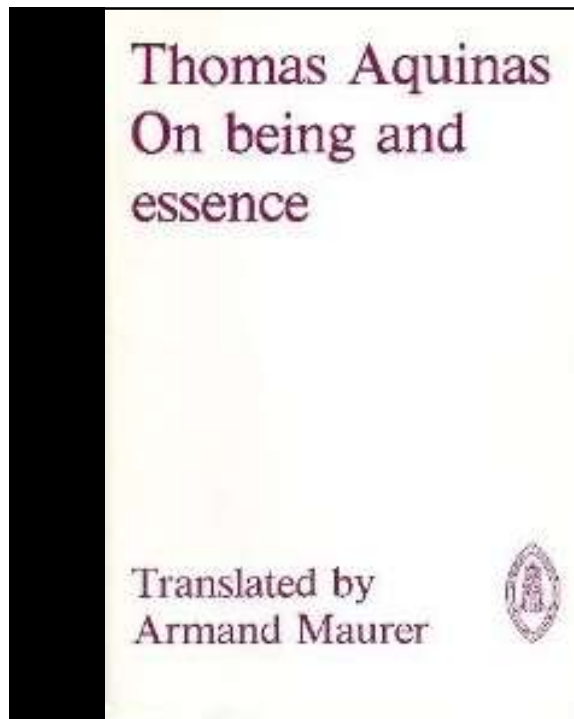
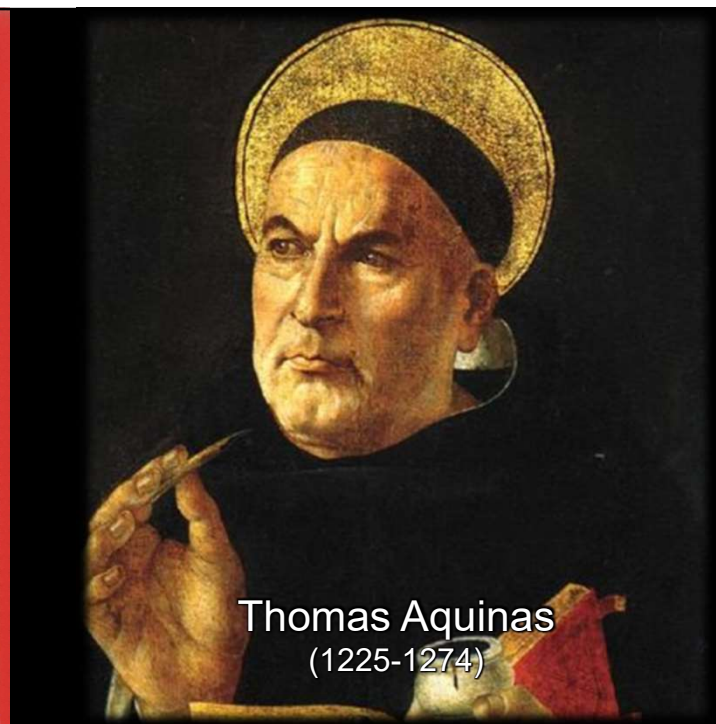
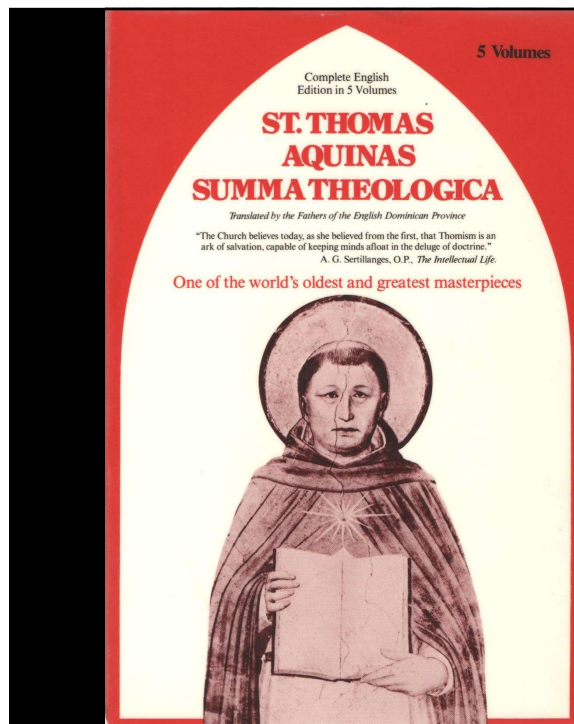


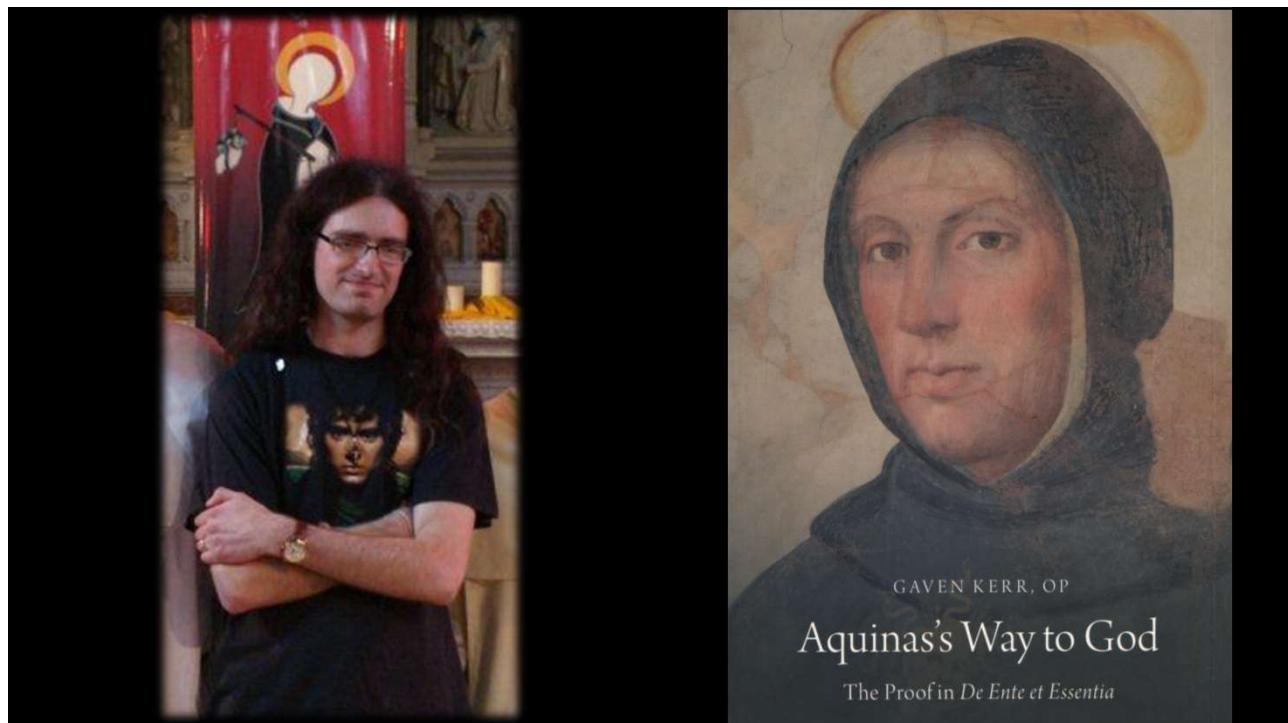


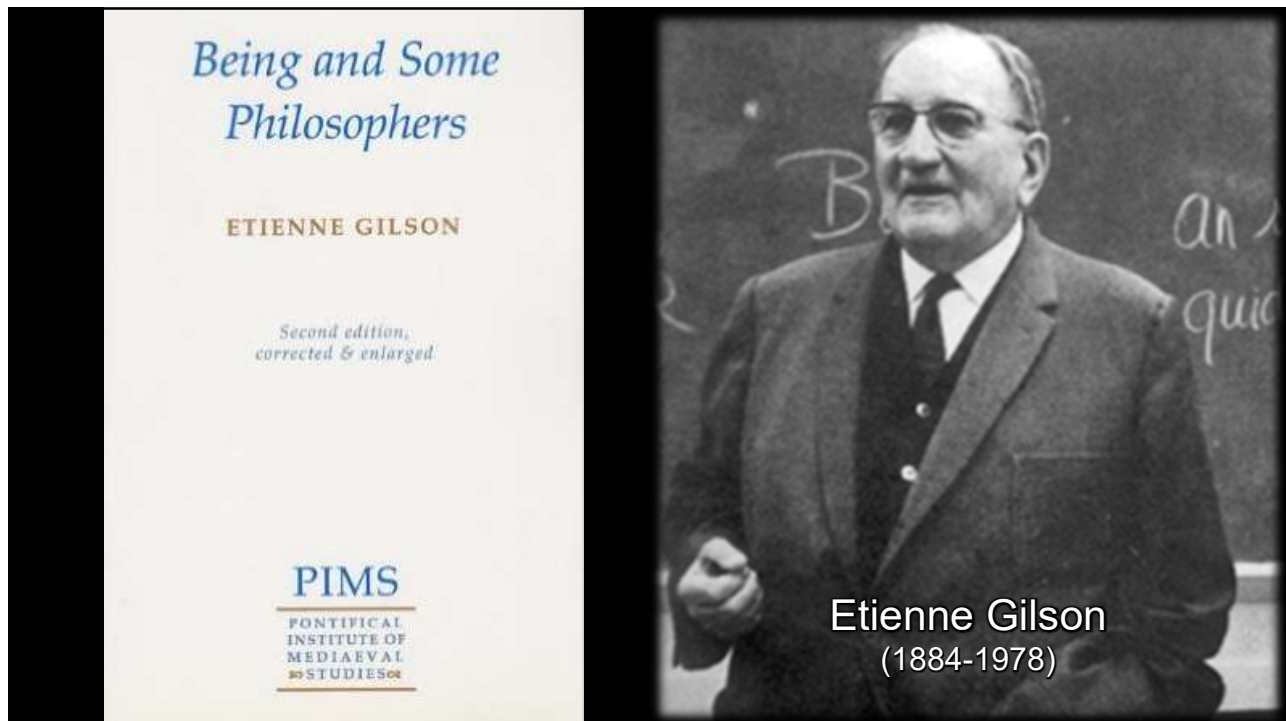


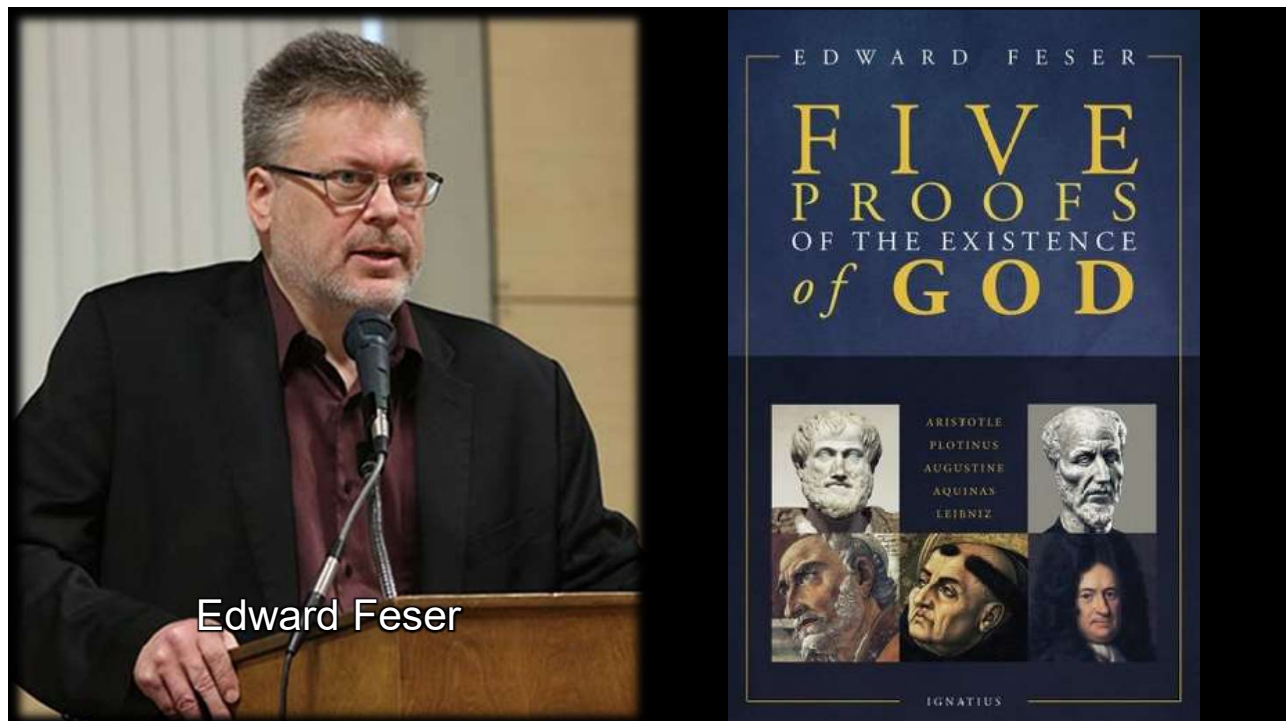
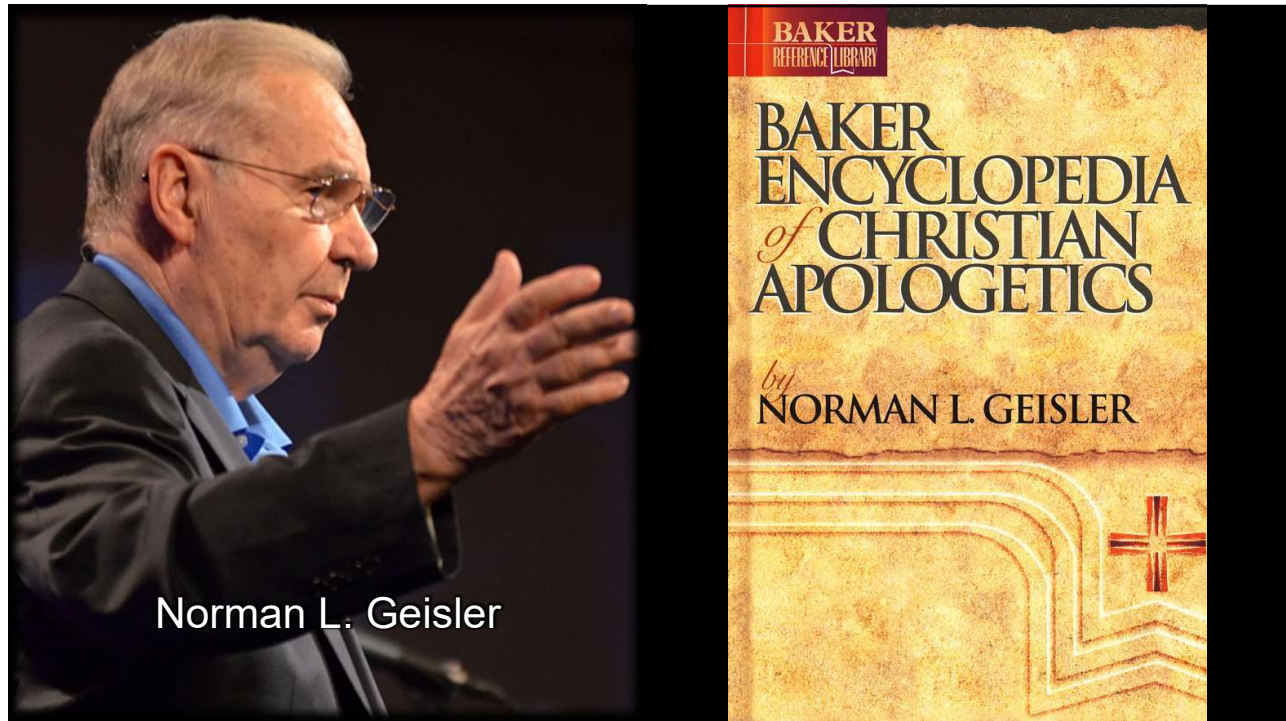


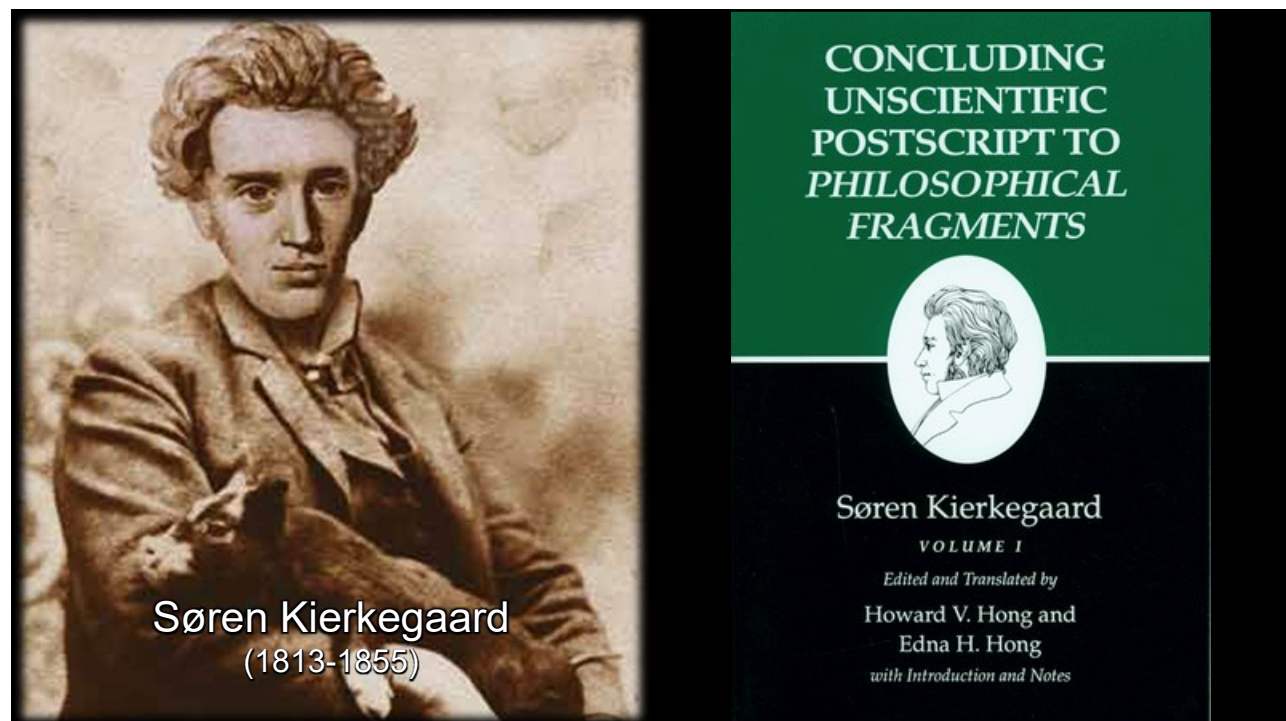
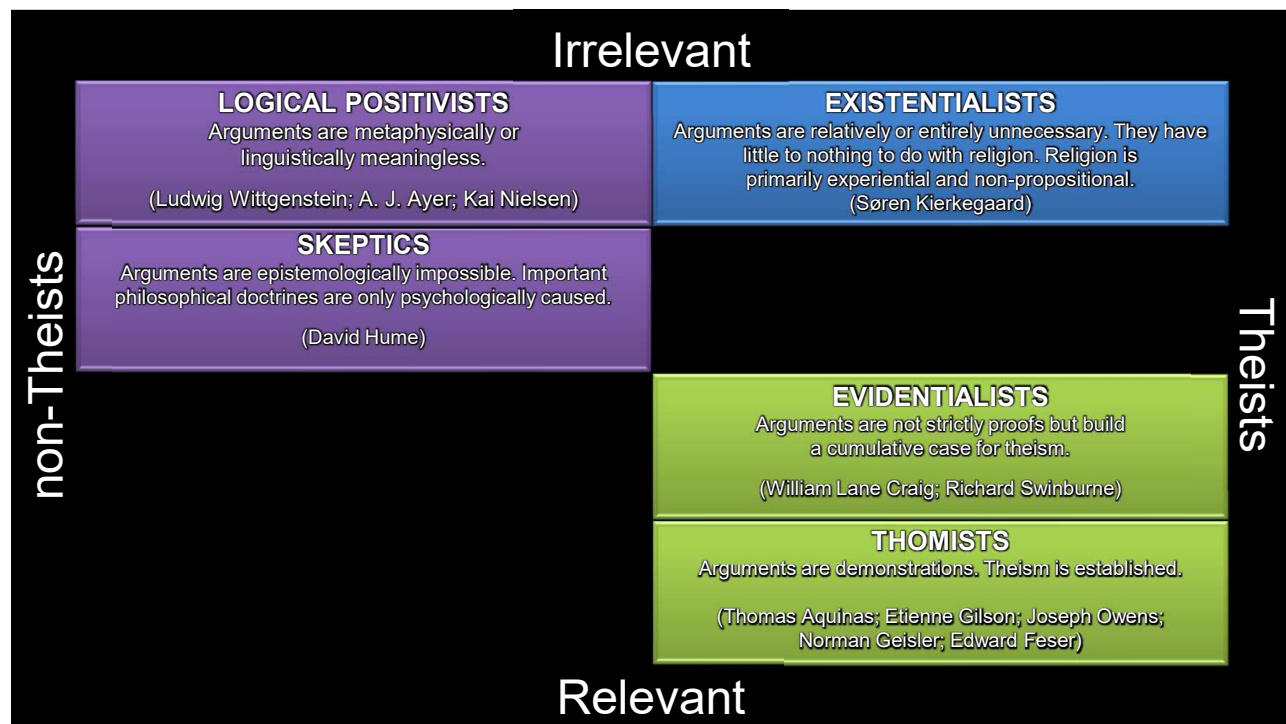


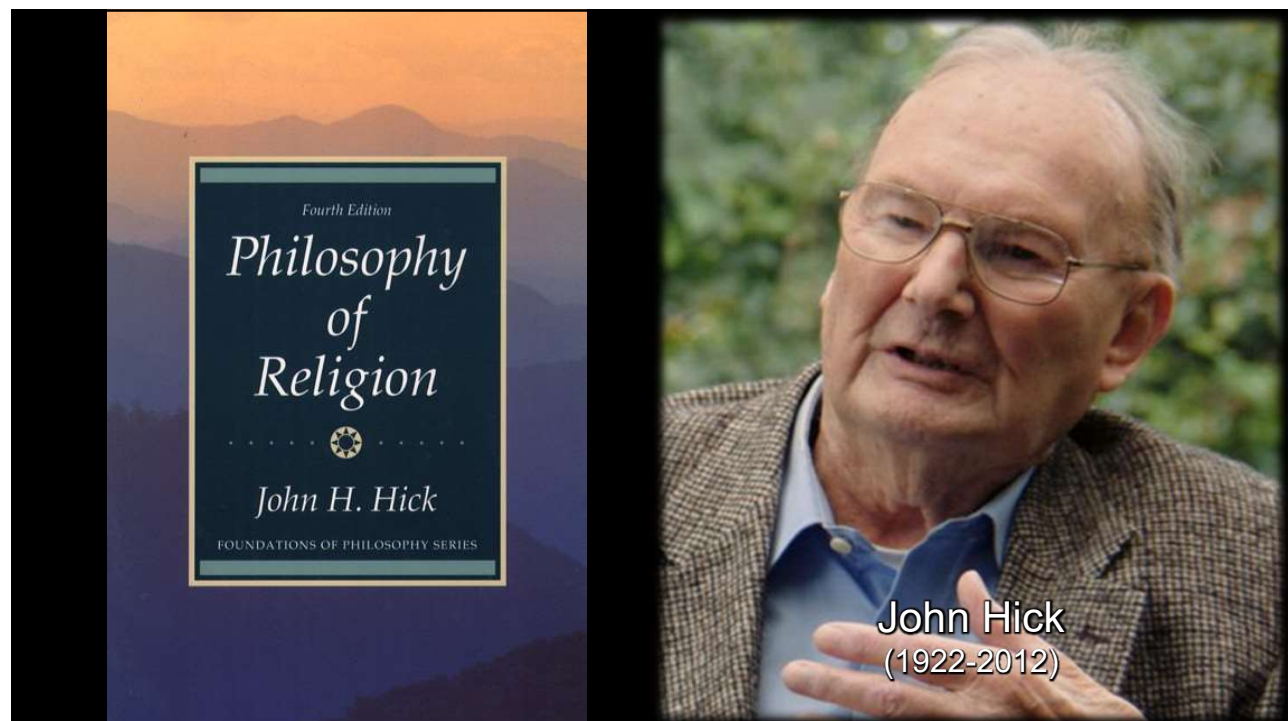
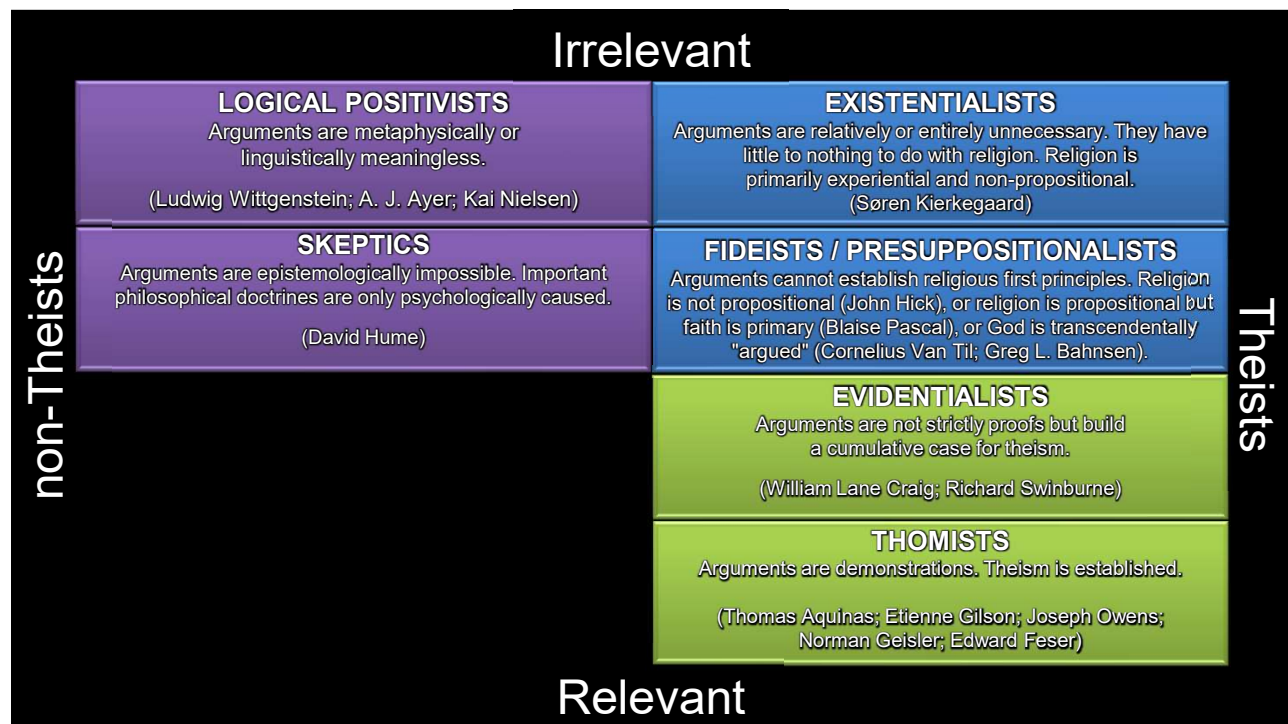


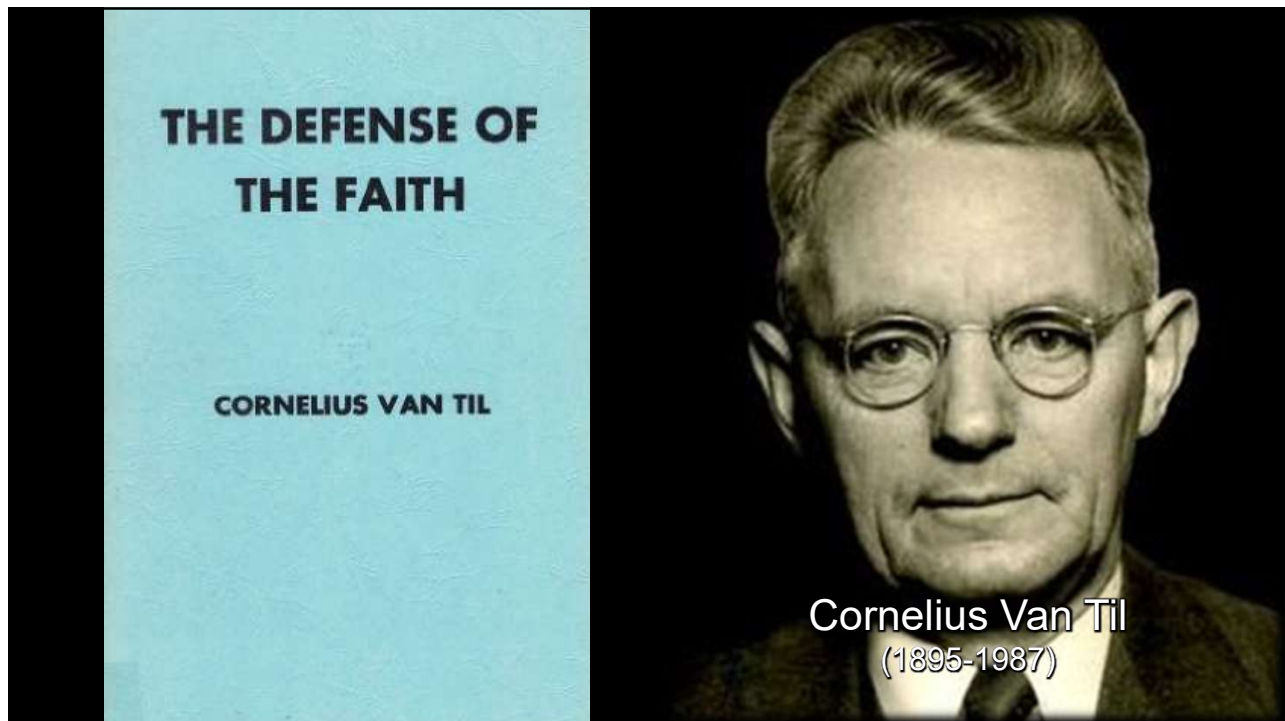


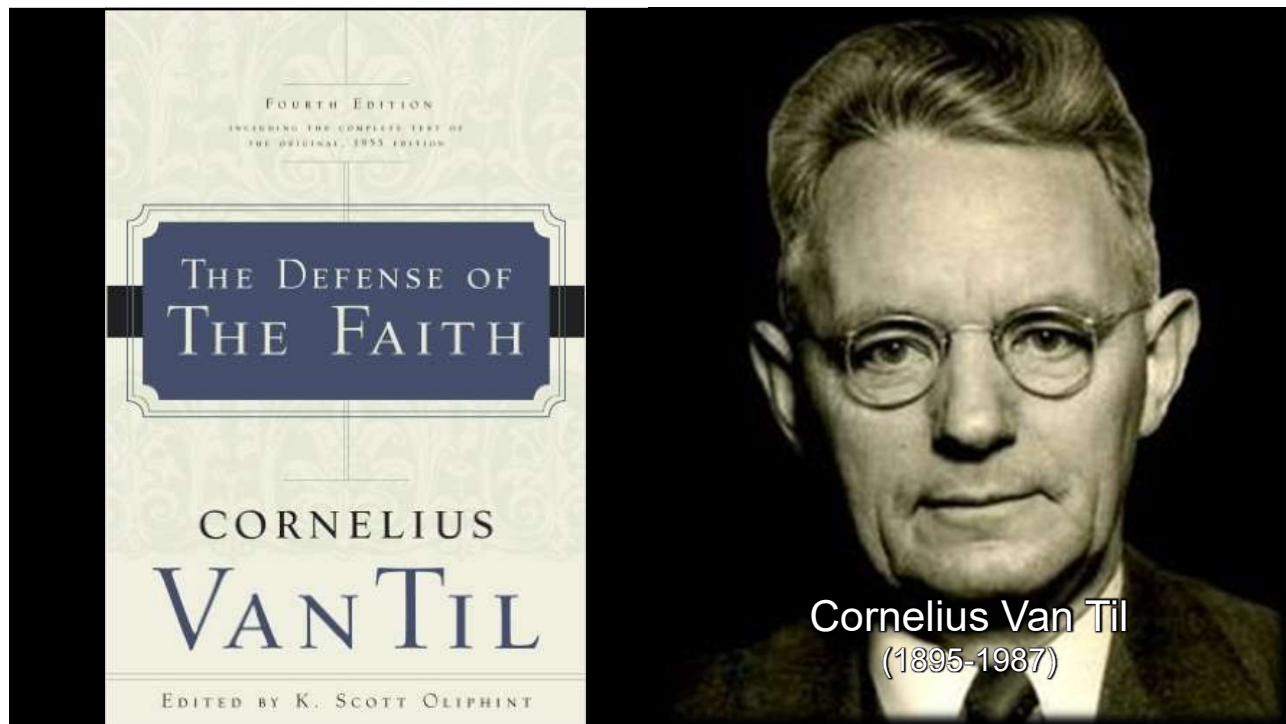




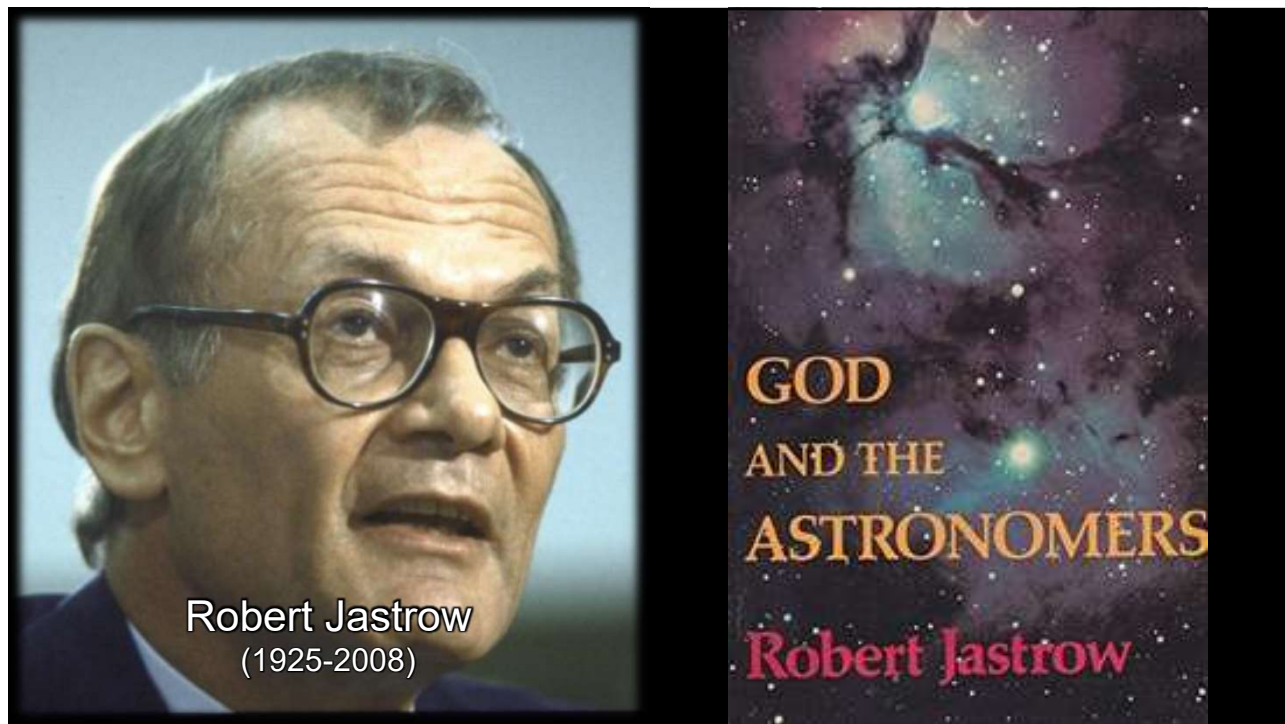




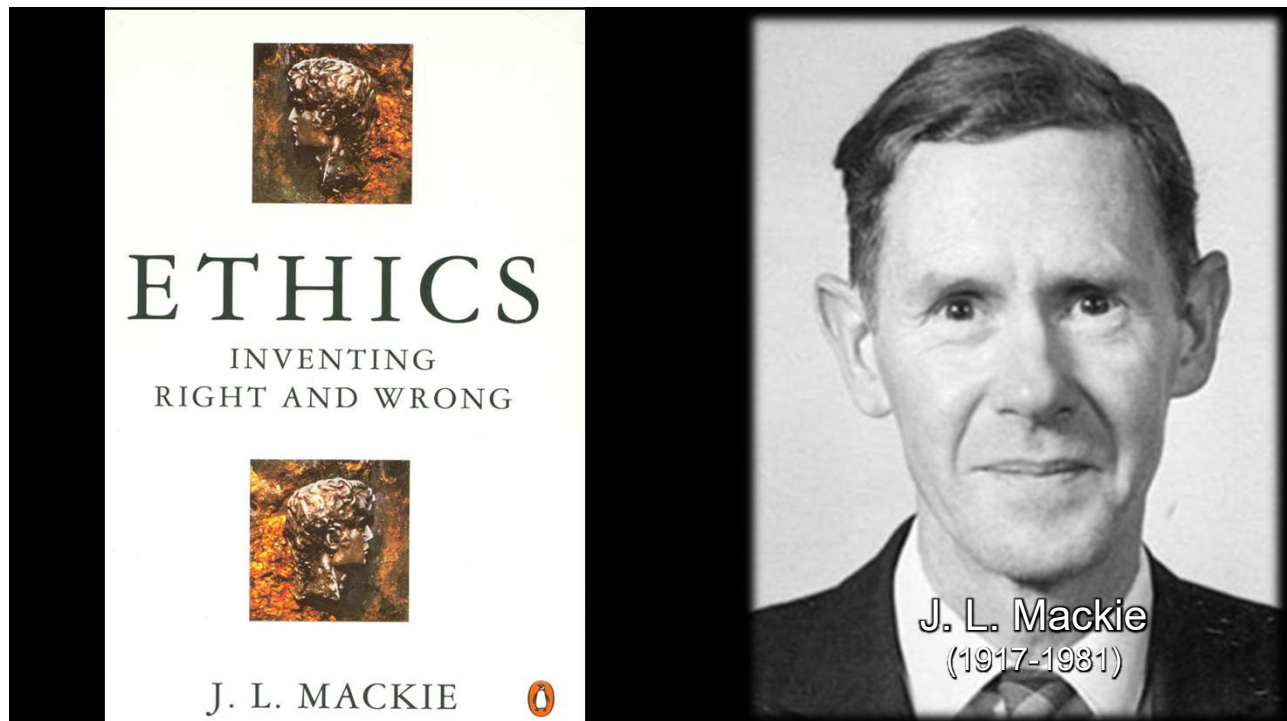
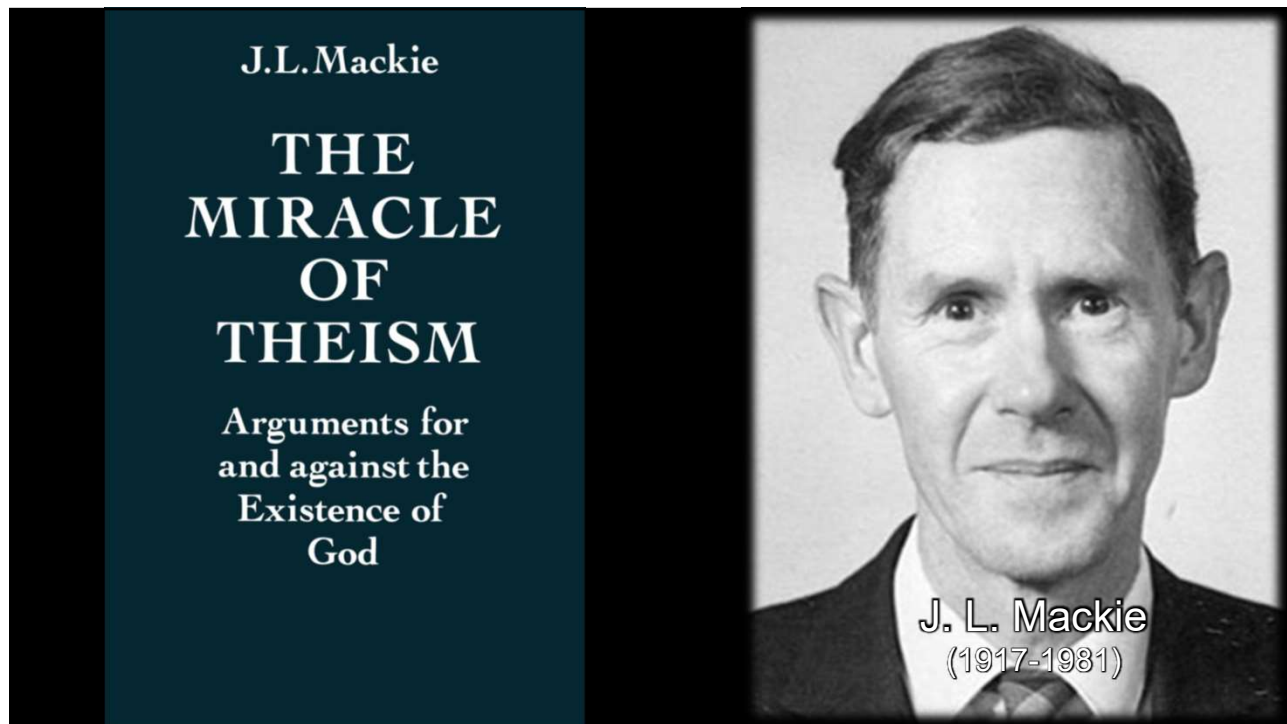


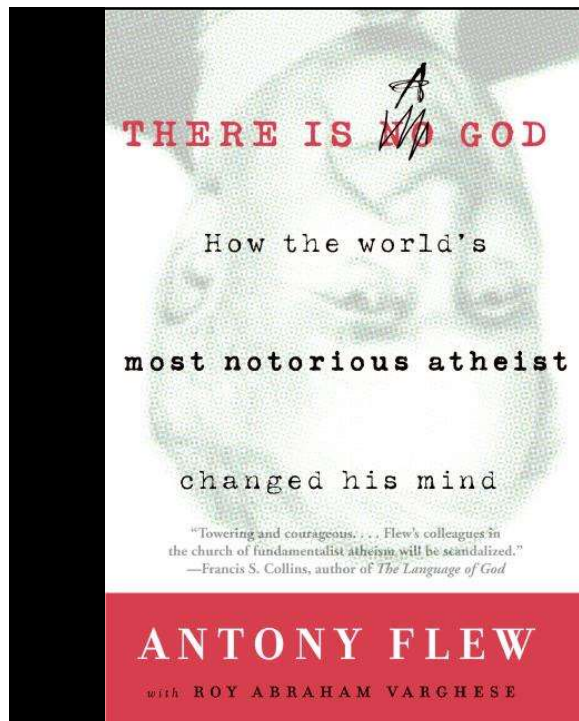
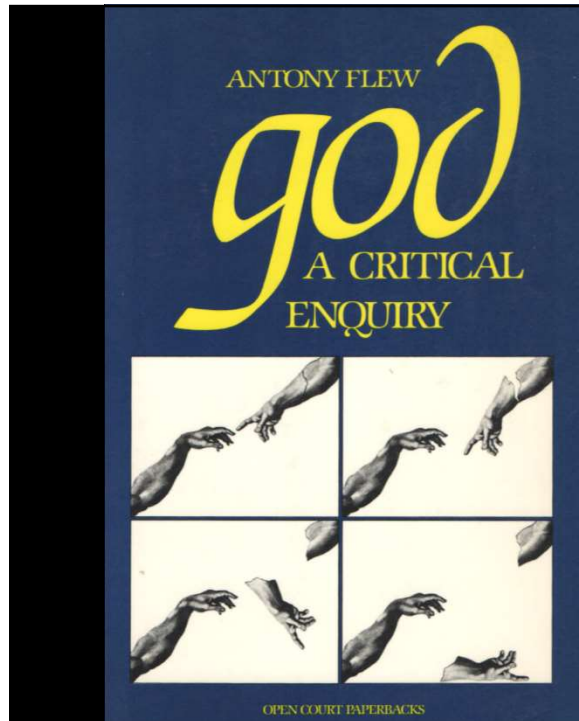


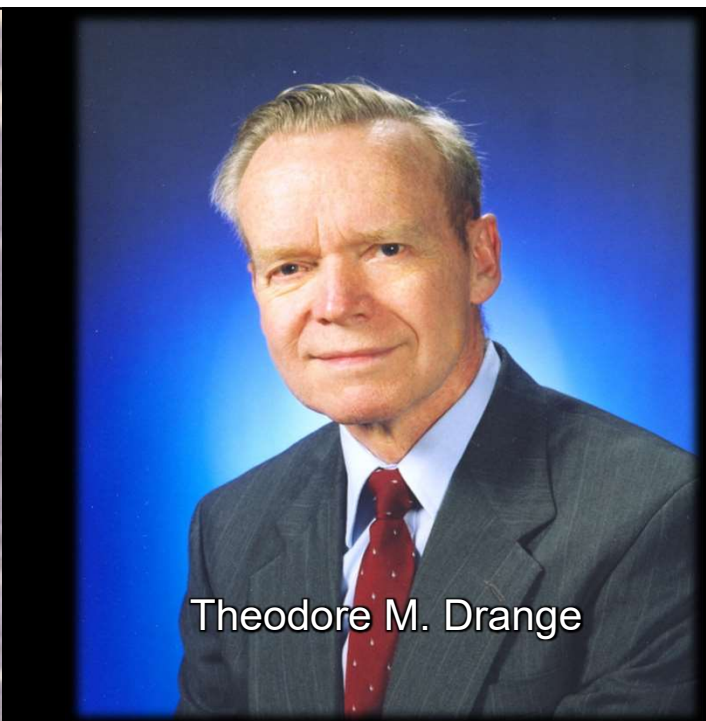
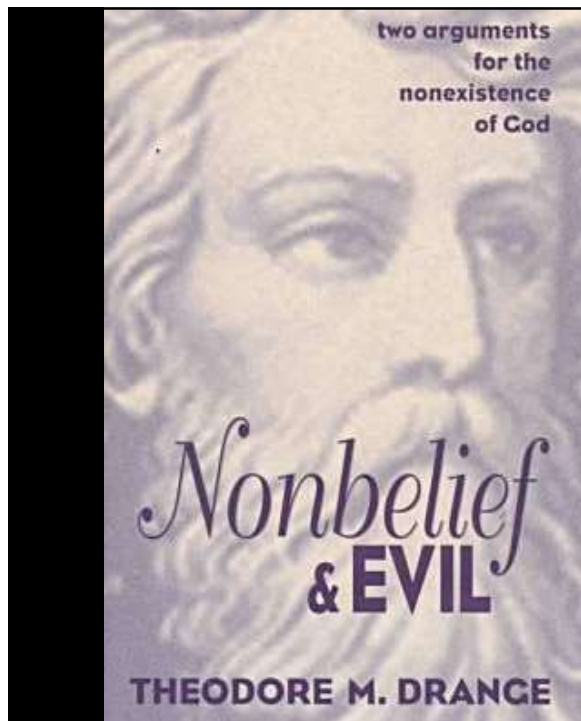
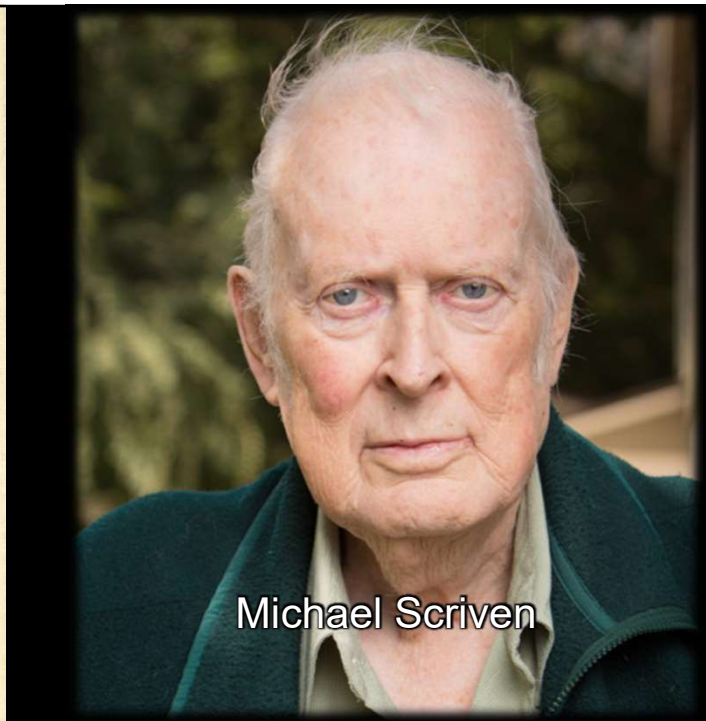
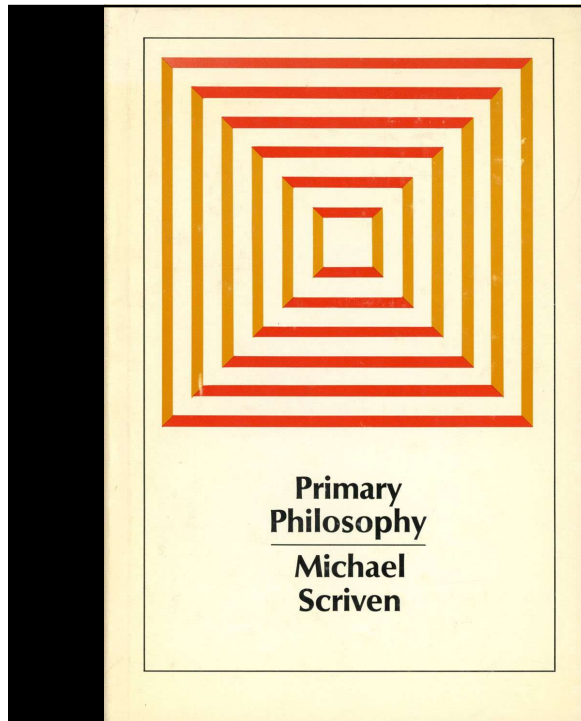
Irrelevant			
non-Theists	LOGICAL POSITIVISTS Arguments are metaphysically or linguistically meaningless. (Ludwig Wittgenstein; A. J. Ayer; Kai Nielsen)	EXISTENTIALISTS Arguments are relatively or entirely unnecessary. They have little to nothing to do with religion. Religion is primarily experiential and non-propositional. (Søren Kierkegaard)	Theists
	SKEPTICS Arguments are epistemologically impossible. Important philosophical doctrines are only psychologically caused. (David Hume)	FIDEISTS / PRESUPPOSITIONALISTS Arguments cannot establish religious first principles. Religion is not propositional (John Hick), or religion is propositional but faith is primary (Blaise Pascal), or God is transcendently "argued" (Cornelius Van Til; Greg L. Bahnsen).	
	AGNOSTICS Not all of the evidence is in. Theism may be established with further proof. (Robert Jastrow; Anthony Kenny)	EVIDENTIALISTS Arguments are not strictly proofs but build a cumulative case for theism. (William Lane Craig; Richard Swinburne)	
		THOMISTS Arguments are demonstrations. Theism is established. (Thomas Aquinas; Etienne Gilson; Joseph Owens; Norman Geisler; Edward Feser)	
	Relevant		

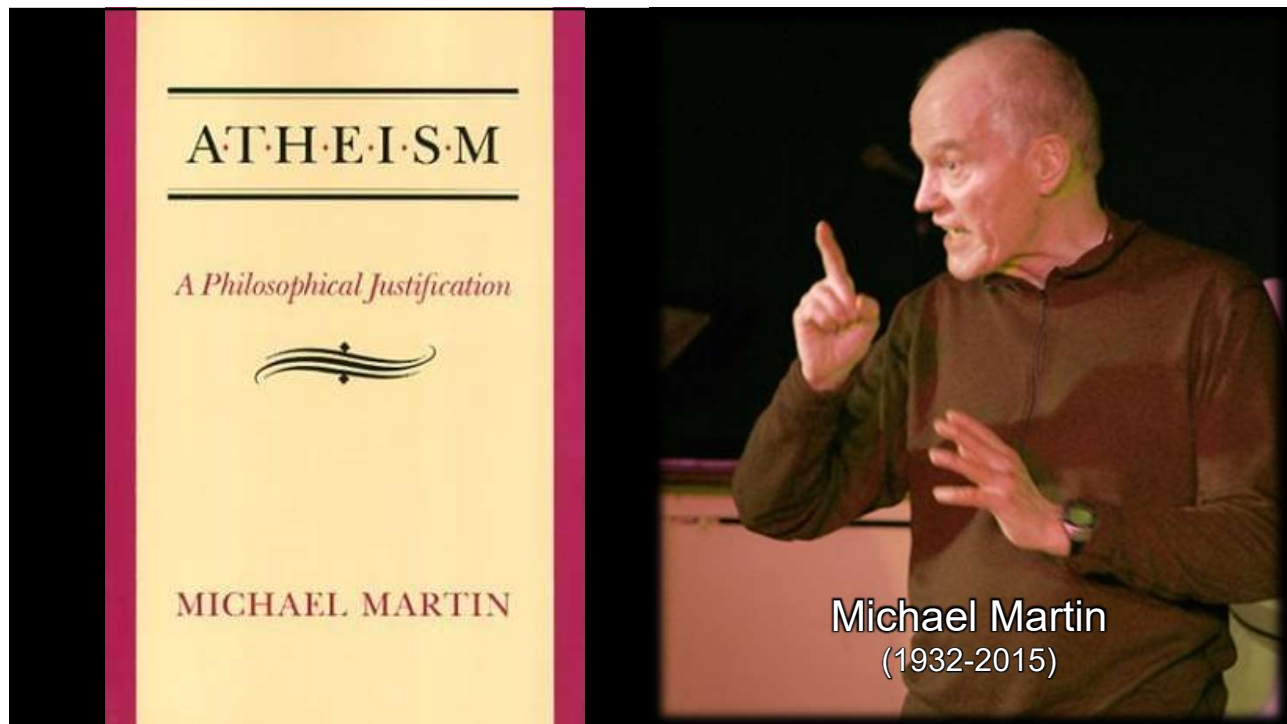


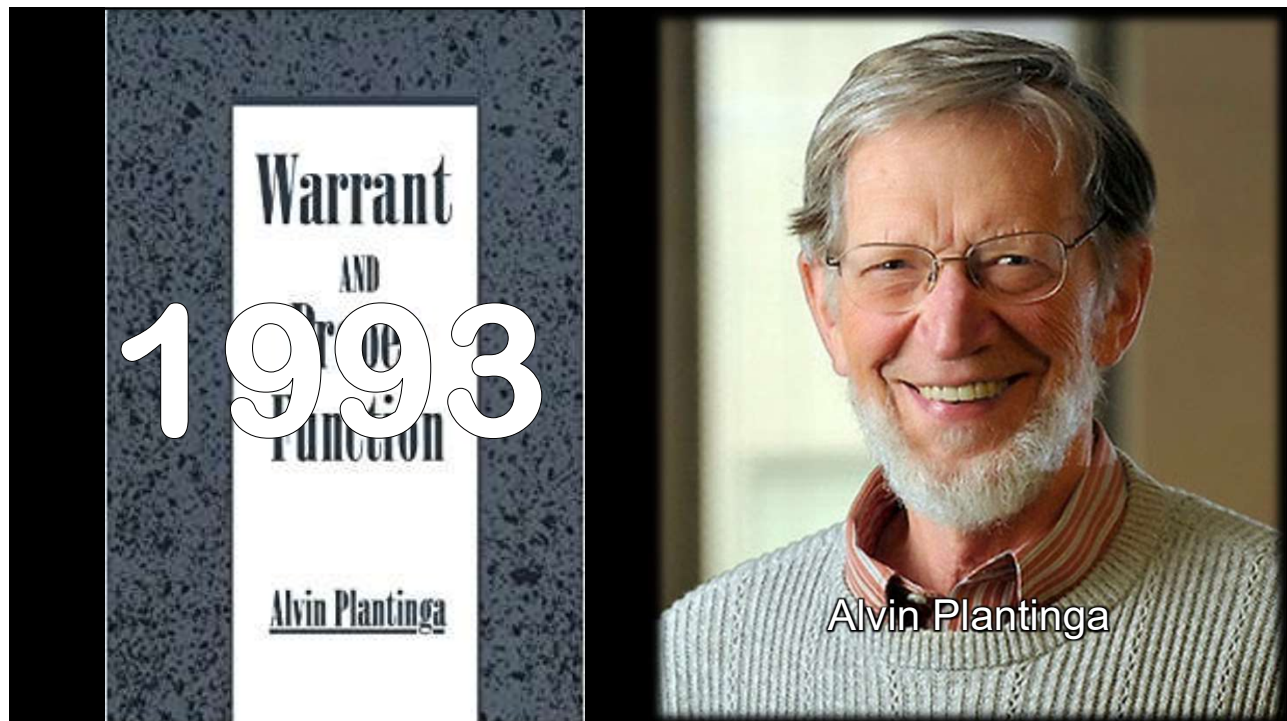
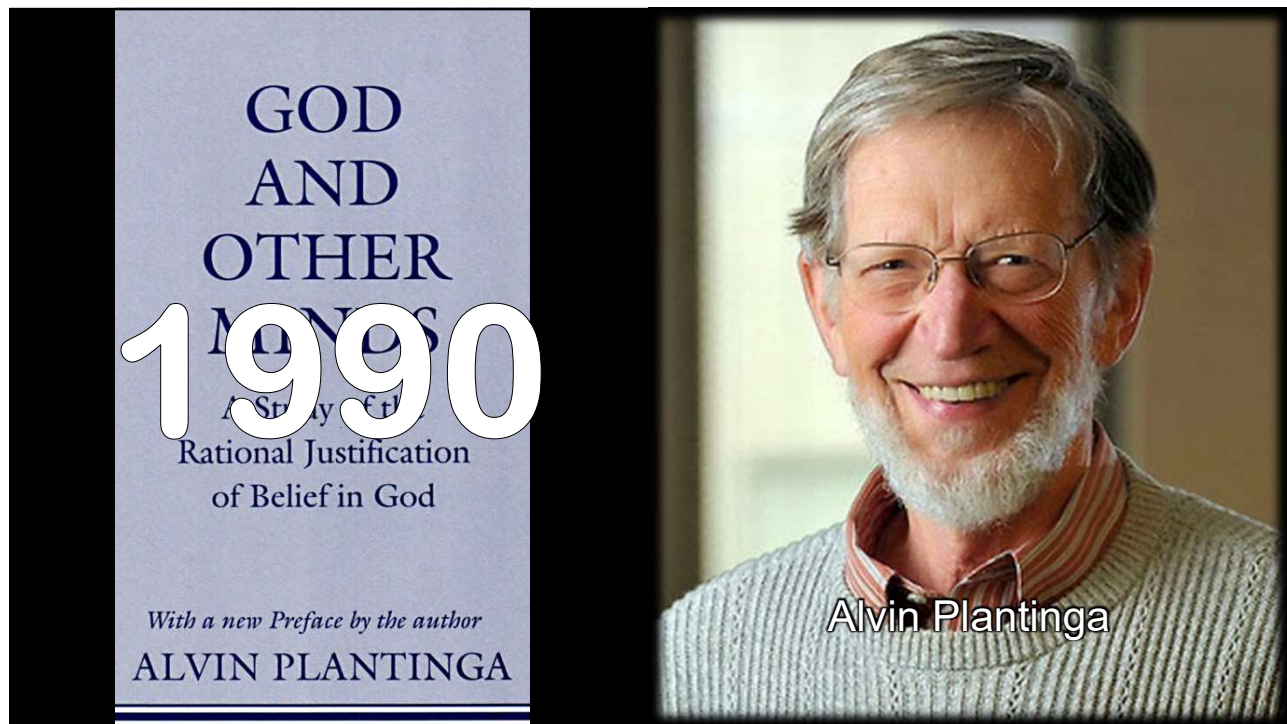
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	ATHEISTS Arguments surface important philosophical issues. The evidence proves atheism. (J. L. Mackie; early Antony Flew; Michael Scriven, Theodore Drange; Michael Martin)	THOMISTS Arguments are demonstrations. Theism is established. (Thomas Aquinas; Etienne Gilson; Joseph Owens; Norman Geisler; Edward Feser)
Relevant		
Theists		

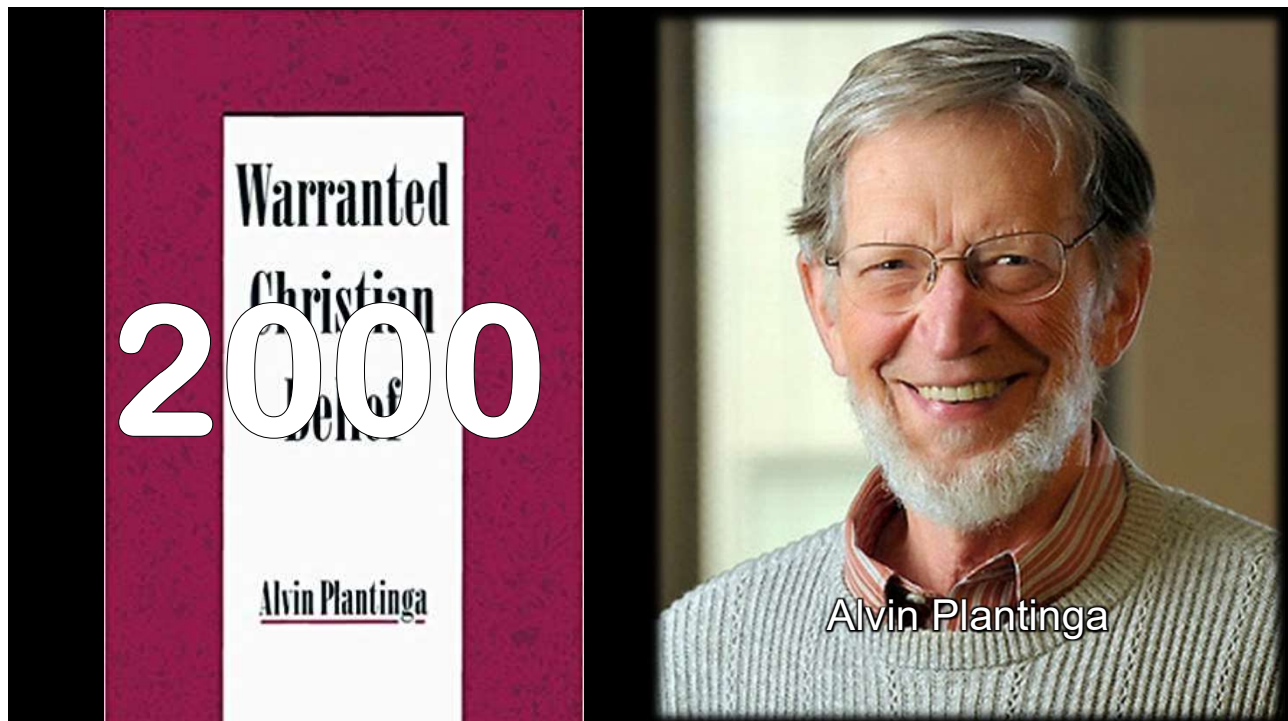
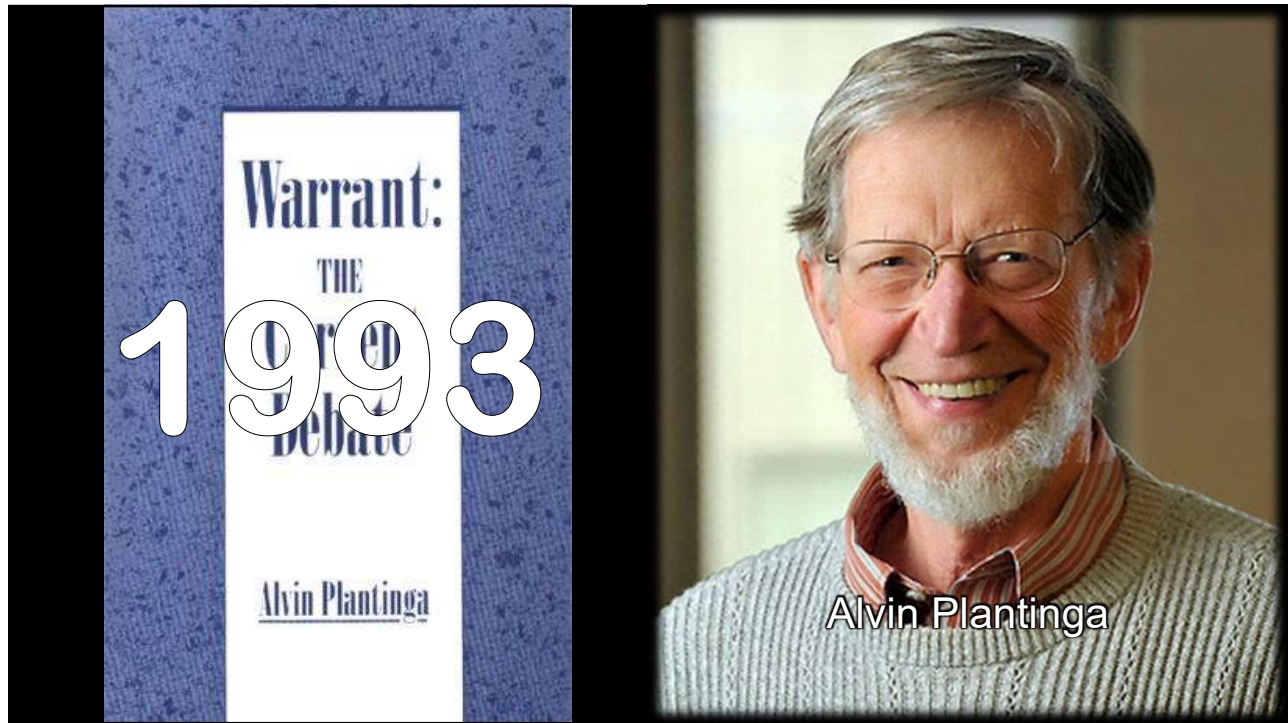


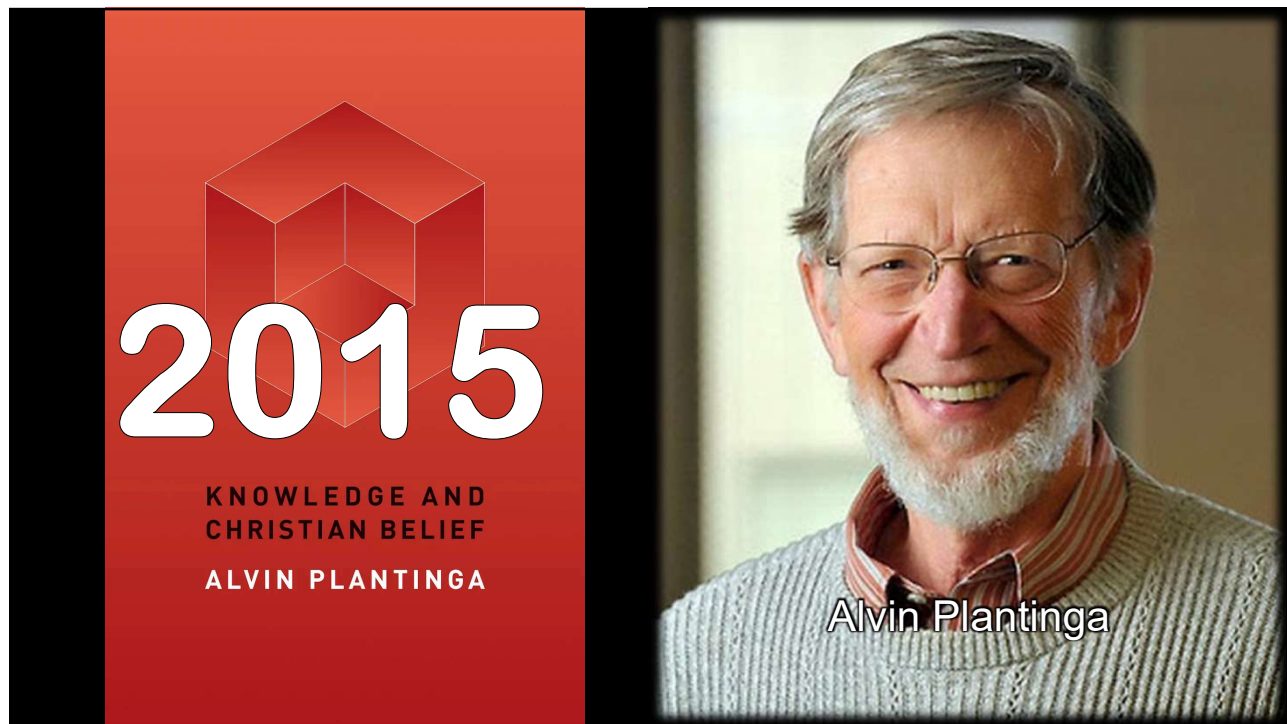










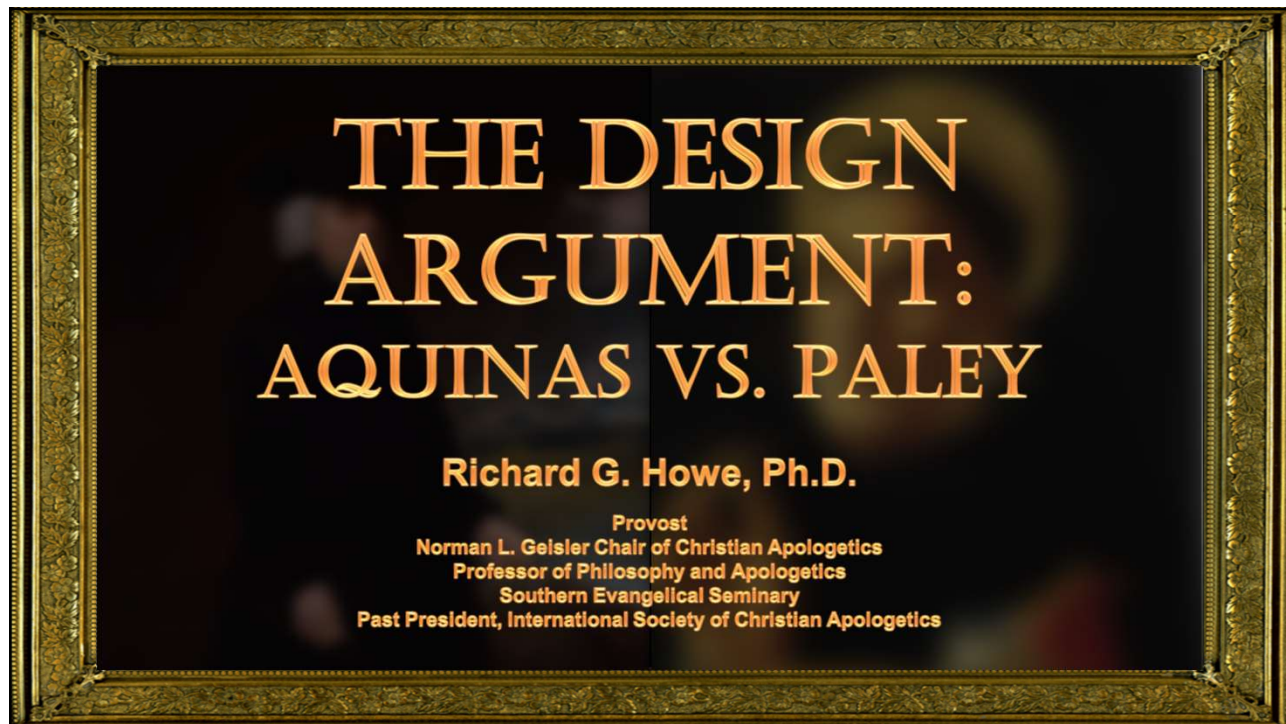


COSMOLOGICAL: based on the existence of the universe (cosmos)

DESIGN: based on the orderly or organized aspects of the universe; largely scientific evidence

TELEOLOGICAL: based on the directedness (teleology) of natural objects; philosophical evidence





COSMOLOGICAL: based on the existence of the universe (cosmos)

DESIGN: based on the orderly or organized aspects of the universe; largely scientific evidence

TELEOLOGICAL: based on the directedness (teleology) of natural objects; philosophical evidence

ONTOLOGICAL: based on the concept of God as the greatest conceivable being

MORAL: based on the existence of moral truths



- ❖ *God as the cause of the beginning of the universe (i.e., the coming into existence of the universe): Scientific*
- ❖ *God as the cause of the current existing of the universe: Philosophical*
- ❖ *God as the cause of the design of the universe: Scientific*
- ❖ *God as the cause of the teleology of the universe: Philosophical*

Generally, the arguments utilizing the scientific evidence take the form of an "argument to the best explanation."

In contrast, the arguments utilizing the philosophical "evidence" seek to show how the existence of God (together with the classical attributes of God) follow inexorably from the basic tenets of metaphysics.

Strengths & Weaknesses of the Scientific Arguments



➤ Strengths ➤

The scientific arguments appeal to the common sense notion that something can only begin to exist by being caused to exist.



➤ Strengths ➤

They also appeal to the common sense notion that anything that exhibits sufficient evidence of design is likely caused by an intelligence.



➤ Strengths ➤

These arguments benefit from the academic and social clout enjoyed by the contemporary natural sciences.



➤ Strengths ➤

They generally avoid trafficking in the technicalities of academic philosophy which are less familiar than the general categories of the sciences.



➤ Weaknesses ➤

Without further arguments, the scientific arguments do not demonstrate that the cause of the universe still exists.



Weaknesses

Without further arguments, they do not demonstrate that the cause of the universe is God (i.e., that the cause has the attributes of classical theism).



Weaknesses

Without further arguments, they do not demonstrate that the cause of the universe is God (i.e., that the cause has the attributes of classical theism).



⌘ Weaknesses ⌘


Without further arguments, they do not demonstrate that the cause of the universe is good (even apart from the other attributes of classical theism).



⌘ My Weaknesses ⌘

Certain aspects of the science are disputed.

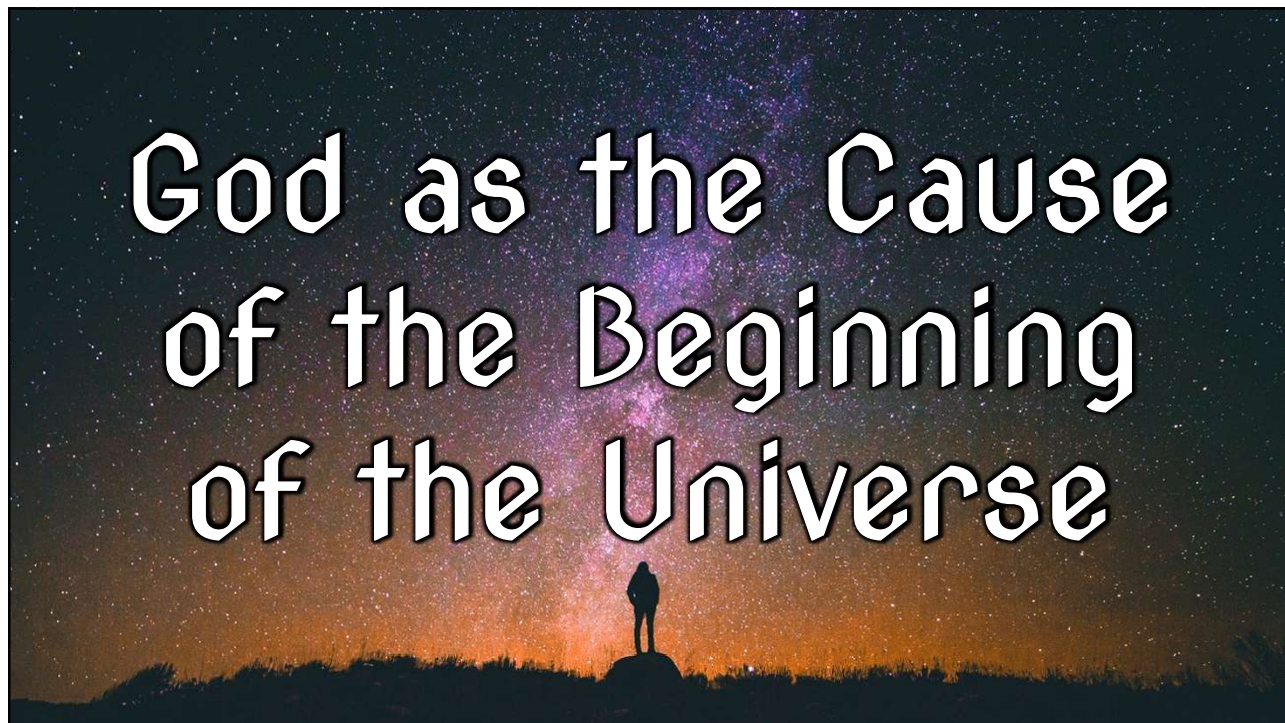
Such disputes can invariably get technical and, thus, are beyond the knowledge of the non-scientist like me.

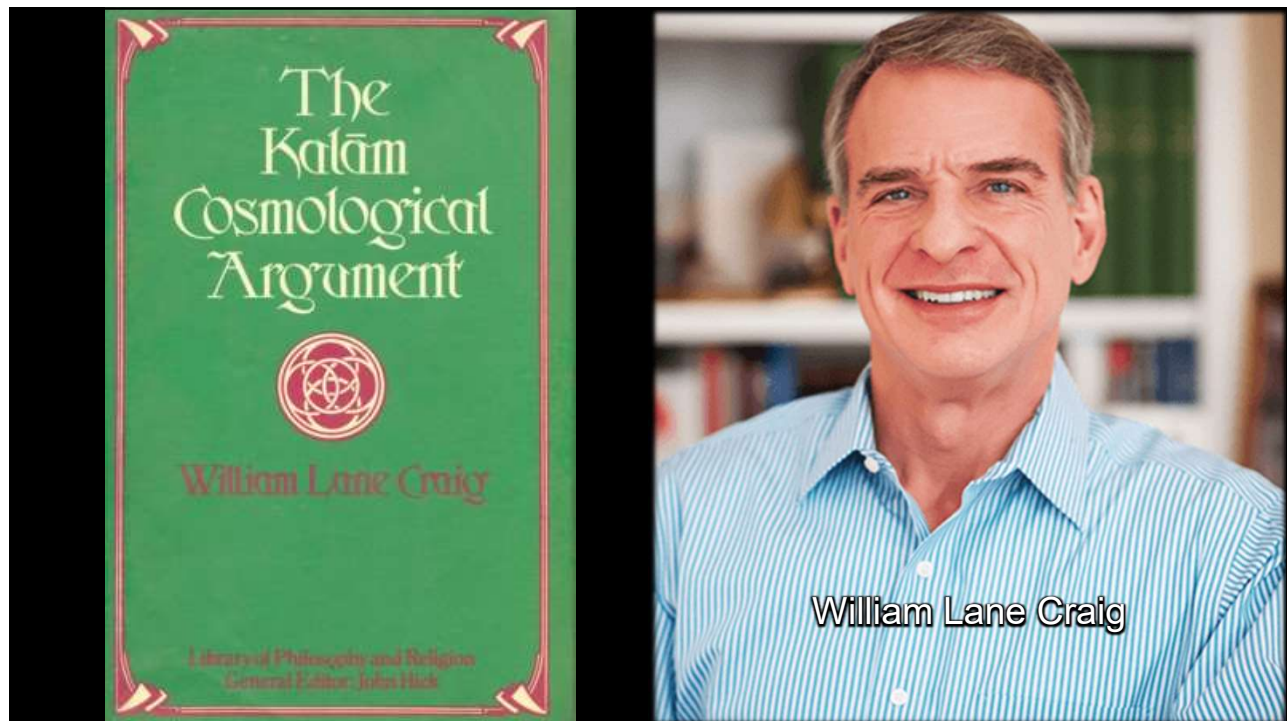
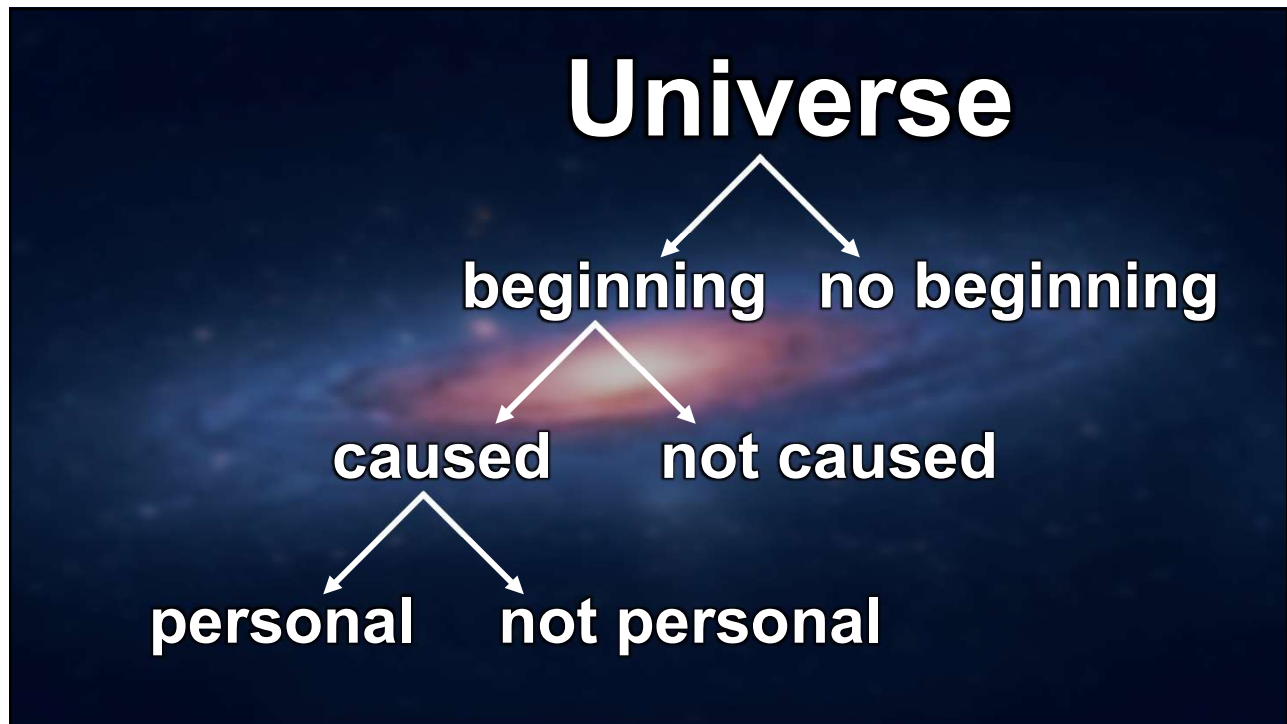


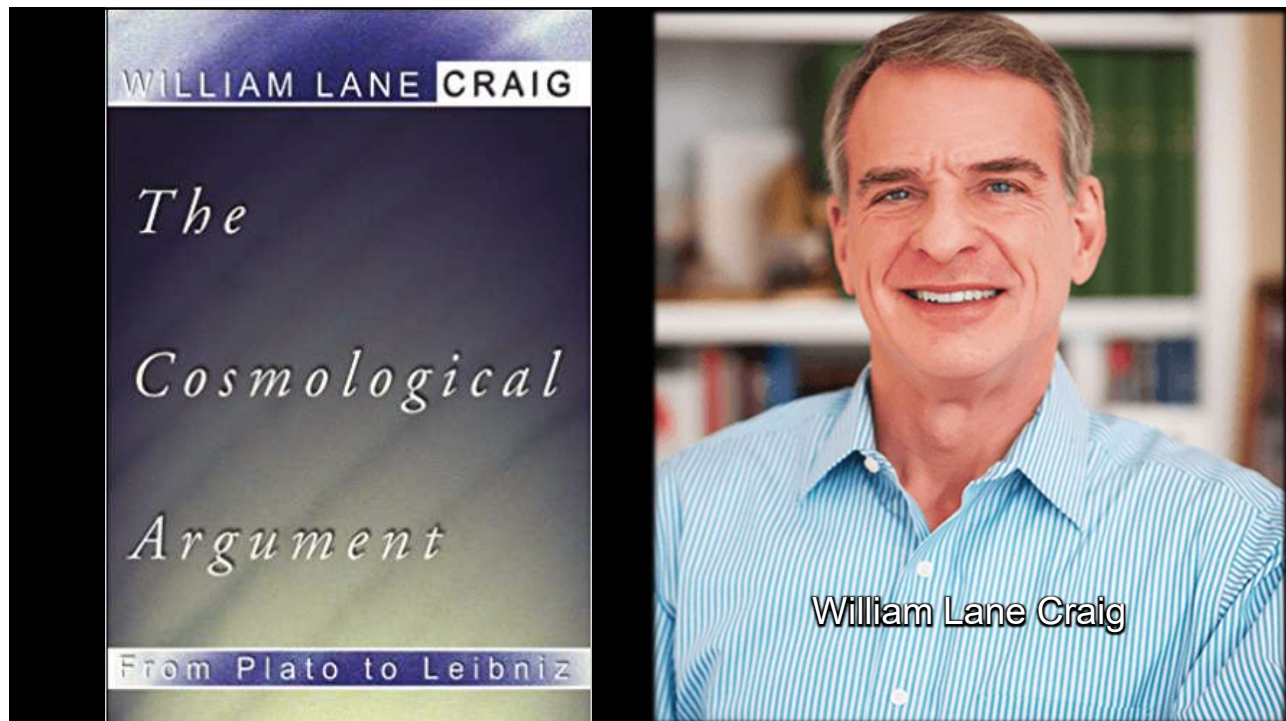
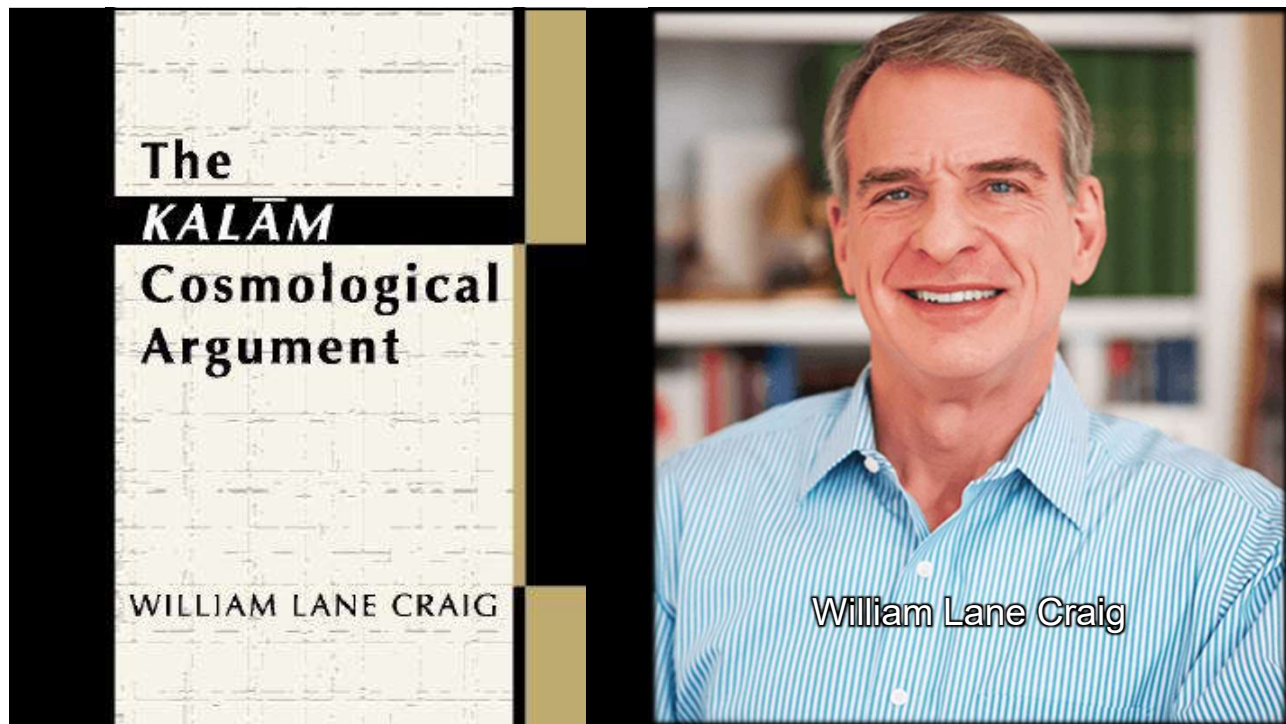
~ My Weaknesses ~

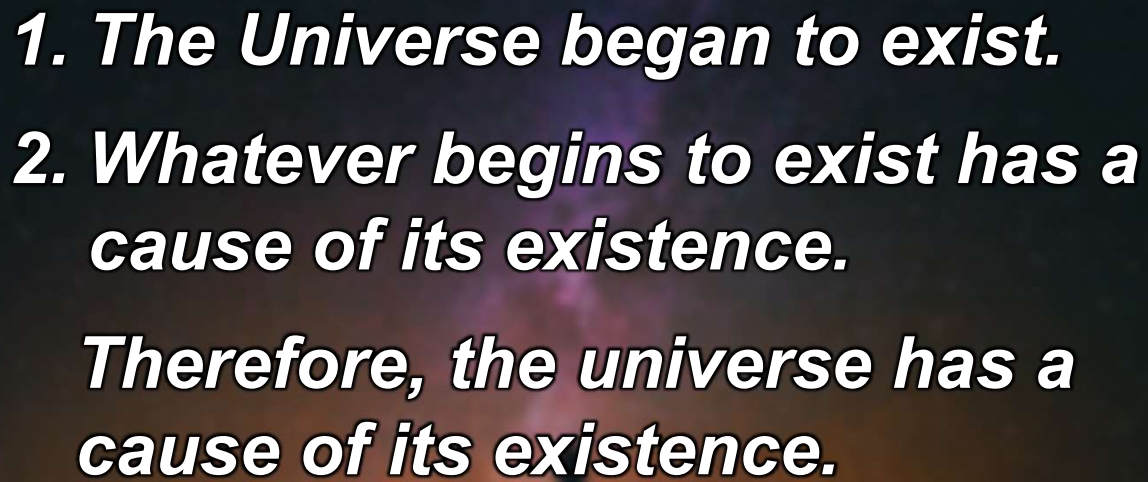
Granted, certain aspects of the philosophy are disputed as well.

However, as a philosopher, I am more accustomed to engaging the issue philosophically rather than scientifically.







- 
- 1. The Universe began to exist.***
2. Whatever begins to exist has a cause of its existence.
Therefore, the universe has a cause of its existence.

- 
- 1. The Universe began to exist.***



Scientific Evidence for the Beginning of the Universe

- ✓ *Big Bang Theory*
- ✓ *Expanding Universe*
- ✓ *Second Law of Thermodynamics*

The Big Bang Theory

∞ Definition ∞

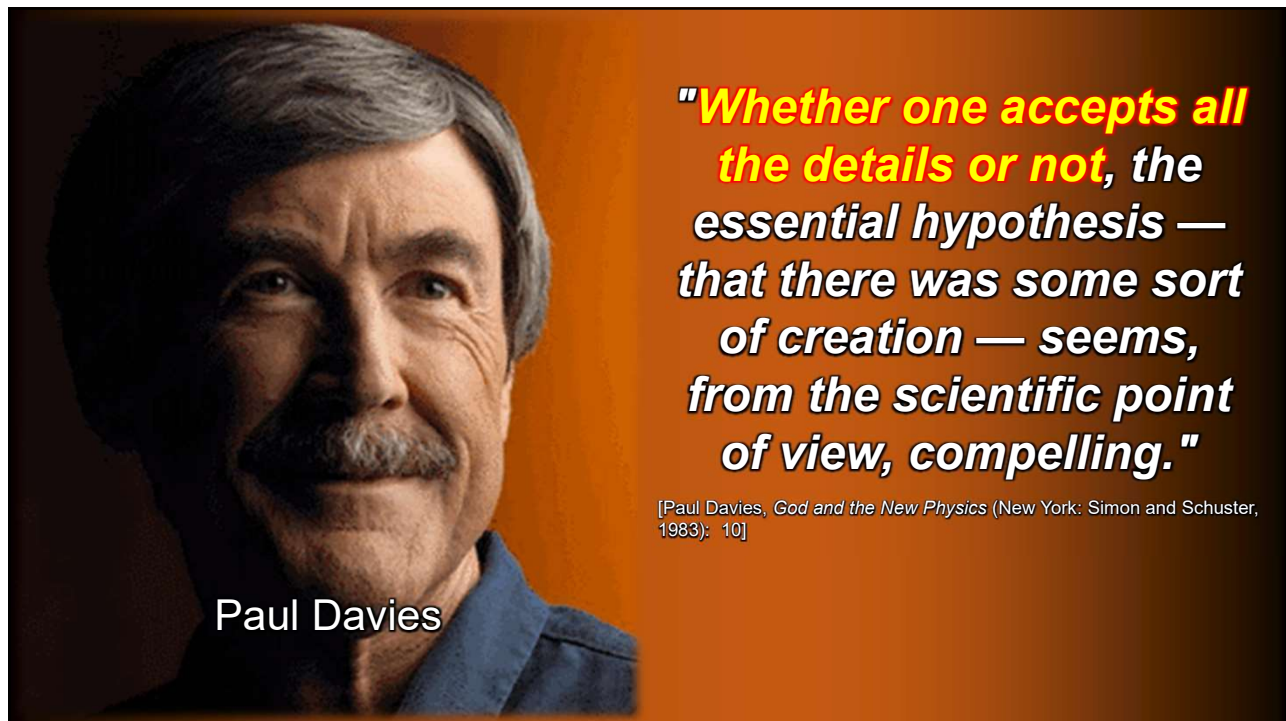
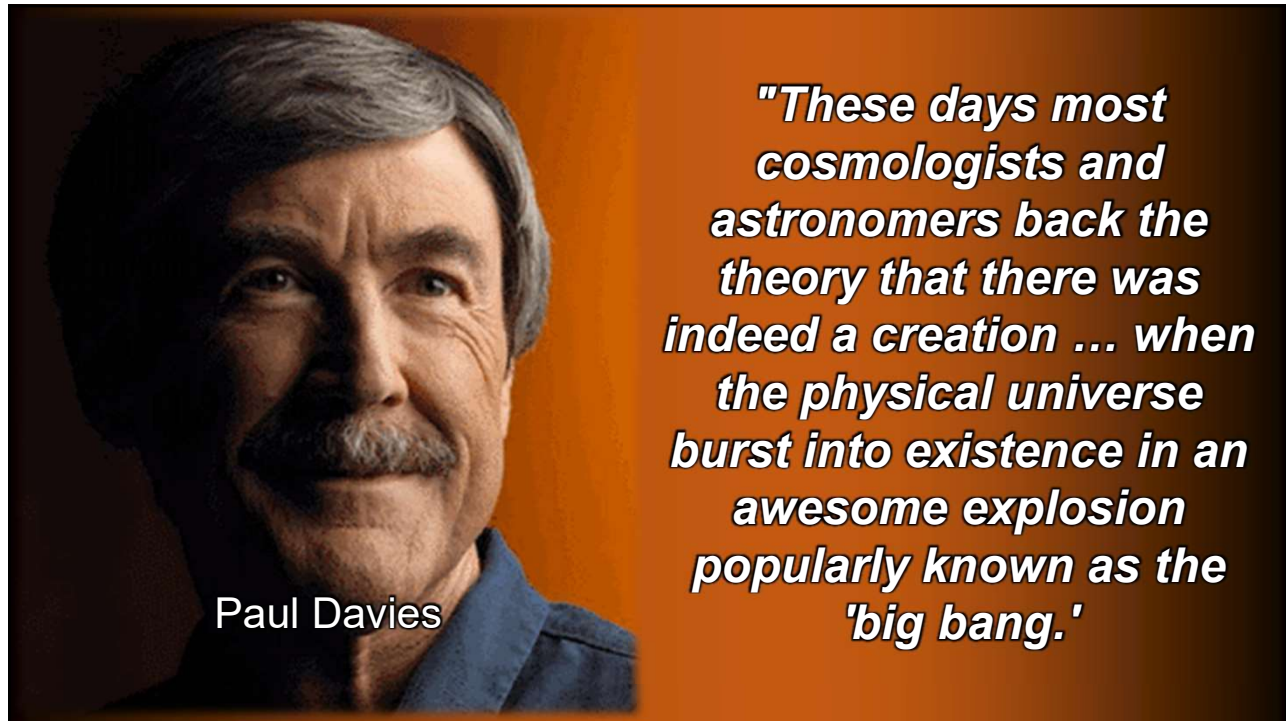
Scientists maintain that the universe began in a colossal explosion a finite time ago.


∞ Significance ∞

The universe has not existed from eternity, according to the Big Bang Theory.

∞ Significance ∞

Therefore, the universe began to exist a finite time ago.






Steven Weinberg

"In the beginning there was an explosion. Not an explosion like those familiar on Earth . . . but an explosion which occurred simultaneously everywhere, filling all space from the beginning"

[Steven Weinberg, *The First Three Minutes* (Fontana Paperbacks, 14) available at <https://www.zuj.edu.jo/download/the-first-three-minutes-a-modern-view-of-the-origin-of-the-universe-s-weinberg-pdf/>, accessed 08/14/24]

"Recent developments in astronomy have implications that may go beyond their contribution to science itself."



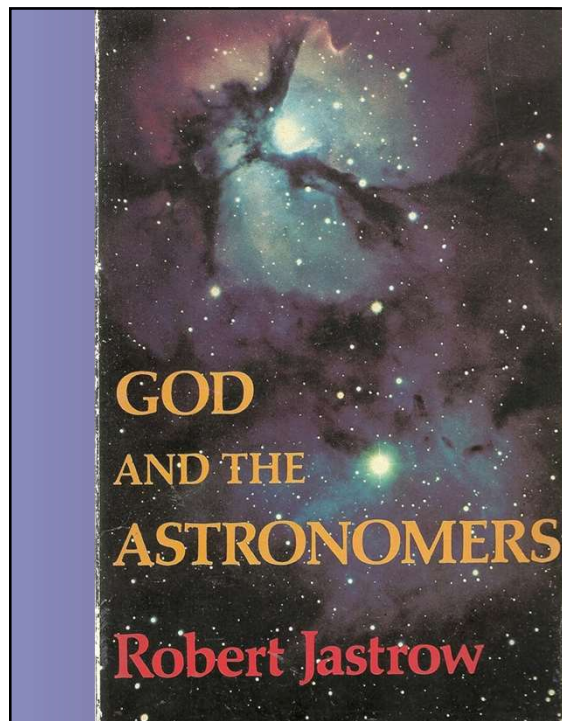
Robert Jastrow
(1925-2008)

***"In a nutshell,
astronomers, studying
the Universe through their
telescopes, have been
forced to the conclusion
that the world began
suddenly, in a moment of
creation, as the product
of unknown forces."***

[Robert Jastrow "Message from Professor Robert Jastrow, "
<http://www.leaderu.com/truth/1truth18b.html>, accessed 08/14/24]



Robert Jastrow
(1925-2008)



Robert Jastrow
(1925-2008)

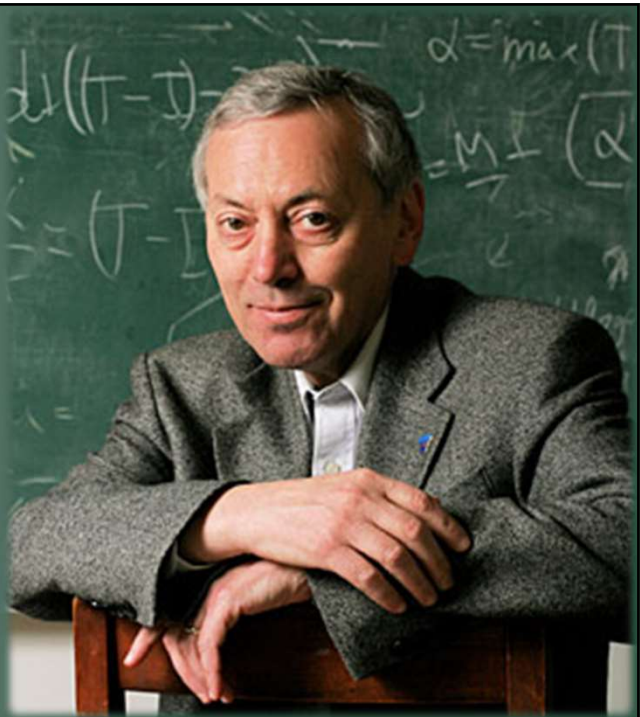


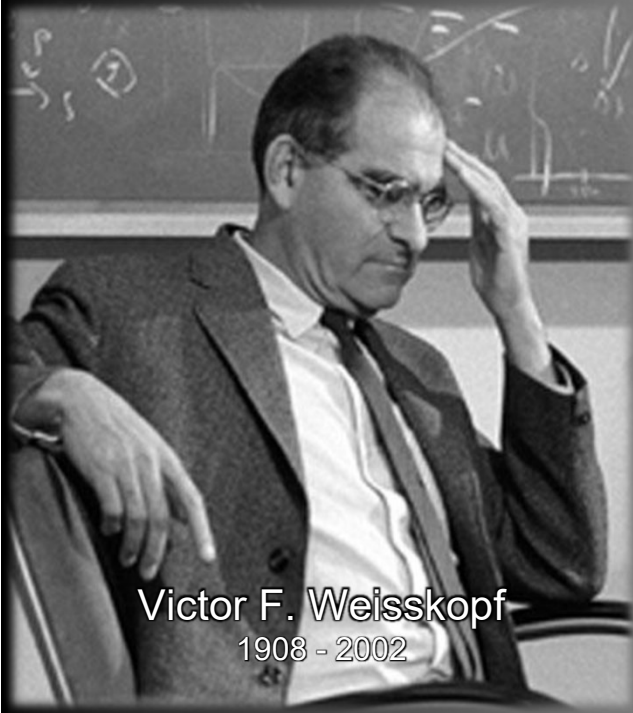
"Almost everyone now believes that the universe, and time itself, had a beginning at the Big Bang."

[Steven W. Hawking and Roger Penrose, *The Nature of Space and Time* (Princeton, N.J.: Princeton University Press, 1996), <https://arxiv.org/pdf/hep-th/9409195>, accessed 08/214/24]

"With the proof now in place, cosmologists can no longer hide behind the possibility of a past-eternal universe. There is no escape, they have to face the problem of a cosmic beginning."

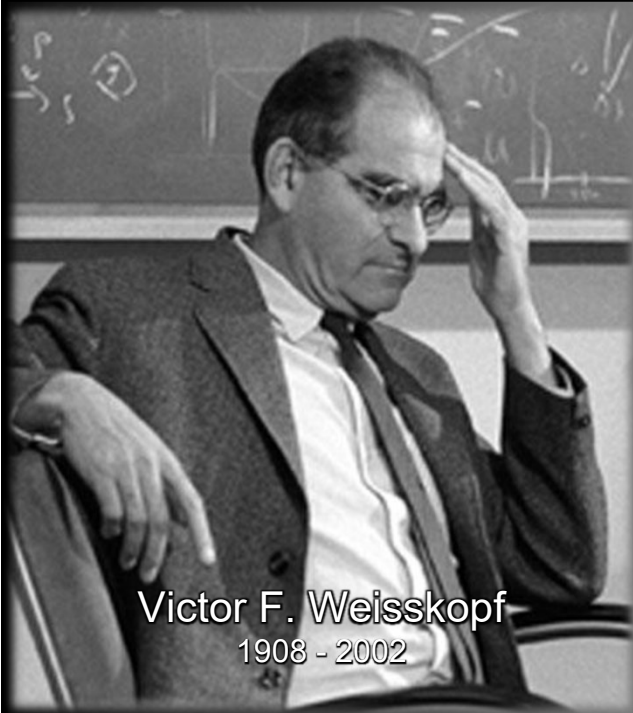
[Alexander Vilenkin, *Many Worlds in One: The Search for Other Universes* (New York: Hill and Wang, 2006), p.176]





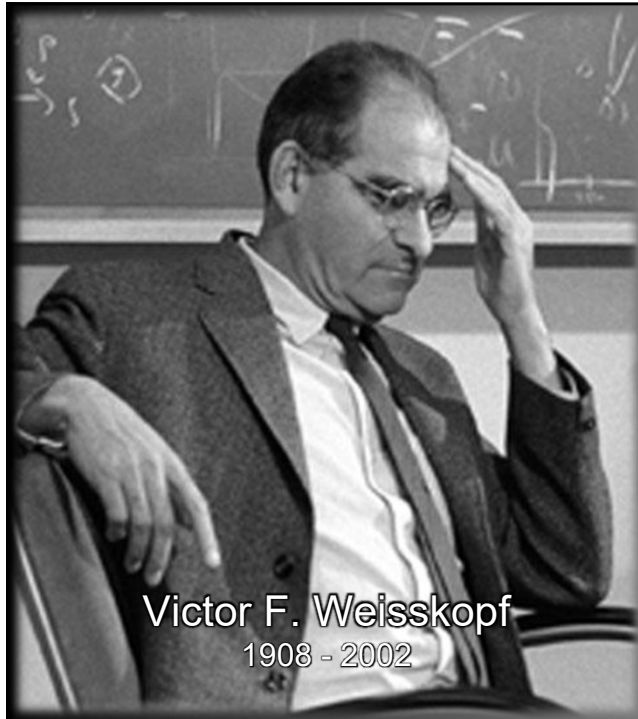
Victor F. Weisskopf
1908 - 2002

"The question of the origin of the universe is one of the most exciting topics for a scientist to deal with. It reaches far beyond its purely scientific significance, since it is related to human existence, to mythology, and to religion. . . ."



Victor F. Weisskopf
1908 - 2002


"It hits us in the heart, as it were. The origin of the universe can be talked about not only in scientific terms, but also in poetic and spiritual language, an approach that is complementary to the scientific one."



"Indeed, the Judeo-Christian tradition describes the beginning of the world in a way that is surprisingly similar to the scientific model."

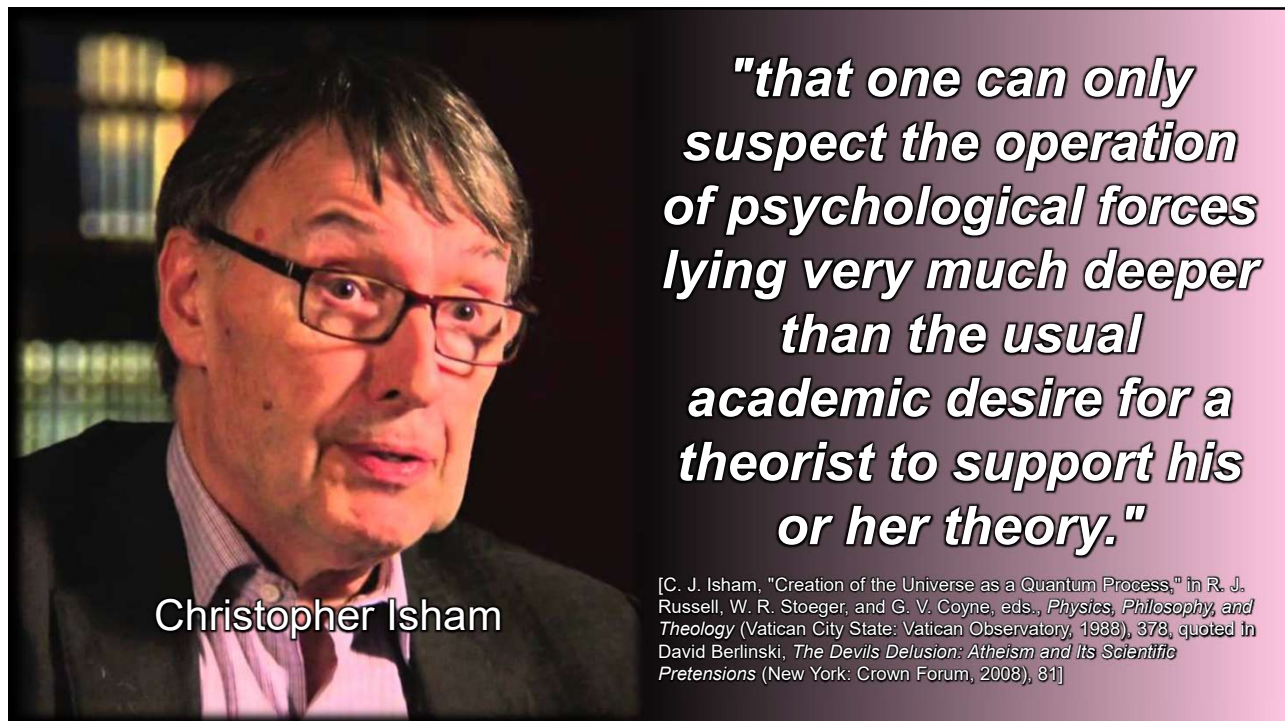
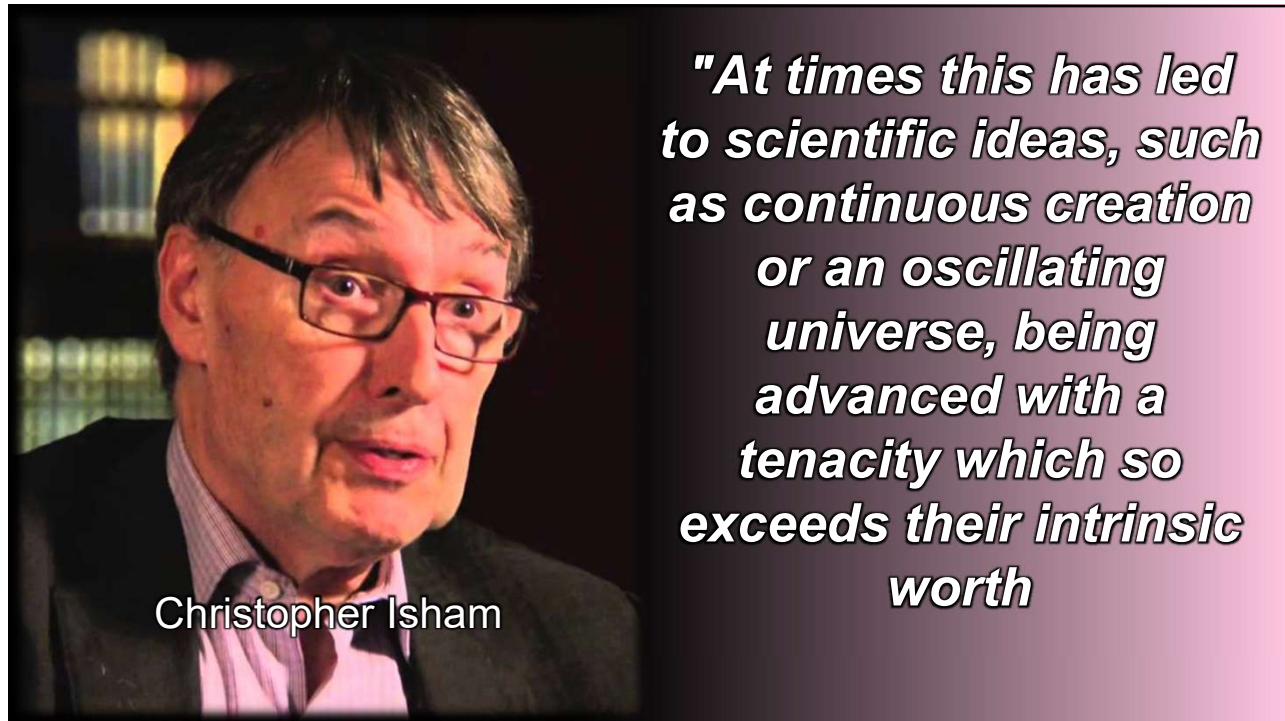
[Victor F. Weisskopf, "The Origin of the Universe," *American Scientist*, Sep.-Oct. 1983, 71, pp. 473-480, reprinted in *The World of Physics: A Small Library of the Literature of Physics from Antiquity to the Present*, 3 vols. (New York: Simon and Schuster, 1987), vol. 3, pp. 300, 317]

Victor F. Weisskopf
1908 - 2002



"Perhaps the best argument in favor of the thesis that the Big Bang supports theism is the obvious unease with which it is greeted by some atheist physicists."

Christopher Isham





The Expanding Universe

∞ Definition ∞

Scientists maintain that every object in the universe is moving away from every other object such that even space itself is expanding.

∞ Significance ∞

The universe could not have been expanding from eternity otherwise it would be infinitely dispersed (which it is not).

∞ Significance ∞

Therefore, the universe began to exist a finite time ago.

Question

What does it mean when they say the universe is expanding?

Answer

When scientists talk about the expanding universe, they mean that it has been growing ever since its beginning with the Big Bang.

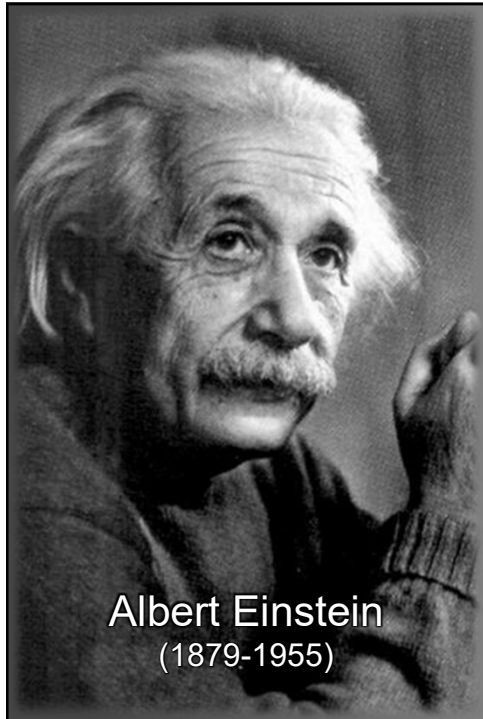
[<https://www.loc.gov/everyday-mysteries/astronomy/item/what-does-it-mean-when-they-say-the-universe-is-expanding/>, accessed 08/14/24]

"The entire space of the universe, populated by billions of galaxies, is in a state of rapid expansion, with all its members flying away from one another at high speed."

[George Gamow, "Broadening Horizons," in *The World of Physics: A Small Library of the Literature of Physics from Antiquity to the Present*, 3. vols. (New York: Simon and Schuster, 1987), vol. 3, 259]



George Gamow
(1904-1968)

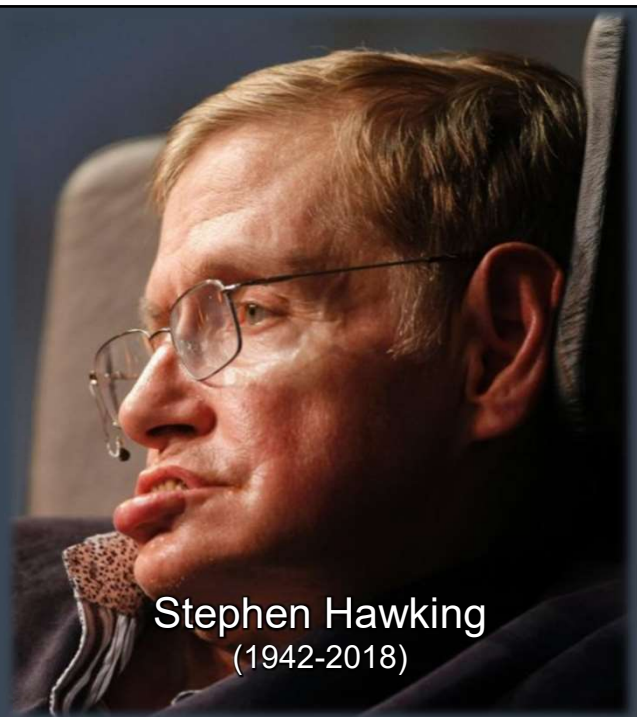


"Hubble's discovery can, therefore, be considered to some extent as a confirmation of the theory [of an expansion of space]."

Albert Einstein
(1879-1955)

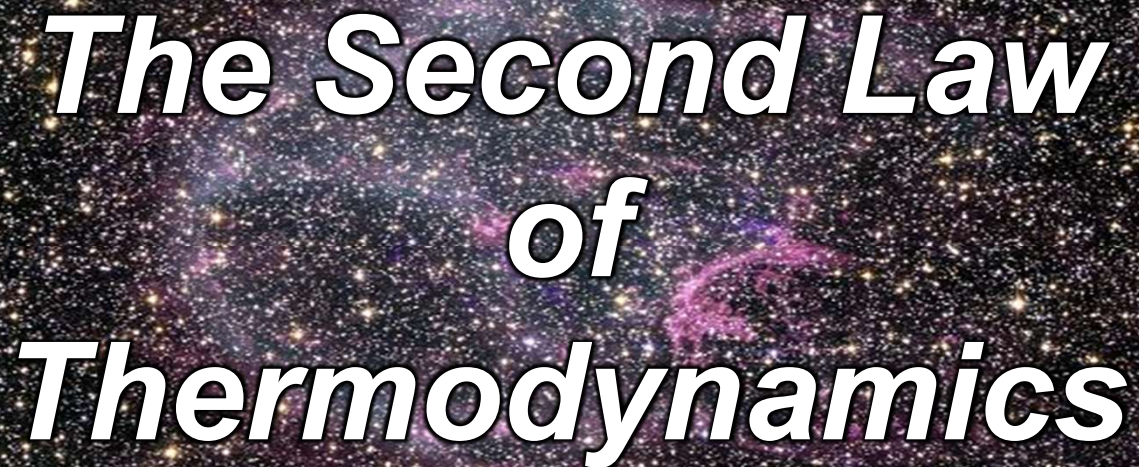
[Albert Einstein, *Relativity: The Special and the General Theory*. (New York: Bonanza Books, 1961), 134]

"The old idea of an essentially unchanging universe that could have existed, and could continue to exist, forever was replaced by the notion of a dynamic, expanding universe that seemed to have begun a finite time ago, and that might end at a finite time in the future."



Stephen Hawking
(1942-2018)

[Steven W. Hawking, *A Brief History of Time: From the Big Bang to Black Holes* (Toronto: Bantam Books, 1988), pp. 33-34]



The Second Law of Thermodynamics



∞ Definition ∞

*All isolated systems will tend
toward a state of maximum
disorder (entropy).*

∞ Definition ∞

In an isolated system the amount of energy available to do work decreases and becomes uniform.

∞ Definition ∞

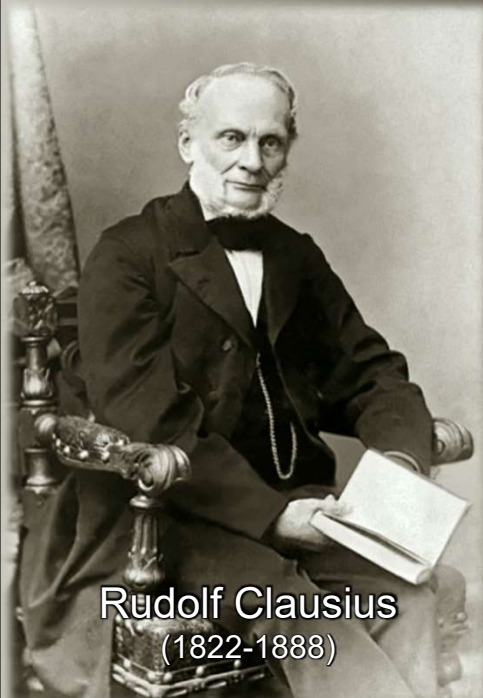
This amounts to saying that the universe is "running down."

∞ Significance ∞

The universe could not have been running down from eternity otherwise it would have run down by now (which it has not).

∞ Significance ∞

Therefore, the universe began to exist a finite time ago.

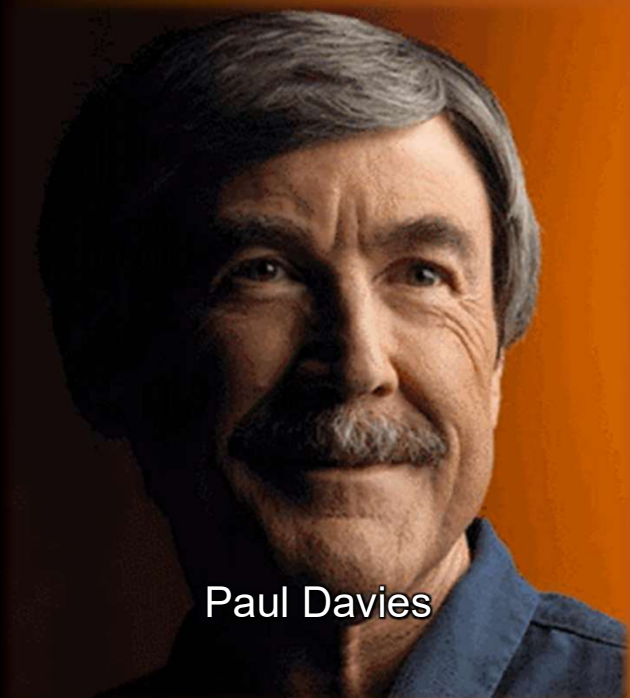


Rudolf Clausius
(1822-1888)

"We can express the fundamental laws of the universe which correspond to the two fundamental laws of the mechanical theory of heat in the following simple form:

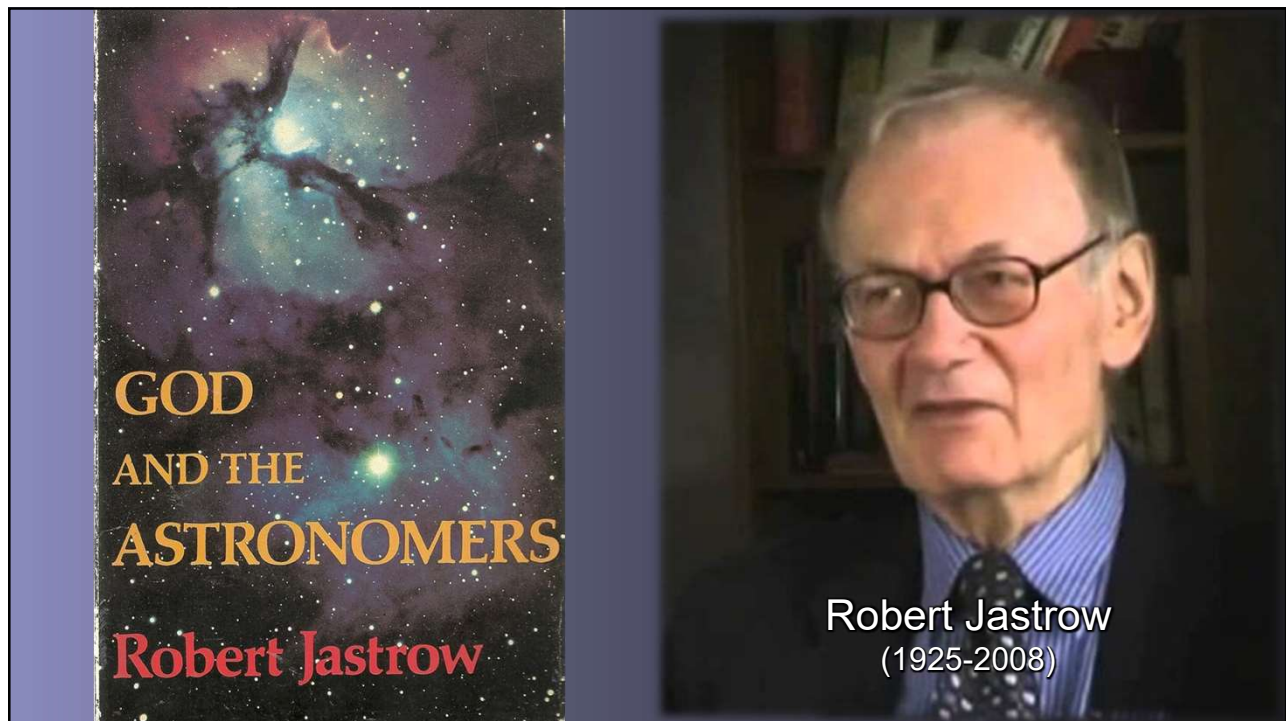
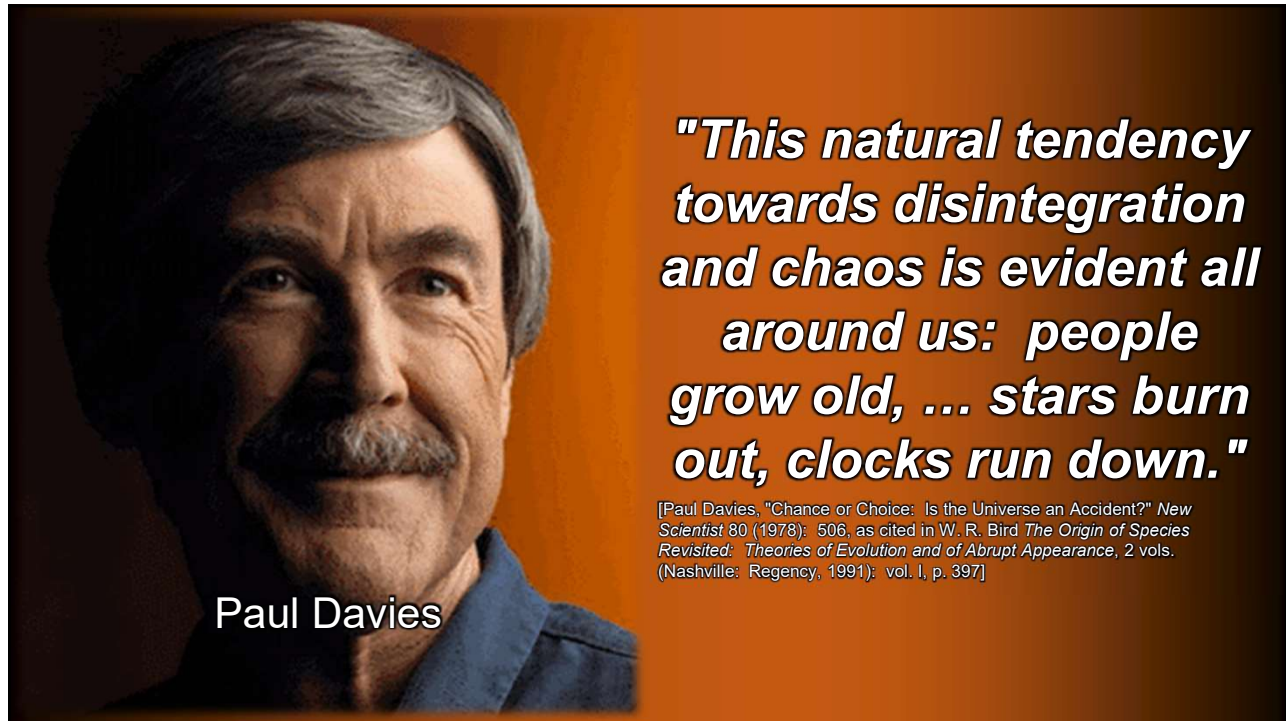
- 1. The energy of the universe is constant.***
- 2. The entropy of the universe tends toward a maximum."***

[Rudolf Clausius, "The Second Law of Thermodynamics," in *The World of Physics: A Small Library of the Literature of Physics from Antiquity to the Present*, 3. vols. (New York: Simon and Schuster, 1987), vol. 1, p. 734]



Paul Davies

"The second law of thermodynamics ... says, roughly speaking, that in any change, the Universe becomes a slightly more disorderly place;"



"The laws of thermodynamics ... [point] to one conclusion; ... that the Universe had a beginning."

[Robert Jastrow, *God and the Astronomers* (New York: W. W. Norton & Company, Inc., 1978), 111]



Robert Jastrow
(1925-2008)

"For the scientist who has lived by his faith in the power of reason, the story ends like a bad dream. He has scaled the mountains of ignorance; he is about to conquer the highest peak; as he pulls himself over the final rock, he is greeted by a band of theologians who have been sitting there for centuries."

[Robert Jastrow, *God and the Astronomers* (New York: W. W. Norton & Company, Inc., 1978), 116]



Robert Jastrow
(1925-2008)

The evidence for the Big Bang Theory shows that the universe has not always existed. Therefore, the universe began to exist a finite time ago.

The evidence for the expansion of the universe shows that the universe could not have been expanding from eternity. Therefore the universe began to exist a finite time ago.

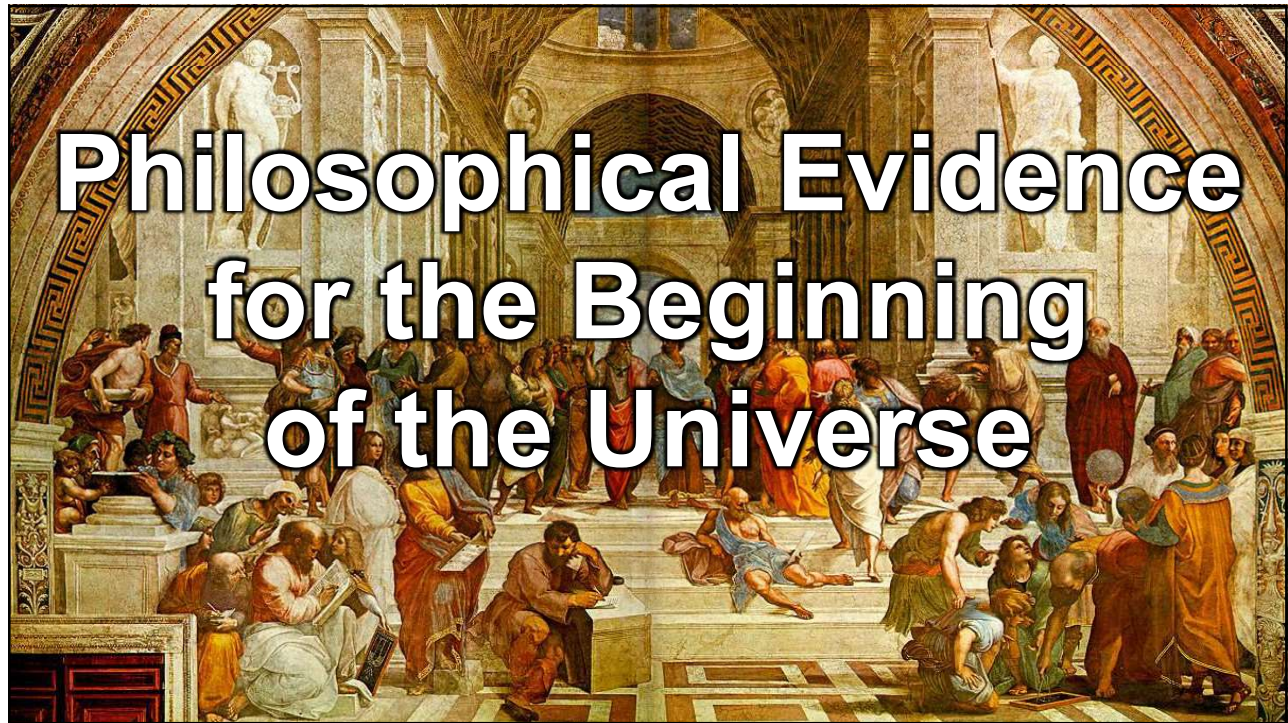
The evidence of the Second Law of Thermodynamics shows that the universe could not have been running down from eternity. Therefore, the universe began to exist a finite time ago.

The Universe began to exist.

The
Expanding
Universe

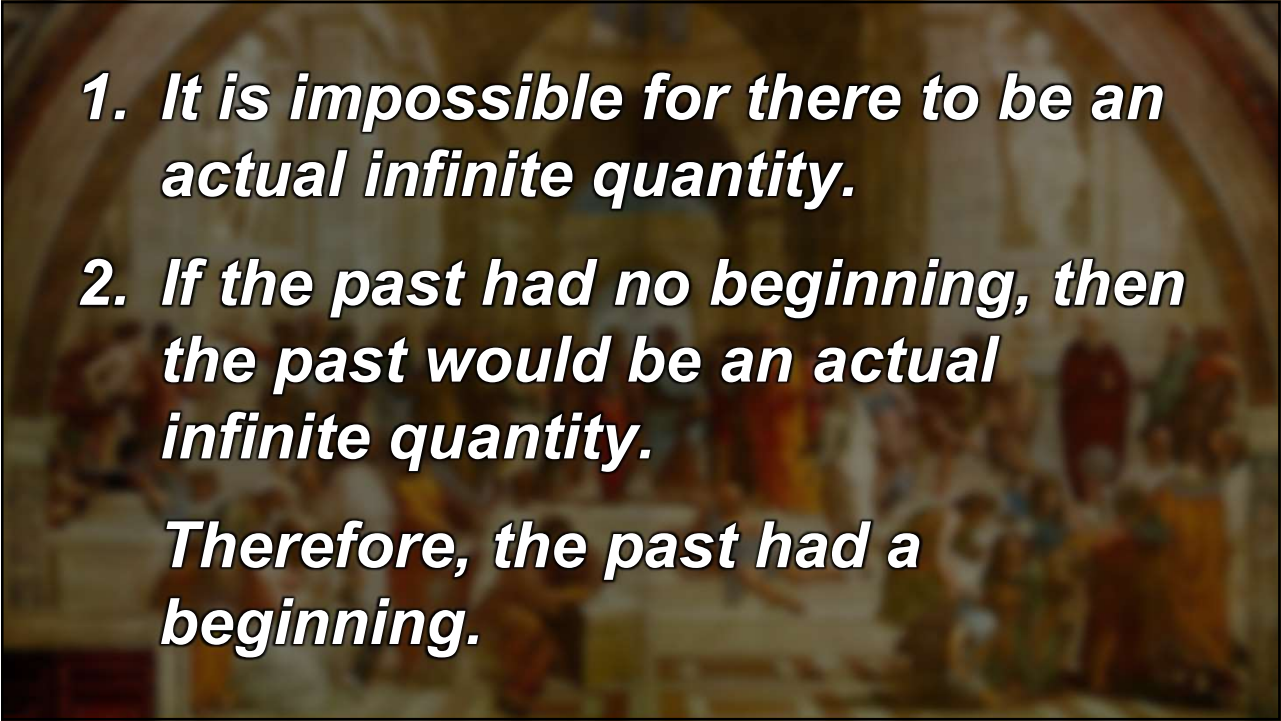
The
Big Bang
Theory

The Second Law
of Thermodynamics



- 1. It is impossible to traverse an actual infinite length of time.*
- 2. If the past had no beginning, then an actual infinite length of time has been traversed.*

Therefore, the past had a beginning.



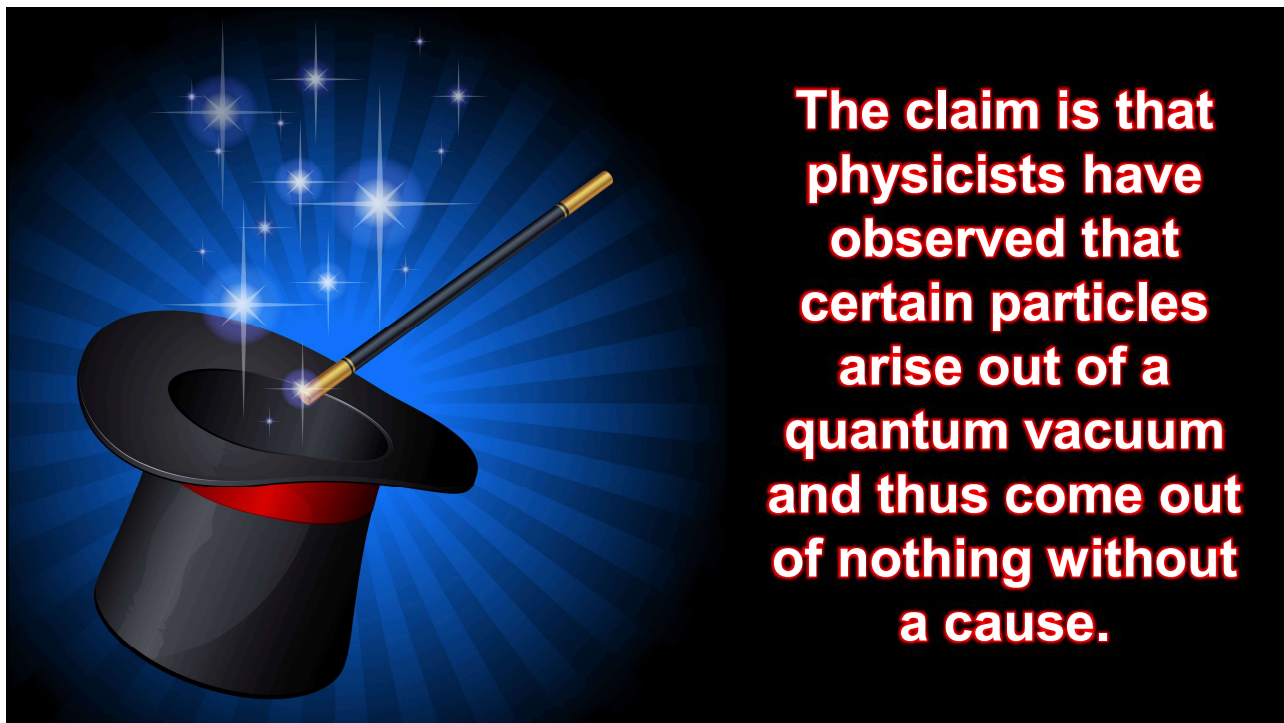
1. It is impossible for there to be an actual infinite quantity.

2. If the past had no beginning, then the past would be an actual infinite quantity.

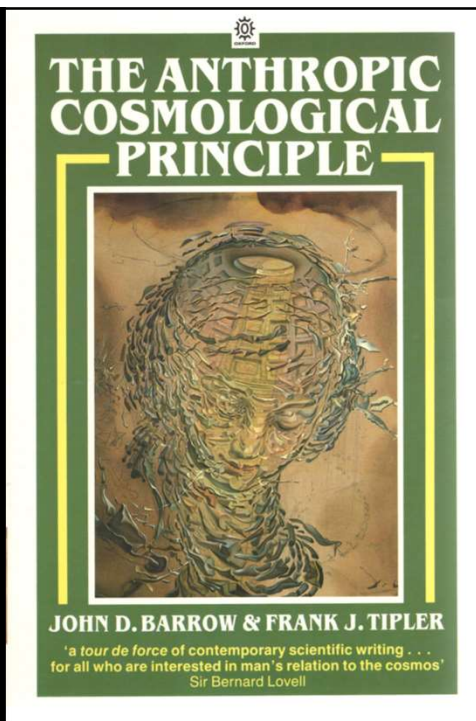
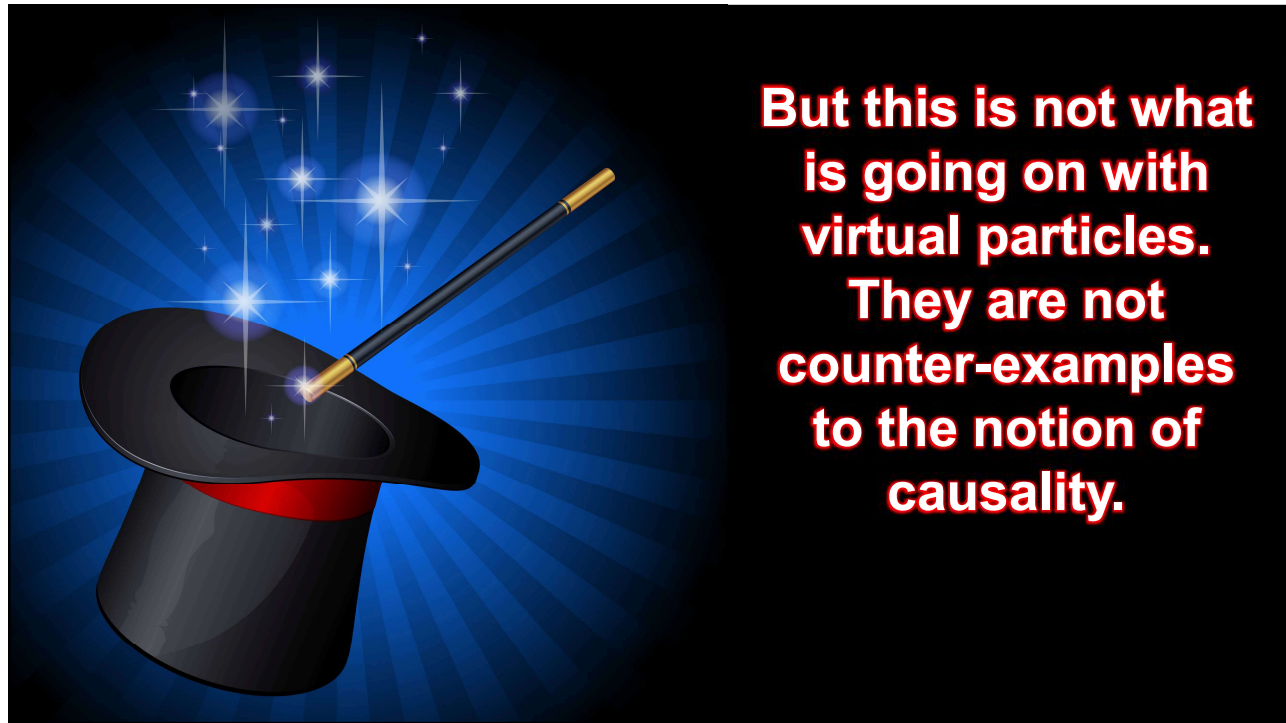
Therefore, the past had a beginning.

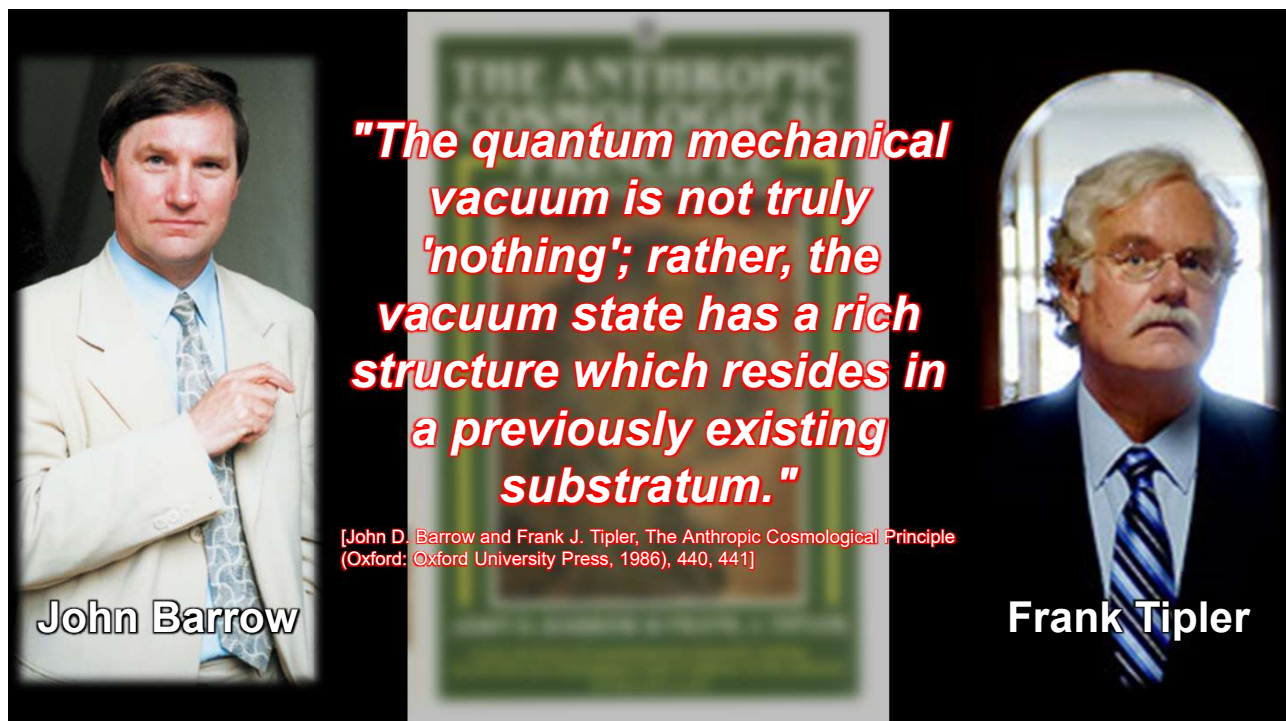
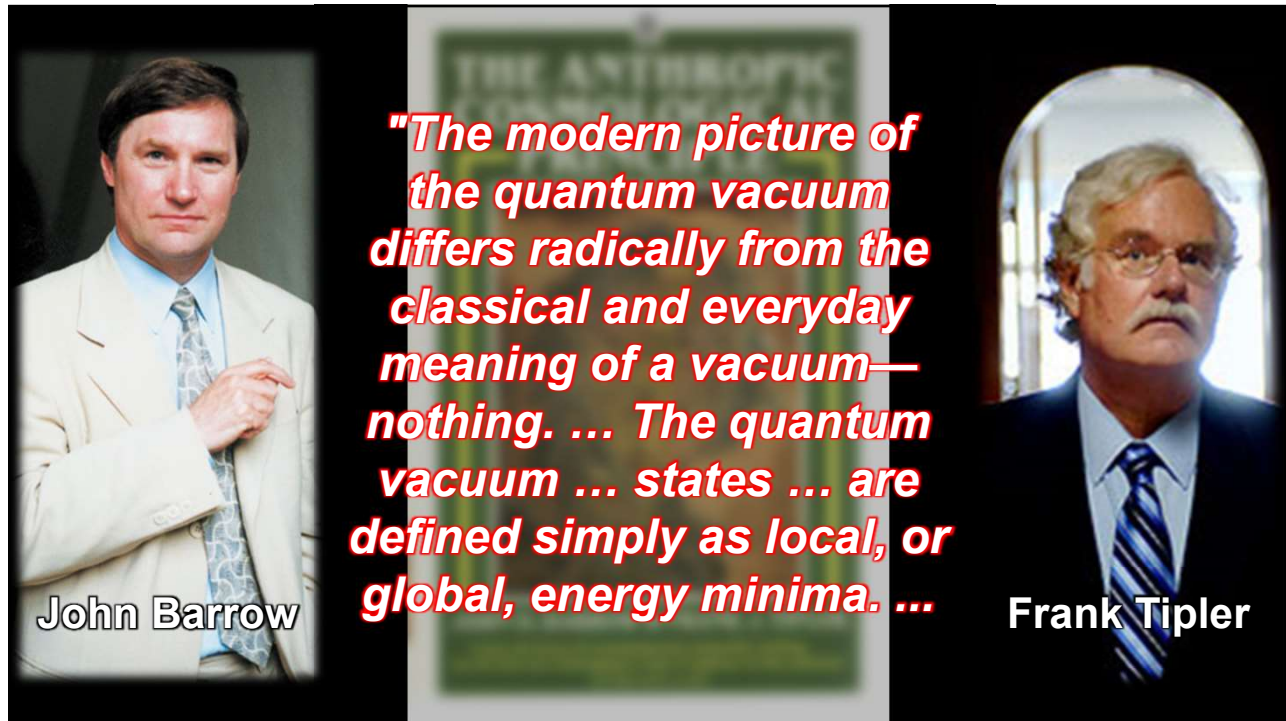


2. Whatever begins to exist has a cause of its existence.

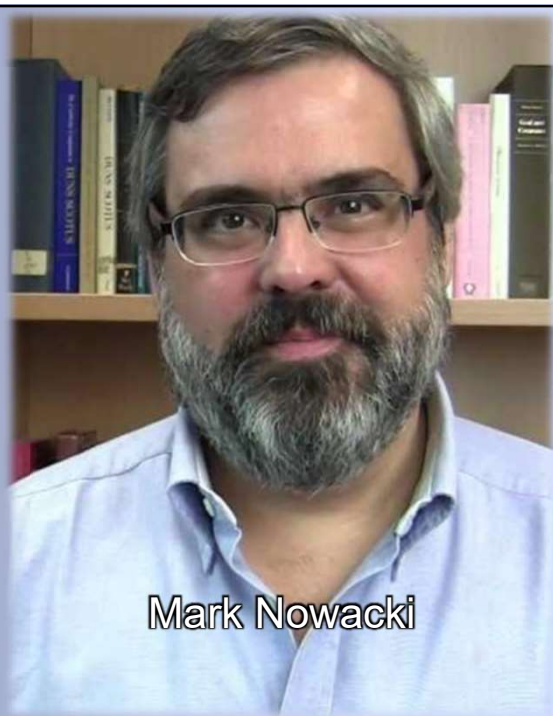


**The claim is that
physicists have
observed that
certain particles
arise out of a
quantum vacuum
and thus come out
of nothing without
a cause.**





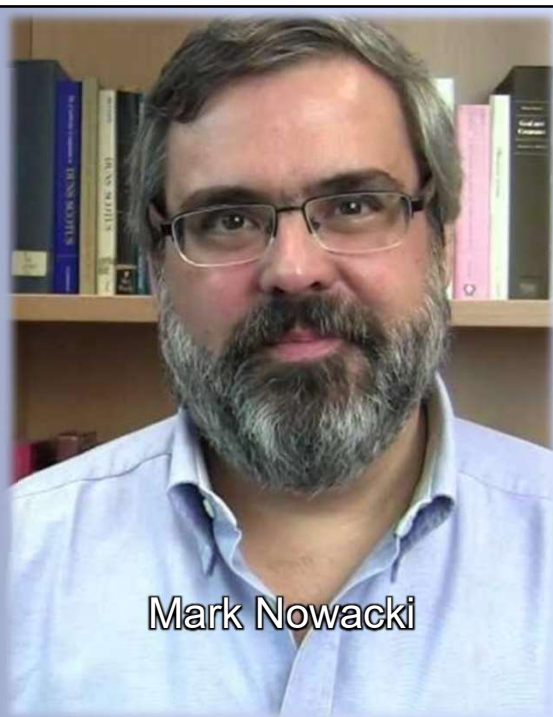
"... the quantum vacuum is very different from the void of Newton: the quantum vacuum is a soupy morass of energy and particles in constant flux; and virtual particles derive their existence from the surrounding quantum gumbo."



Mark Nowacki

"So, whatever the full causal account of virtual particles might be, it is clear that their arising is not a case of something coming to be out of nothing."

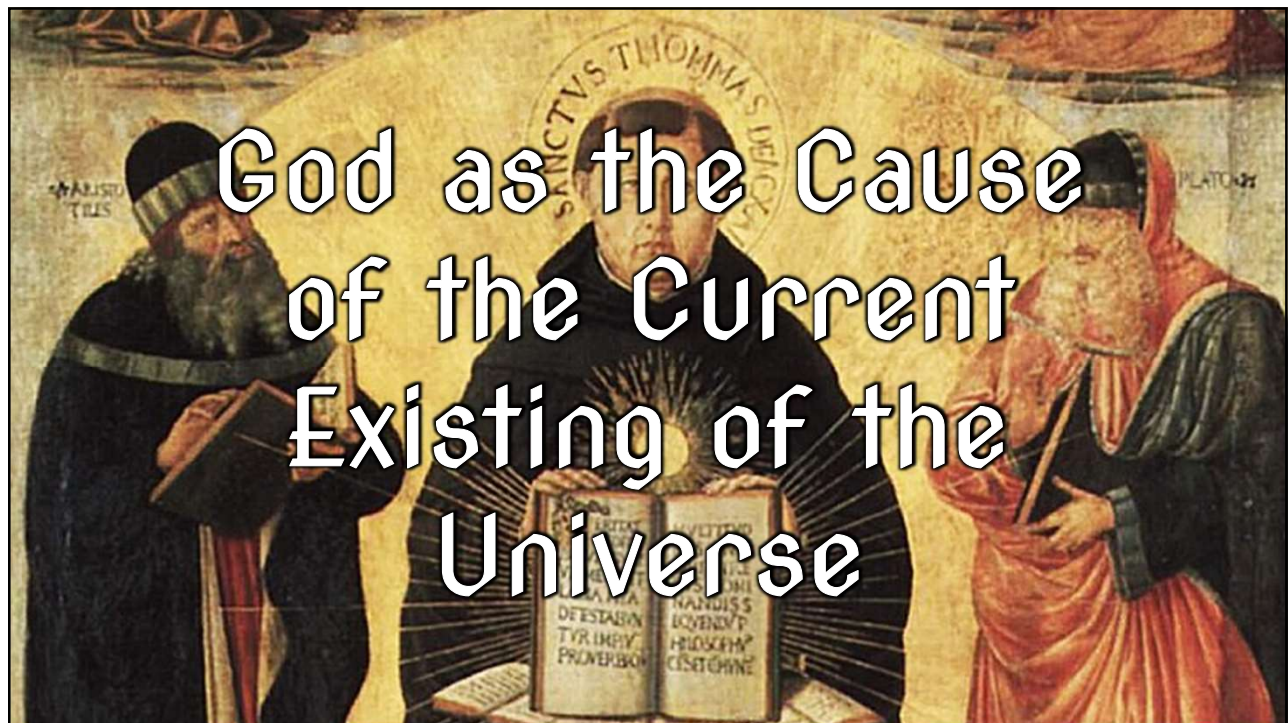
Mark R. Nowacki, "Whatever Comes to Be Has a Cause of Its Coming to Be: A Thomistic Defense of the Principle of Sufficient Reason" *The Thomist* 62 (1998): 291-302.

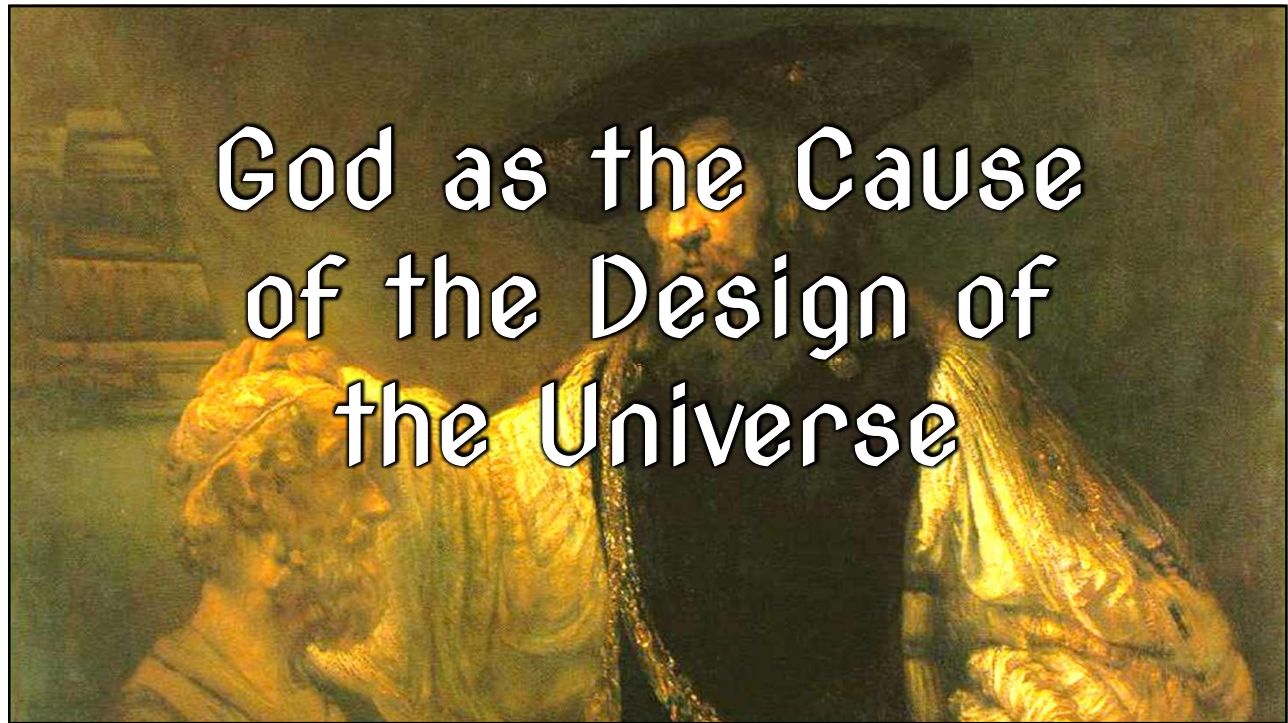


Mark Nowacki



Therefore, the universe has a cause of its existence.

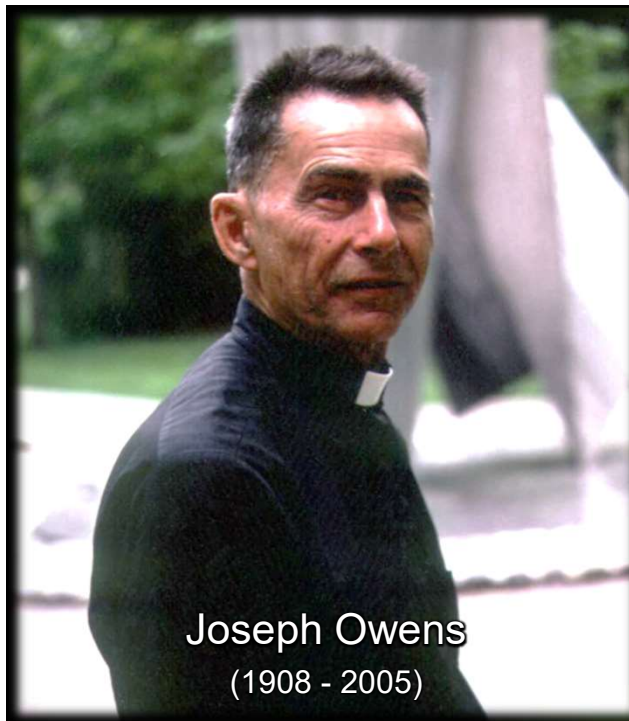




THE DESIGN ARGUMENT: AQUINAS VS. PALEY

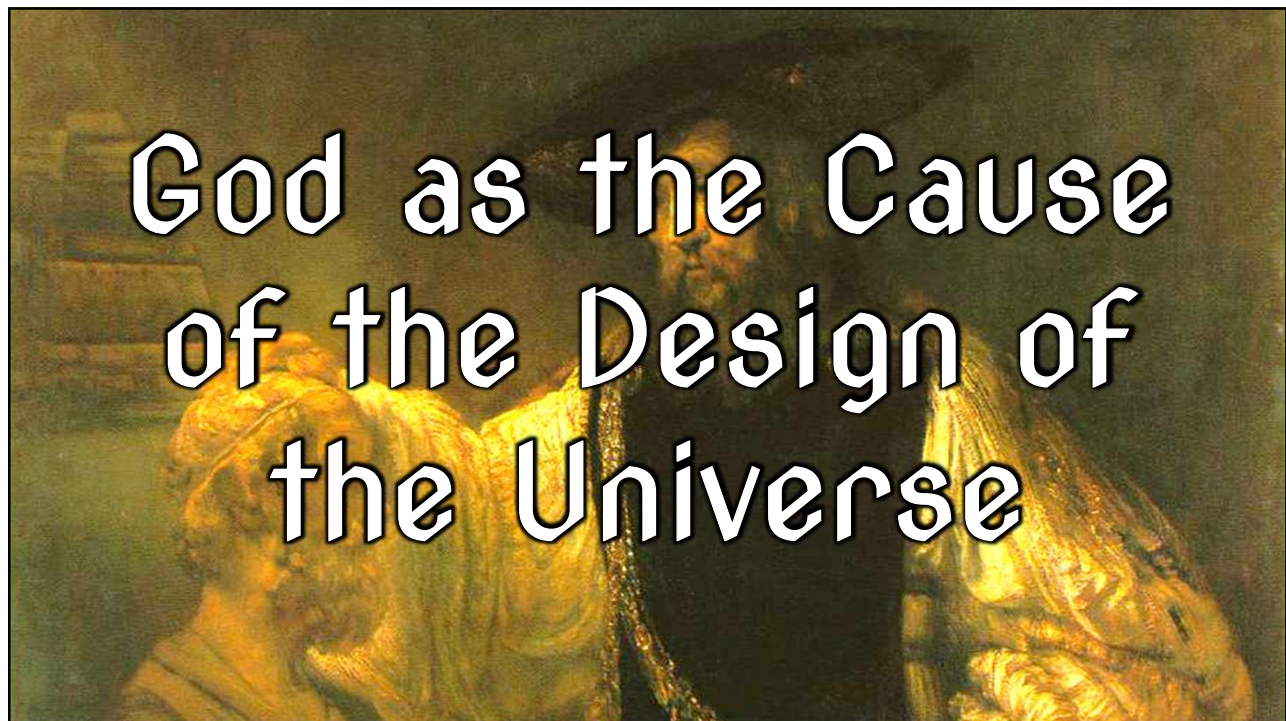
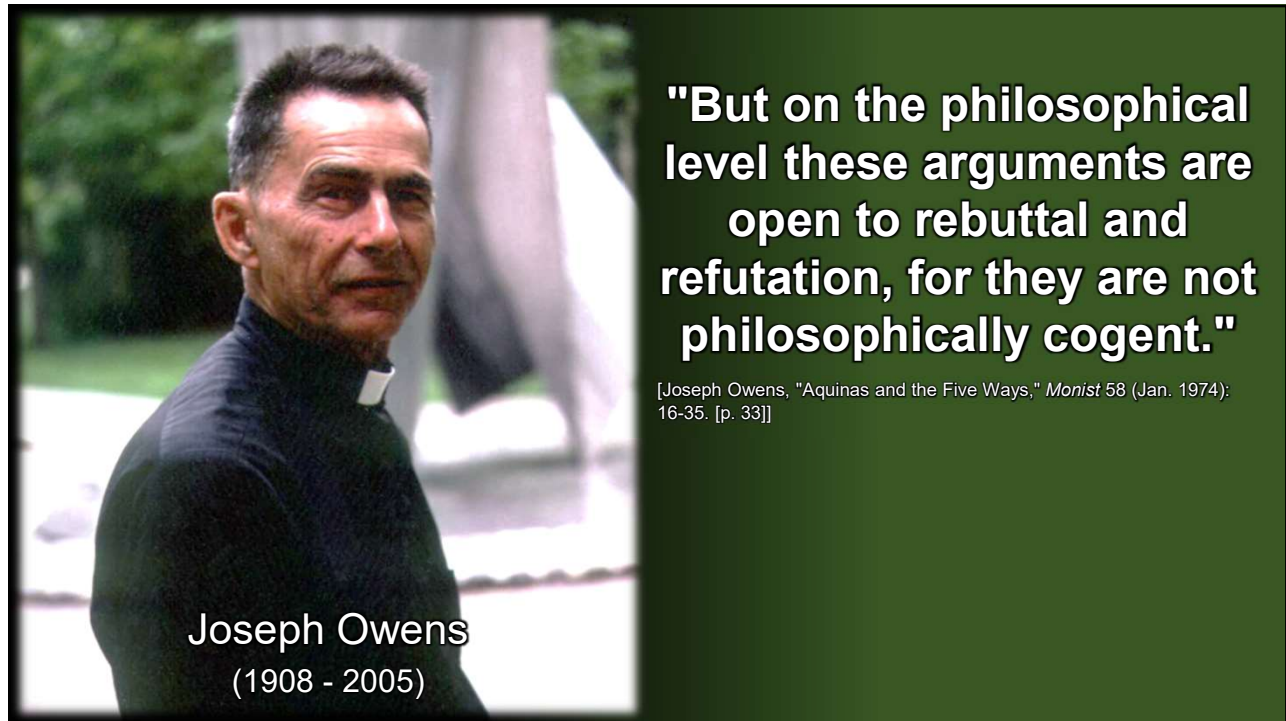
Richard G. Howe, Ph.D.

**Emeritus Professor of Philosophy and Apologetics, Southern Evangelical Seminary
Past President, International Society of Christian Apologetics**



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."



Scientific Evidence for the Design in the Universe

∞ Design of the Universe ∞

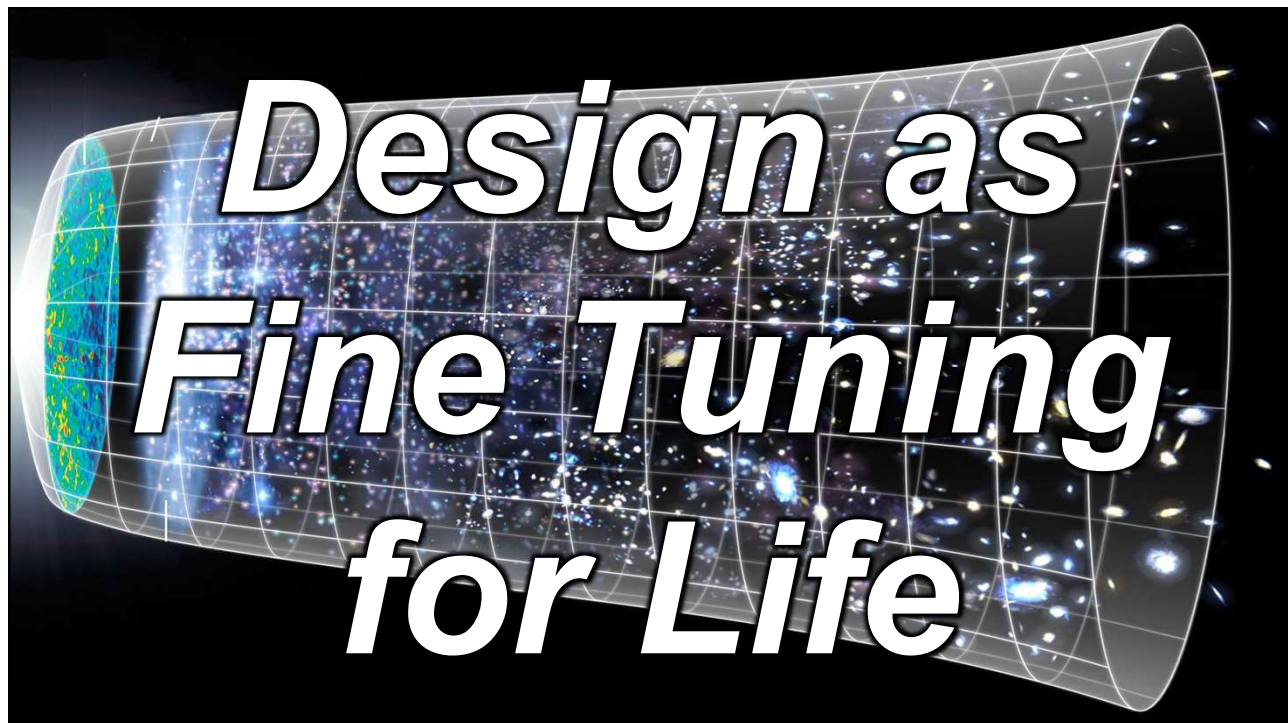
Design as fine tuning for life

Design as the origin of life

∞ Design of Living Systems ∞

Design as information

Design as irreducible complexity



∞ Definition ∞

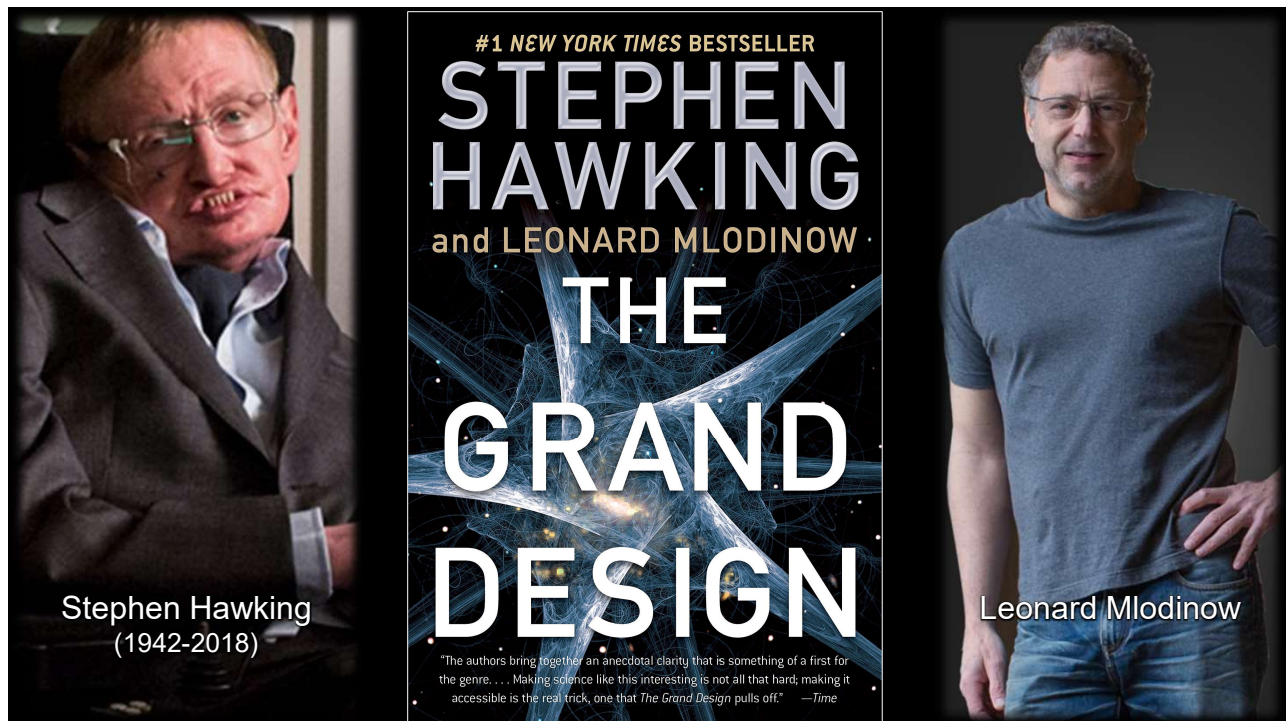
Scientists recognize that the universe's initial condition contained an array of physical values (constants) that are necessary for the universe to support life.

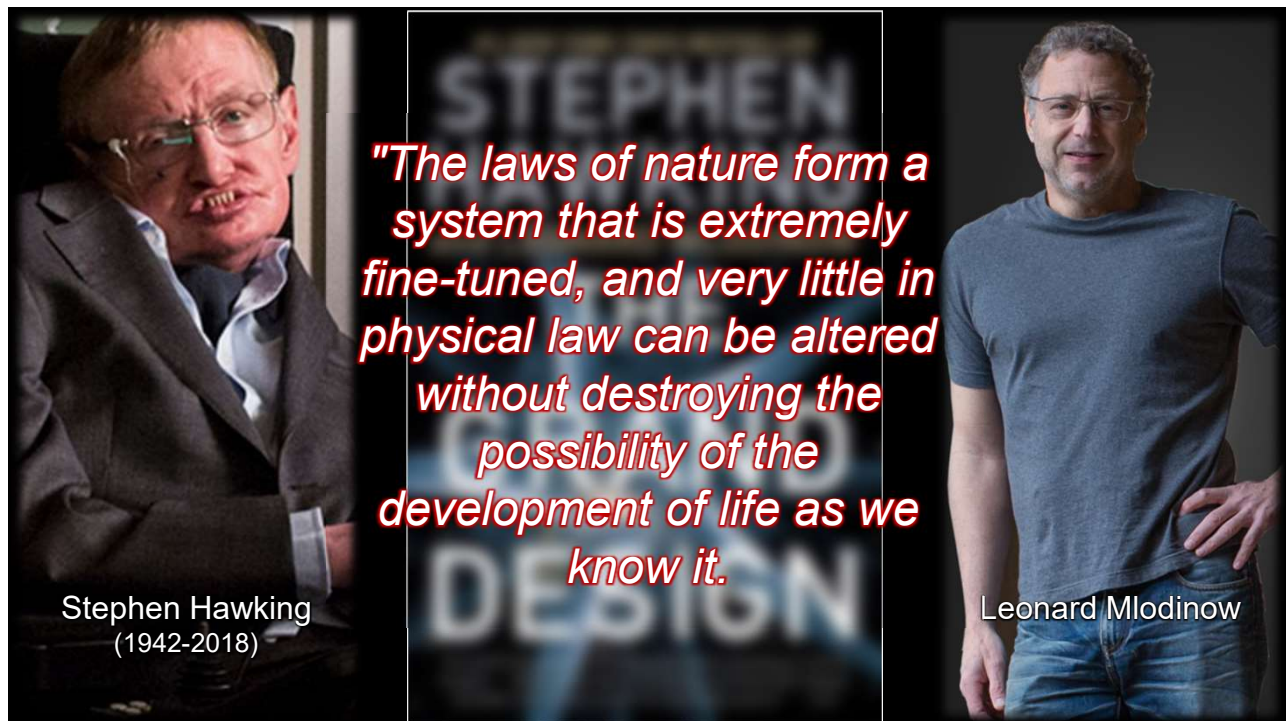
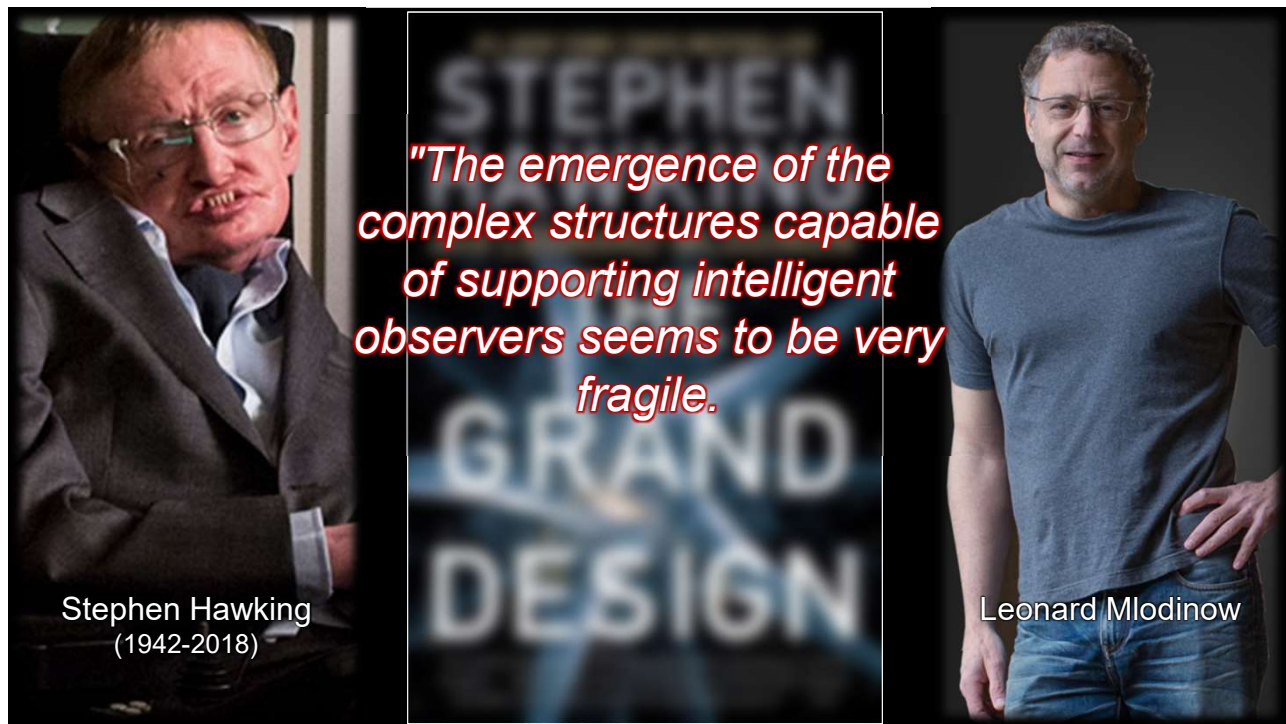
∞ Significance ∞

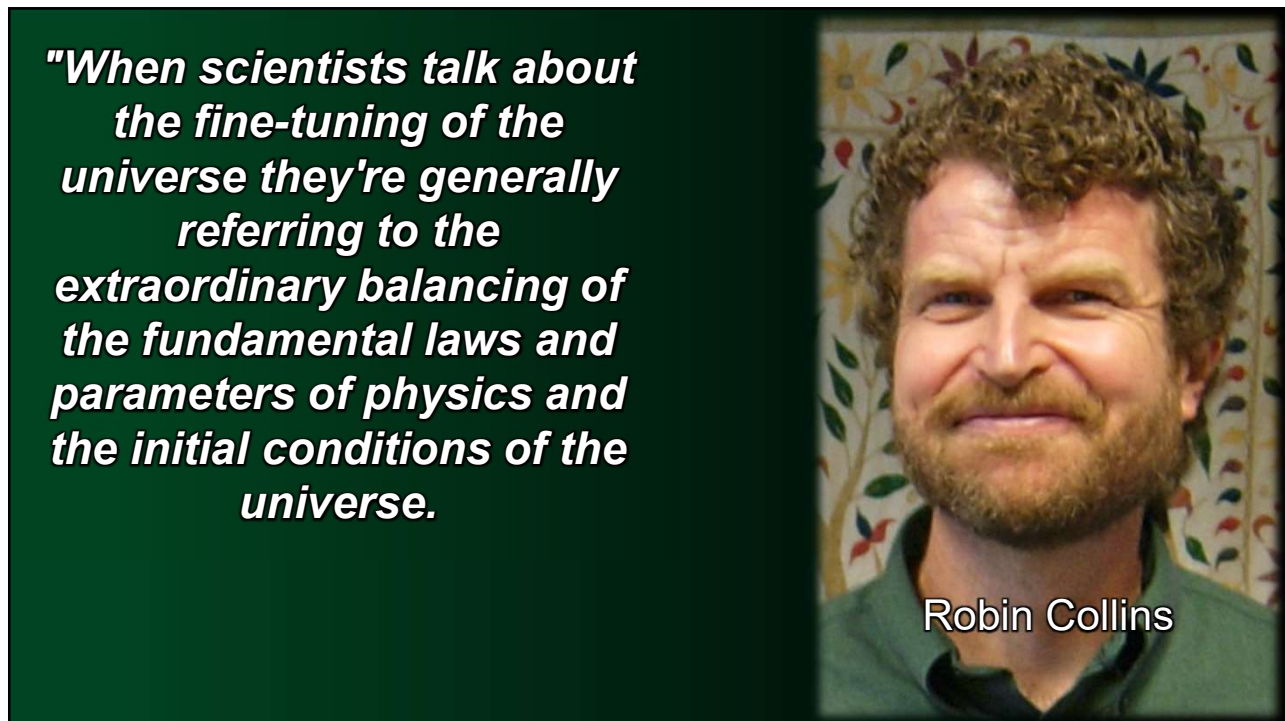
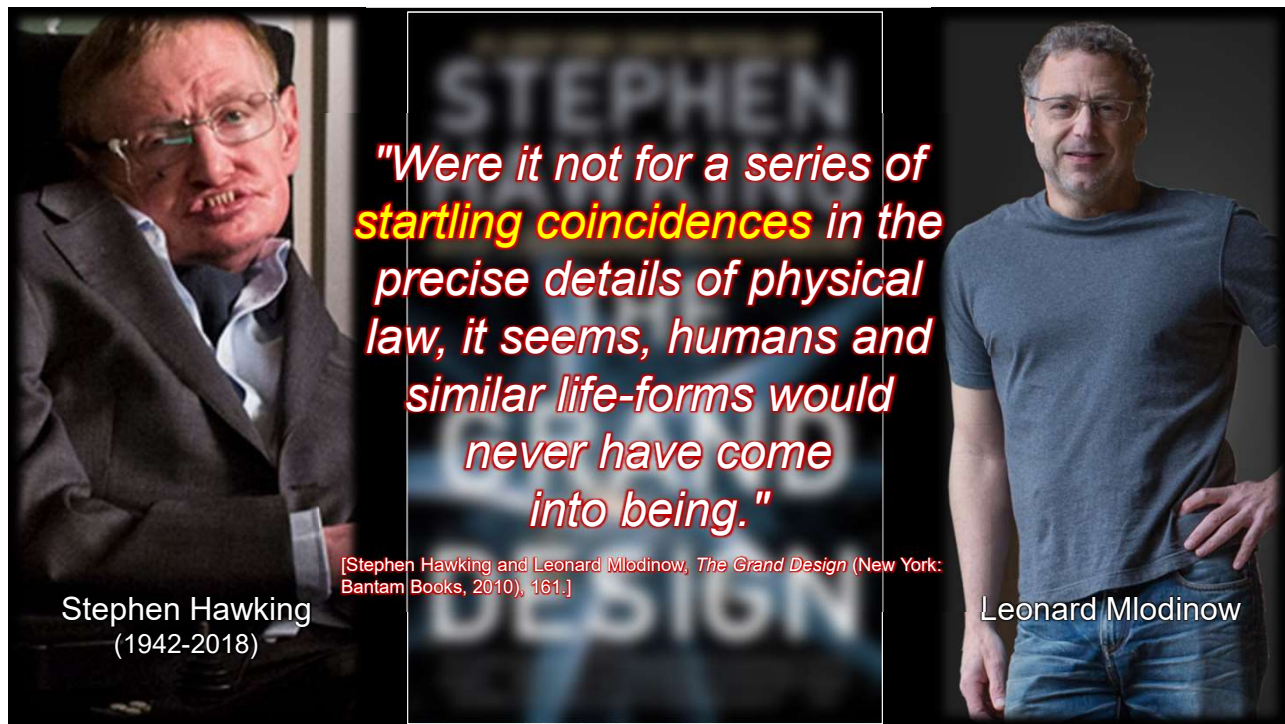
It would seem to some that the likelihood that these values could come about by chance is next to impossible.

∞ Significance ∞

Therefore, the status of the universe to support life seems to have been designed deliberately by an intelligent cause.

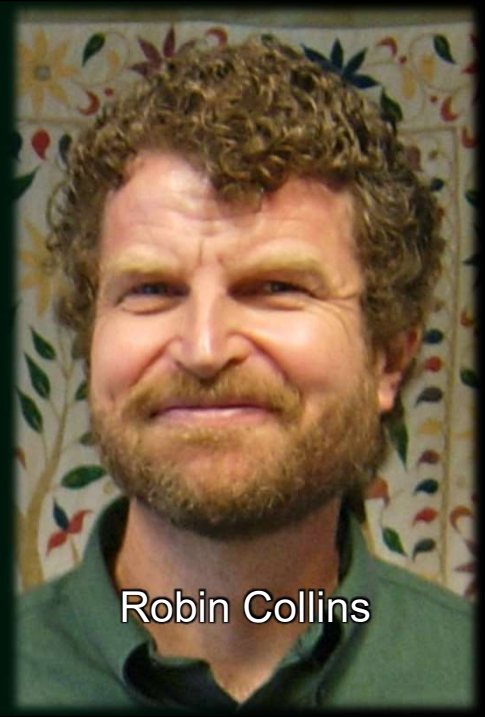






"Our minds can't comprehend the precision of some of them. The result is a universe that has just the right conditions to sustain life. The coincidences are simply too amazing to have been the result of happenstance."

[Robin Collins, "The Evidence of Physics: The Cosmos on a Razor's Edge" in Lee Strobel, *The Case for a Creator: A Journalist Investigates Scientific Evidence that Points Toward God* (Grand Rapids: Zondervan, 2004): 130]



Robin Collins

- | | |
|--|---|
| 1. strong nuclear force constant | 20. ground state energy level for ^4He |
| 2. weak nuclear force constant | 21. decay rate of ^9Be |
| 3. gravitational force constant | 22. mass excess of the neutron over the proton |
| 4. electromagnetic force constant | 23. initial excess of nucleons over anti-nucleons |
| 5. ratio of electromagnetic force constant to gravitational force constant | 24. polarity of the water molecule |
| 6. ratio of electron to proton mass | 25. degree of uncertainty in the Heisenberg uncertainty principle |
| 7. ratio of number of protons to number of electrons | 26. size of the relativistic dilation factor |
| 8. expansion rate of the universe | 27. supernovae eruptions |
| 9. entropy level of the universe | 28. number of white dwarf binaries |
| 10. mass density of the universe | 29. ratio of the mass of exotic matter to ordinary matter |
| 11. velocity of light | 30. ratio of number of dwarf galaxies to number of large galaxies |
| 12. age of the universe | 31. number of effective dimensions in the early universe |
| 13. initial uniformity of radiation | 32. number of effective dimensions in the present universe |
| 14. average distance between galaxies | 33. mass of the neutrino |
| 15. galaxy cluster density | 34. size of big bang ripples |
| 16. average distance between stars | 35. size of cosmological constant |
| 17. fine structure constant (a number used to describe the fine structure splitting of spectral lines) | |
| 18. decay rate of the proton | |
| 19. ^{12}C to ^{16}O nuclear energy level ratio | |

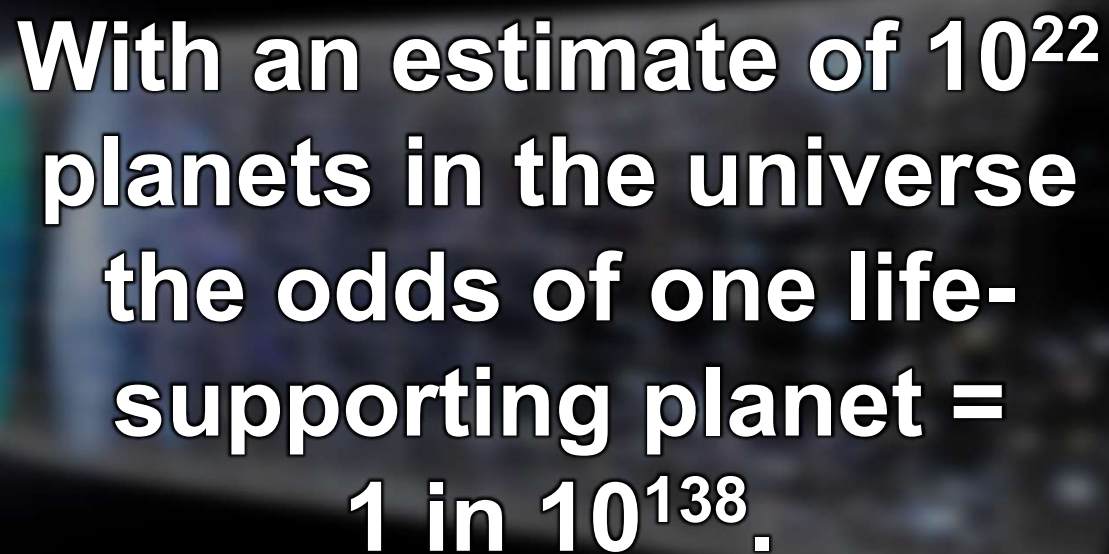
[Hugh Ross, "Why I Believe in the Miracle of Divine Creation," in Norman L. Geisler and Paul K. Hoffman *Why I Am a Christian: Leading Thinkers Explain Why They Believe* (Grand Rapids: Baker Books, 2001): 138-139]

- ❖ Had the rate of expansion of the big bang been different, no life would have been possible.
- ❖ If Earth's magnetic field were stronger, electromagnetic storms would be too severe. If it were weaker, we would have inadequate protection from hard stellar radiation.

- ❖ If Earth's gravitational interaction with the moon were greater, then tidal effects on the oceans, atmosphere, and rotational period would be too severe. If it were less, orbital changes would cause climactic instabilities.

- ❖ If Earth's axial tilt were any greater or less, surface temperatures would be too great.
- ❖ If Earth's rotational period were longer, diurnal temperature differences would be too great. If it were shorter, atmospheric wind velocities would be too great.

- ❖ Had the values of the gravitational constant, the strong force constant (the force binding protons and neutrons in the nucleus), the weak force (the force responsible for many nuclear processes), and the electromagnetic force been slightly greater or smaller, no life would have been possible.



**With an estimate of 10^{22}
planets in the universe
the odds of one life-
supporting planet =
1 in 10^{138} .**



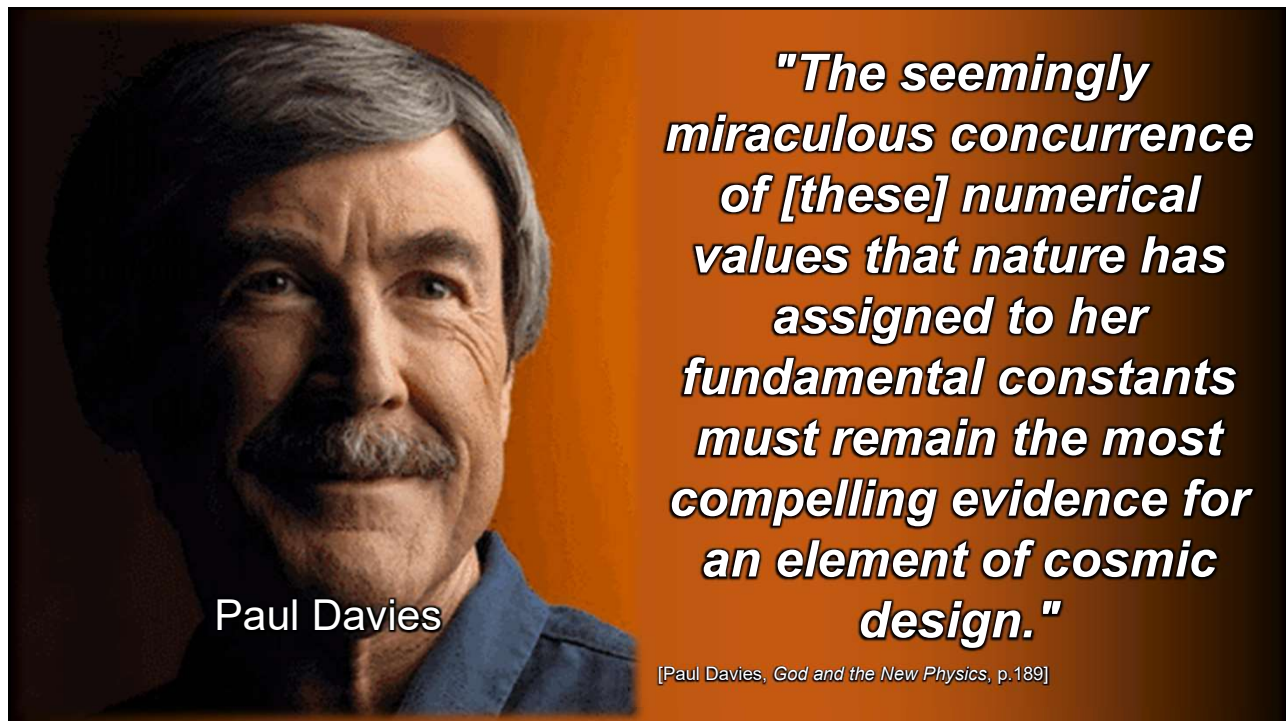
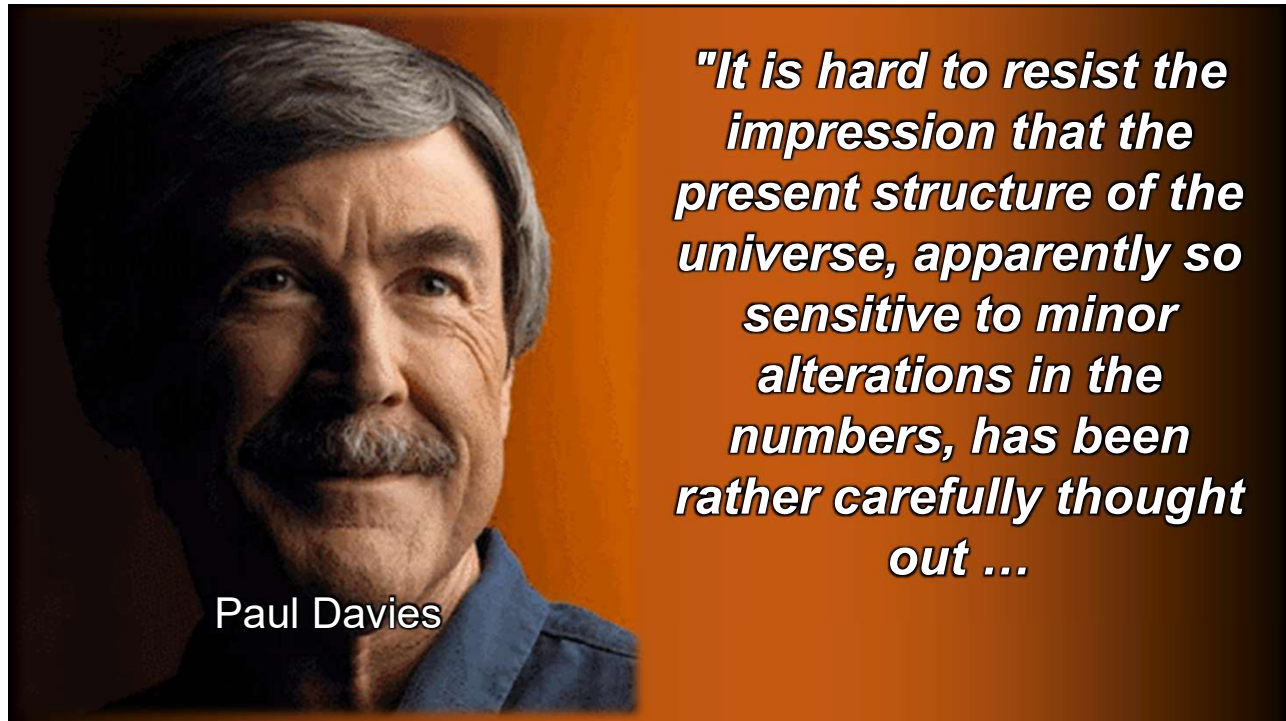
**But just how big
of a number is
1 in 10^{138} ?**



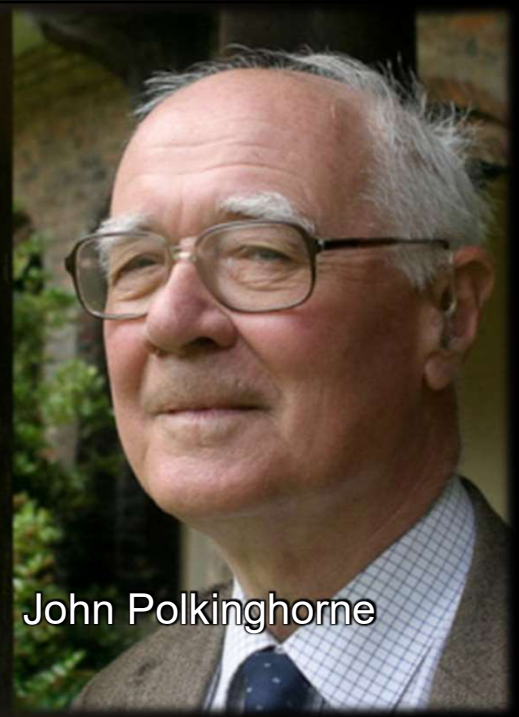
**The number of atoms in
the known universe =**



**The number of atoms in
the known universe =
 10^{79} .**



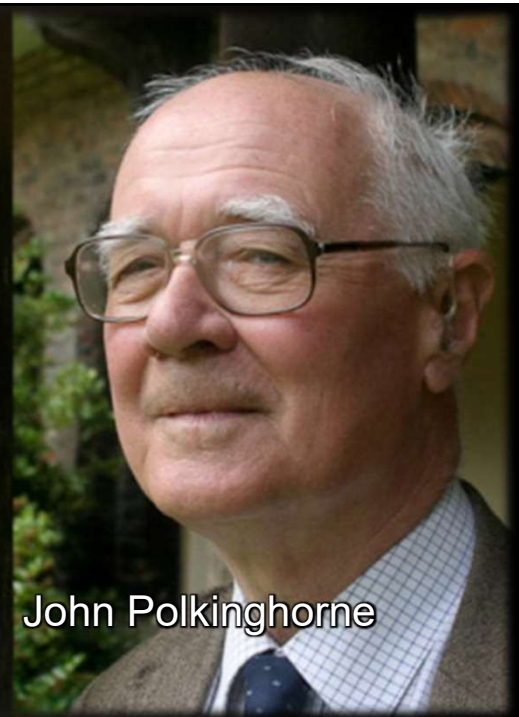
"There seems to be the chance of a revised and revived argument from design . . . appealing to a cosmic planner who has endowed the world with a potentiality implanted within the delicate balance of the laws of nature themselves,



John Polkinghorne

"which laws science cannot explain because it assumes them as the basis for its explanation of the process. In short, the claim would be that the universe is indeed . . . the carefully calculated construct of its Creator."

[John Polkinghorne, *Serious Talk: Science and Religion in Dialogue* (Valley Forge: Trinity Press International, 1995), 69-70]

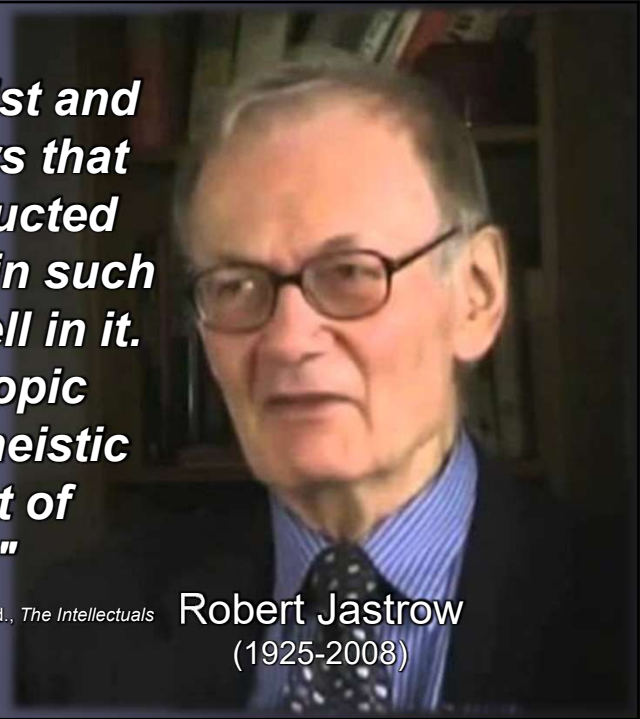


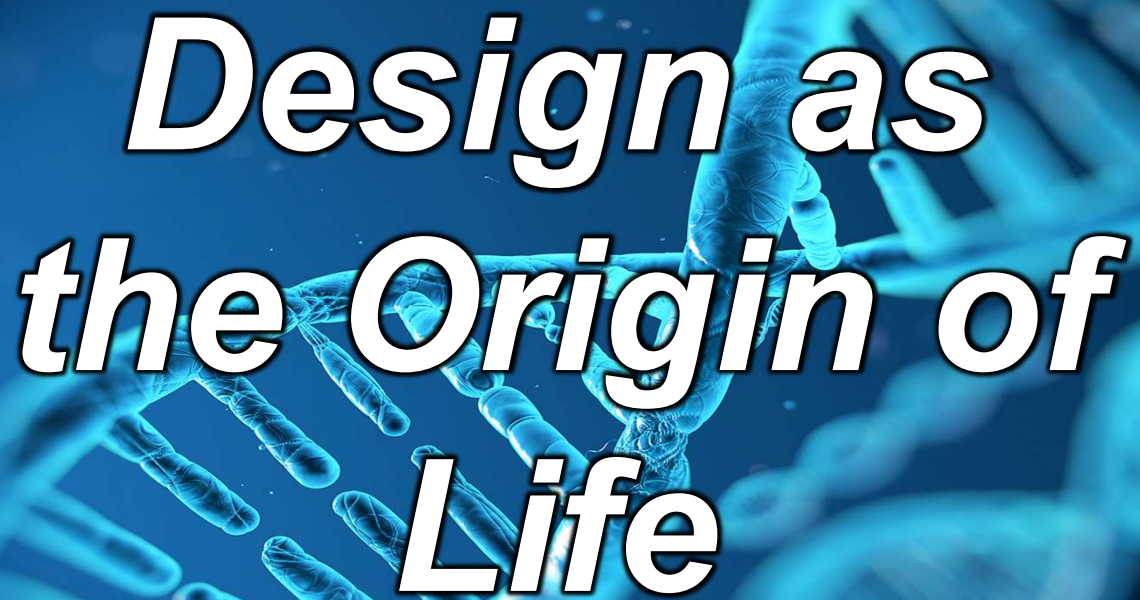
John Polkinghorne

"According to the physicist and the astronomer, it appears that the Universe was constructed within very narrow limits, in such a way that man could dwell in it. This is called the anthropic principle. It is the most theistic result ever to come out of science, in my view."

[Robert Jastrow "The Astronomer and God," in Roy Abraham Varghese, ed., *The Intellectuals Speak Out About God* (Chicago: Regnery Gateway, 1984): 22]

Robert Jastrow
(1925-2008)





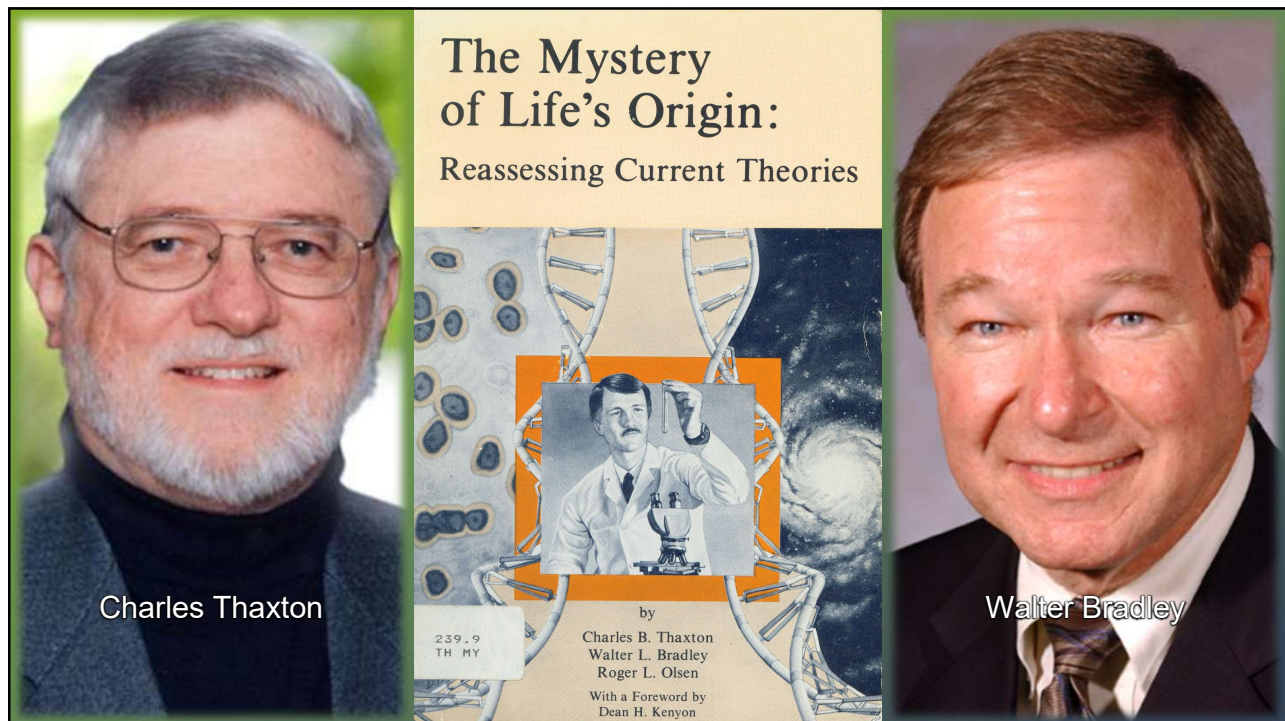
Design as the Origin of Life

∞ Definition ∞

Biologically speaking, life is physically possible only given certain elements and processes, the existence of which require biological life itself.


∞ Significance ∞

If the necessary ingredients for biological life themselves require biological life, then biological life could not have come from non-life.



Charles Thaxton


Walter Bradley




"Without a doubt, the atoms and molecules which comprise living cells individually obey the laws of chemistry and physics. The enigma is the origin of so unlikely an organization of these atoms and molecules

Charles Thaxton

...




Walter Bradley




"It is apparent that 'chance' should be abandoned as an acceptable model for coding of the macromolecules essential in living systems."

Charles Thaxton


[Charles B. Thaxton, Walter L. Bradley, and Roger L. Olsen, *The Mystery of Life's Origin: Reassessing Current Theories* (New York: Philosophical Library, 1984), 128, 146]



Walter Bradley




"Any theory with a probability of being correct that is larger than one part in 10 to the 40,000th power must be judged superior to random shuffling."




Sir Frederick Hoyle
(1915-2001)

Chandra Wickramasinghe




"The theory that life was assembled by an intelligence has, we believe, a probability vastly higher than one part in 10 to the 40,000th power of being the correct explanation ..."



Sir Frederick Hoyle
(1915-2001)


Chandra Wickramasinghe




Sir Frederick Hoyle
(1915-2001)

"Indeed, such a theory is so obvious that one wonders why it is not widely accepted as being self-evident. The reasons are psychological rather than scientific."

[F. Hoyle and N. Wickramasinghe, *Evolution from Space* (No publisher: No city, 1981), p. 130, as cited in W. R. Bird, *The Origin of Species Revisited*, 2 vols (Nashville: Regency, 1991), vol. I, p. 82]



Chandra Wickramasinghe



"If the universe wasn't fine tuned to be able to support life, we wouldn't be here to observe it!"

↻ The Response ↻



The Firing Squad Example

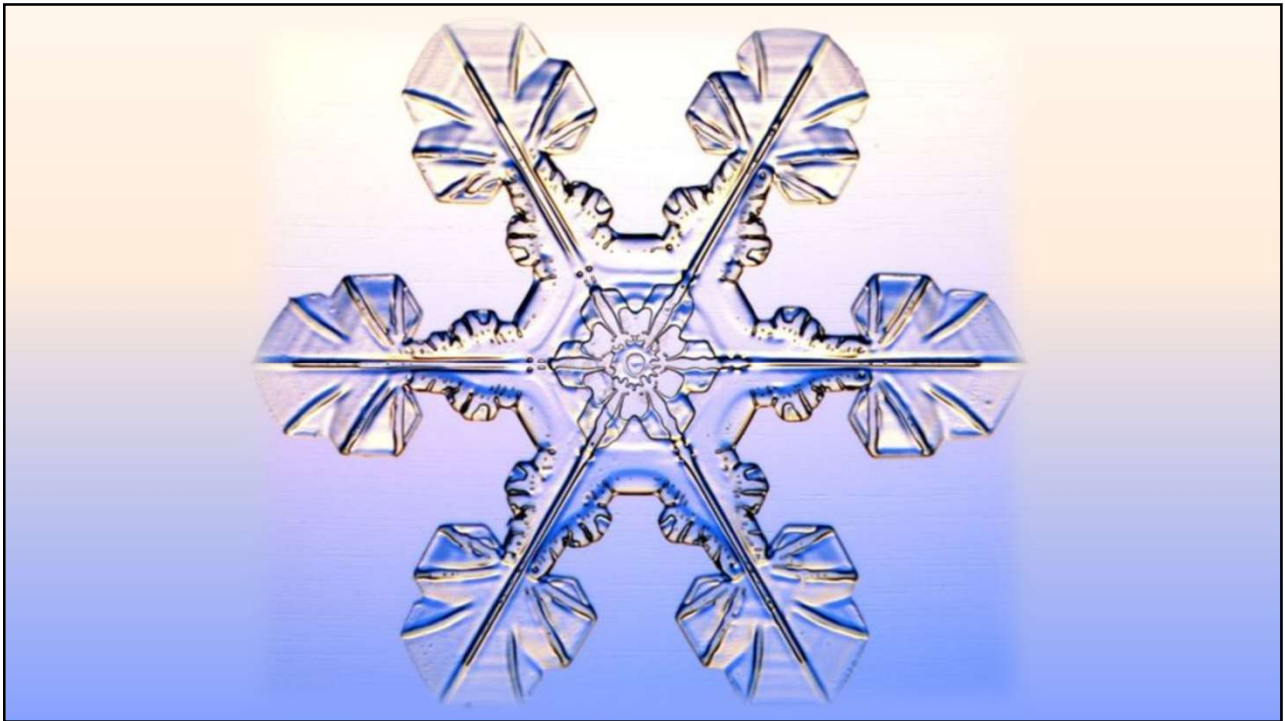
***Design as
Information***

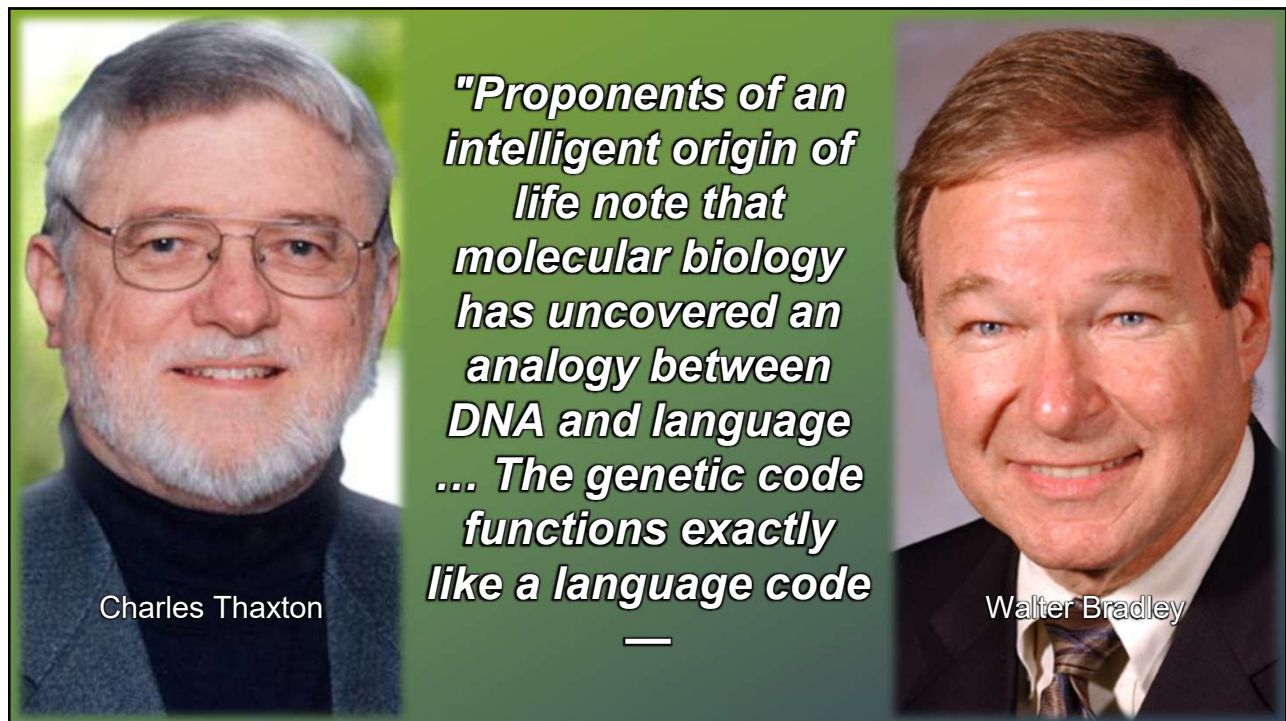
∞ Definition ∞

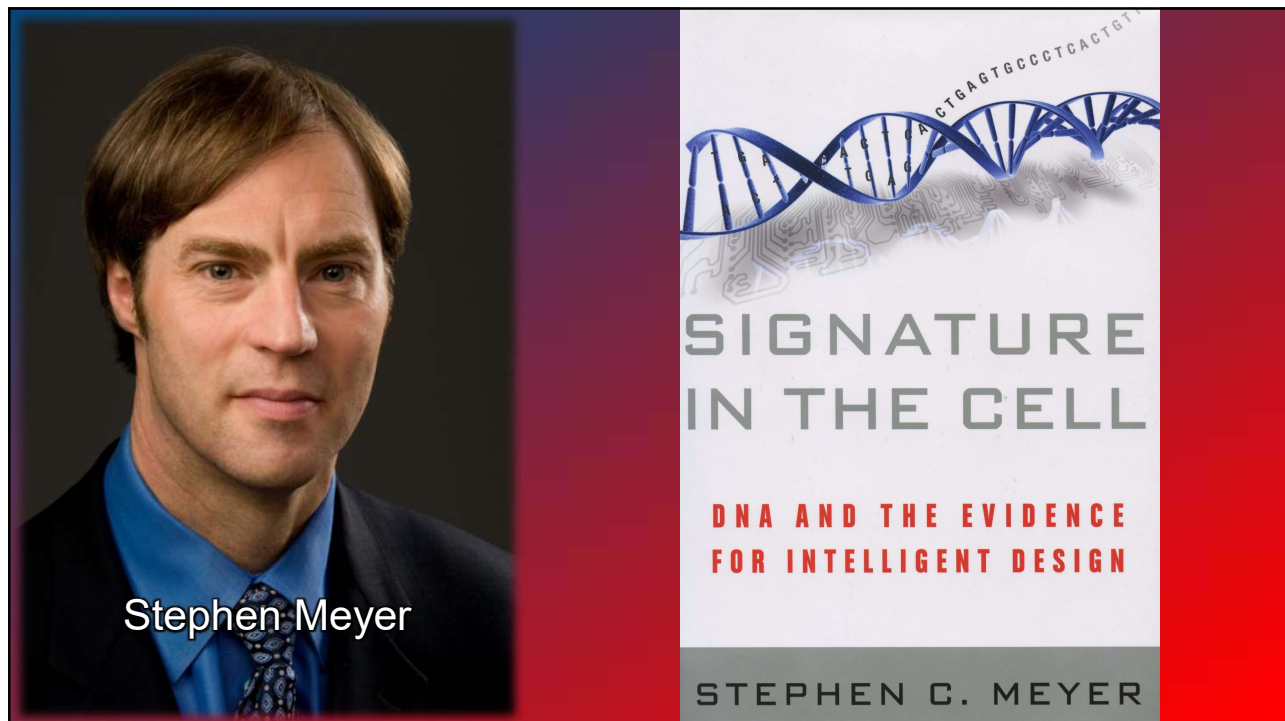
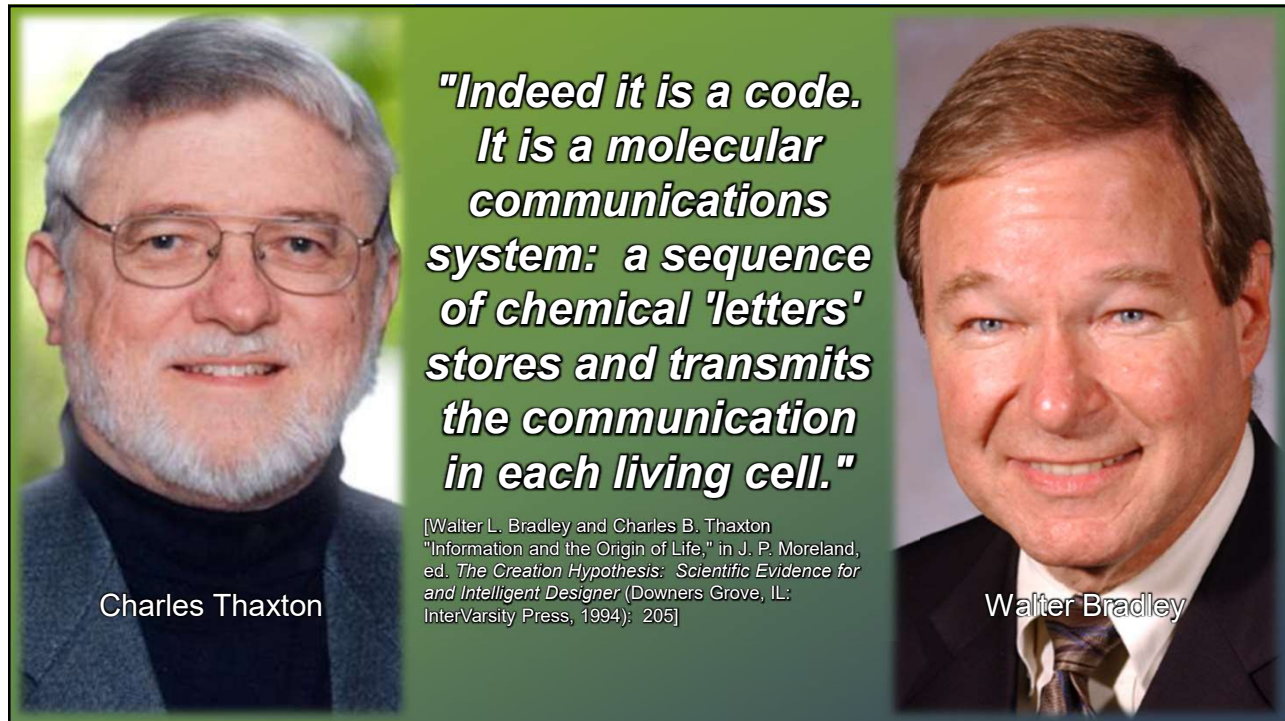
Information, known also as specified complexity, is physically distinguishable from simple complexity and simple order.

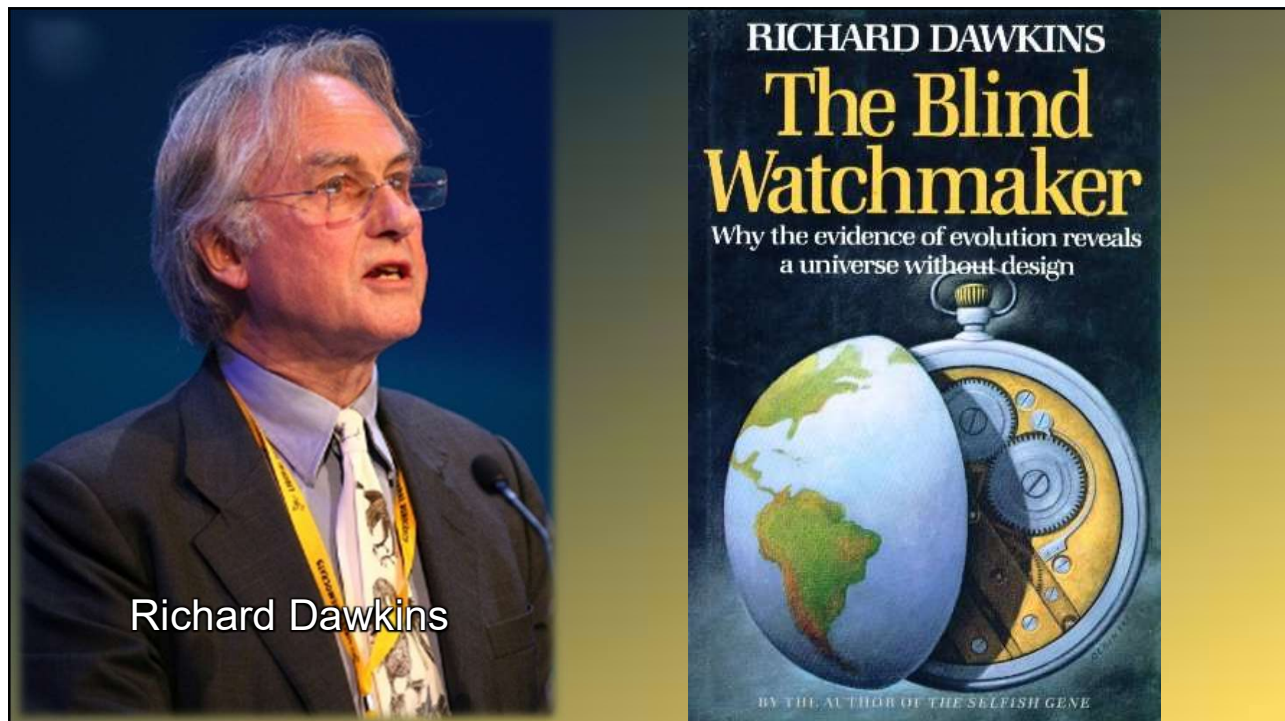
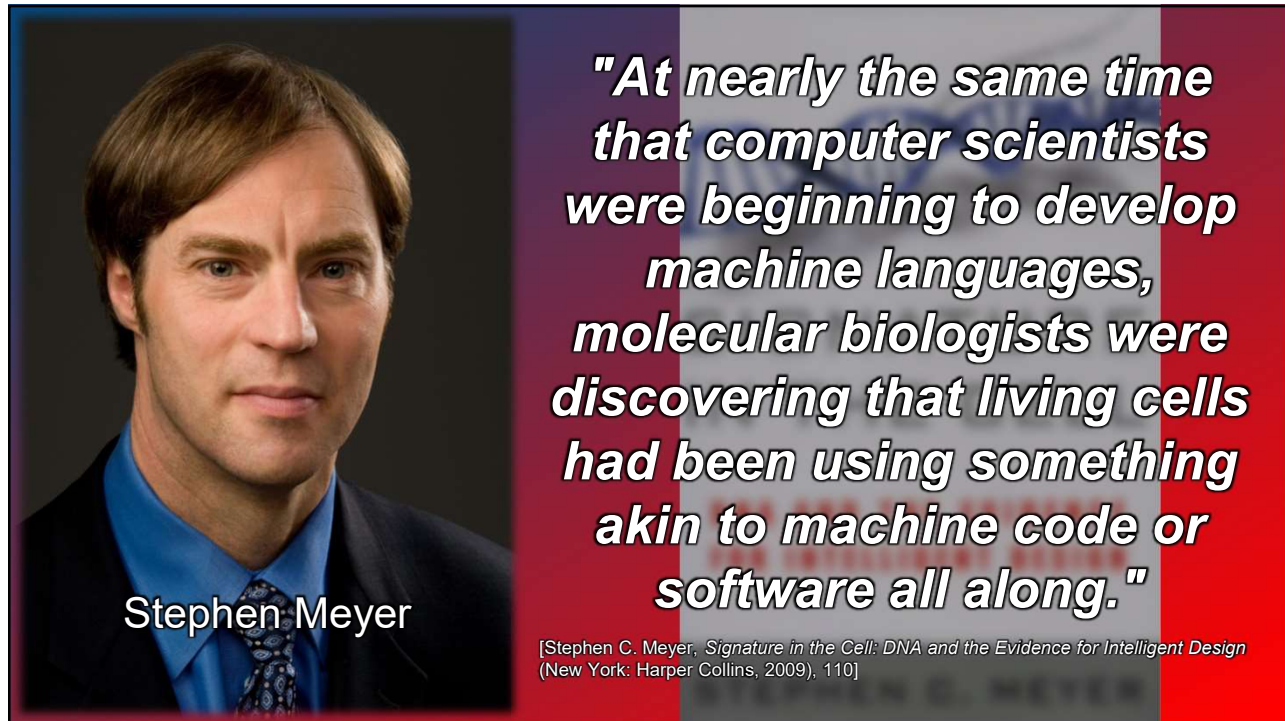
∞ Significance ∞


The presence of information always points to an intelligent cause.





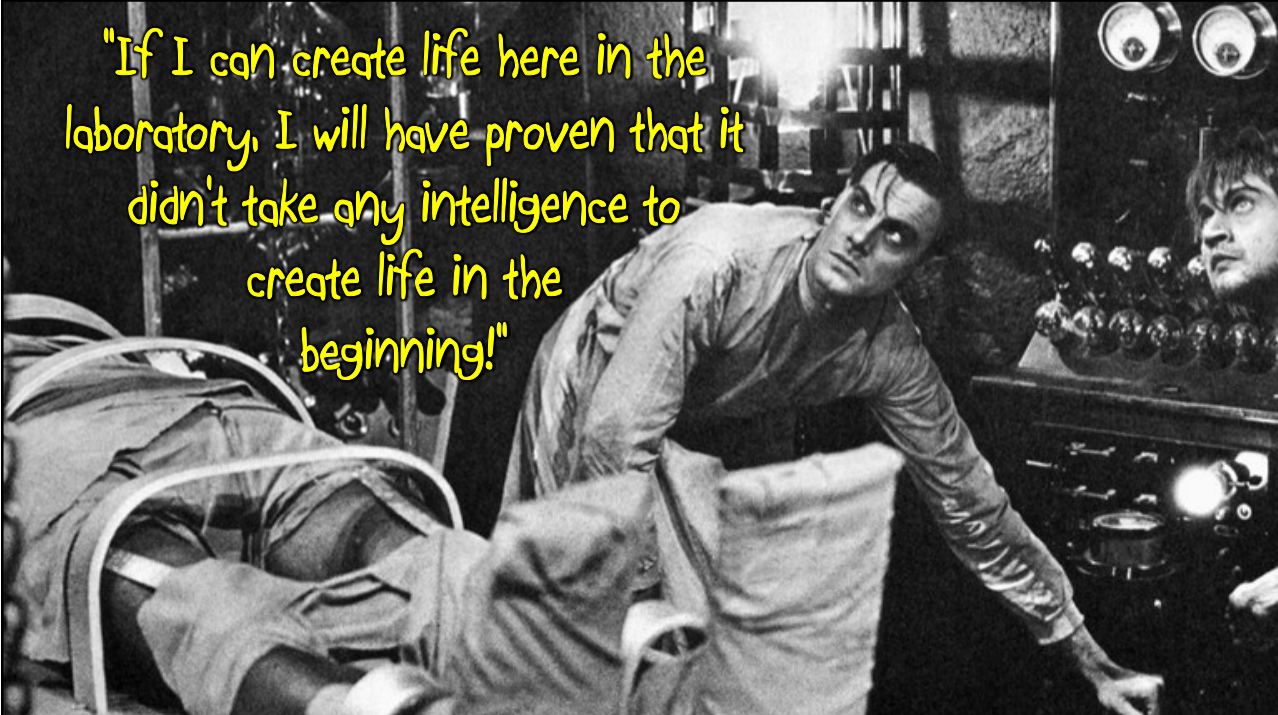




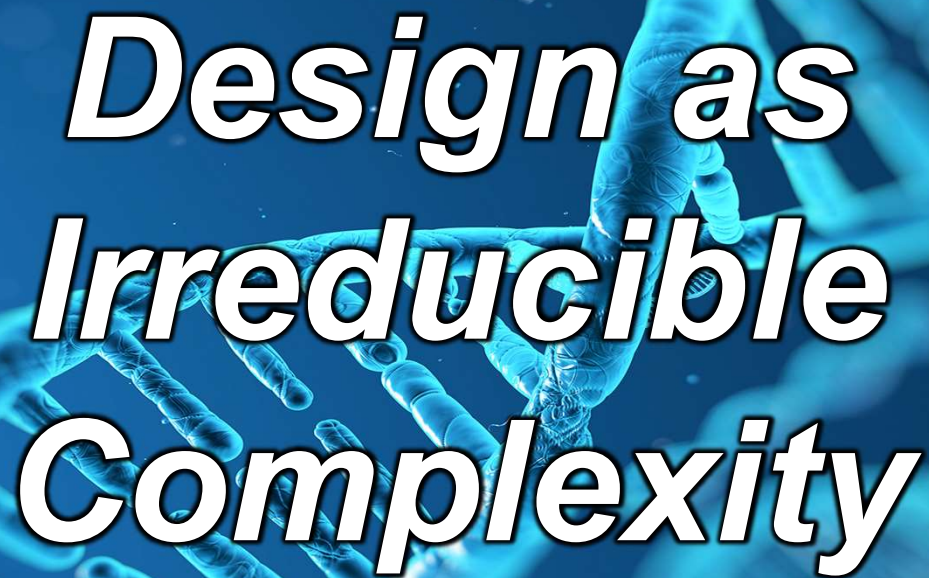


"There is enough information capacity in a single human cell to store the Encyclopedia Britannica, all 30 volumes of it, three or four times over."

[Richard Dawkins, *The Blind Watchmaker: Why the Evidence of Evolution Reveals a Universe Without Design* (New York: W. W. Norton, 1987): 115-118]



"If I can create life here in the laboratory, I will have proven that it didn't take any intelligence to create life in the beginning!"



Design as Irreducible Complexity

∞ Definition ∞

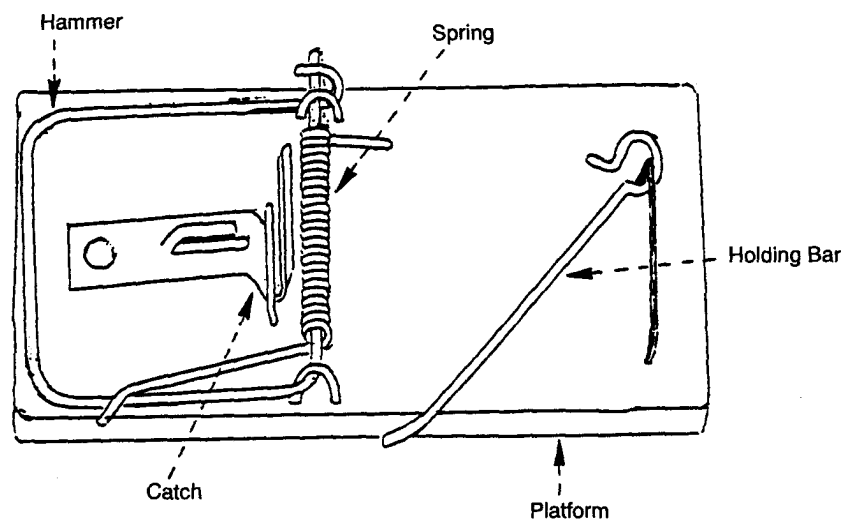
Some biological systems consist of several interlocking parts that must be in place before the system can function at all.

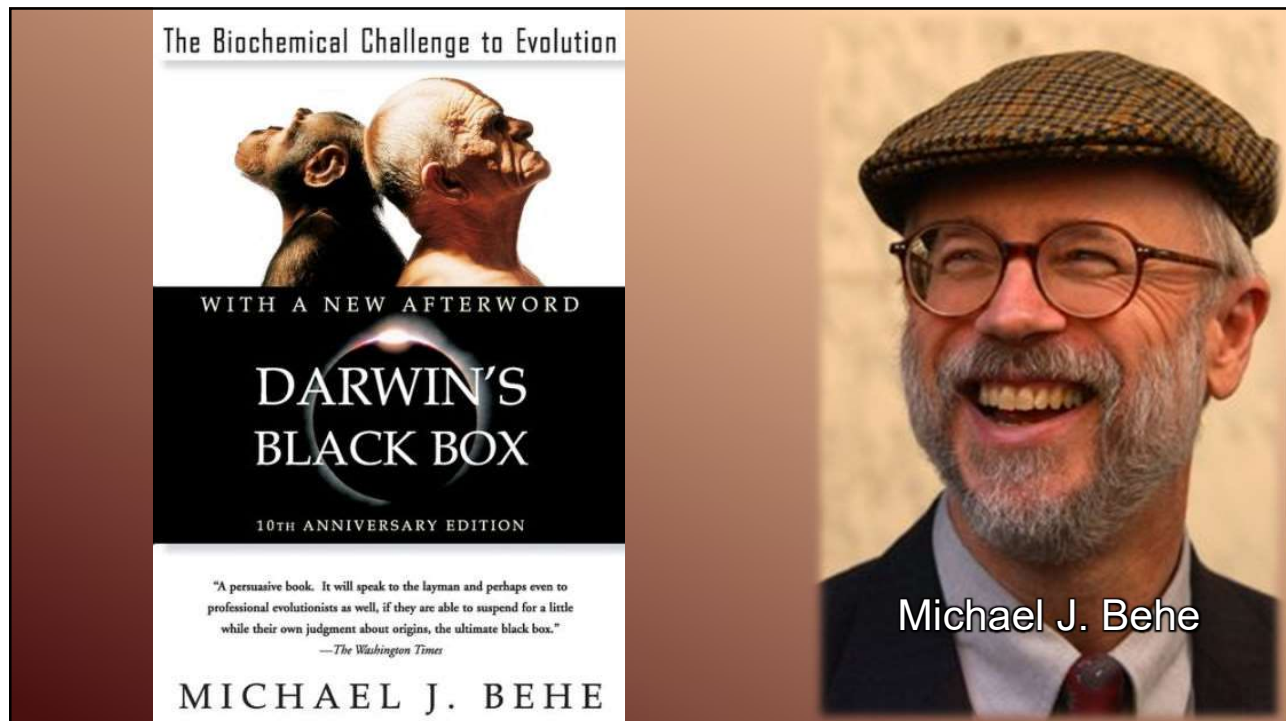
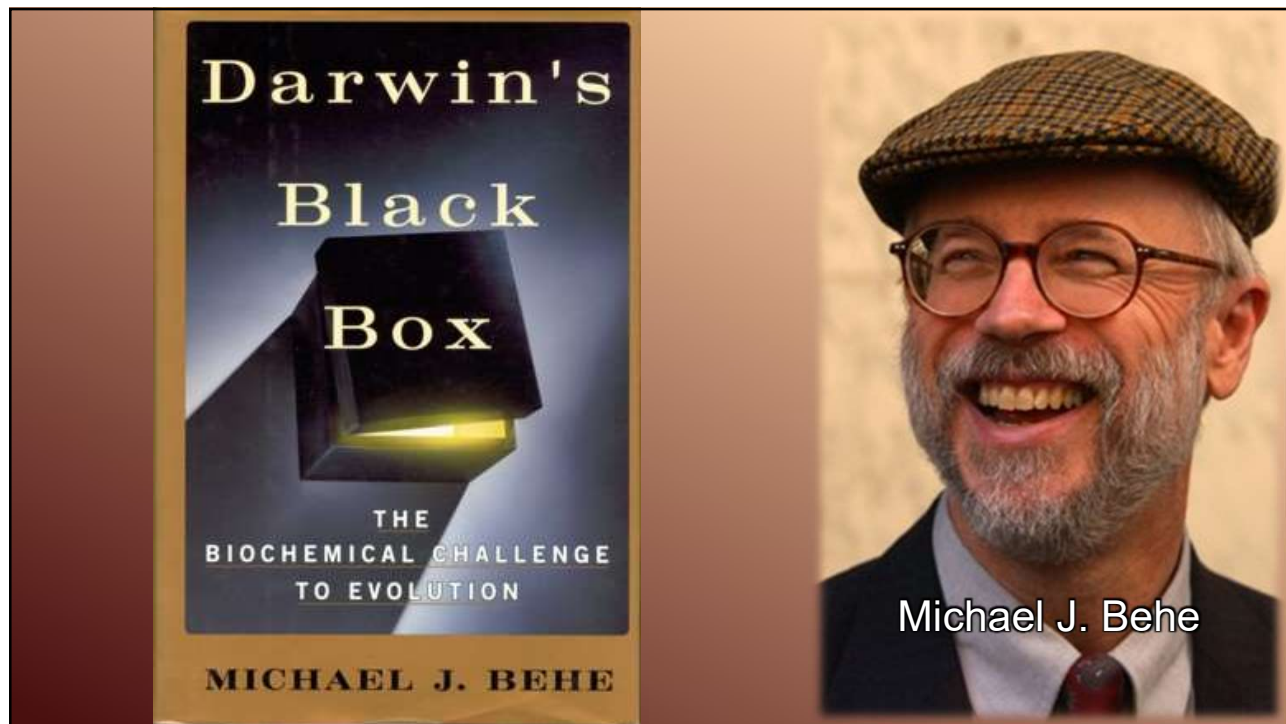
Significance

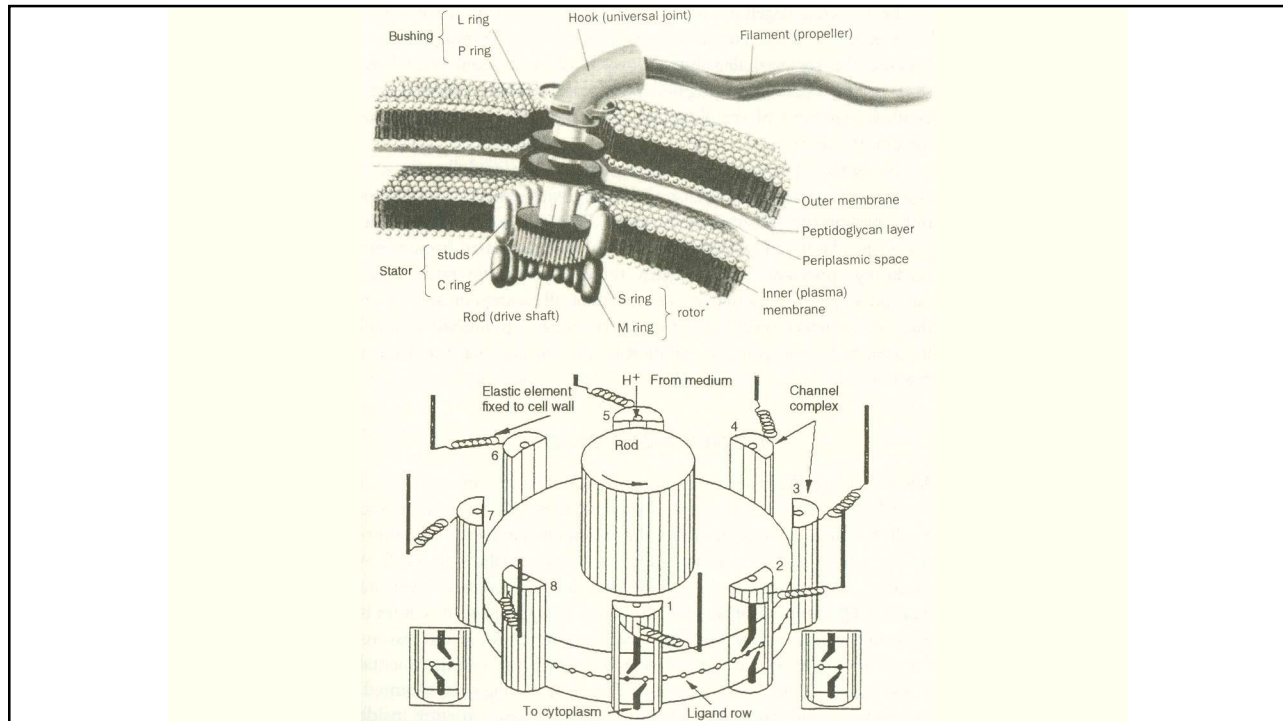
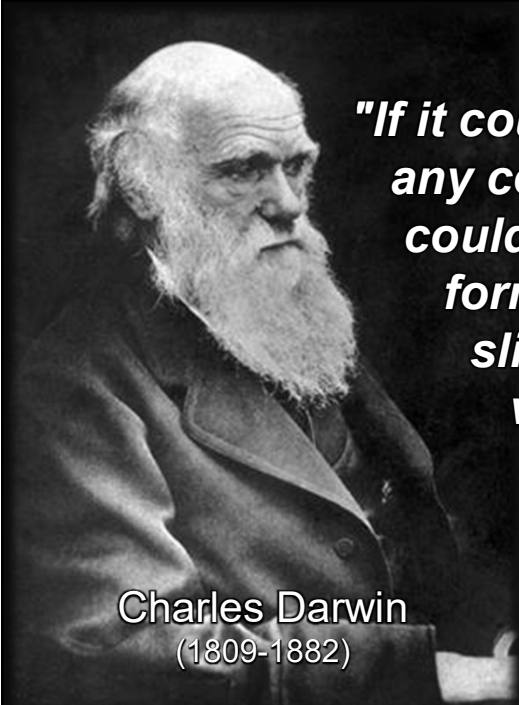
Since such complexity cannot be accounted for by gradual accumulations of random mutations, the systems must have arisen all at once by an intelligent cause.

FIGURE 2-2

A HOUSEHOLD MOUSETRAP.



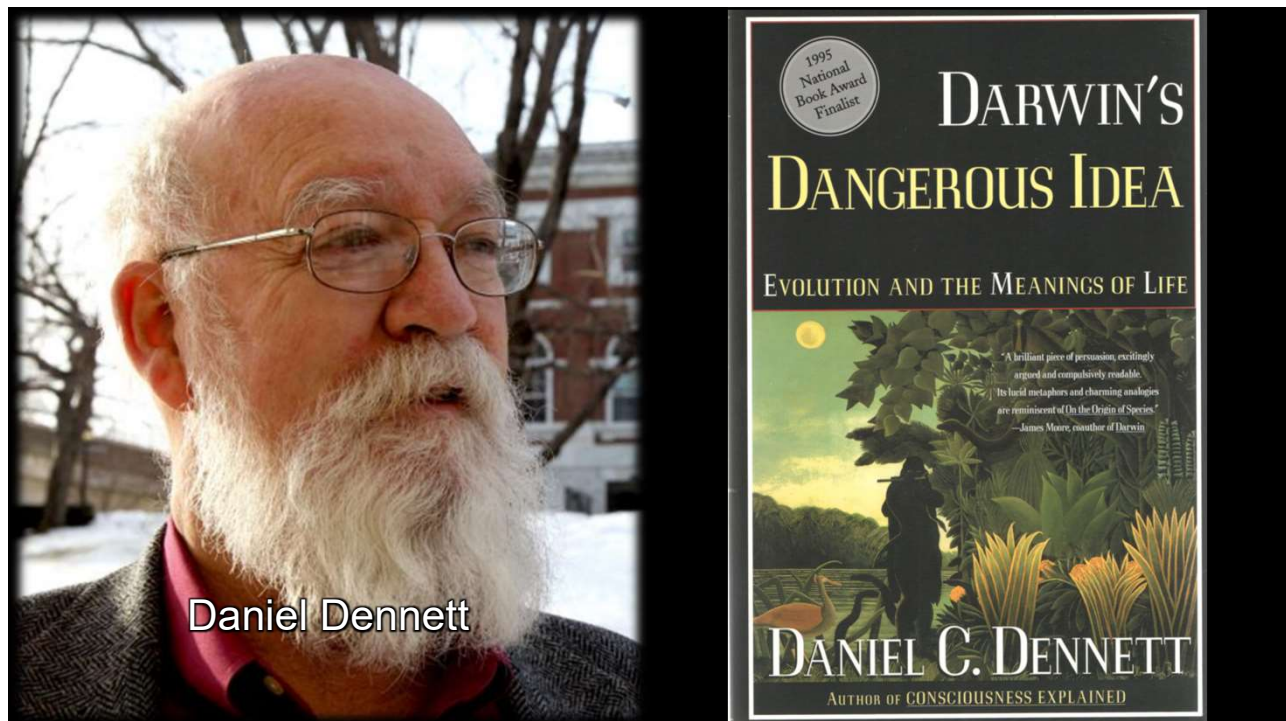
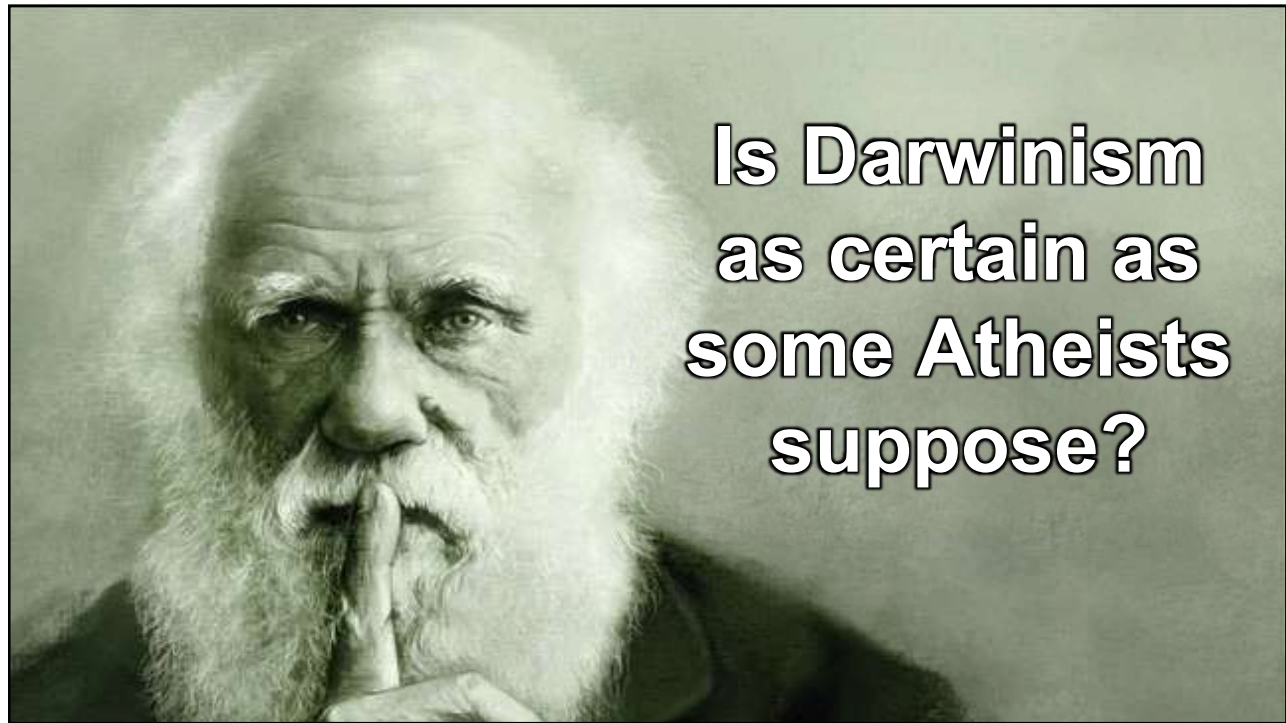


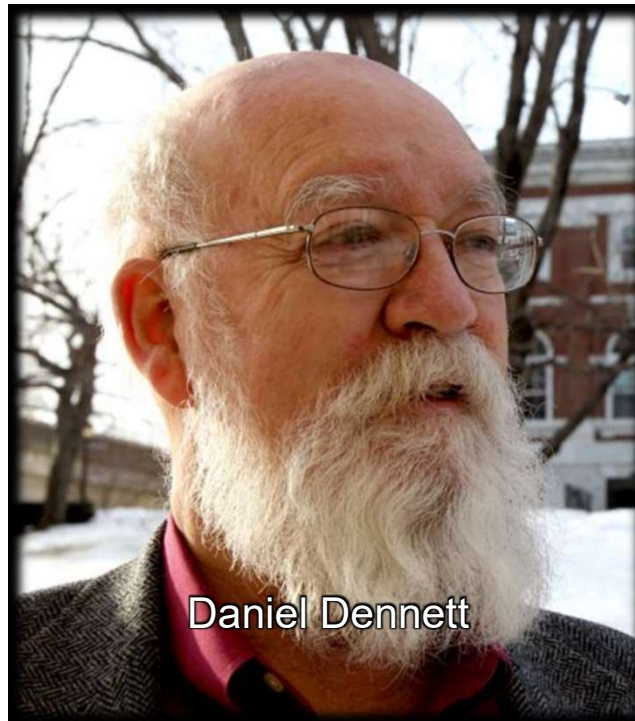



"If it could be demonstrated that any complex organ existed which could not possibly have been formed by numerous, successive, slight modifications, my theory would absolutely break down."

[Charles Darwin, *Origin of Species*, Chapter 6 "Difficulties of the Theory" section "Modes of Transition." in Robert Maynard Hutchins, Ed. in Chief, *Great Books of the Western World*, vol. 49 (Chicago: Encyclopedia Britannica, Inc.): 37.]

Charles Darwin
(1809-1882)

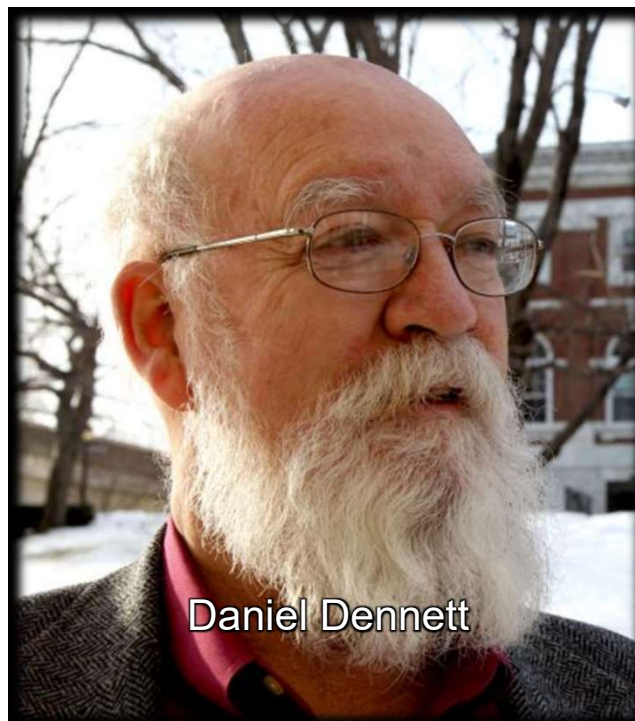




Daniel Dennett

"There are vigorous controversies swirling around in evolutionary theory, but those who feel threatened by Darwinism should not take heart from this fact. ... **The basic Darwinian idea ... is about as secure as any in science**"

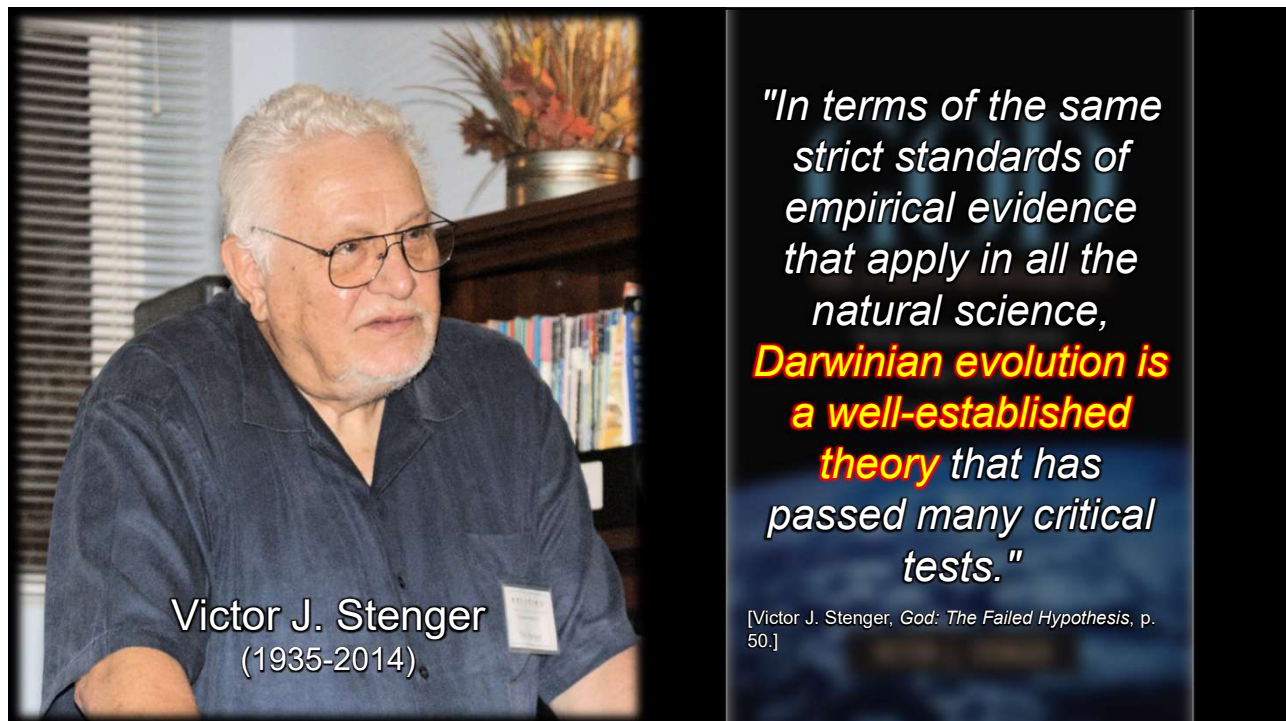
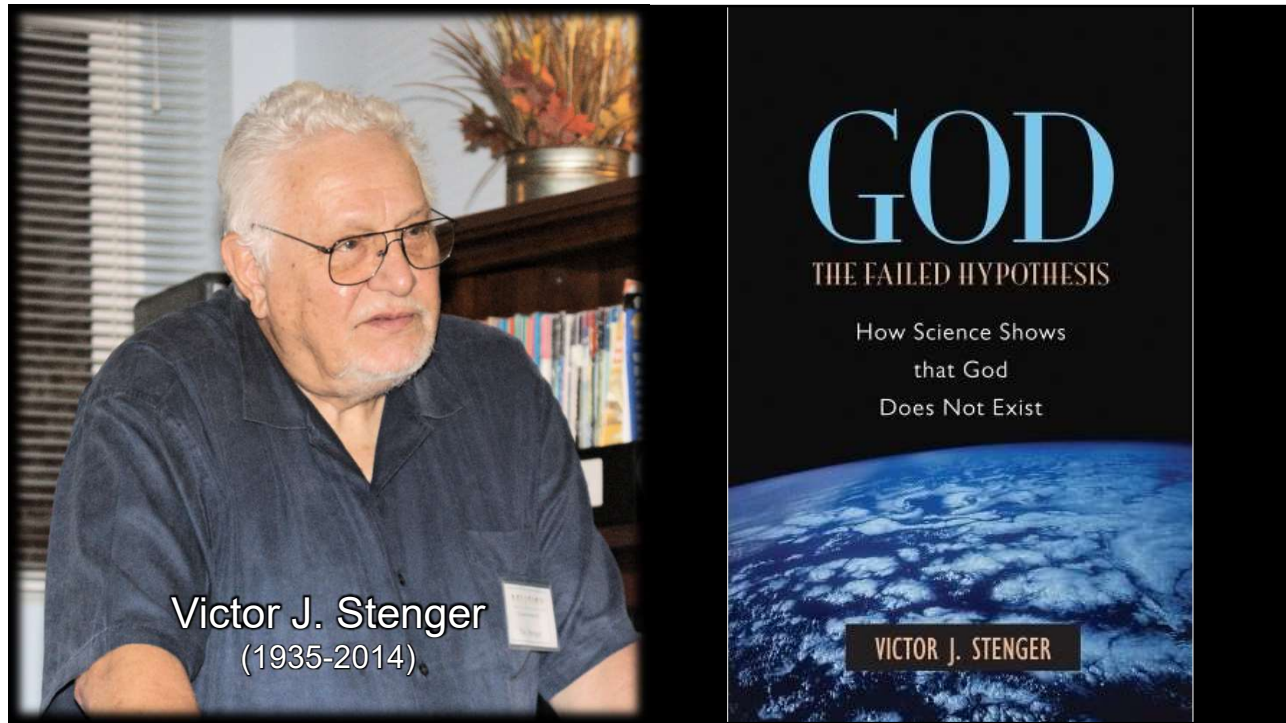
[Daniel C. Dennett, *Darwin's Dangerous Idea*, p. 19]

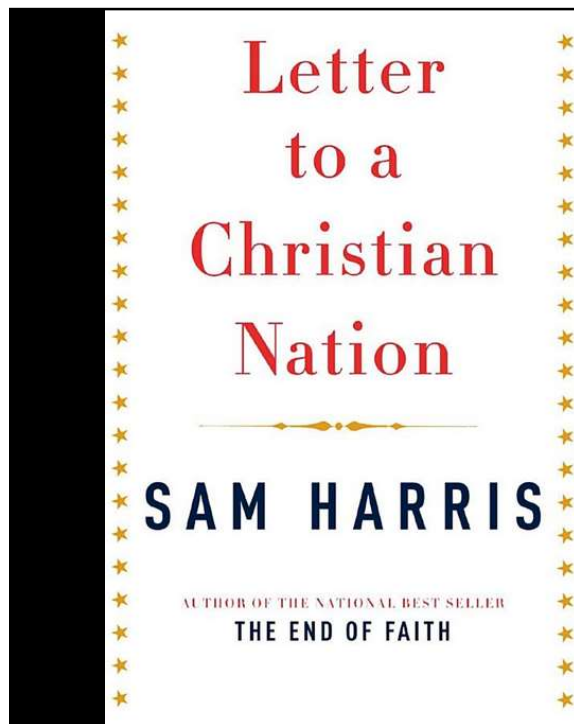


Daniel Dennett

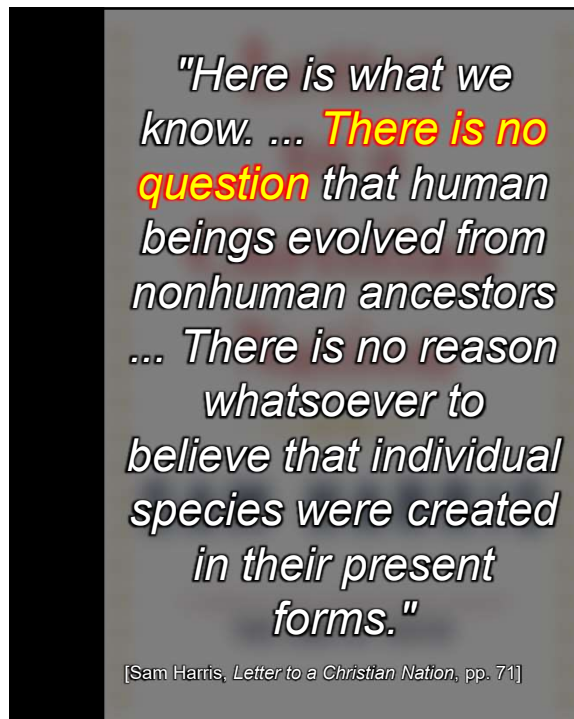
"If you insist on teaching your children falsehoods—that the **Earth is flat**, that **'Man' is not a product of evolution** by natural selection—then ... we will ... describe your teachings as the spreading of falsehoods, and will attempt to demonstrate this to your children at our earliest opportunity."

[Daniel Dennett, *Darwin's Dangerous Idea: Evolution and the Meaning of Life* (New York: Simon & Schuster, 1995), 519]





Sam Harris



Sam Harris



"The basic Darwinian idea . . . is about as secure as any in science ..."

Challenging evolution is on par with believing in a flat Earth.

"Darwinian evolution is a well-established theory. "

"There is no question . . ."

Challenging evolution is on par with challenging the Moon landing.

Is this so?

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A SCIENTIFIC DISSENT
 FROM DARWINISM

"We are skeptical of claims for the ability of random mutation and natural selection to account for the complexity of life. Careful examination of the evidence for Darwinian theory should be encouraged."

See your fellow scientists on a growing number of scientists at that the Darwinian

Growing Number of Scientists are Skeptical of Darwinian The

1:00 / 1:17

Sign the List
 Download the List


There Is Scientific
 Dissent From Darwinism.
It deserves to be heard.

"Scientific journals now document many scientific problems and criticisms of evolutionary theory and students need to know about these as well.... Many of the scientific criticisms of which I speak are well known by scientists in various disciplines, including the disciplines of chemistry and biochemistry, in which I have done my work."

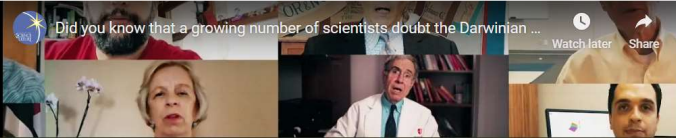
Philip A. Ball, Member National Academy of Sciences, Emeritus Dean Pugh Professor at Pennsylvania State University

chn fin fra ger deu ita jpn kor ind grc rus esp tur


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 FROM DARWINISM

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✍ Sign the List

☁ Download the List

There Is Scientific Dissent From Darwinism.
It deserves to be heard.

"Scientific journals now document many scientific problems and criticisms of evolutionary theory and students need to know about these as well. ... Many of the scientific criticisms of which I speak are well known by scientists in various disciplines, including the disciplines of chemistry and biochemistry, in which I have done my work."

Philip S. Skell, Member National Academy of Sciences, Emeritus Evan Pugh Professor at Pennsylvania State University

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A SCIENTIFIC DISSENT FROM DARWINISM

"We are skeptical of claims for the ability of random mutation and natural selection to account for the complexity of life. Careful examination of the evidence for Darwinian theory should be encouraged."

This was last publicly updated February 2019. Scientists listed by doctoral degree or current position.

Philip Skell*	Emeritus, Evan Pugh Prof. of Chemistry, Pennsylvania State University	Member of the National Academy of Sciences
Lyle H. Jensen*	Professor Emeritus, Dept. of Biological Structure & Dept. of Biochemistry	University of Washington, Fellow AAAS
Maciej Giertych	Full Professor, Institute of Dendrology	Polish Academy of Sciences
Lev Beloussov	Prof. of Embryology, Honorary Prof., Moscow State University	Member, Russian Academy of Natural Sciences
Eugene Buff	Ph.D. Genetics	Institute of Developmental Biology, Russian Academy of Sciences
Emil Palecek	Prof. of Molecular Biology, Masaryk University; Leading Scientist	Inst. of Biophysics, Academy of Sci., Czech Republic
K. Mosto Onuoha	Shell Professor of Geology & Deputy Vice-Chancellor, Univ. of Nigeria	Fellow, Nigerian Academy of Science
Ferenc Jeszenszky	Former Head of the Center of Research Groups	Hungarian Academy of Sciences
M.M. Ninan	Former President	Hindustan Academy of Science, Bangalore University (India)
Denis Fesenko	Junior Research Fellow, Engelhardt Institute of Molecular Biology	Russian Academy of Sciences (Russia)
Sergey I. Vdovenko	Senior Research Assistant, Department of Fine Organic Synthesis	Institute of Bioorganic Chemistry and Petrochemistry Ukrainian National Academy of Sciences (Ukraine)
Henry Schaefer	Director, Center for Computational Quantum Chemistry	University of Georgia
Paul Ashby	Ph.D. Chemistry	Harvard University
Israel Hanukoglu	Professor of Biochemistry and Molecular Biology Chairman	The College of Judea and Samaria (Israel)
Alan Linton	Emeritus Professor of Bacteriology	University of Bristol (UK)
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David W. Forslund	Ph.D. Astrophysics, Princeton University	Fellow of American Physical Society
Robert W. Bass	Ph.D. Mathematics (also: Rhodes Scholar; Post-Doc at Princeton)	Johns Hopkins University
John Hey	Associate Clinical Prof. (also: Fellow, American Geriatrics Society)	Dept. of Family Medicine, Univ. of Mississippi
Daniel W. Heinze	Ph.D. Geophysics (also: Post-Doc Fellow, Carnegie Inst. of Washington)	Texas A&M University
Donald Ewert	Ph.D. Microbiology	University of Georgia
Russell Carlson	Emeritus Professor of Biochemistry & Molecular Biology	University of Georgia
David Chapman*	Senior Scientist	Woods Hole Oceanographic Institution
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Dennis Dean Rathman	Staff Scientist	MIT Lincoln Laboratory
Richard Austin	Assoc. Prof. & Chair, Biology & Natural Sciences	Piedmont College
Richard Anderson	Assistant Professor of Environmental Science and Policy	Duke University
Raymond C. Mjolsness	Ph.D. Physics	Princeton University
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James Robert Dickens	Ph.D. Mechanical Engineering	Texas A&M University
Phillip Bishop	Professor of Kinesiology	University of Alabama
Jeffrey M. Jones	Professor Emeritus in Medicine (Ph.D. Microbiology and M.D.)	University of Wisconsin-Madison
Donald R. Mull	Ph.D. Physiology	University of Pittsburgh
John Bloom	Ph.D. Physics	Cornell University
William Dembski	Ph.D. Mathematics	University of Chicago
Ben J. Stuart	Ph.D. Chemical & Biochemical Engineering	Rutgers University
Raymond Bohlin	Ph.D. Molecular & Cell Biology	University of Texas, Dallas
Christa R. Koval	Ph.D. Chemistry	University of Colorado at Boulder
John Bordelon	Ph.D. Electrical Engineering	Georgia Institute of Technology
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Lydia G. Thebeau	Ph.D. Cell & Molecular Biology	Saint Louis University
David Bossard	Ph.D. Mathematics	Dartmouth College
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Carlos M. Murillo	Professor of Medicine (Neurosurgery)	Autonomous University of Guadalajara (Mexico)
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Sami Palonen	Ph.D. Analytical Chemistry	University of Helsinki (Finland)
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Bradley R. Johnson	Ph.D. Materials Science	University of Illinois at Urbana-Champaign
Rudolf Brits	Ph.D. Nuclear Chemistry	University of Stellenbosch (South Africa)
Gary Castello	Ph.D. Biology	University of Wisconsin-Milwaukee
Karen Rispin	Assistant Professor of Biology	LeTourneau University
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John Brown	Research Meteorologist	National Oceanic and Atmospheric Administration
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Thomas M. Stackhouse	Ph.D. Biochemistry	University of California, Davis
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Donald Ewert	Ph.D. Microbiology	University of Georgia
Russell Carlson	Professor of Biochemistry & Molecular Biology	University of Georgia
Scott Minnich	Associate Professor of Microbiology	University of Idaho
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Annika Parantainen	Ph.D. Biology	University of Turku (Finland)
Fred Schroeder	Ph.D. Marine Geology	Columbia University
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Leo Zacharski	Professor of Medicine	Dartmouth Medical School
Joel D. Hetzer	Ph.D. Statistics	Baylor University
Michael Behe	Professor of Biological Science	Lehigh University
Michael Atchison	Professor of Biochemistry	University of Pennsylvania, Vet School
Thomas G. Williams	Ph.D. Molecular Biology	The Medical College of Wisconsin
Arthur B. Robinson	Professor of Chemistry	Oregon Institute of Science & Medicine
Joel Adams	Professor of Computer Science	Calvin College
Abraham S. Feigenbaum	Ph.D. Nutritional Biochemistry	Rutgers University
Yasuo Yoshida	Ph.D. Physics	Kyushu University (Japan)
Domingo Aerden	Professor of Geology	Universidad de Granada (Spain)
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Kerry N. Jones	Professor of Mathematical Sciences	Ball State University
Ge Wang	Professor of Radiology & Biomedical Engineering	University of Iowa
Moorad Alexanian	Professor of Physics	University of North Carolina, Wilmington
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Mark Krejci	Ph.D. Polymer Science & Engineering (Post-docs, Stanford & Caltech)	University of Massachusetts
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Ola Hössjer	Professor of Mathematical Statistics	Stockholm University
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Nicholas Cominellis	Associate Professor of Community and Family Medicine	University of Missouri-Kansas City
William J. Arion	Emeritus Professor of Biochemistry	Cornell University
Stephen Crouse	Professor of Kinesiology	Texas A&M University
Cham Dallas	Professor, Pharmaceuticals & Biomedical Science	University of Georgia

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Thomas Deahl	Ph.D. Radiation Biology	The University of Iowa
Shun Yan Cheung	Associate Professor of Computer Science	Emory University
Robert DeHaan	Ph.D. Human Development	University of Chicago
Gage Blackstone	Doctor of Veterinary Medicine	Texas A&M University
Harold Delaney	Professor of Psychology	University of New Mexico
Jonathan C. Boomgard	Ph.D. Mechanical Engineering	University of Wisconsin
Greg Tate	Ph.D. Plant Pathology	University of California, Davis
William Bordeaux	Chair, Department of Natural & Mathematical Science	Huntington College
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Aaron J. Miller	Ph.D. Physics	Stanford University
Gary Dilts	Ph.D. Mathematical Physics	University of Colorado
Gerald Chubb	Associate Professor of Aviation	Ohio State University
Robert DiSilvestro	Ph.D. Biochemistry	Texas A & M University
Daniel Dix	Associate Professor of Mathematics	University of South Carolina
Allison Dobson	Assistant Professor, Chemistry	Georgia Southern University
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Kenneth Dormer	Ph.D. Biology & Physiology	University of California, Los Angeles
Ernest Prabhakar	Ph.D. Experimental Particle Physics	California Institute of Technology
John Doughty	Ph.D. Aerospace & Mechanical Engineering	University of Arizona
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Eduard F. Schmitter	Ph.D. Astronomy	University of Wisconsin
Lee Eimers	Professor of Physics & Mathematics	Cedarville University
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Bruce Evans	Ph.D. Neurobiology	Emory University
Gary Achtemeier	Ph.D. Meteorology	Florida State University
William Everson	Ph.D. Human Physiology	Penn State College of Medicine
Susan L.M. Huck	Ph.D. Geology/Geography	Clark University
James Florence	Associate Professor, Department of Public Health	East Tennessee State University
Douglas R. Buck	Ph.D. Nutrition and Food Sciences	Utah State University
	Fellow	American College of Nutrition
Margaret Flowers	Professor of Biology	Wells College
Etienne Windisch	Ph.D. Engineering	McGill University (Canada)

Mark Foster	Ph.D. Chemical Engineering	University of Minnesota
Suzanne Sawyer Vincent	Ph.D. Physiology & Biophysics	University of Washington
Clarence Fouché	Professor of Biology	Virginia Intermont College
Robert Blomgren	Ph.D. Mathematics	University of Minnesota
Kenneth French	Chairman, Division of Natural Science	Blinn College
Richard N. Taylor	Professor of Information & Computer Science	University of California, Irvine
Stephen C. Knowles	Ph.D. Marine Science	University of North Carolina, Chapel Hill
Marvin Fritzler	Professor of Biochemistry & Molecular Biology	University of Calgary Medical School (Canada)
Mark L. Psiaki	Professor of Mechanical and Aerospace Engineering (Ph.D., Princeton)	Cornell University
Walter E. Lillo	Ph.D. Electrical Engineering	Purdue University
Mark Fuller	Ph.D. Microbiology	University of California, Davis
Daniel Galassini	Doctor of Veterinary Medicine	Kansas State University
Stanley E. Zager	Professor Emeritus, Chemical Engineering	Youngstown State University
Andrew Fong	Ph.D. Chemistry	Indiana University
John Garth	Ph.D. Physics	University of Illinois, Champaign-Urbana
John K. G. Kramer	Adjunct Professor, Dept. of Human Biology & Nutrition Sciences	University of Guelph (Canada)
Glen O. Brindley	Professor of Surgery, Director of Ophthalmology	Scott & White Clinic, Texas A&M University H.S.C.
Ann Gauger	Ph.D. Zoology	University of Washington
Pamela Faith Fahey	Ph.D. Physiology & Biophysics	University of Illinois
Paul Brown	Assistant Professor of Environmental Studies	Trinity Western University (Canada)
Mark Geil	Ph.D. Biomedical Engineering	Ohio State University
Ibrahim Barsoum	Ph.D. Microbiology	The George Washington University
Jim Gibson	Ph.D. Biology	Loma Linda University
John W. Balliet	Ph.D. Molecular & Cellular Biology	University of Pennsylvania
William Gilbert	Emeritus Professor of Biology	Simpson College
Joe R. Eagleman	Professor Emeritus, Department of Physics & Astronomy	University of Kansas
Dexter F. Speck	Associate Professor of Physiology	University of Kentucky Medical Center
Warren Gilson	Associate Professor, Dairy Science	University of Georgia
Raul Leguizamon	Professor of Medicine (Pathology)	Autonomous University of Guadalajara (Mexico)
Steven Gollmer	Ph.D. Atmospheric Science	Purdue University
Sun Uk Kim	Ph.D. Biochemical Engineering	University of Delaware
Gene B. Chase	Professor of Mathematics and Computer Science (Ph.D. Cornell)	Messiah College
Chris Grace	Associate Professor of Psychology	Biola University
James A. Ellard, Sr.	Ph.D. Chemistry	University of Kentucky
Richard Gunasekera	Ph.D. Biochemical Genetics	Baylor University
Jennifer M. Cohen	Ph.D. Mathematical Physics	New Mexico Institute of Mining and Technology
Russel Peak	Senior Researcher, Engineering Information Systems	Georgia Institute of Technology
Graham Gutsche	Emeritus Professor of Physics	U.S. Naval Academy
Olivia A. Henderson	Ph.D. Pharmaceutics	University of Missouri, Kansas City
Dan Hale	Professor of Animal Science	Texas A&M University
Robert L. Jones	Associate Professor, Department of Ophthalmology	University of California, Irvine
James Harbrecht	Clinical Associate Professor, Division of Cardiology	University of Kansas Medical Center
George W. Benthien	Ph.D. Mathematics	Carnegie Mellon University
James Harman	Associate Chair, Dept. of Chemistry & Biochemistry	Texas Tech University
Frederick T. Zugibe	Emeritus Adjunct Associate Professor of Pathology	Columbia Univ. College of Physicians and Surgeons

William Harris	Ph.D. Nutritional Biochemistry	University of Minnesota
Thomas H. Johnson	Ph.D. Mathematics	University of Maryland
Paul Hausgen	Ph.D. Mechanical Engineering	Georgia Institute of Technology
Gregory A. Snyder	Ph.D. Geochemistry	Colorado School of Mines
Walter Hearn	Ph.D. Biochemistry	University of Illinois
Janice Arlon	Ph.D. Animal Science	Cornell University
Howard Martin Whitcraft	Ph.D. Mathematics	University of St. Louis
Nolan Hertel	Professor, Nuclear & Radiological Engineering	Georgia Institute of Technology
Joseph Francis	Associate Professor of Biology	Cedarville University
Roland Hirsch	Ph.D. Analytical Chemistry	University of Michigan
Todd Peterson	Ph.D. Plant Physiology	University of Rhode Island
Charles Edward Norman	Ph.D. Electrical Engineering	Carleton University (Canada)
Dewey Hodges	Professor, Aerospace Engineering	Georgia Institute of Technology
James P. Russum	Ph.D. Chemical Engineering	Georgia Institute of Technology
Marko Horb	Ph.D. Cell & Developmental Biology	State University of New York
Joe Watkins	Military Professor, Department of Mechanical Engineering	United States Military Academy
Barton Houseman	Emeritus Professor of Chemistry	Goucher College
Mark Pitt	Ph.D. Mathematics	Yale University
Edward Peltzer	Ph.D. Oceanography	University of California, San Diego (Scripps Institute)
Cornelius Hunter	Ph.D. Biophysics	University of Illinois
Rodney Ice	Principle Research Scientist, Nuclear & Radiological Engineering	Georgia Institute of Technology
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Rafe Payne	Ph.D. Biology	University of Nebraska
Muzaffar Iqbal	Ph.D. Chemistry	University of Saskatchewan (Canada)
Mark P. Bowman	Ph.D. Organic Chemistry	Pennsylvania State University
David L. Elliott	Chair, Division of Natural Sciences/Mathematics	Louisiana College
David Ives	Emeritus Professor of Biochemistry	Ohio State University
Stephan J. G. Gift	Professor of Electrical Engineering	The University of the West Indies
Tony Jelema	Ph.D. Biochemistry	McMaster University (Canada)
George C. Wells	Professor of Computer Science	Rhodes University (South Africa)
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Raleigh R. White, IV	Professor of Surgery	Texas A&M University, College of Medicine
Jerry Johnson	Ph.D. Pharmacology & Toxicology	Purdue University
Harold D. Cole	Professor of Physiology	Southwestern Oklahoma State University
Yongsom Park	Ph.D. Nutritional Biochemistry	Washington State University
Richard Johnson	Professor of Chemistry	LeTourneau University
David Hagen	Ph.D. Mechanical Engineering	University of Minnesota
David Johnson	Associate Professor of Pharmacology & Toxicology	Duquesne University
Jay Hollman	Assistant Clinical Professor of Cardiology	Louisiana State University Health Science Center
Lawrence Johnston	Emeritus Professor of Physics	University of Idaho
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George Lebo	Associate Professor of Astronomy	University of Florida
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Peter Line	Ph.D. Neuroscience	Swinburne University of Technology (Australia)
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John Nichols	Ph.D. Mathematics	University of Tennessee
Mark Bearden	Ph.D. Electrical & Computer Engineering	Carnegie Mellon University
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Christopher Macosko	Ph.D. Chemical Engineering	University of North Carolina, Chapel Hill
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Amy Ward	Ph.D. Mathematics	University of New Hampshire
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Mark A. Robinson	Full Professor of Thermodynamics and Combustion Theory	University of Barcelona (Spain)
Hsin-Yi Lin	Ph.D. Environmental Science	University of Leeds (UK)
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Edwin Karlow	Chair, Department of Physics	LaSierra University
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James Keener	Professor of Mathematics & Adjunct of Bioengineering	University of Utah
Shawn Wright	Ph.D. Crop Science	North Carolina State University
Douglas Keil	Ph.D. Plasma Physics	University of Wisconsin, Madison
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Rebecca Keller	Research Professor, Department of Chemistry	University of New Mexico
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Bretta King	Assistant Professor of Chemistry	Spelman College
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Bruce Krogh	Professor of Electrical & Computer Engineering	Carnegie Mellon University
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William Notz	Professor of Statistics	Ohio State University
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Keith P. Birch	Ph.D. Atmospheric Physics	University of Southampton (UK)
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Theodor Liss	Ph.D. Chemistry	Massachusetts Institute of Technology
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Steve D. Figard	Ph.D. Biochemistry	Florida State University
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James T. Fowler	Ph.D. Mathematics	University of Durham (UK)
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Rod Rogers	Ph.D. Agronomy/Plant Breeding	Iowa State University
David W. Herrin	Research Assistant Professor in Mechanical Engineering	University of Kentucky
Glen Needham	Associate Professor of Entomology (Emeritus)	The Ohio State University
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Vladimir L. Voelkov	Vice-Chairman, Chair of Bio-organic Chemistry, Faculty of Biology	Lomonosov Moscow State University (Russia)
Ricardo Leon	Dean of School of Medicine	Autonomous University of Guadalajara (Mexico)
Eugene C. Ashby	Regents' Professor and Distinguished Professor Emeritus	Georgia Institute of Technology
JoAnne Larsen	Assistant Professor of Industrial Engineering	University of South Florida, Lakeland
Douglas Axe	Director (Ph.D. Chemical Engineering, California Institute of Technology)	Biologic Institute
Joel Brind	Professor of Biology	Baruch College, City University of New York
Olufermi Dokun-Babalola	Professor of Ophthalmology and Head of Department of Surgery	Bingham University (Nigeria)
L. Nathan Tumeo	Ph.D. Chemistry	Duke University
William F. Basener	Associate Professor of Mathematics	Rochester Institute of Technology
L. Whit Marks	Emeritus Professor of Physics	University of Central Oklahoma
Jan Peter Bengtson	Associate Professor (M.D., Ph.D. Intensive Care Medicine)	University of Gothenburg (Sweden)
Perry Mason	Professor of Mathematics and Physical Science	Lubbock Christian University
Timothy A. Mixon	Assistant Professor of Medicine	Texas A&M University
Lawrence DeMejo	Ph.D. Polymer Science and Engineering	University of Massachusetts at Amherst
Charles Garner	Professor of Chemistry	Baylor University
Lynne Parker	Professor of Computer Science (Ph.D. MIT)	Distributed Intelligence Lab, University of Tennessee
Ivan M. Lang	Ph.D. Physiology and Biophysics	Temple University
David J. Lawrence	Ph.D. Physics	Washington University, St. Louis
John G. Hoey	Ph.D. Molecular and Cellular Biology	City University of New York Graduate School
Theodore J. Siek	Ph.D. Biochemistry	Oregon State University
John P. Rickert	Ph.D. Mathematics	Vanderbilt University
Christian M. Loeh	Ph.D. Biochemistry and Molecular Genetics	University of Virginia
David W. Rusch	Sr. Research Scientist, Laboratory for Atmospheric and Space Physics	University of Colorado
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Luke Randall	Ph.D. Molecular Microbiology	University of London (UK)
Jan Frederic Dudi	Associate Professor of Biology	Grove City College
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Mark A. Chambers	Ph.D. Virology	University of Cambridge (UK)
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Daniel Howell	Ph.D. Biochemistry	Virginia Tech
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C. Roger Longbotham	Ph.D. Statistics	Florida State University
Hugh L. Henry	Lecturer (Ph.D. Physics, University of Virginia)	Northern Kentucky University
Jonathan D. Eisenback	Professor of Plant Pathology Dept. of Plant Pathology and Weed Science	Virginia Tech
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Peter Silley	Ph.D. Microbial Biochemistry	University of Newcastle upon Tyne
E. Norbert Smith	Ph.D. Zoology	Texas Tech University
Peter C. Iwen	Professor of Pathology and Microbiology	University of Nebraska Medical Center
Paul Roschke	A.P. and Florence Wiley Professor, Dept. of Civil Engineering	Texas A&M University
Luman R. Wing	Associate Professor of Biology	Azusa Pacific University
Edward F. Blick	Ph.D. Engineering Science	University of Oklahoma
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Wayne Linn	Professor Emeritus of Biology	Southern Oregon University
James Gundlach	Associate Professor of Physics	John A. Logan College
Guillermo Gonzalez	Associate Professor of Astronomy	Iowa State University
Tim Droubay	Ph.D. Physics	University of Wisconsin-Milwaukee
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Barry Homer	Ph.D. Mathematics	Southampton University (UK)
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Neil Amitage	Associate Professor of Civil Engineering	University of Cape Town (South Africa)
Geoff Barnard	Senior Research Scientist, Department of Veterinary Medicine	University of Cambridge (UK)
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Donald A. Kangas	Professor of Biology	Truman State University
Alvin Masanira	Senior Lecturer for Structural Engineering and Mechanics	University of Cape Town (South Africa)
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Thomas C. Majerus	PharmD; FCCP	University of Minnesota
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Dennis M. Sullivan	Professor of Biology and Bioethics	Cedarville University

Rodney M. Rutland	Department Head & Associate Professor of Kinesiology	Anderson University
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Laverne Miller	Clinical Associate Professor of Family Medicine	Medical College of Ohio
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Dale A. Dickinson	Assistant Professor & Graduate Program Director, School of Public Health	University of Alabama Birmingham
Gerald C. Van Dyke	Professor of Botany & Plant Pathology	North Carolina State University
Paul N. Dunlap	Ph.D. in Chemical Engineering	California Institute of Technology
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Matthew Harvey Jones	Ph.D. in Mechanical and Aeronautical Engineering	University of California, Davis
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James R. Matthews	Ph.D. in Materials Engineering	MIT
Doug Peters	Ph.D. in Electrical Engineering	University of Virginia
Terry L. Rathman	Ph.D. in Organic Chemistry	Virginia Tech
Philip C. Sekar	Ph.D. in Medical Chemistry	University of Delhi
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Craig Thomas	Ph.D. in Animal Science	University of Florida
Ron Voss	Ph.D. in Chemistry	University of Manitoba
Wesley Brewer	Ph.D. in Computational Engineering	Mississippi State University
Keith Diaz	Ph.D. in Integrative Exercise Physiology	Temple University
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George-Adrian Lungu	Ph.D. Physics	University of Bucharest
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Yongfang Zhang	Ph.D. Electrical Engineering	California Institute of Technology
Betsy Siewert	Ph.D. in Biostatistics	University of Colorado, Denver
Edgar Andrews	Emeritus Professor of Materials Science	University of London, UK
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Günter Bechly	Ph.D. Paleontology	Eberhard-Karls-University Tübingen
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Doo Jin Cho	Professor of Electronics	Ajou University, Korea
Jang Hoon Kim	Professor of Architecture	Ajou University, Korea
Rémi Plus	Doctor of Sciences	Paris University
	Former member, Société Française de Chimie Physique	
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Dusan Fiala	Ph.D. Biophysics/Systems Biology	De Montfort University
Michael R. Shepard	Ph.D. Chemistry	University of Florida
Victor Enrique Vizcarra Ruiz	Professor of Physics	Universidade Estadual de Maringá
PremRaj Pushpakaran	Ph.D. Biotechnology	Jamia Hamdard, New Delhi, India
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Guy F. Birkenmeier	Ph.D. Biochemistry	Washington State University
Paul Keough	Ph.D. Health Sciences	Northwestern University

*= Deceased since signing statement.
Note: Unless updated information has been received, positions listed are those held by signatories when they signed the statement.

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Stefano Brilanti	Associate Professor of Gastroenterology	University of Bologna
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William Soo Hoo	Ph.D. in Biochemistry	University of Illinois, Champaign-Urbana
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Julio A. Gonzalo	Professor of Solid State Physics, 1983-2006	Universidad Autónoma de Madrid
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Hamza Saouli	Ph.D. Computer Science	University of Biskra, Algeria
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Jean-Michel Olivereau	Professor of Neurosciences (retired)	University of Paris-Descartes
Timothy P. Gilmour	Ph.D. Electrical Engineering	Pennsylvania State University
Mark Liebe	Ph.D. Water Resources Engineering	Iowa State University
Edward Schmeichel	Emeritus Professor of Mathematics	San Jose State University
James Hodge	Ph.D. Chemistry	Pennsylvania State University
Ernst Lutz	Ph.D. in Agricultural and Resource Economics	University of California, Berkeley
Istvan Fodor	Ph.D. in Molecular Biology	USSR Academy of Sciences (USSR)
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Rob Redfield	Professor, Dept. of Engineering Mechanics	US Air Force Academy
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David Rolf	Ph.D. in Bioorganic Chemistry	University of Minnesota
Wayne Rossiter	Assistant Professor of Biology	Waynesburg University
Ralph A. Henderson Jr.	Professor Emeritus, Department of Clinical Sciences	Auburn University, College of Veterinary Medicine
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Moses Noh	Ph.D. in Mechanical Engineering	Georgia Institute of Technology
Allan L. Bleeker	Ph.D. Biology	Rutgers University
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Isak J. van der Walt	Professor, Philosophy of Science and Technology	North West University (South Africa)
Rex A. Parker	Ph.D. Biochemistry	Indiana University
Richard Webb	Ph.D. Physics	Washington State University
Robert W. West, Jr.	Emeritus Professor, Department of Biochemistry and Molecular Biology	SUNY Upstate Medical University
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Timothy D. Blackburn	Ph.D. Systems Engineering	The George Washington University
Teemu Langsjö	M.D., Ph.D. Anatomy	University of Eastern Finland
Peter Knibbe	Ph.D. Experimental Physics	University of Pennsylvania
Sebastian Michael	Ph.D. in Anthropology	University of Bombay
John Thatcher	Ph.D. Mathematics (Theoretical Astrophysics)	University of Sydney

Observations

This doesn't prove that
Darwinism is false.

Observations

This doesn't mean that all
these signers repudiate
evolution entirely.

Observations

It does mean that statements such as

"The basic Darwinian idea . . . is about as secure as any in science . . ."

Challenging evolution is on par with believing in a flat Earth.

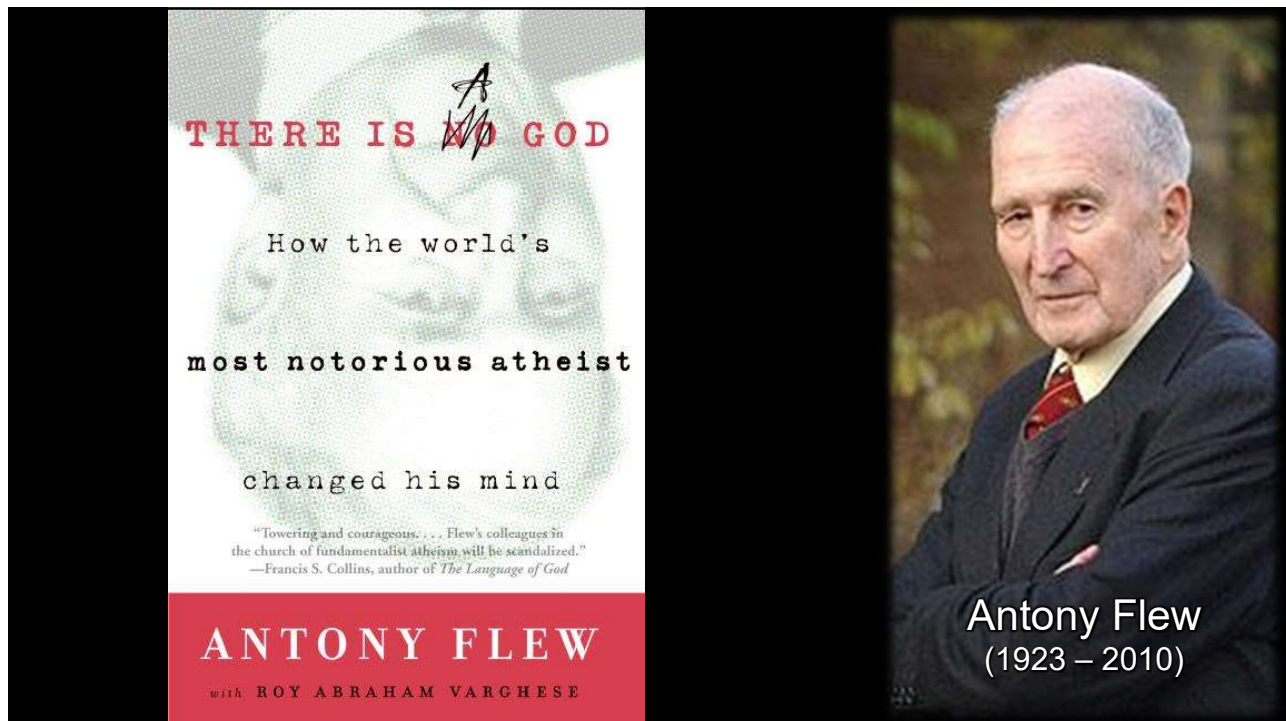
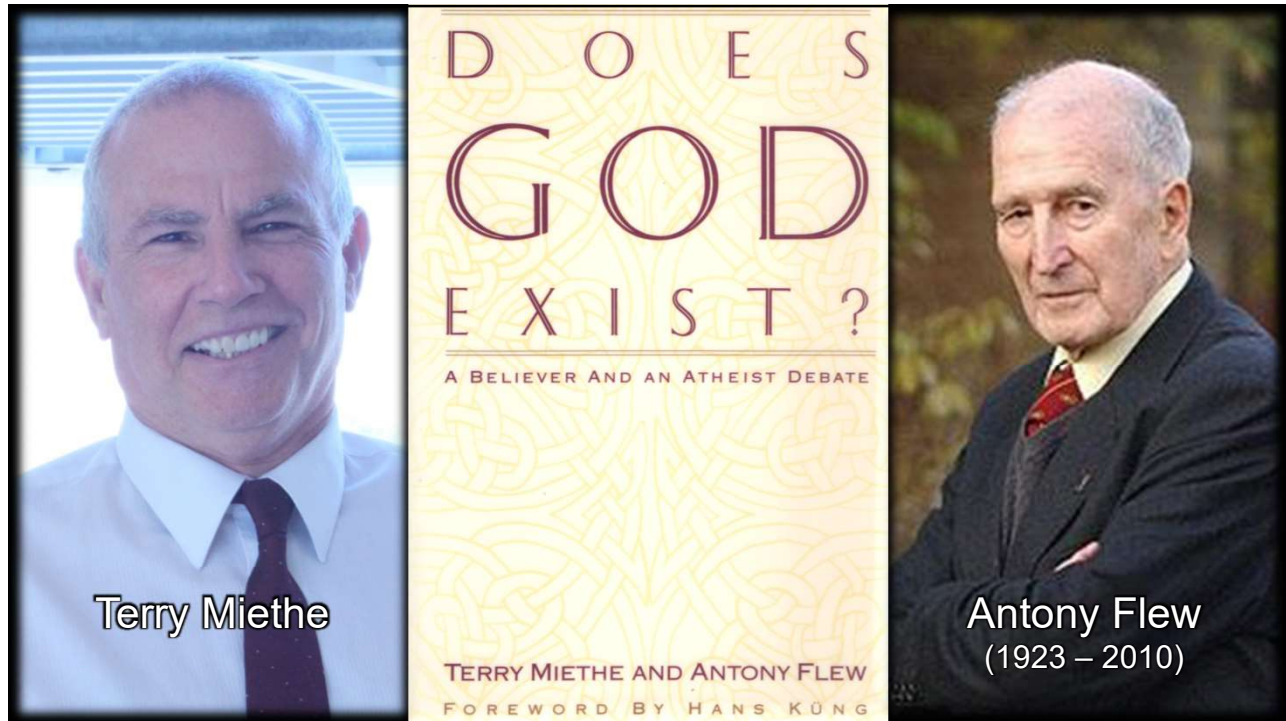
"Darwinian evolution is a well-established theory. "

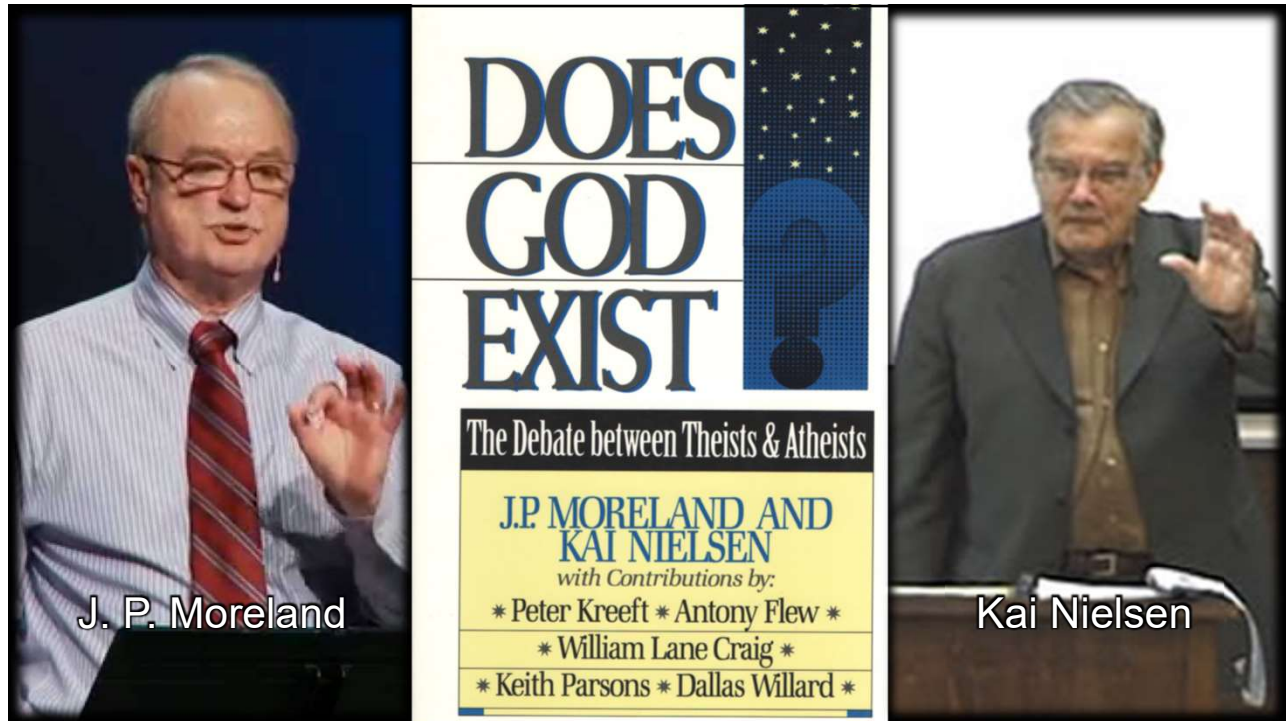
Challenging evolution is on par with challenging the Moon landing.

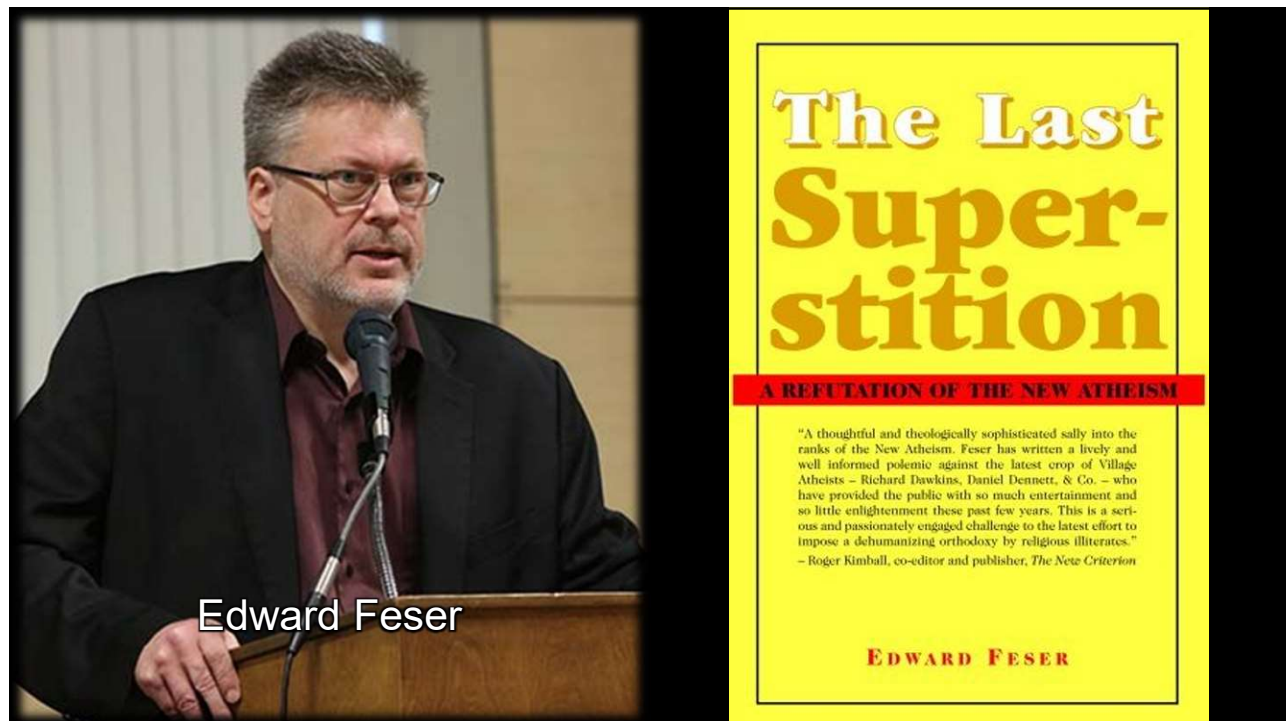
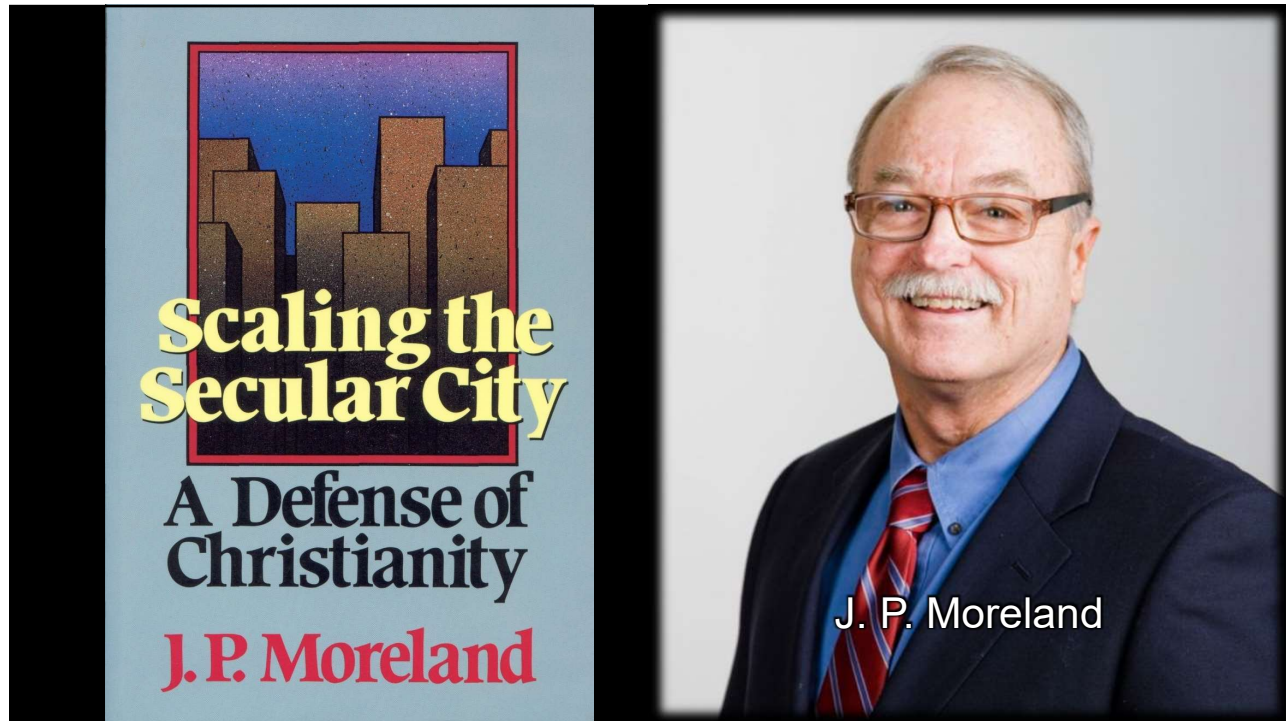
"There is no question . . ."

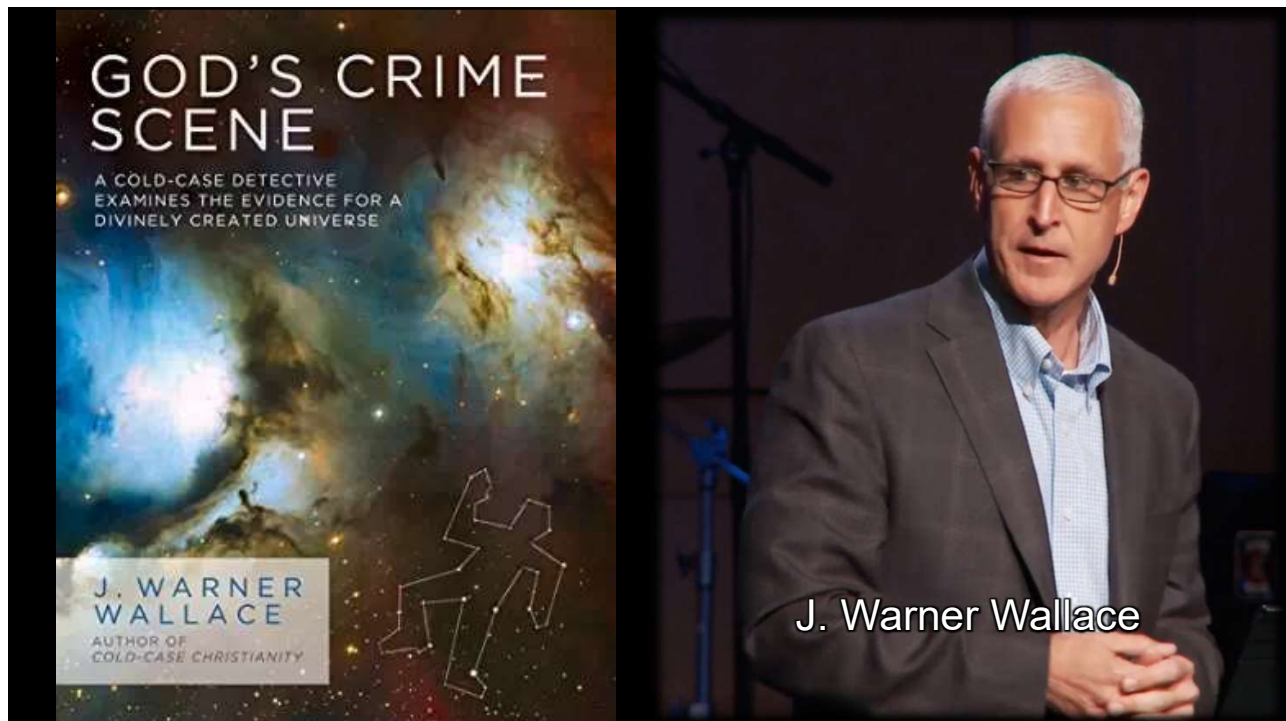
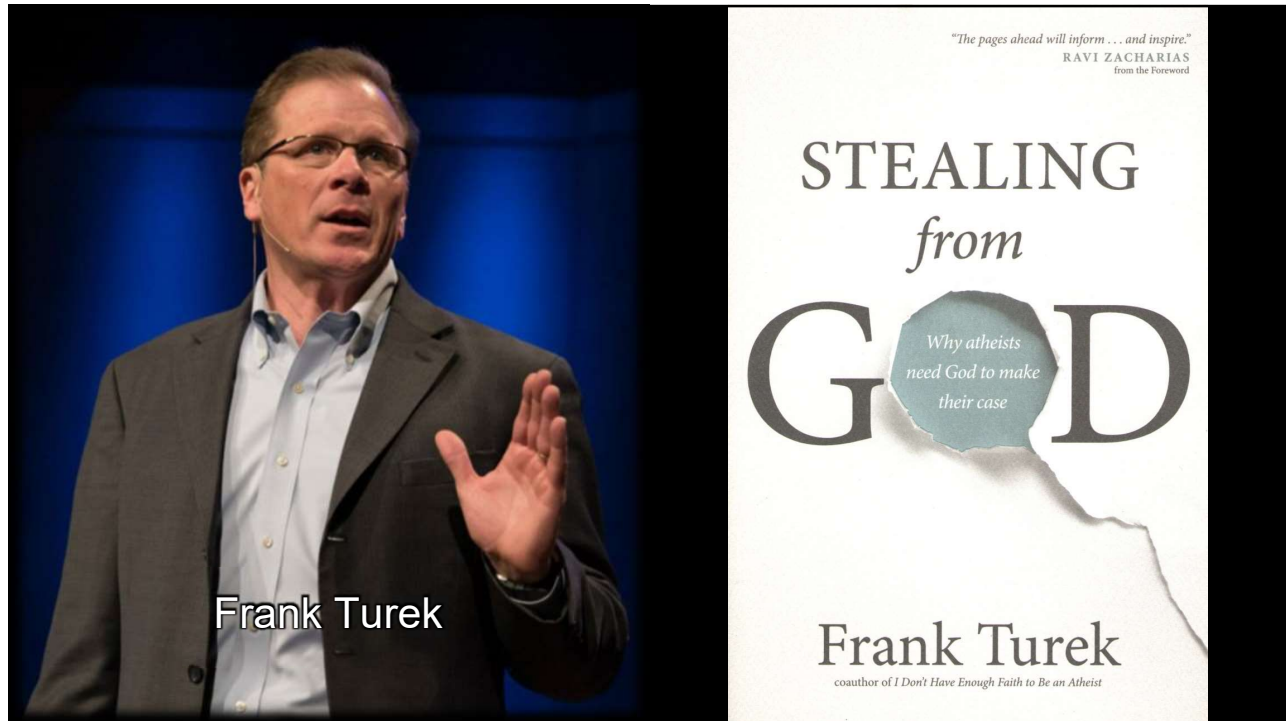
are unwarranted.

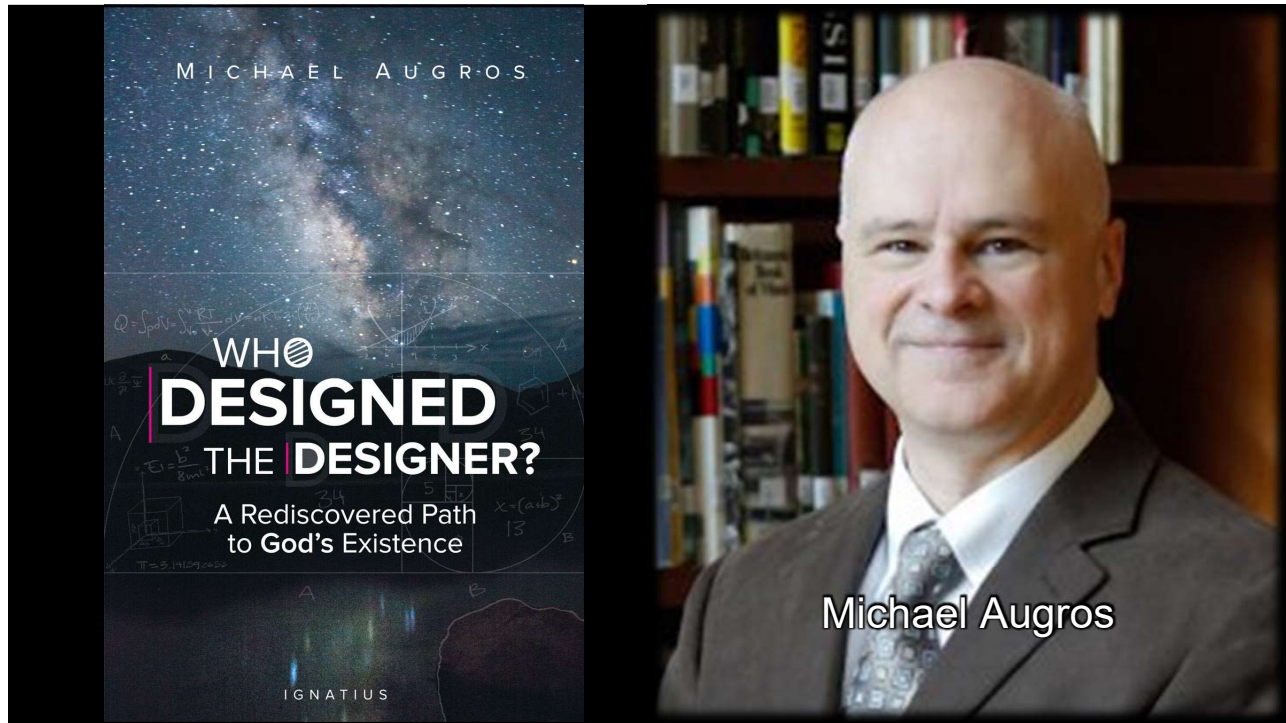


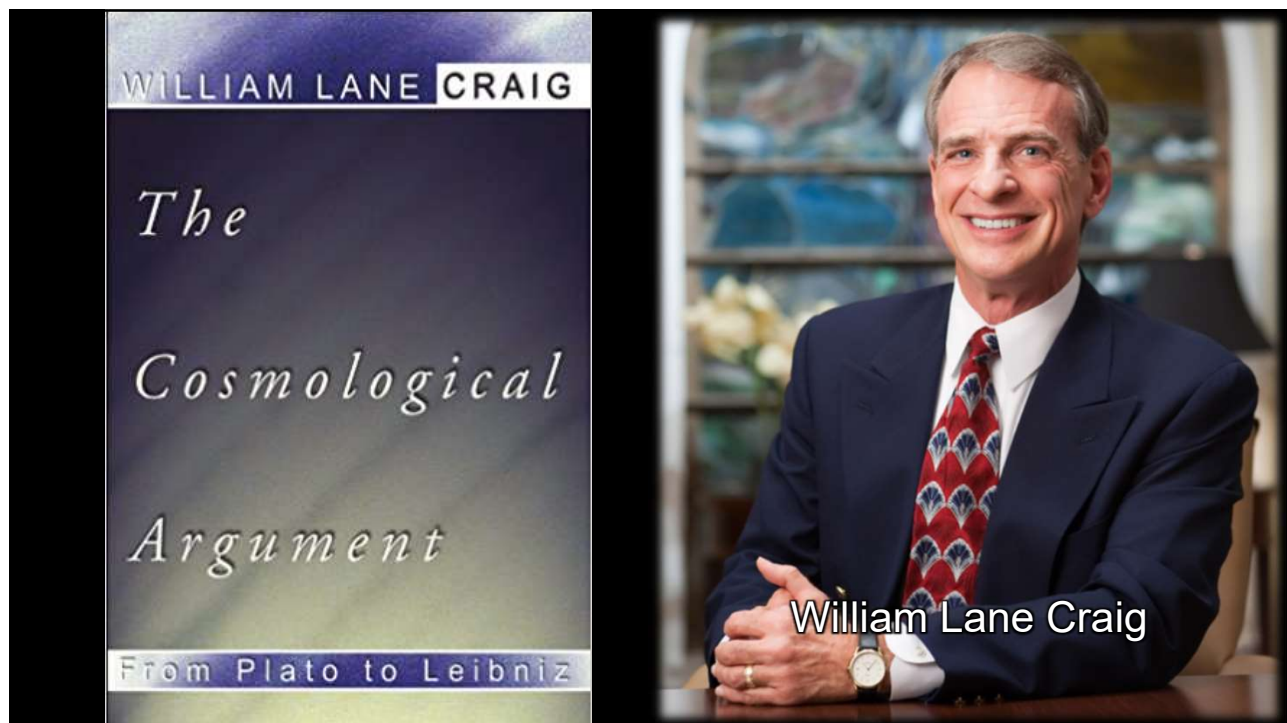
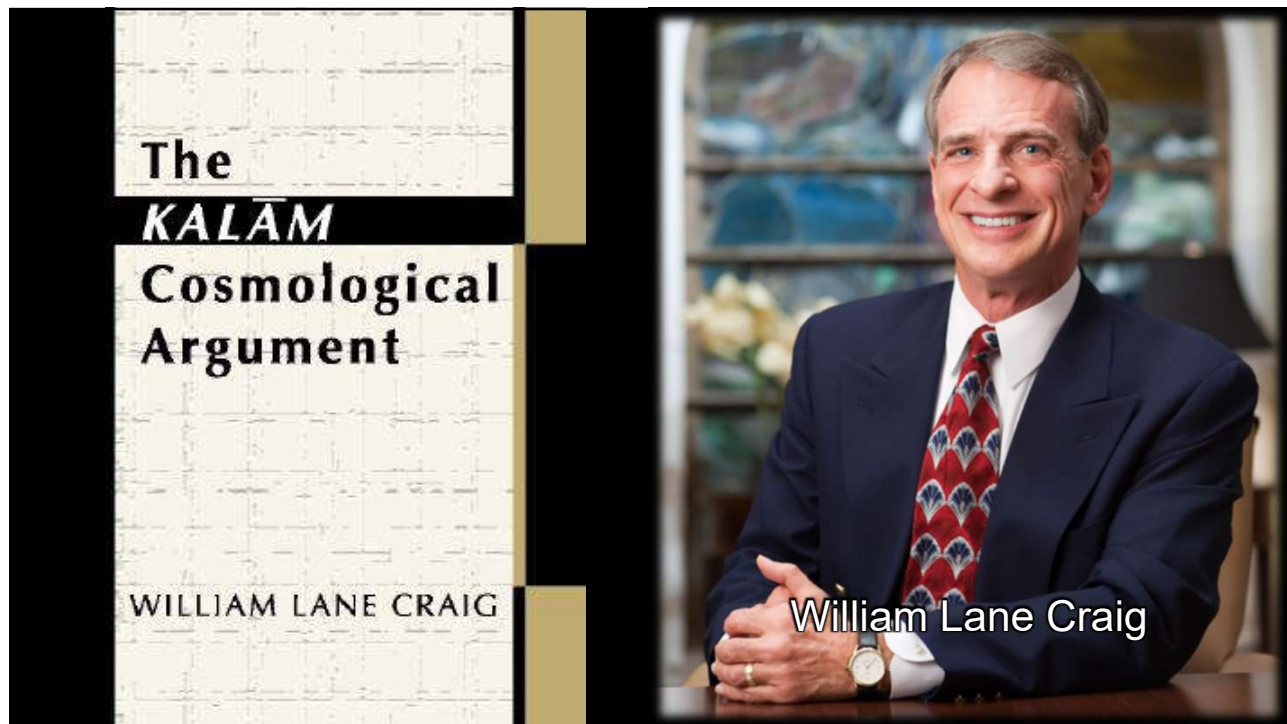


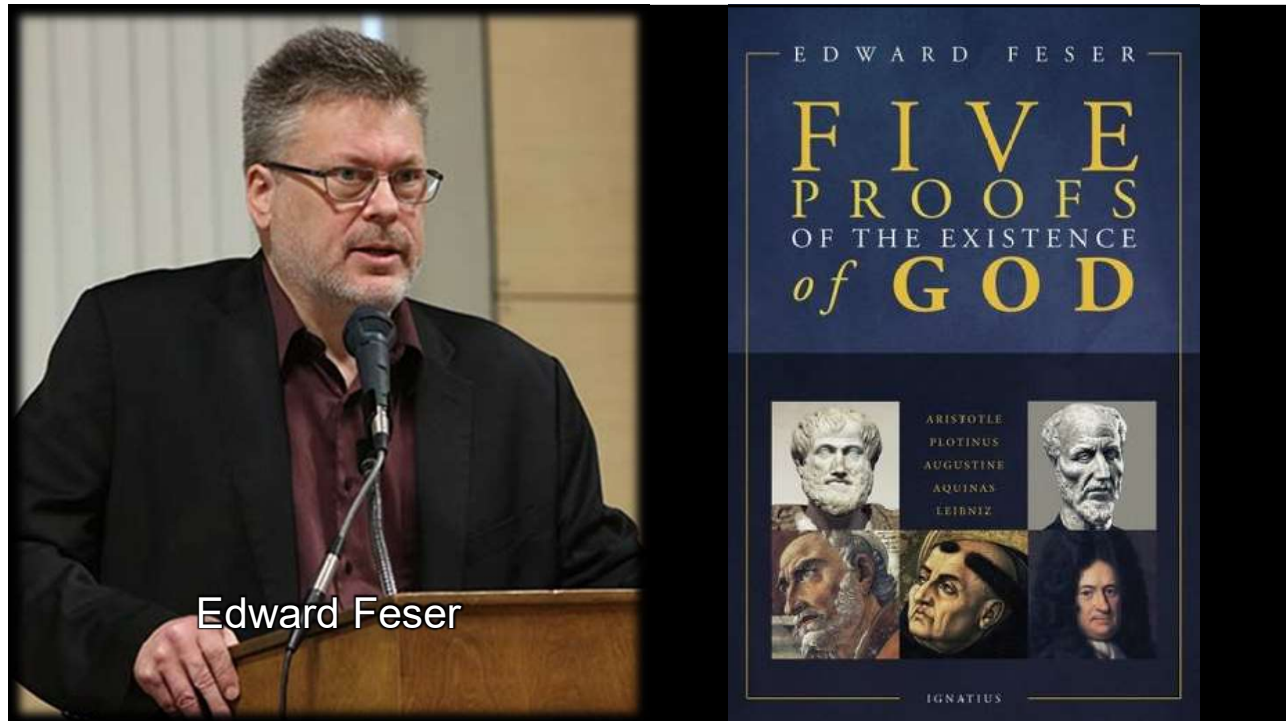


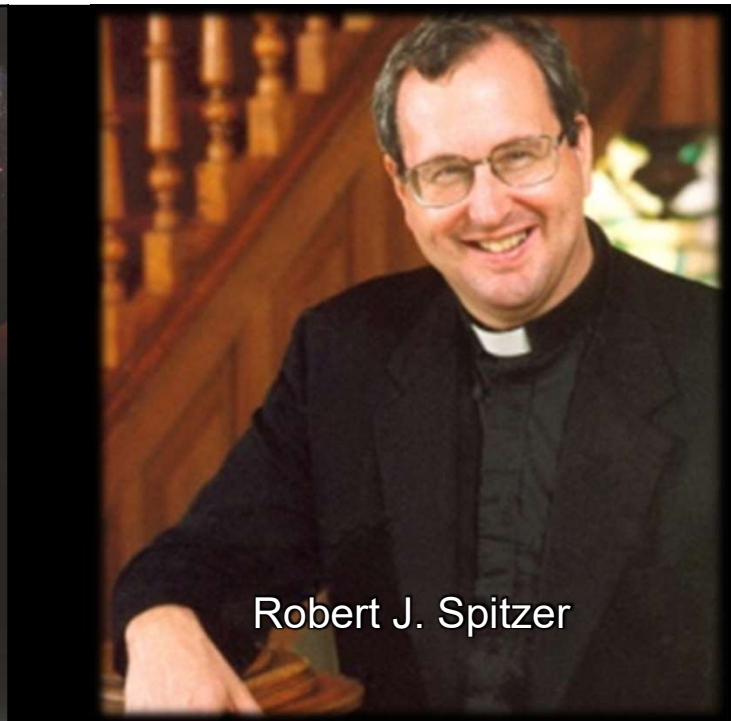
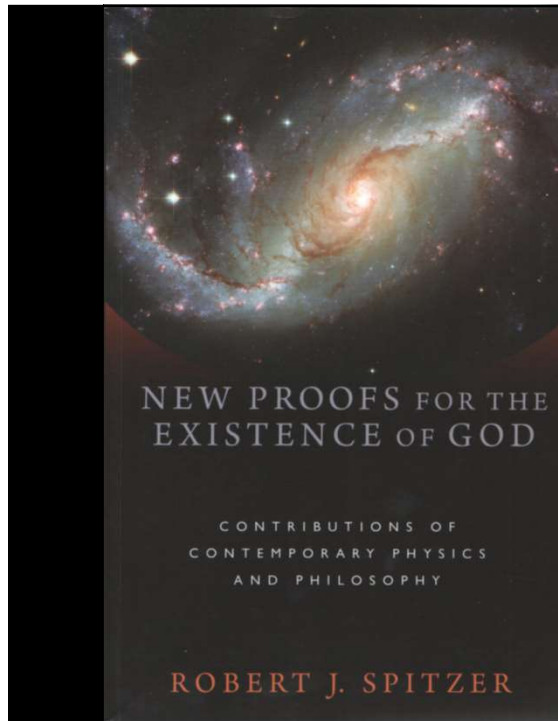




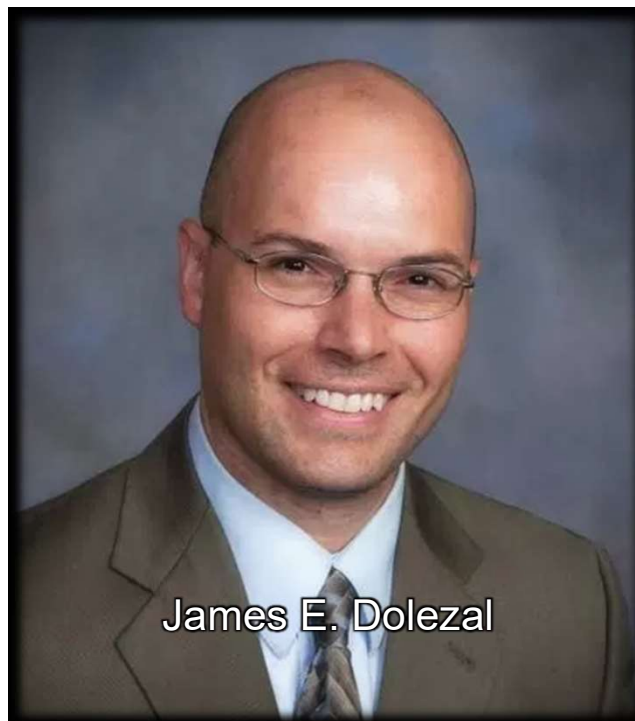








Robert J. Spitzer



James E. Dolezal

