

"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."

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

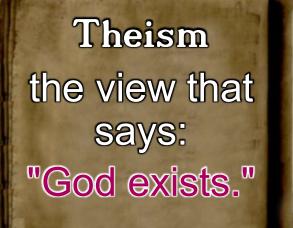
Inmanuel Kant Izu-1804



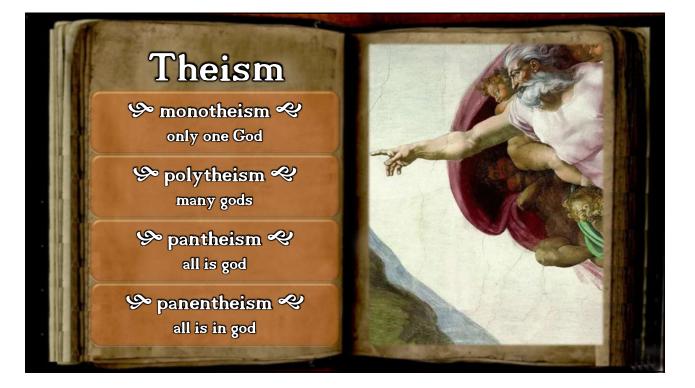
### Theism

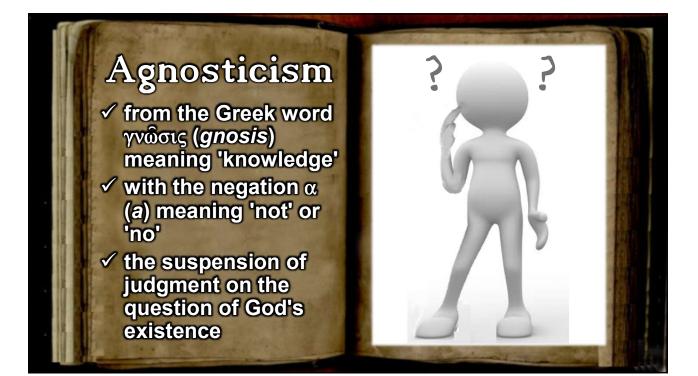
 ✓ from the Greek word θεός (theos) meaning 'God'
 ✓ the world view that affirms the existence of God

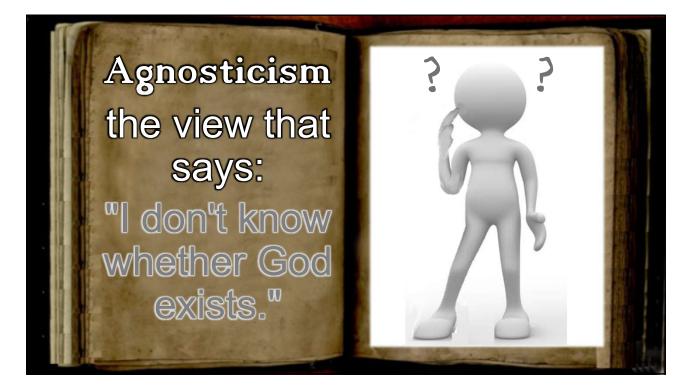


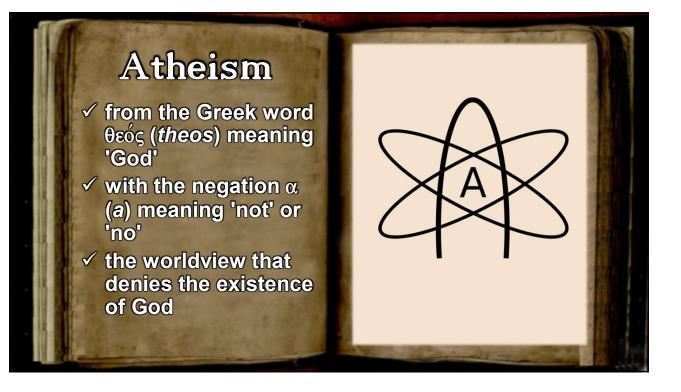


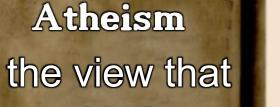






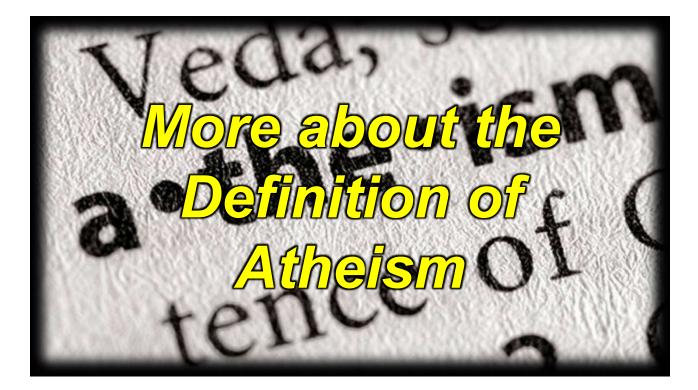


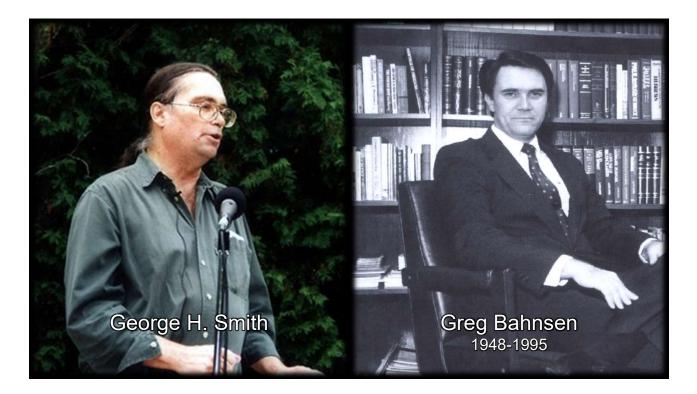




says "God does not exist."

#### 2

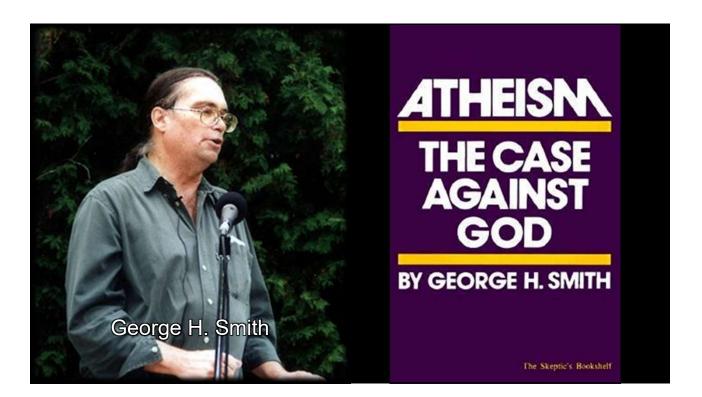




George H. Smith

"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

"Atheism, in its basic form, is not a belief: it is the absence of belief. An atheist is not primarily a person who believes that a god does not exist; rather, he does not believe in the existence of God."

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



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

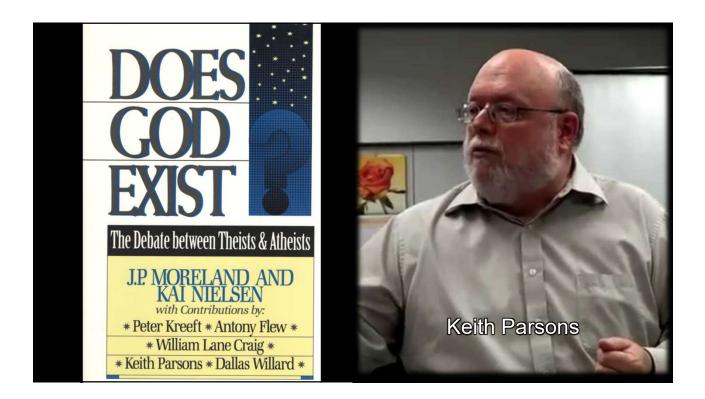
[George H. Smith, *Atheism: The Case Against God* (Buffalo: Prometheus, 1989), 21]

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

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

## "If atheism is correct, \_\_\_\_\_

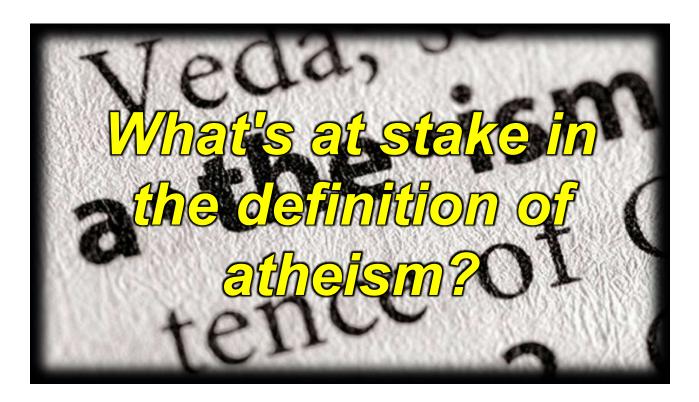
- man is alone
- there is no god
- > for knowledge, man must think for himself
- for success, man must work
- For happiness, man must strive to achieve it
- > all of these are sole responsibility of man

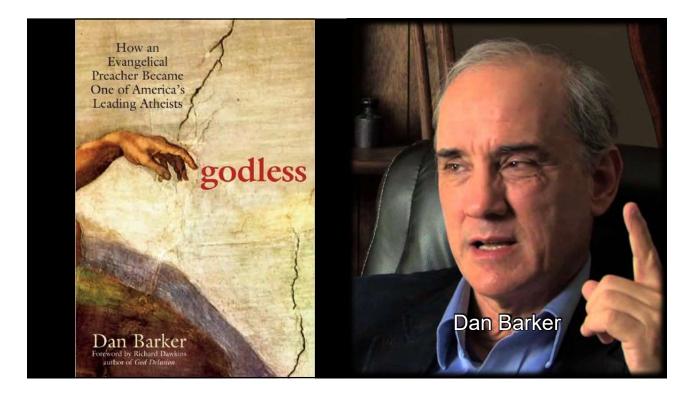


"After all, 'atheism' means simply the lack of belief in God (and not, as is commonly supposed, the denial of God's existence)."

[J. P. Moreland and Kai Nielsen *Does God Exist? The Great Debate* (Nashville: Thomas Nelson Publishers, 1990): 179 republished as *Does God Exist? The Debate Between Theists and Atheists* (Buffalo: Prometheus Books, 1993): 179]

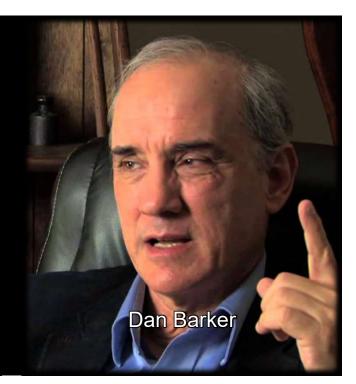


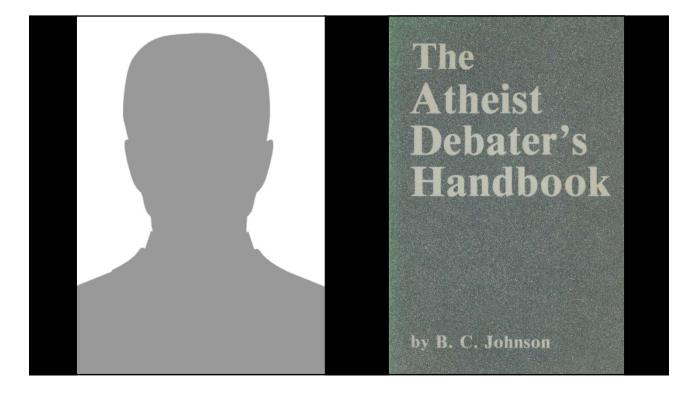




"Theists claim that there is a god; atheists do not. ... In any argument, the burden of proof is on the one making the claim."

[Dan Barker, Godless: How an Evangelical Preacher Became One of America's Leading Atheists (Berkeley: Ulysses Press, 2008), 104]



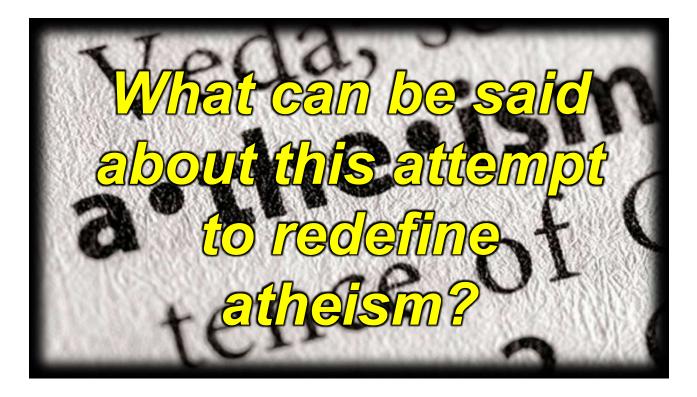


"Theists believe in God, while atheists do not have such a belief. Many theists insist that it is the responsibility of the atheist to offer evidence justifying his lack of belief in God. But is the theist's demand rational? Must the atheist justify his lack of belief in God? Or does the burden rest with the theist?"

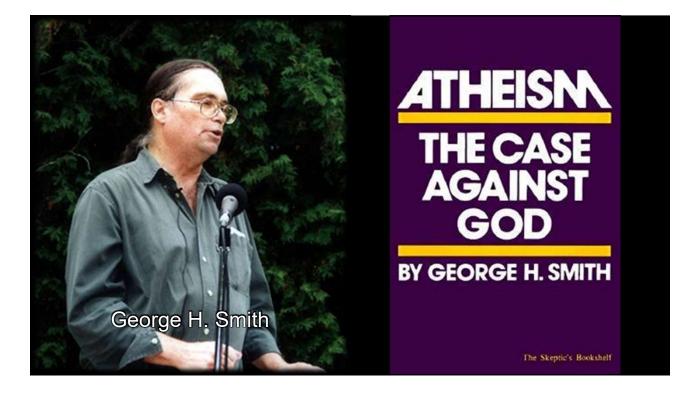
[B. C. Johnson, The Athelist Debater's Handbook (Buffalo: Prometheus Books, 1983): 11]

## The Atheist Debater's Handbook

by B. C. Johnson



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





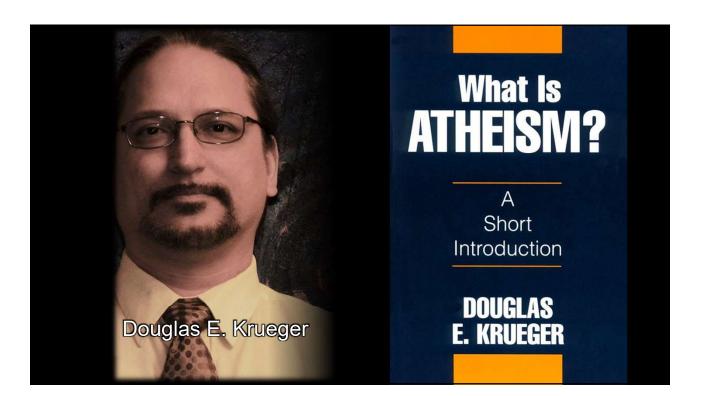
"As used throughout this book, 'theism' signifies the belief in any god or number of gods. The prefix 'a' means 'without,' so the term 'a-theism' literally means 'without theism,' or without belief in a god or gods."

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



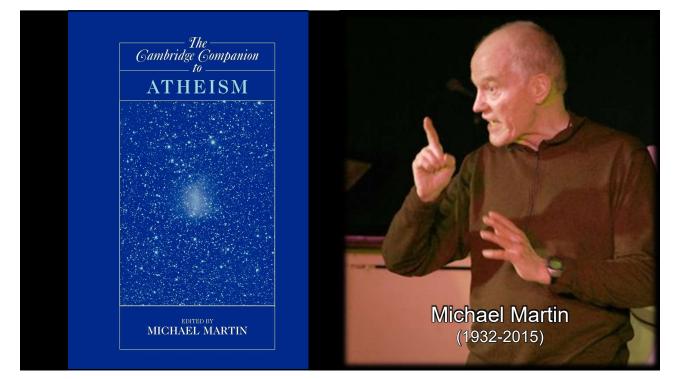
Douglas E. Krueger

"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). "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."

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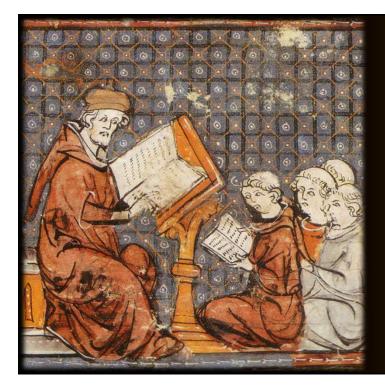


"If you look up 'atheism' in a dictionary, you will find it defined as the belief that there is no God. Certainly, many people understand 'atheism' in this way. Yet this is not what the term means if one considers it from the point of view of its Greek roots. In Greek 'a' means 'without' or 'not' and 'theos' 'god.' From this stand point, an atheist is someone without a belief in God; he or she need not be someone who believes that God does not exist."

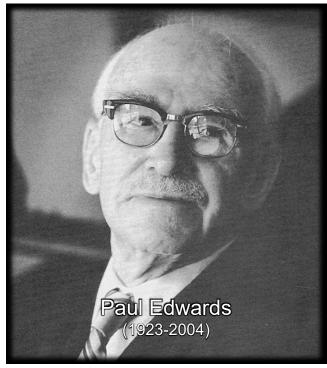
[n.a., "General Introduction," in *The Cambridge Companion to Atheism* (Cambridge: Cambridge University Press, 2007), 1]

Michael Martin

(1932-2015)

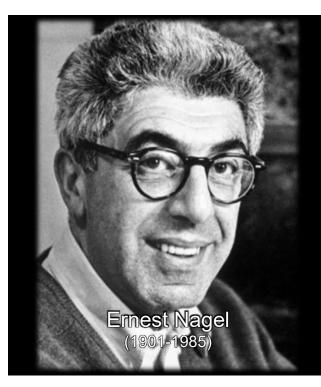


Second, this definition conflicts with the standard academic definition of atheism.



"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.]



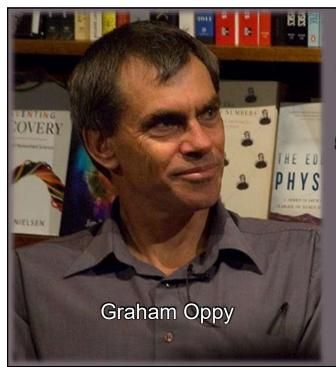
"[A]theism is not to be identified with sheer unbelief.... A child who has received no religious instruction ... is not an atheist—for he is not denying any theistic claims."

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



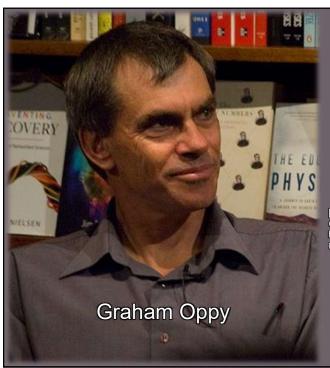
"Is the proposition that God exists true or false? You are a theist if and only if you say that the proposition is true or probably true, you are an atheist if and only if you say that it is false or probably false, and you are an agnostic if and only if you understand what the proposition is, but resist 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]



"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.

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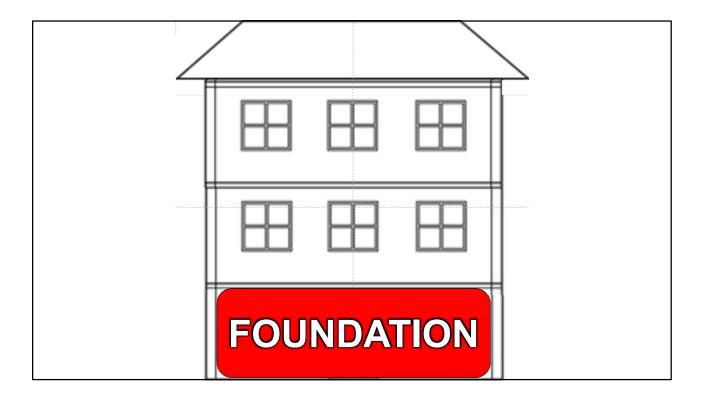
"Other people like to say that atheism is just lacking the belief that God exists which lumps together ... the class of agnostics with the class of atheists; if you define it that way, which I don't like."

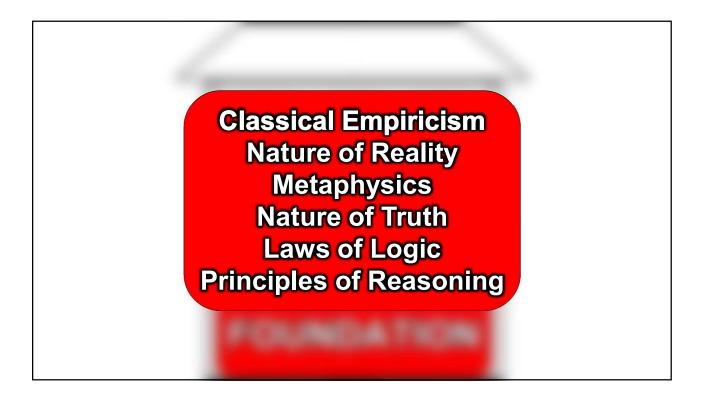
[Gramham Oppy vs. Ben Arbour, "The Ontological Argument" on *Capturing Christianity*, You Tube video https://www.youtube.com/watch?v=udxfuPgq4TY, @1:05:20, accessed 06/13/22]

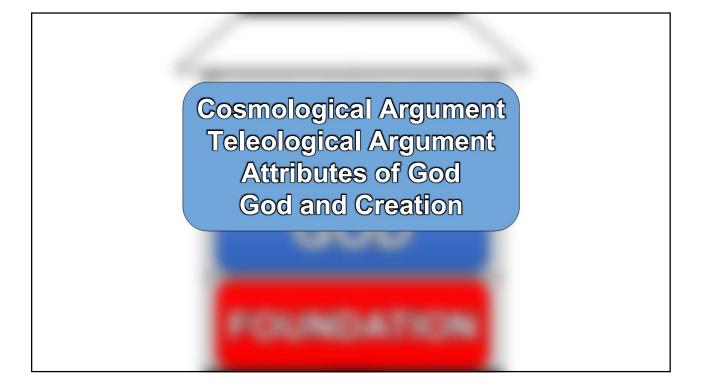


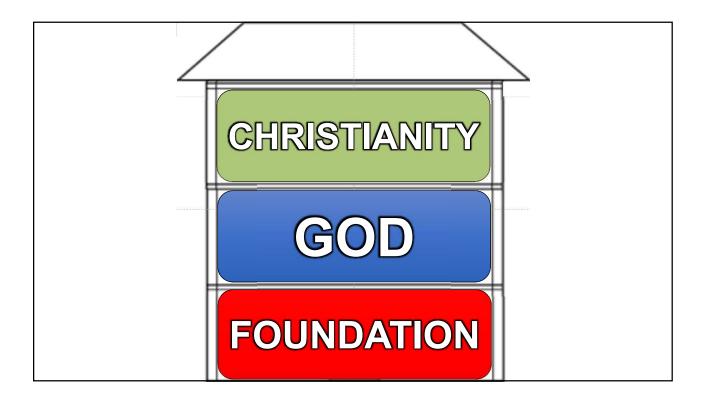
Third, this definition entails an absurdity if not an outright contradiction.

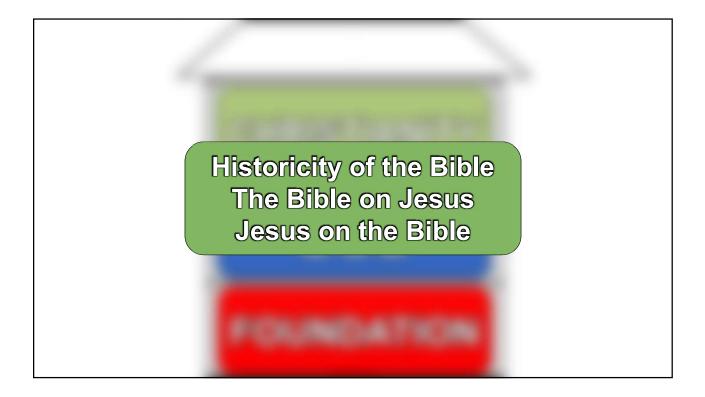










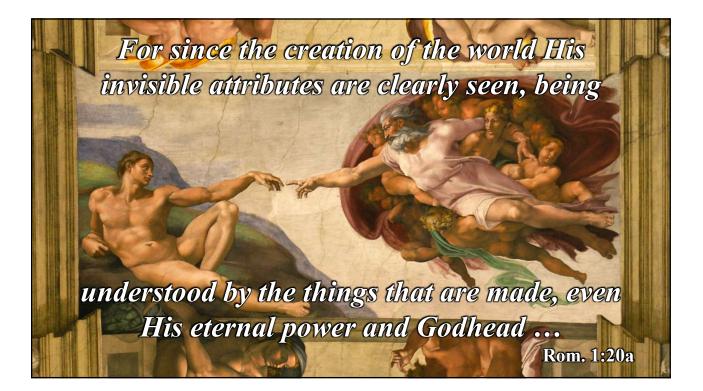


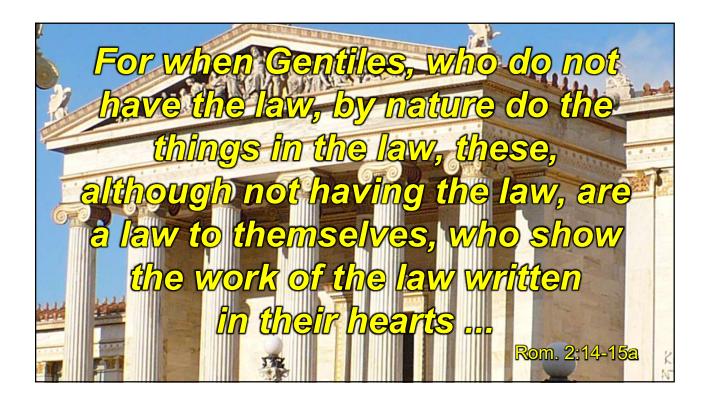
# The Bible's Testimony to the Existence of God

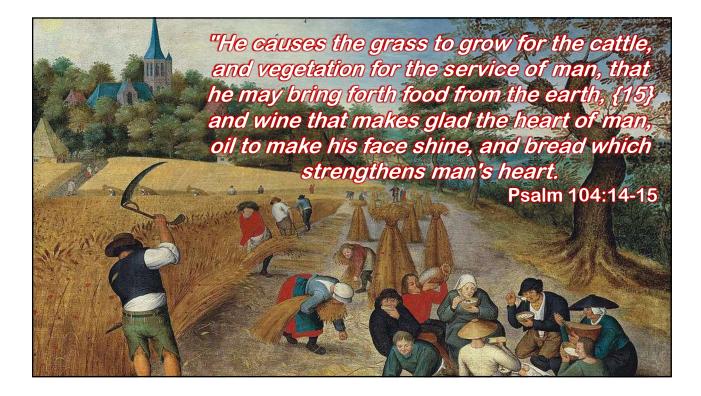
The heavens declare the glory of God; and the firmament shows His handiwork.

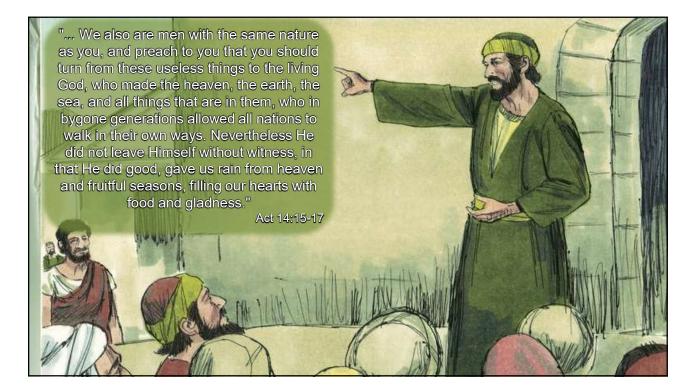
The heavens declare His righteousness, And all the peoples see His glory.

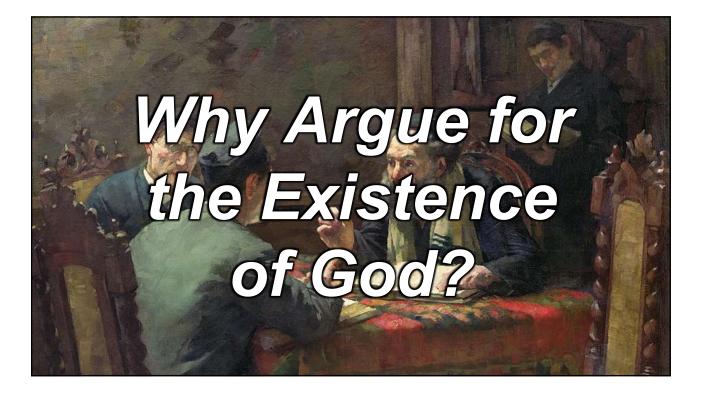
Psalm 97:6











#### **≫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.

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

... 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

#### 

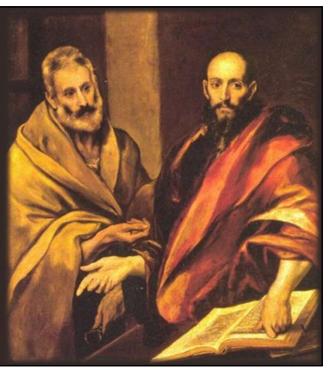
God may use the evidence to bring some to believe that God exists.

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.

... 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.

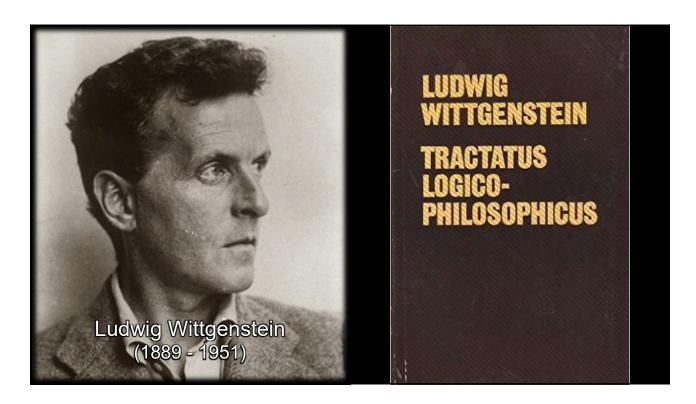
Irrelevant		
non-Theists	non-Theists / Irrelevant	Theists / Irrelevant
T-non-T	non-Theists / Relevant	Theists / Relevant
Relevant		

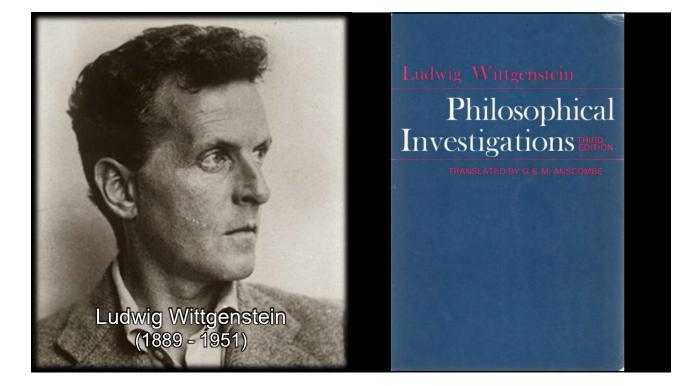


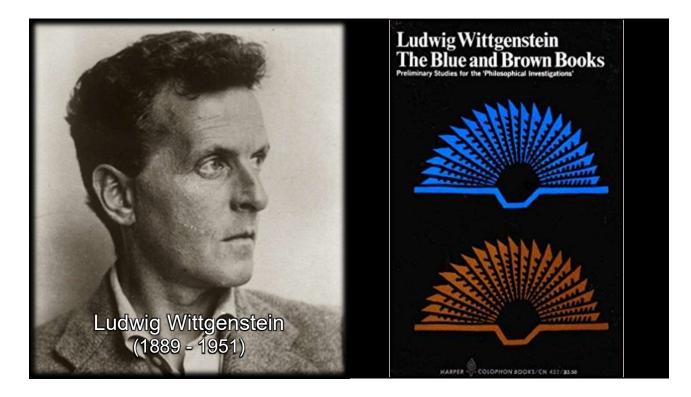
## non-Theists

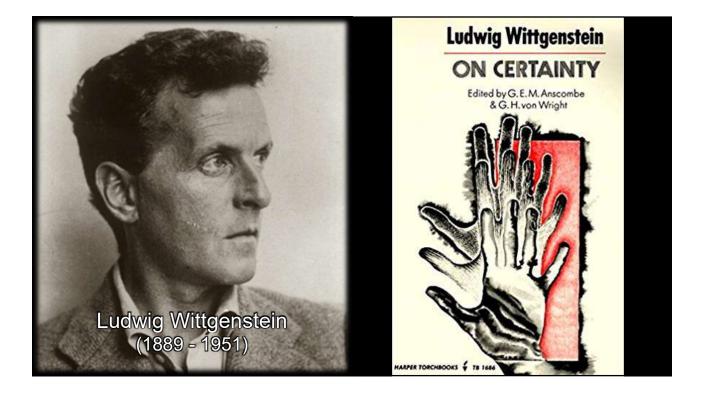


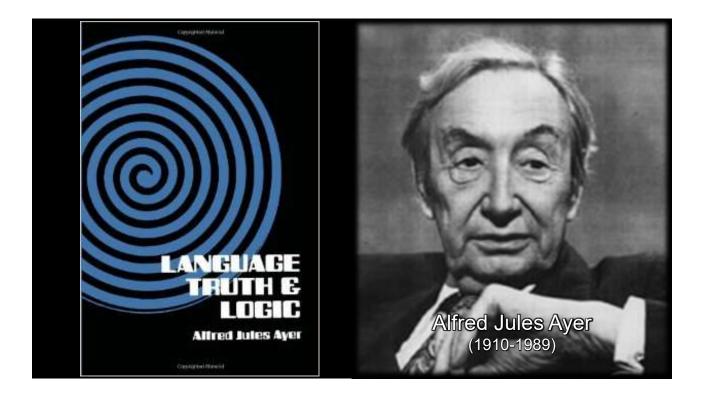
#### Relevant

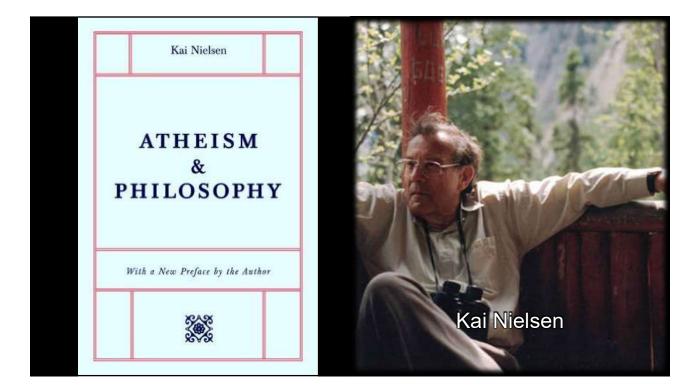












	Irrele	evant
	LOGICAL POSITIVISTS Arguments are metaphysically or linguistically meaningless.	
	(Ludwig Wittgenstein; A. J. Ayer; Kai Nielsen)	
non-Theists	<b>SKEPTICS</b> Arguments are epistemologically impossible. Important philosophical doctrines are only psychologically caused. (David Hume)	The
on-T		heists
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	Rele	vant

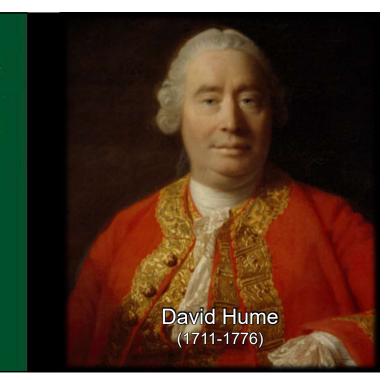
#### DAVID HUME ENQUIRIES CONCERNING HUMAN UNDERSTANDING AND CONCERNING THE PRINCIPLES OF MORALS

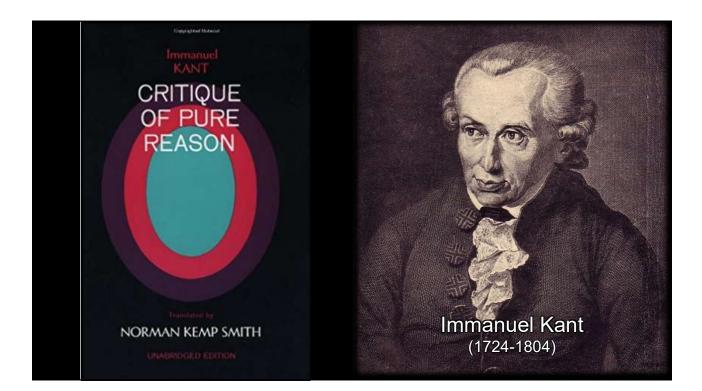
Reprinted from the 1777 edition with Introduction and Analytical Index by L. A. Selby-Bigge

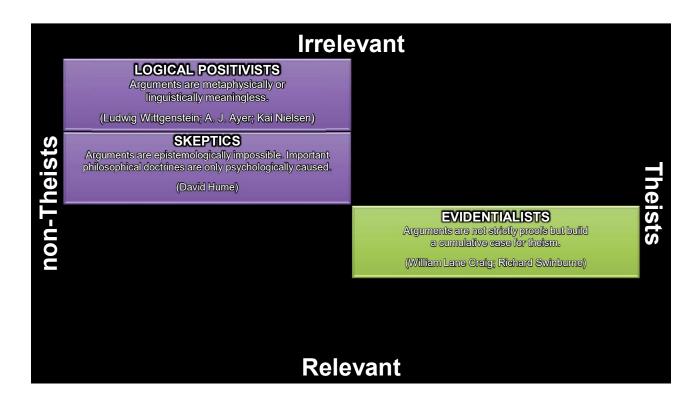
#### THIRD EDITION

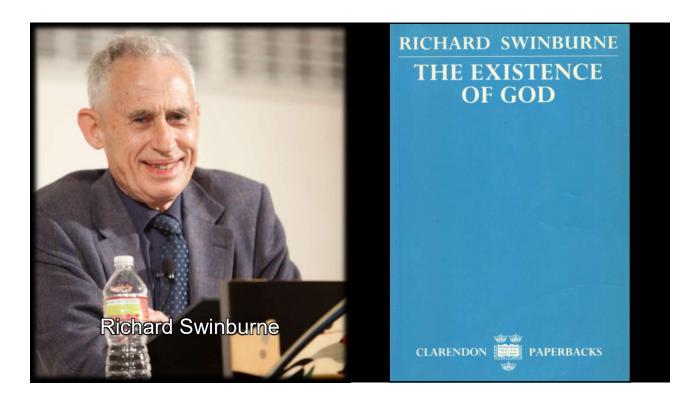
with text revised and notes by P. H. Nidditch

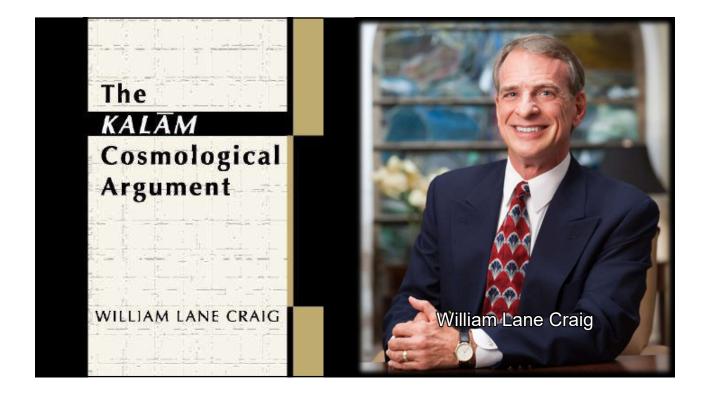
OPEN UNIVERSITY SET BOOK



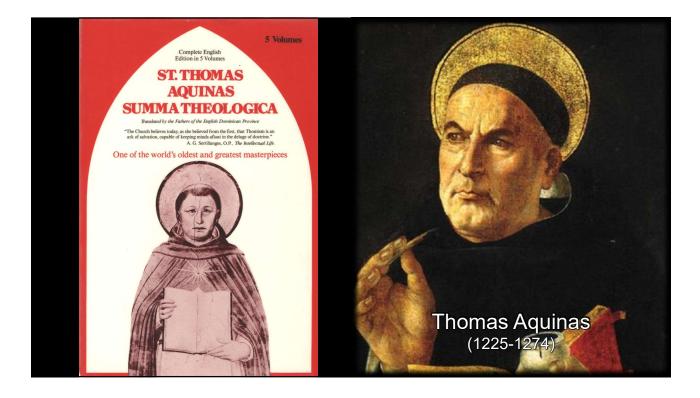








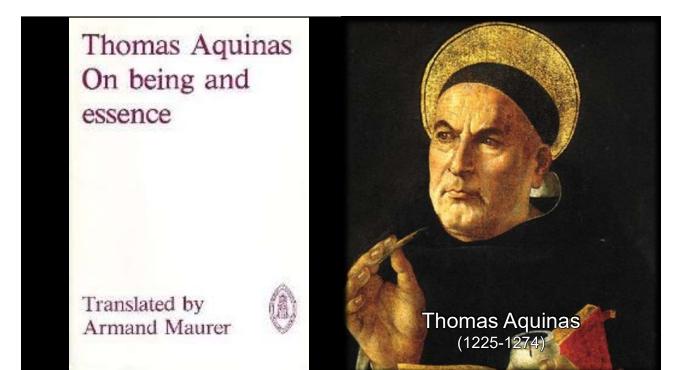
	Irrele	evant	
	<b>LOGICAL POSITIVISTS</b> Arguments are metaphysically or linguistically meaningless.		
	(Ludwig Wittgenstein; A. J. Ayer; Kai Nielsen)		
on-Theists	<b>SKEPTICS</b> Arguments are epistemologically impossible. Important philosophical doctrines are only psychologically caused. (David Hume)		The
non-T		EVIDENTIALISTS Arguments are not strictly proofs but build a cumulative case for theism. (William Lane Craig; Richard Swinburne)	ists
		THOMISTS Arguments are demonstrations. Theism is established. (Thomas Aquinas; Etienne Gilson; Joseph Owens; Norman Ceisler; Edward Feser)	
	Rele	vant	

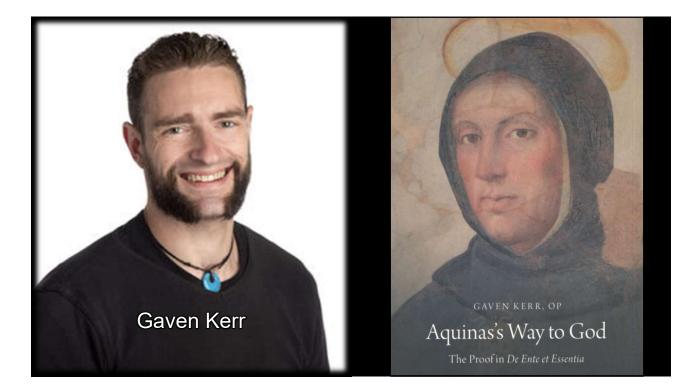


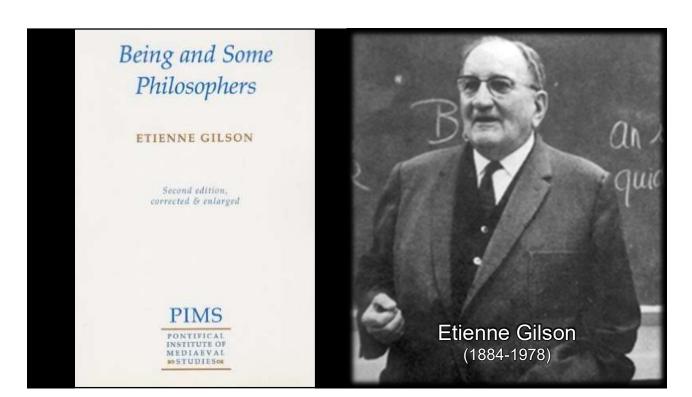
### Thomas Aquinas's "Five Ways"

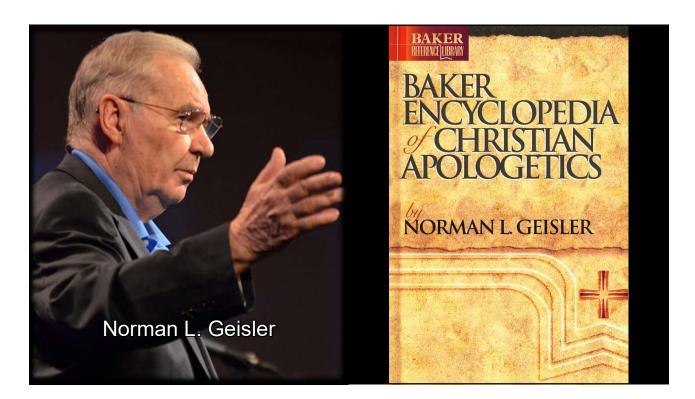
- > Argument from motion
- Argument from efficient causality
- Argument from necessary being
- Argument from degrees of perfection
- Argument from final causality

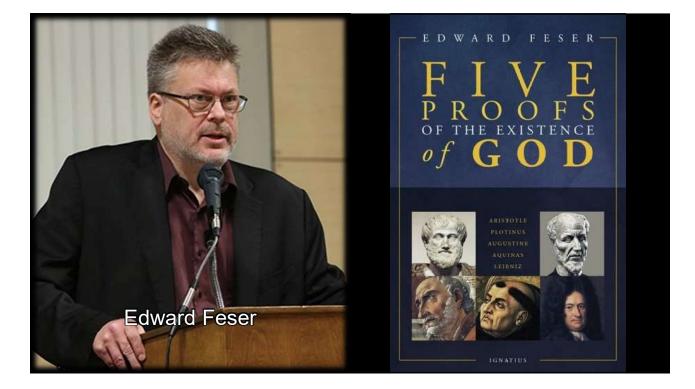
Thomas Aquinas (1225-1274)











	Irrelevant		
	LOGICAL POSITIVISTS Arguments are metaphysically or linguistically meaningless. (Ludwig Wittgenstein; A. J. Ayer; Kai Nielsen)	<b>EXISTENTIALISTS</b> Arguments are relatively or entirely unnecessary. They have little to nothing to do with religion. Religion is primarily experiential and non-propositional. (Søren Kierkegaard)	
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	Rele	vant	

Søren Kierkegaard (1813-1855)

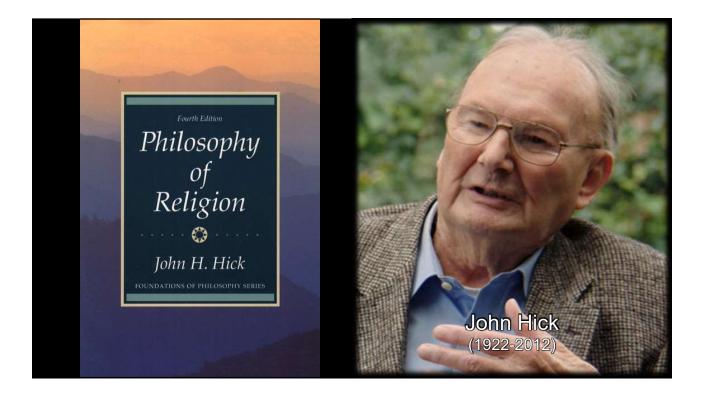
#### CONCLUDING UNSCIENTIFIC POSTSCRIPT TO PHILOSOPHICAL FRAGMENTS

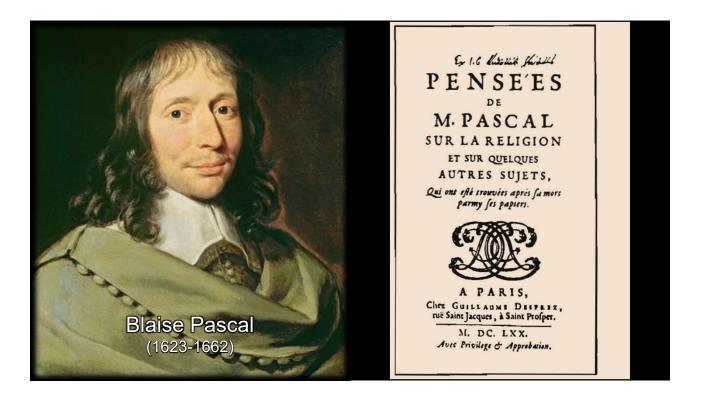


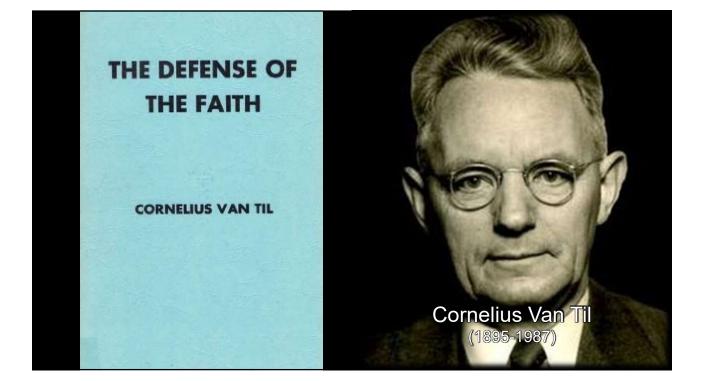
#### Søren Kierkegaard

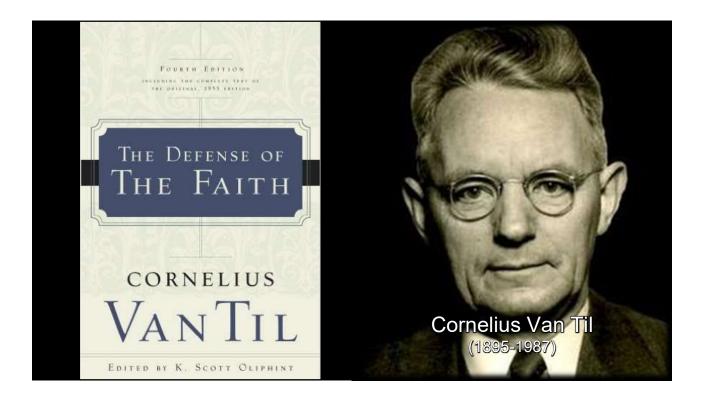
VOLUME I Edited and Translated by Howard V. Hong and Edna H. Hong with Introduction and Notes

	Irrelevant		
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non-Theists	<b>SKEPTICS</b> 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 transcendentally "argued" (Cornelius Van Til; Greg L. Bahnsen).	
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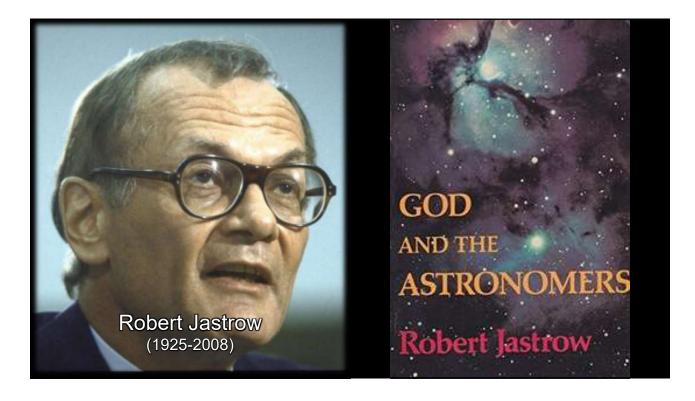




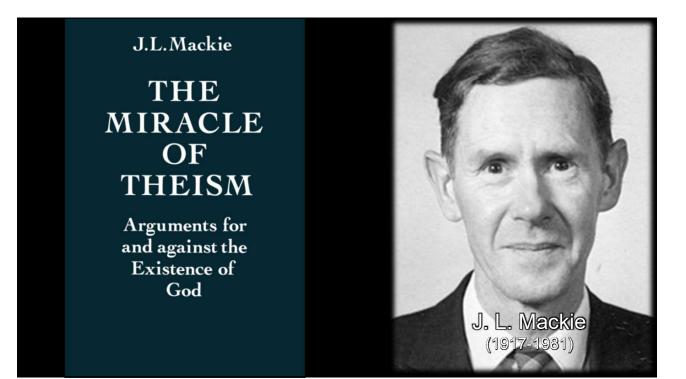


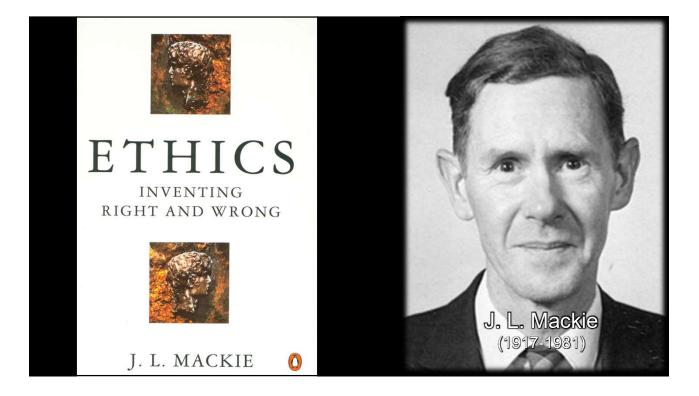


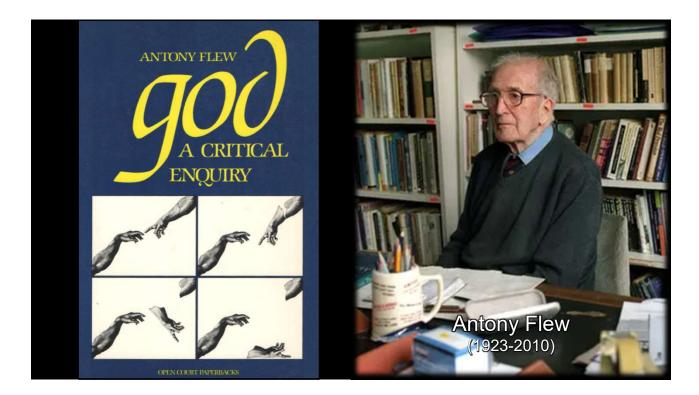
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non-T	AGNOSTICS Not all of the evidence is in. Theism may be established with further proof. (Robert Jastrow; Anthony Kenny)	EVIDENTIALISTS Arguments are not strictly proofs but build a cumulative case for theism. (William Lane Creig; Richard Swinburne)	icte
		THOMISTS Arguments are demonstrations. Theism is established. (Thomas Aquinas; Etienne Gilson; Joseph Owens; Norman Geisler; Edward Feser)	
Relevant			

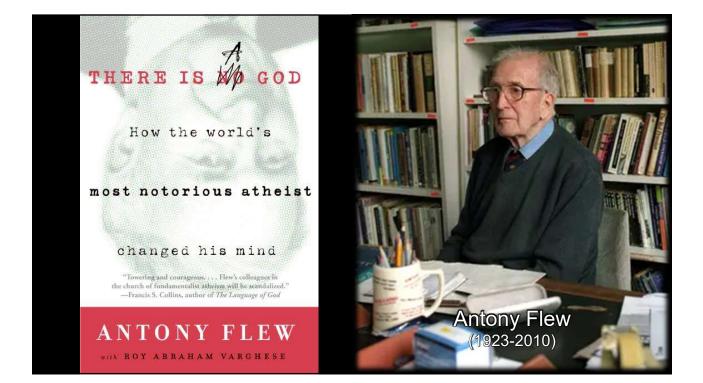


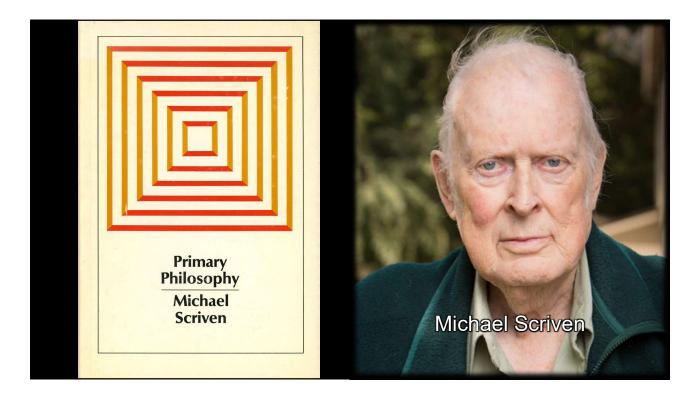
	Irrele	evant
	LOGICAL POSITIVISTS Arguments are metaphysically or linguistically meaningless. (Ludwig Wittgenstein; A. J. Ayer; Kai Nielsen)	EXISTENTIALISTS Arguments are relatively or entirely unnecessary. They have little to nothing to do with religion. Religion is primarily experiential and non-propositional. (Søren Kierkegaard)
heists	<b>SKEPTICS</b> 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 transcendentally "argued" (Cornelius Van Til; Greg L. Bahnsen).
on-T	AGNOSTICS Not all of the evidence is in. Theism may be established with further proof.	EVIDENTIALISTS Arguments are not strictly proofs but build a cumulative case for theism.
n	(Robert Jastrow; Anthony Kenny)	(William Lane Graig; Richard Swinburne)
	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)
	Rele	vant

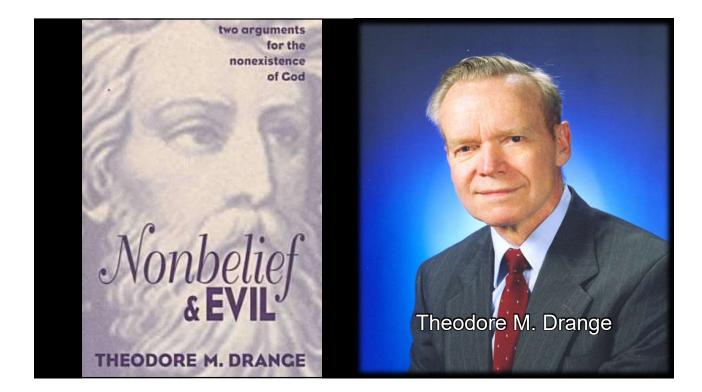


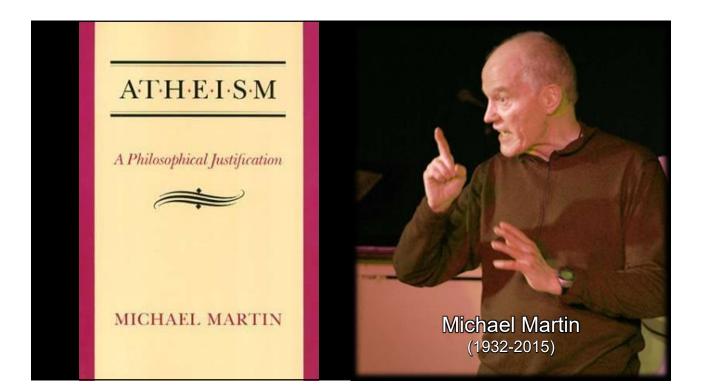


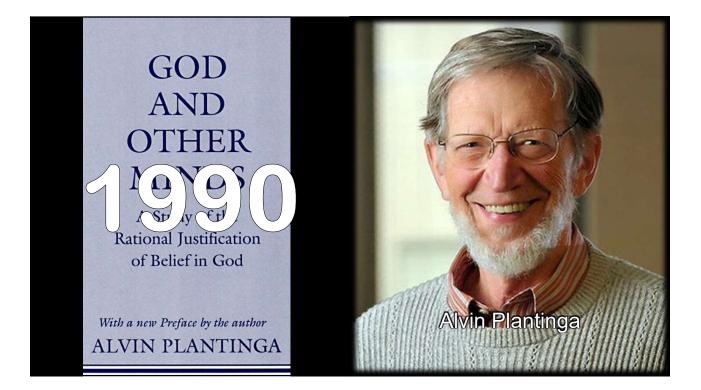


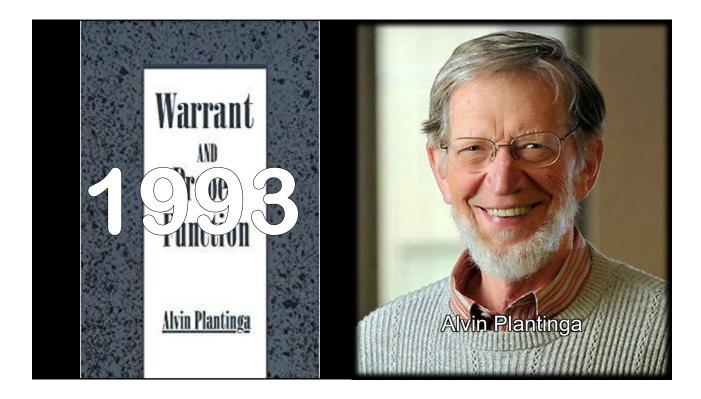


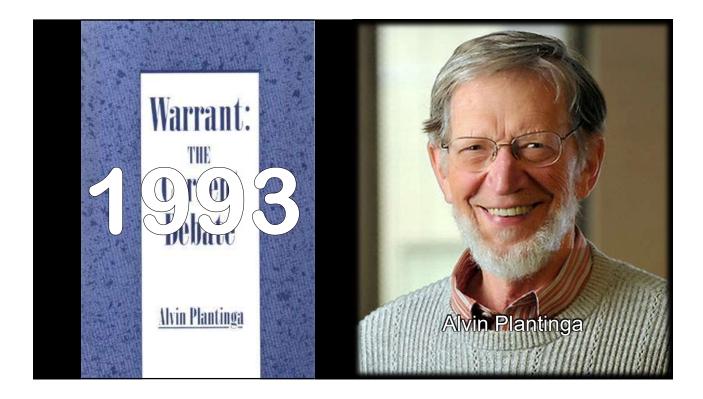


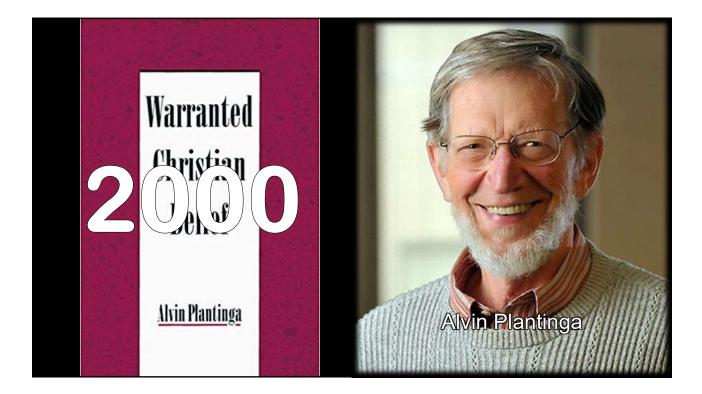


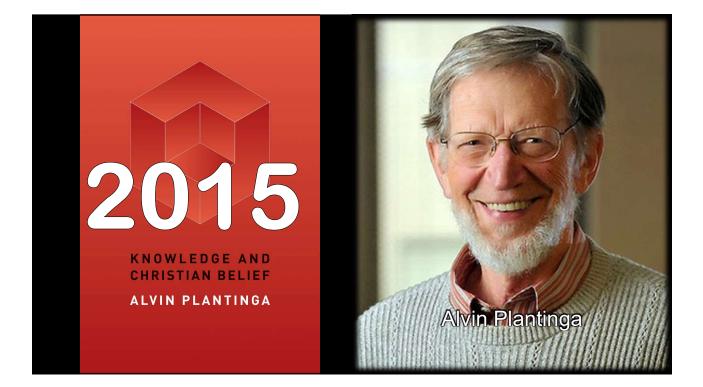












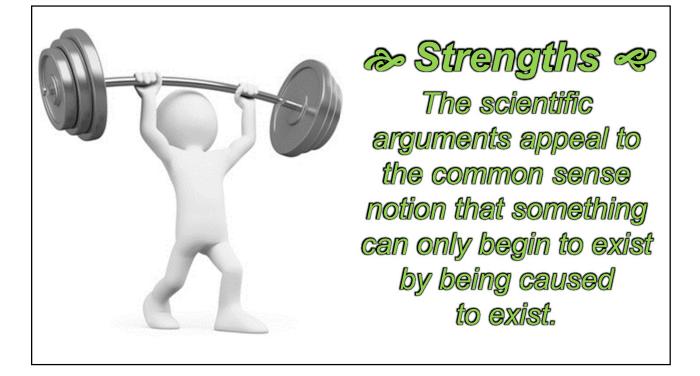


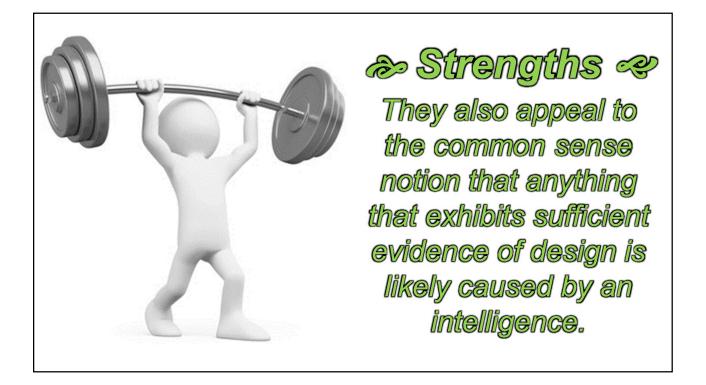
COSMOLOGICAL: based on the existence of the universe (cosmos)
DESIGN: based on the orderly or organized aspects of the universe; largely scientific evidence
TELEOLOGICAL: based on the directedness (teleological) of natural objects; philosophical evidence
ONTOLOGICAL: based on the concept of God as the greatest conceivable being
MORAL: based on the existence of moral truths



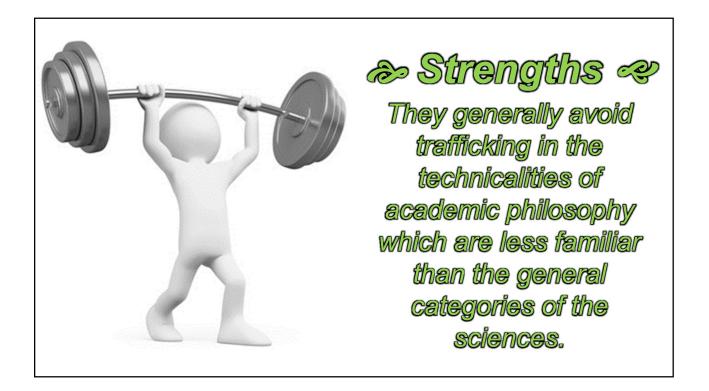
- God as the cause of the beginning of the universe (i.e., the coming into existence of the universe): Scientific
- God as the cause of the current existing of the universe: Philosophical
- God as the cause of the design of the universe: Scientific
- God as the cause of the teleology of the universe: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

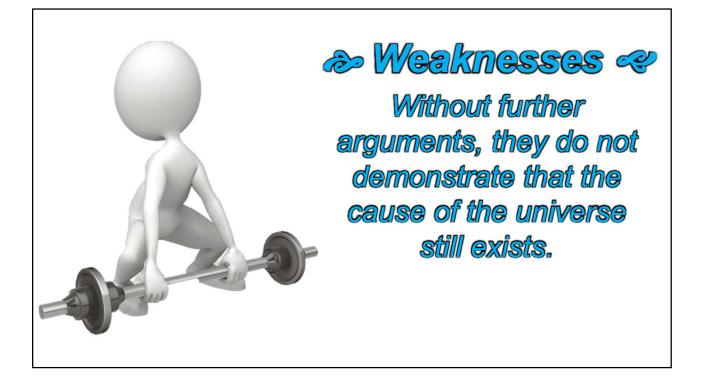


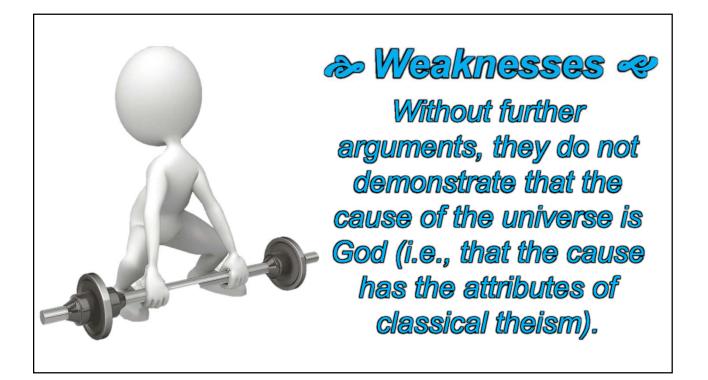




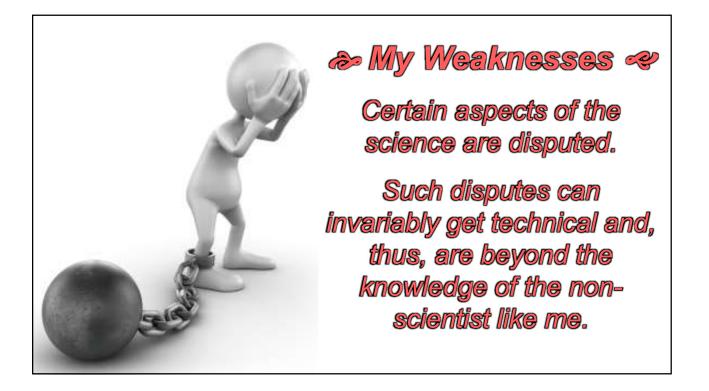






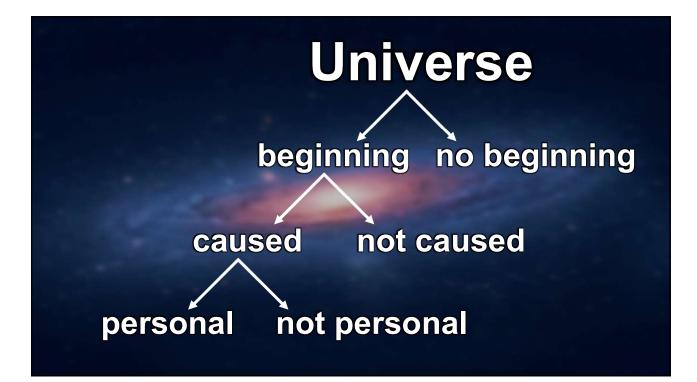


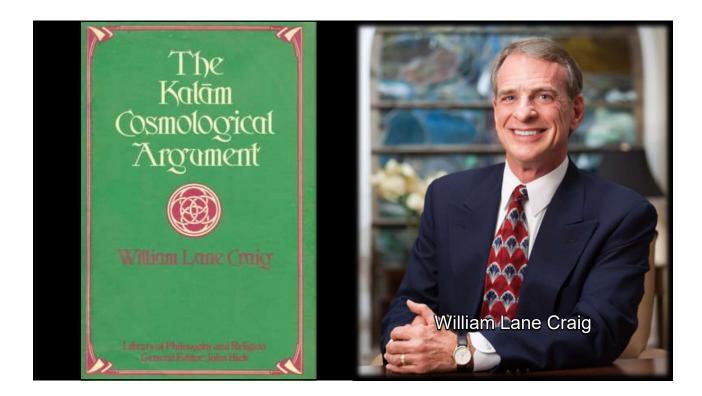


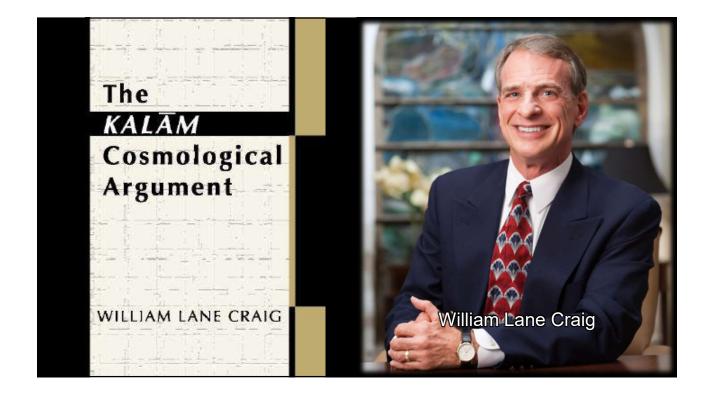


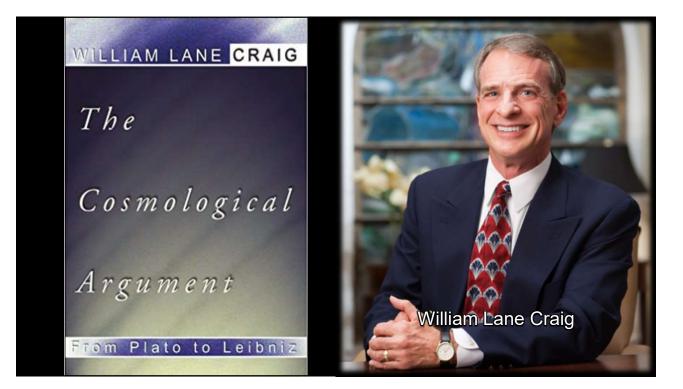


# God as the Cause of the Beginning of the Universe





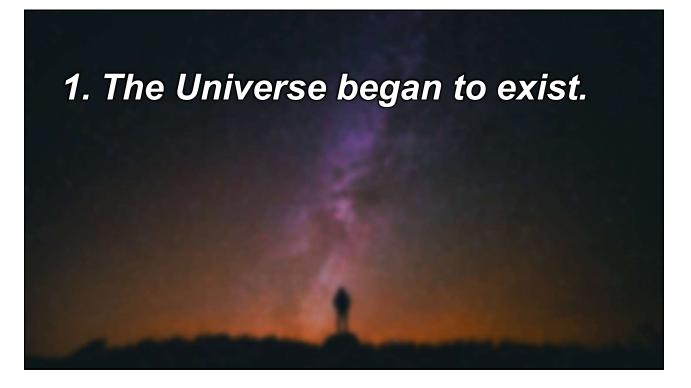


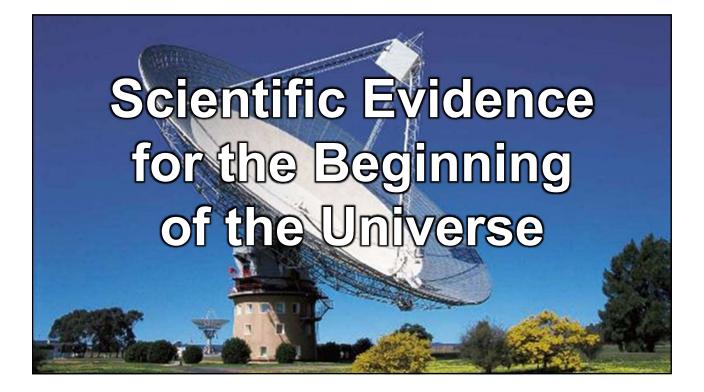


1. The Universe began to exist.

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

Therefore, the universe has a cause of its existence.







### **> 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.

"These days most cosmologists and astronomers back the theory that there was indeed a creation ... when the physical universe burst into existence in an awesome explosion popularly known as the 'big bang.'

Paul Davies

"Whether one accepts all the details or not, the essential hypothesis that there was some sort of creation — seems, from the scientific point of view, compelling."

[Paul Davies, *God and the New Physics* (New York: Simon and Schuster, 1983): 10]

**Paul Davies** 

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-ofthe-universe-s-weinberg-pdf/, accessed 06/27/22] "Recent developments in astronomy have implications that may go beyond their contribution to science itself.



"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 01/12/22] 
 Robert Jastrow

 Jastrow

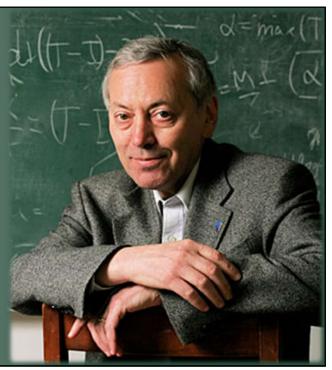


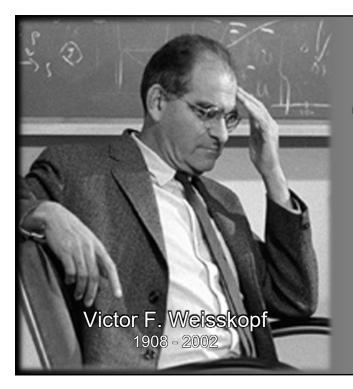
"Almost everyone now believes that the universe, and time itself, had a beginning at the Big Bang."

[Steven W. Hawking and Roger Penrose, *The Nature of Space and Time* (Princeton, N.J.: Princeton University Press, 1996), http://www.crowhealingnetwork.net/pdf/Stephen%20Hawking%20-%20The%20Nature%20Of%20Space%20And%20Time.pdf, accessed 06/27/22]

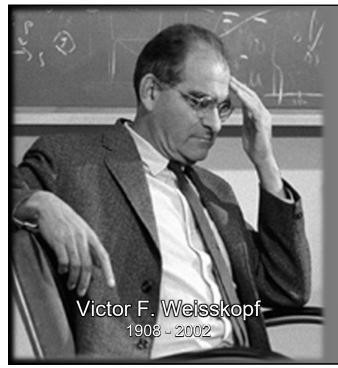
"With the proof now in place, cosmologists can no longer hide behind the possibility of a pasteternal universe. There is no escape, they have to face the problem of a cosmic beginning."

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

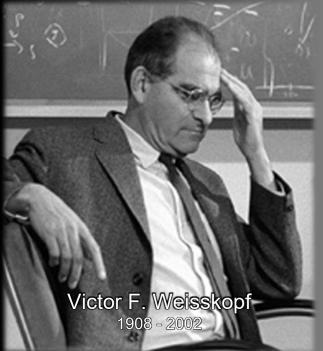




"The question of the origin of the universe is one of the most exciting topics for a scientist to deal with. It reaches far beyond its purely scientific significance, since it is related to human existence, to mythology, and to religion....



"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]



"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

"At times this has led to scientific ideas, such as continuous creation or an oscillating universe, being advanced with a tenacity which so exceeds their intrinsic worth

Christopher Isham

"that one can only suspect the operation of psychological forces lying very much deeper than the usual academic desire for a theorist to support his or her theory."

[C. J. Isham, "Creation of the Universe as a Quantum Process," in R. J. Russell, W. R. Stoeger, and G. V. Coyne, eds., *Physics, Philosophy, and Theology* (Vatican City State: Vatican Observatory, 1988), 378, quoted in David Berlinski, *The Devils Delusion: Atheism and Its Scientific Pretensions* (New York: Crown Forum, 2008), 81]



#### 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?

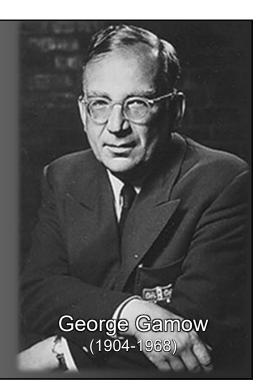
#### Answer

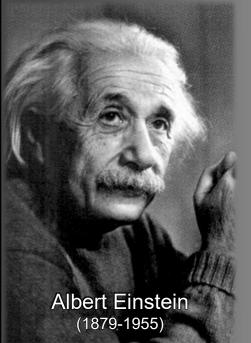
When scientists talk about the expanding universe, they mean that it has been growing ever since its beginning with the Big Bang.

[https://www.loc.gov/everyday-mysteries/astronomy/item/what-does-it-mean-when-they-say-the-universe-is-expanding/, accessed 06/28/22]

"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, 1937), vol. 3, 259]





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

[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."

[Steven W. Hawking, A Brief History of Time: From the Big Bang to Black Holes (Toronto: Bantam Books, 1988), pp. 33-34] Stephen Hawking (1942-2018)



#### 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

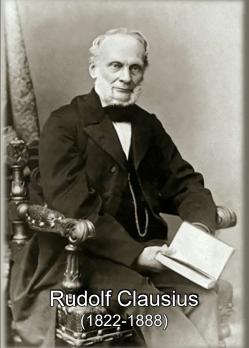
This amounts to saying that the universe is "running down."

# a Significance «

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

#### Significance «

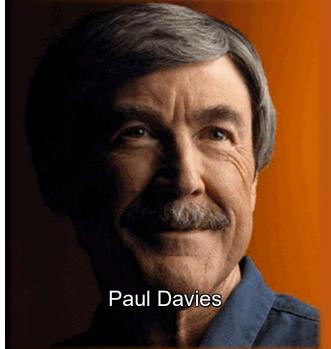
Therefore, the universe began to exist a finite time ago.



"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]



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

"This natural tendency towards disintegration and chaos is evident all around us: people grow old, ... stars burn out, clocks run down."

[Paul Davies, "Chance or Choice: Is the Universe an Accident?" New Scientist 80 (1978): 506, as cited in W. R. Bird The Origin of Species Revisited: Theories of Evolution and of Abrupt Appearance, 2 vols. (Nashville: Regency, 1991): vol. I, p. 397]

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

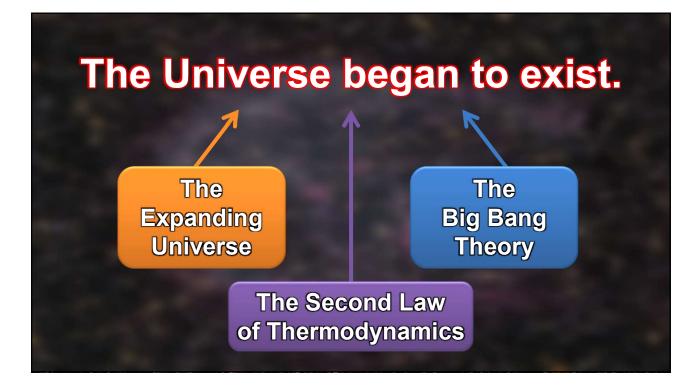
[Robert Jastrow, God and the Astronomers (New York: W. W. Norton & Company, Inc., 1978), 111]

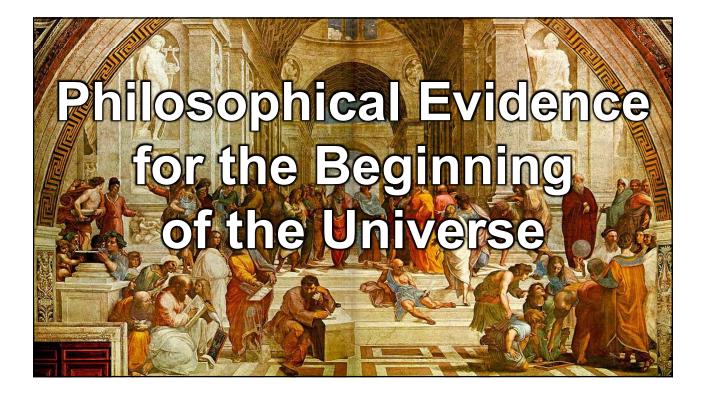
 Robert Jastrow

 Jastrowe

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.





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.



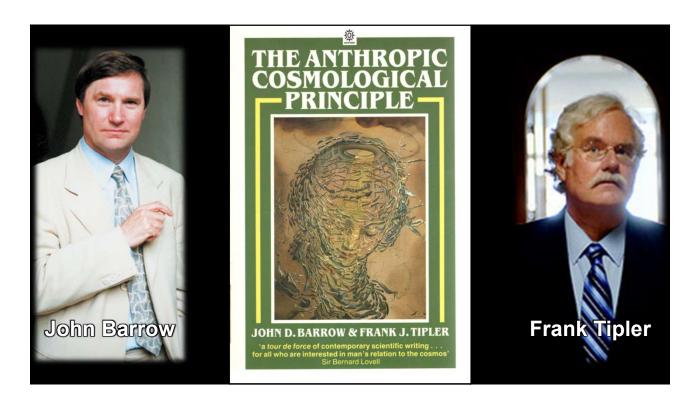




The claim is that physicists have observed that certain particles arise out of a quantum vacuum and thus come out of nothing without a cause.



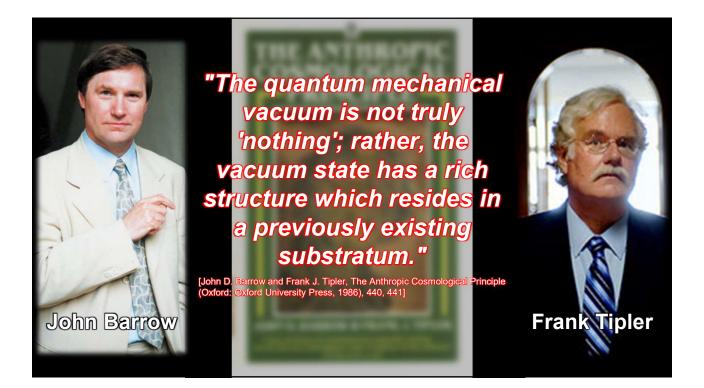
But this is not what is going on with virtual particles. They are not counter-examples to the notion of causality.





"The modern picture of the quantum vacuum differs radically from the classical and everyday meaning of a vacuum nothing. ... The quantum vacuum ... states ... are defined simply as local, or global, energy minima. ...



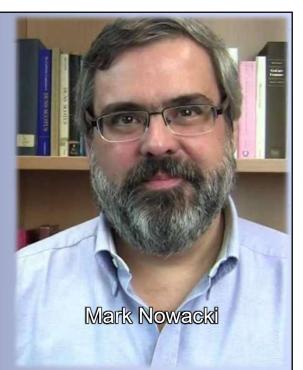


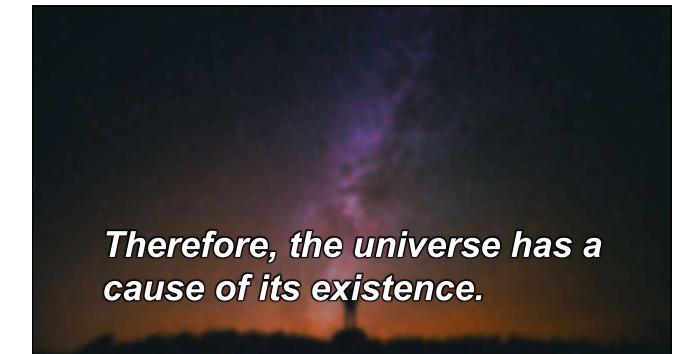
"... the quantum vacuum is very different from the void of Newton: the quantum vacuum is a soupy morass of energy and particles in constant flux; and virtual particles derive their existence from the surrounding quantum gumbo.



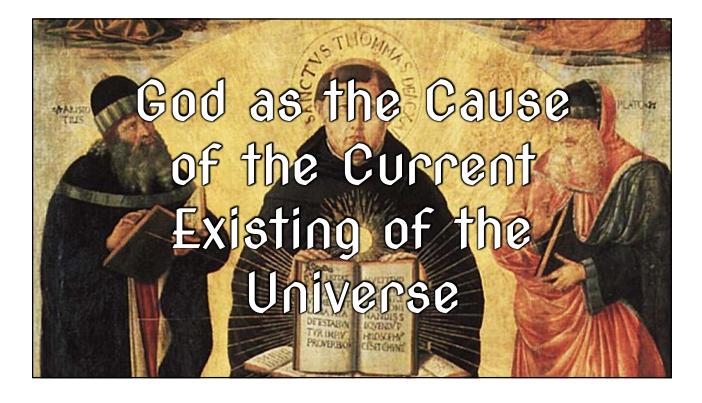
"So, whatever the full causal account of virtual particles might be, it is clear that their arising is not a case of something coming to be out of nothing."

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.



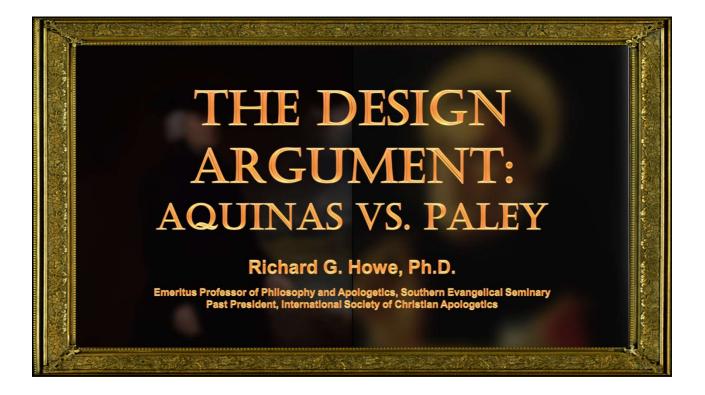


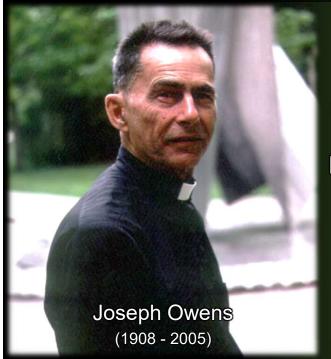




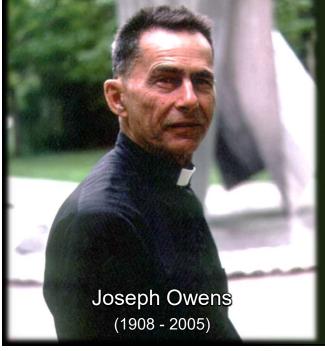
God as the Cause of the Design of the Universe







"Other arguments may vividly suggest the existence of God, press it home eloquently to human consideration, and for most people provide much greater spiritual and religious aid than difficult metaphysical demonstrations.



"But on the philosophical level these arguments are open to rebuttal and refutation, for they are not philosophically cogent."

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



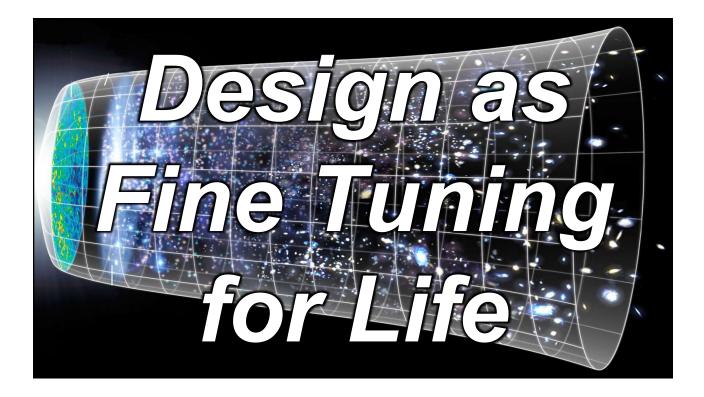
#### Scientific Evidence for the Design in the Universe

#### 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** «

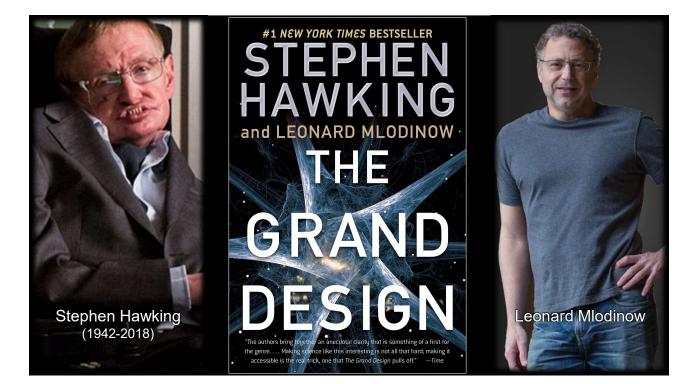
Scientists recognize that the universe's initial condition contained an array of physical values (constants) that are necessary for the universe to support life.

### Significance «

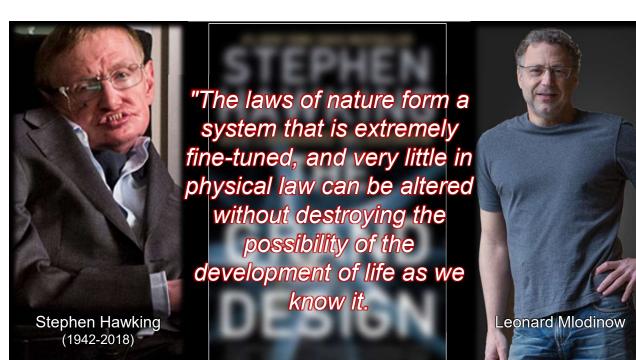
It would seem to some that the likelihood that these values could come about by chance is next to impossible.

#### Significance «

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

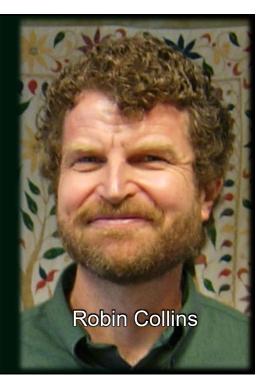






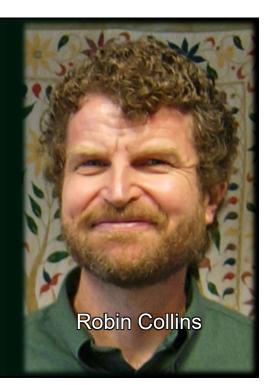


"When scientists talk about the fine-tuning of the universe they're generally referring to the extraordinary balancing of the fundamental laws and parameters of physics and the initial conditions of the universe.



"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]



- 1. strong nuclear force constant
- 2. weak nuclear force constant
- 3. gravitational force constant
- 4. electromagnetic force constant
- 5. ratio of electromagnetic force constant to gravitational force constant
- 6. ratio of electron to proton mass
- 7. ratio of number of protons to number of electrons
- 8. expansion rate of the universe
- 9. entropy level of the universe
- 10. mass density of the universe
- 11. velocity of light
- 12. age of the universe
- 13. initial uniformity of radiation
- 14. average distance between galaxies
- 15. galaxy cluster density
- 16. average distance between stars
- 17. fine structure constant (a number used to describe
- the fine structure splitting of spectral lines)
- 18. decay rate of the proton
- 19. <sup>12</sup>C to <sup>16</sup>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]

- 20. ground state energy level for <sup>4</sup>He
- 21. decay rate of 8Be
- 22. mass excess of the neutron over the proton
- initial excess of nucleons over antinucleons
- 24. polarity of the water molecule
- 25. degree of uncertainty in the Heisenberg uncertainty principle
- 26. size of the relativistic dilation factor
- 27. supernovae eruptions
- 28. number of white dwarf binaries
- 29. ratio of the mass of exotic matter to ordinary matter
- 30. ratio of number of dwarf galaxies to number of large galaxies
- 31. number of effective dimensions in the early universe
- 32. number of effective dimensions in the present universe
- 33. mass of the neutrino
- 34. size of big bang ripples
- 35. size of cosmological constant

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 lifesupporting planet =  $1 \text{ in } 10^{138}$ .

#### But just how big of a number is 1 in 10<sup>138</sup>?

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

## The number of atoms in the known universe = 10<sup>79</sup>.

"It is hard to resist the impression that the present structure of the universe, apparently so sensitive to minor alterations in the numbers, has been rather carefully thought out ...

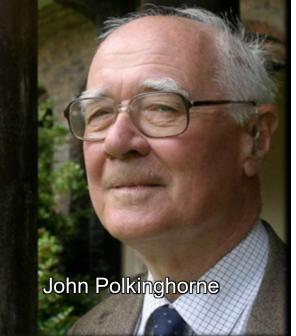
Paul Davies

**Paul Davies** 

"The seemingly miraculous concurrence of [these] numerical values that nature has assigned to her fundamental constants must remain the most compelling evidence for an element of cosmic design."

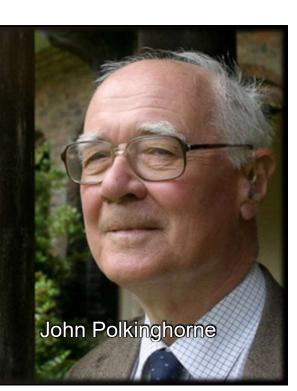
[Paul Davies, God and the New Physics, p.189]

"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,



"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]



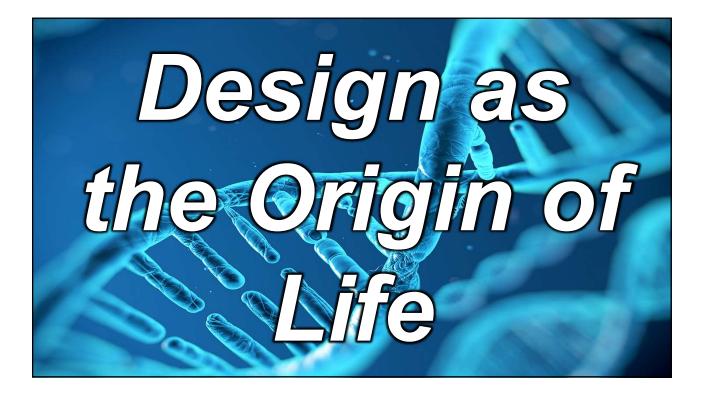
"According to the physicist and the astronomer, it appears that the Universe was constructed within very narrow limits, in such a way that man could dwell in it. This is called the anthropic principle. It is the most theistic result ever to come out of science, in my view."

[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)



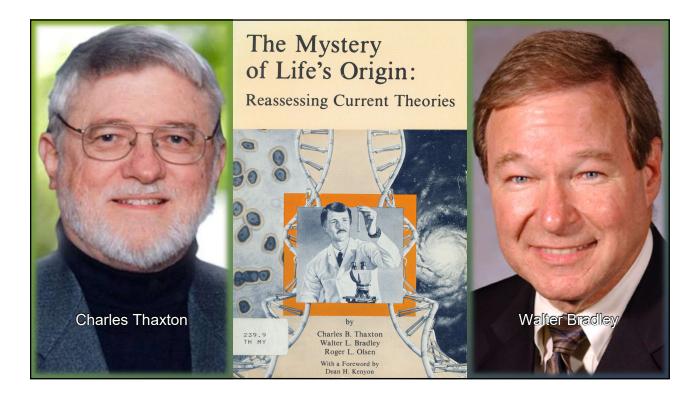


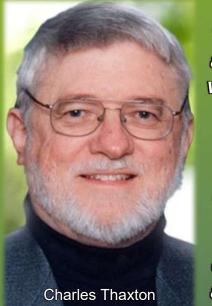
#### Definition

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

#### Significance

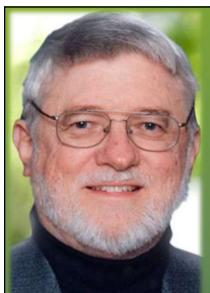
If the necessary ingredients for biological life themselves require biological life, then biological life could not have come from non-life.





"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** 

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

[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]





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



Sir Frederick Hoyle (1915-2001) "The theory that life was assembled by an intelligence has, we believe, a probability vastly higher than one part in 10 to the 40,000<sup>th</sup> power of being the correct explanation ...



Chandra Wickramasinghe



"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]





"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



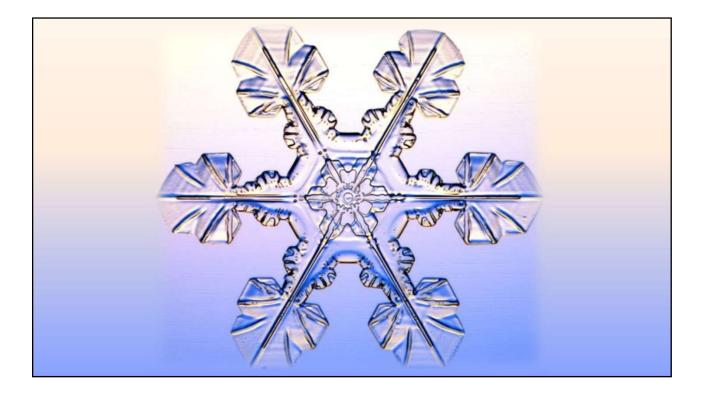
#### Definition

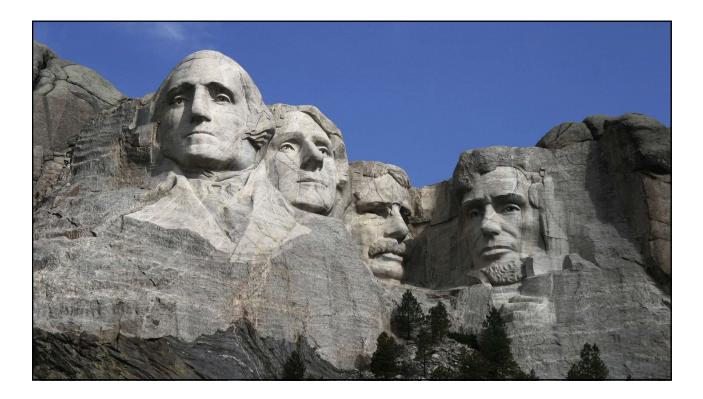
Information, known also as specified complexity, is physically distinguishable from simple complexity and simple order.

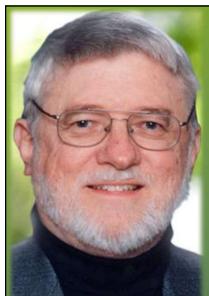
# Significance

The presence of information always points to an intelligent cause.









Charles Thaxton

"Proponents of an intelligent origin of life note that molecular biology has uncovered an analogy between DNA and language ... The genetic code functions exactly like a language code

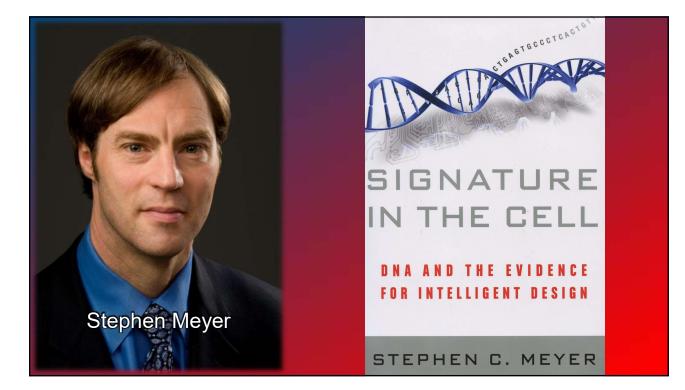


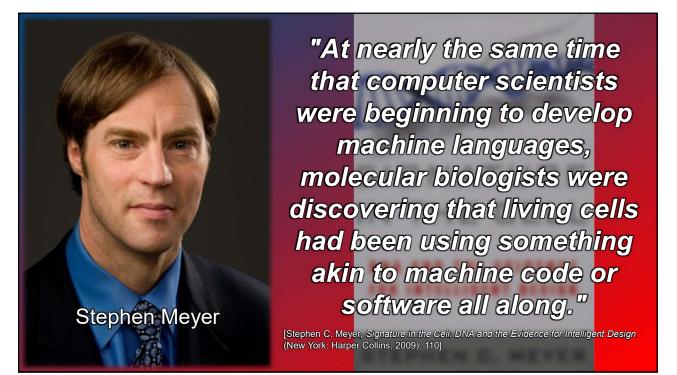


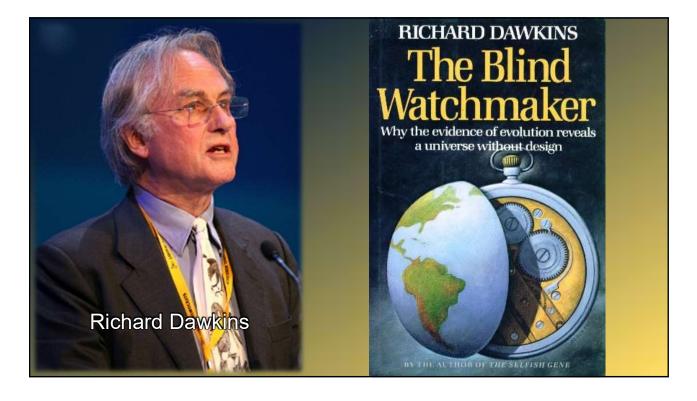
"Indeed it is a code. It is a molecular communications system: a sequence of chemical 'letters' stores and transmits the communication in each living cell."

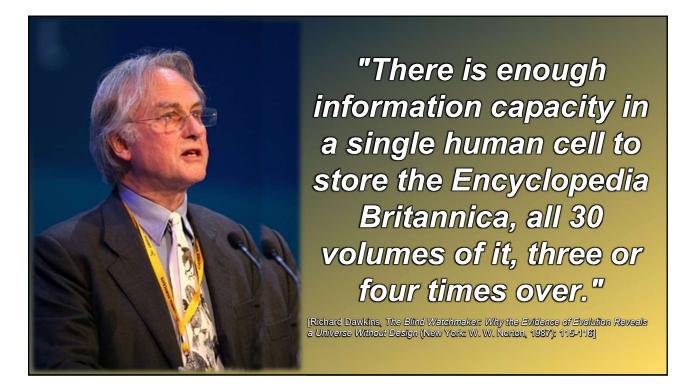
[Walter L, Bradley and Charles B, Thaxton "Information and the Origin of Life," in J. P. Moreland, ed. The Creation Hypothesis: Scientific Evidence for and Intelligent Designer (Downers Grove, IL: InterVarsity Press, 1994): 205]

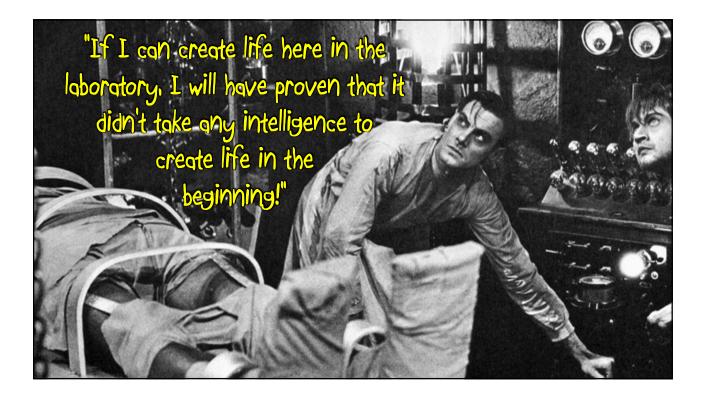












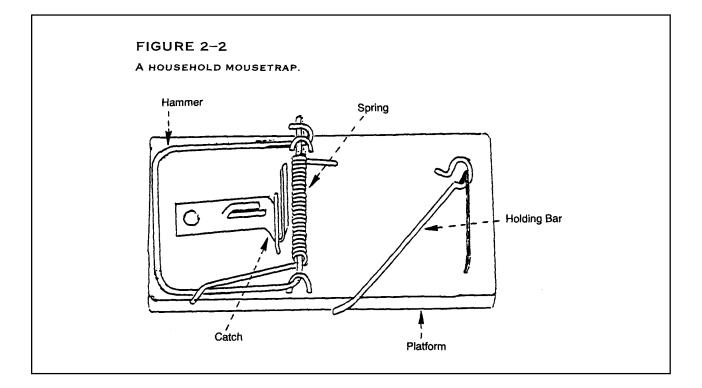


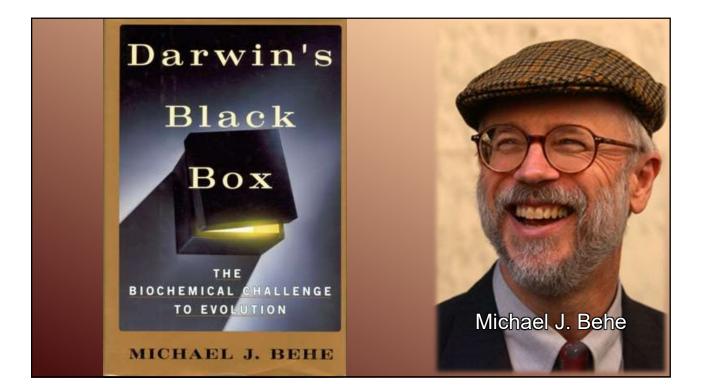
### Definition ~

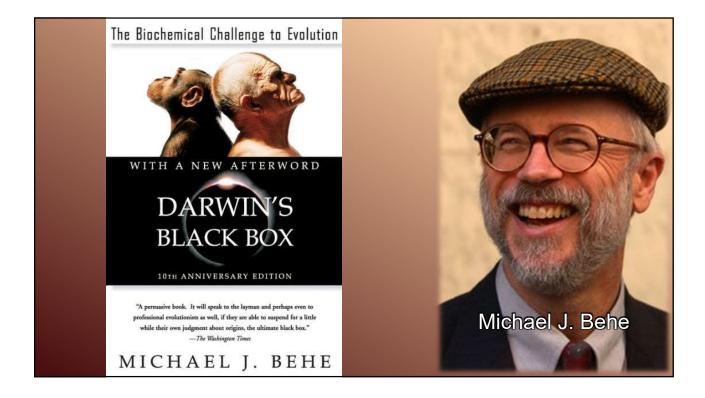
Some biological systems consist of several interlocking parts that must be in place before the system can function at all.

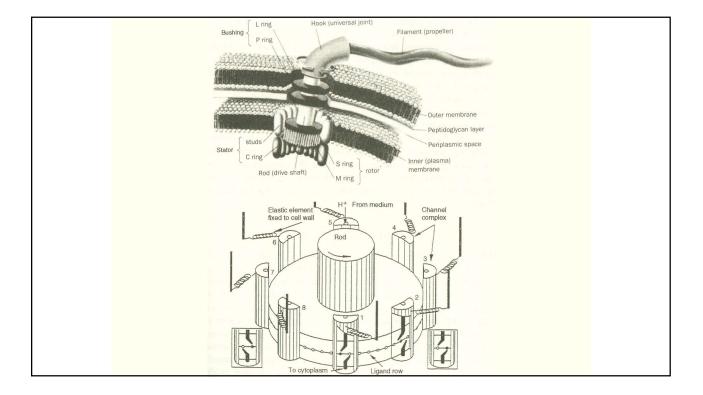
## Significance «

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.





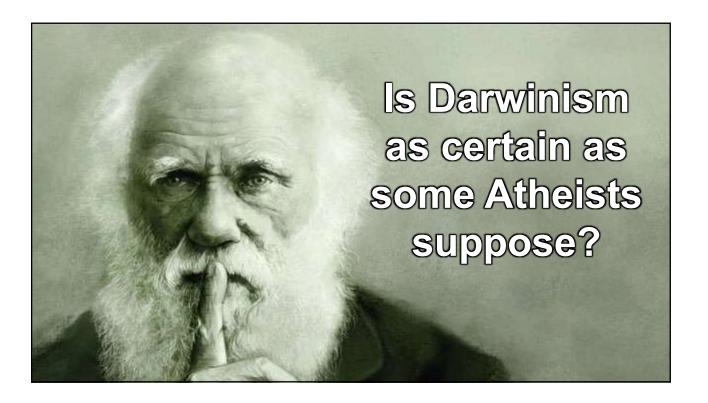


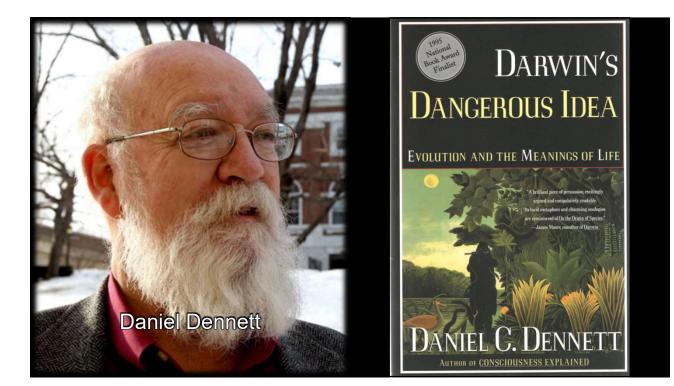


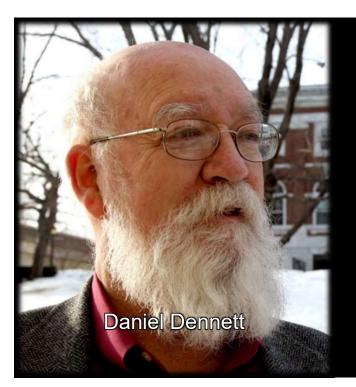
"If it could be demonstrated that any complex organ existed which could not possibly have been formed by numerous, successive, slight modifications, my theory would absolutely break down."

> [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)

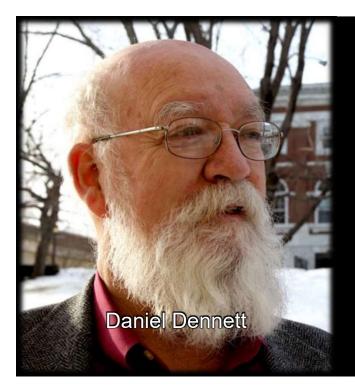






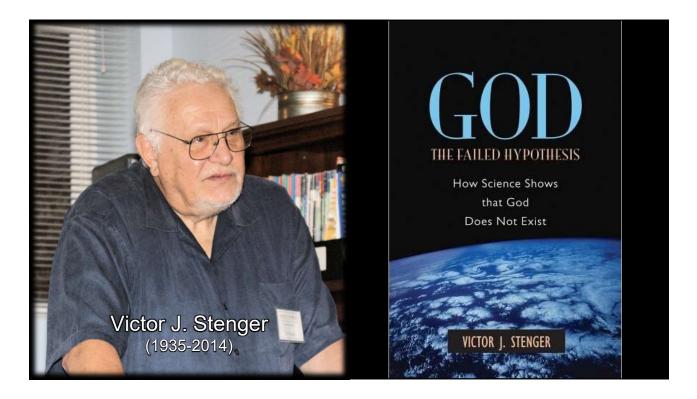
"There are vigorous controversies swirling around in evolutionary theory, but those who feel threatened by Darwinism should not take heart from this fact. ... The basic Darwinian idea ... is about as secure as any in science ....."

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



"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."

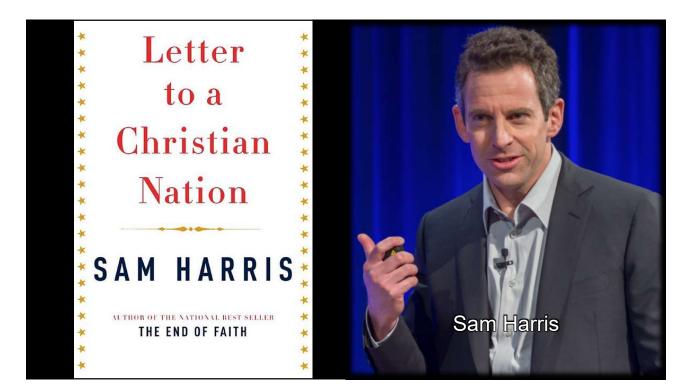
[Daniel Dennett, *Darwin's Dangerous Idea: Evolution and the Meaning of Life* (New York: Simon & Schuster, 1995), 519]





"In terms of the same strict standards of empirical evidence that apply in all the natural science, Darwinian evolution is a well-established theory that has passed many critical tests."

[Victor J. Stenger, *God: The Failed Hypothesis*, p. 50.]



"Here is what we know. ... There is no question that human beings evolved from nonhuman ancestors ... There is no reason whatsoever to believe that individual species were created in their present forms."

[Sam Harris, Letter to a Christian Nation, pp. 71]





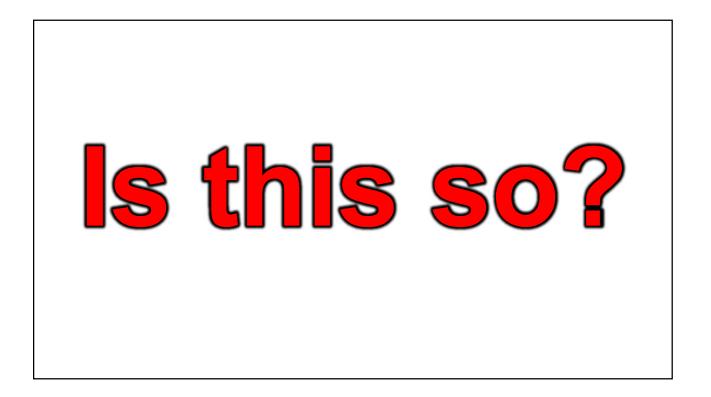
"The basic Darwinian idea . . . is about as secure as any in science ..."

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

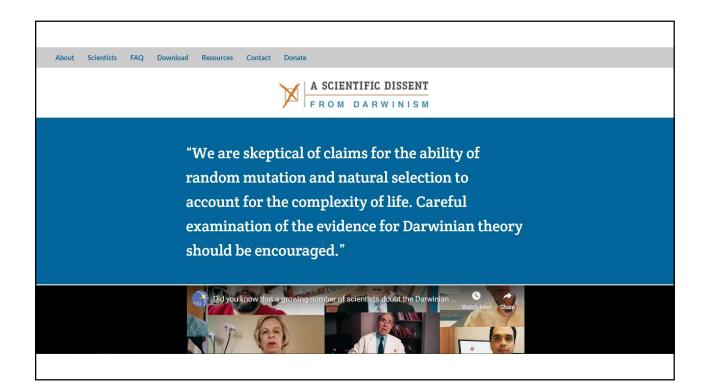
"Darwinian evolution is a well-established theory."

"There is no question . . ."

Challenging evolution is on par with challenging the Moon landing.







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Cornelius Hunter	Ph.D. Biophysics	University of Illinois
Rodney Ice	Principle Research Scientist, Nuclear & Radiological Engineering	Georgia Institute of Technology
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George C. Wells	Professor of Computer Science	Rhodes University (South Africa)
Fred Johnson	Ph.D. Pathology	Vanderbilt University
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Jerry Johnson	Ph.D. Pharmacology & Toxicology	Purdue University
Harold D. Cole	Professor of Physiology	Southwestern Oklahoma State University
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David Jones	Professor of Biochemistry & Chair of Chemistry	Grove City College
Robert Kaita	Ph.D. Nuclear Physics	Rutgers University

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George Lebo	Associate Professor of Astronomy	University of Florida
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J.B. Lee	Assistant Professor of Electrical Engineering	University of Texas, Dallas
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Matti Leisola	Professor, Laboratory of Bioprocess Engineering	Helsinki University of Technology
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E. Lennard	Sc. D. Surgical Infections & Immunology	University of Cincinnati
Glen E. Deal	Ph.D. Electrical Engineering	Florida Institute of Technology
Lane Lester	Ph.D. Genetics	Purdue University
Paul Whitehead	Ph.D. Chemical Thermodynamics	University of Natal (South Africa)
Catherine Lewis	Ph.D. Geophysics	Colorado School of Mines
John R. Goltz	Ph.D. Electrical Engineering	University of Arizona
Peter Line	Ph.D. Neuroscience	Swinburne University of Technology (Australia)
Gerald P. Bodey	Emeritus Professor of Medicine, Former Chairman	Department of Medical Specialties, University of Texas M.D. Anderson Cancer Center
Garrick Little	Ph.D. Organic Chemistry	Texas A & M University
John Nichols	Ph.D. Mathematics	University of Tennessee
Mark Bearden	Ph.D. Electrical & Computer Engineering	Carnegie Mellon University
Harry Lubansky	Ph.D. Biological Chemistry	University of Illinois, Chicago
Daniel L. Moran	Ph.D. Molecular & Cellular Biology	Ohio University
Denier E. moran	( not not contain a contain biology	Fulbright Scholar
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Jed Macosko	Ph.D. Chemistry	University of California, Berkeley
Nigel Surridge	Ph.D. Electrochemistry & Photochemistry	University of North Carolina, Chapel Hill
Christopher Macosko	Ph.D. Chemical Engineering	Princeton University
David Keller	Associate Professor of Chemistry	University of New Mexico
Allen Magnuson	Ph. D. Theoretical & Applied Mechanics	University of New Hampshire
Amy Ward	Ph.D. Mathematics	Clemson University
Donald Mahan	Professor of Animal Nutrition	Ohio State University
Shane A, Kasten	Post-Doctoral Fellow (Ph.D. Biochemistry, Kansas State University)	Virginia Commonwealth University
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Jesus Ambriz	Professor of Medicine	Autonomous University of Guadalajara (Mexico)
Julie Marshall	Ph.D. Chemistry	Texas Tech University
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Andy McIntosh	Full Professor of Thermodynamics and Combustion Theory	University of Leeds (UK)
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Edwin Karlow	Chair, Department of Physics	LaSierra University
Francis M. Donahue	Professor Emeritus, Chemical Engineering	The University of Michigan
James Keener	Professor of Mathematics & Adjunct of Bioengineering	University of Utah
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Charles Koons	Ph.D. Organic Chemistry	University of Minnesota
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Bruce Krogh	Professor of Electrical & Computer Engineering	Carnegie Mellon University
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Larry B. Rainey	Principal Space Systems Engineer	Missle Defense Agency
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James Keesling	Professor of Mathematics	University of Florida
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Paul Missel	Ph.D. Physics	Massachusetts Institute of Technology
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Dónal O'Mathúna	Ph.D. Pharmacognosy	Ohio State University
Steve D. Figard	Ph.D. Biochemistry	Florida State University
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Victoriano Saenz	Professor of Medicine	Autonomous University of Guadalajara (Mexico)
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Terry Morrison		
Bijan Nemati	Ph.D. Chemistry	Syracuse University University of Washington
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Angus Menuge	Ph.D. Philosophy of Psychology	University of Wisconsin-Madison
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Paul Lorenzini	Ph.D. Nuclear Engineering	Oregon State University
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Larry S. Helmick	Senior Professor of Chemistry	Cedarville University
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William Hankley	Professor of Computer Science	Kansas State University
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Jason David Ward	Ph.D. Molecular Biology and Biochemistry	Glasgow University (UK)
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Mark Swanson	Ph.D. Biochemistry	University of Illinois
Ricardo Bravo Méndez		Universidad de Valparaiso (Chile)
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David Van Dyke	Ph.D. Analytical Chemistry	University of Illinois, Urbana
John Walkup	Emeritus Professor of Electrical & Computer Engineering	Texas Tech University
Tom Belanger	Professor of Environmental Science	Florida Institute of Technology
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Pieder Beeli	Ph.D. Physics	University of Notre Dame
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Weimin Gao	Microbiologist	Brookhaven National Laboratory
Woody Weed	Mechanical Engineer, Science & Technology Division	Sandia National Labs
Heikki Martikka	Professor of Machine Design	Lappeenranta University of Technology (Finland)
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Lawrence Dickson	Ph.D. Mathematics	Princeton University
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## **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.

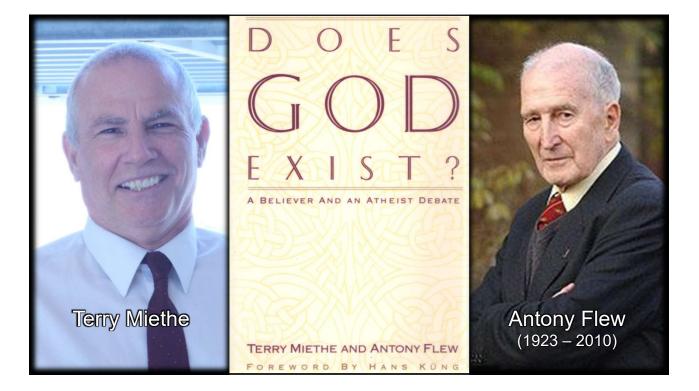
"Darwinian evolution is a well-established theory."

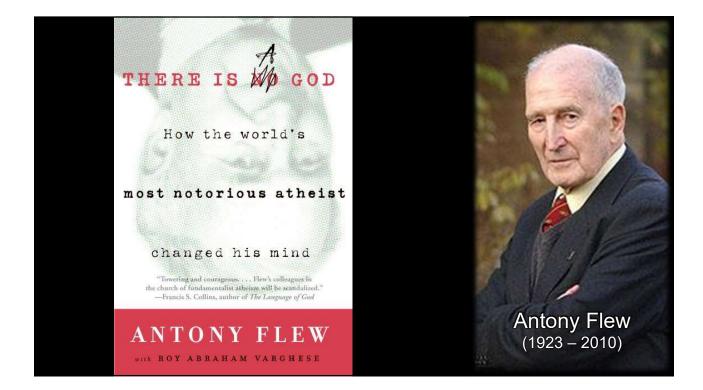
Challenging evolution is on par with challenging the Moon landing.

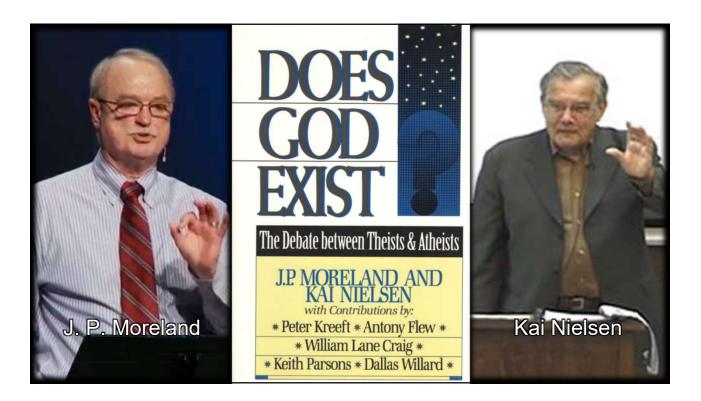
"There is no question . . ."

are unwarranted.

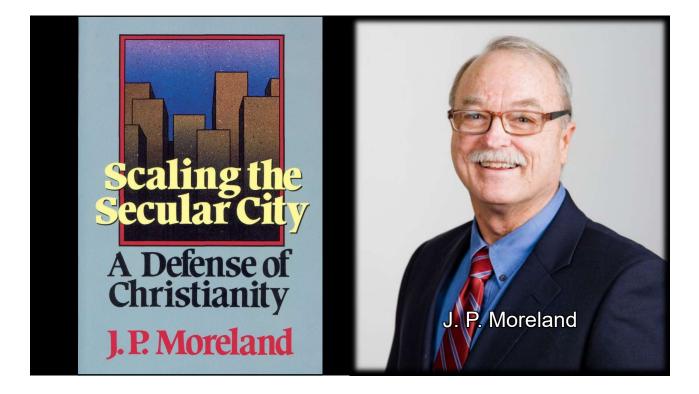


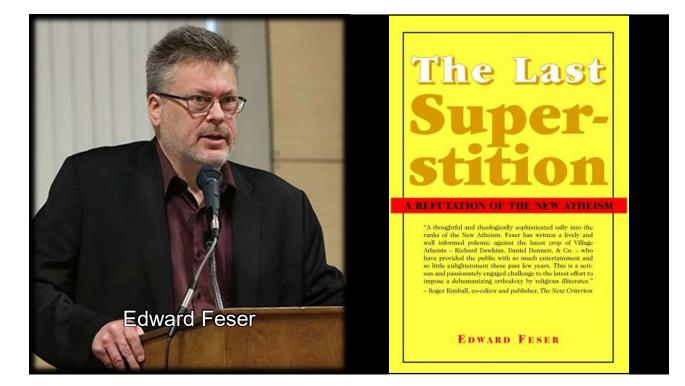


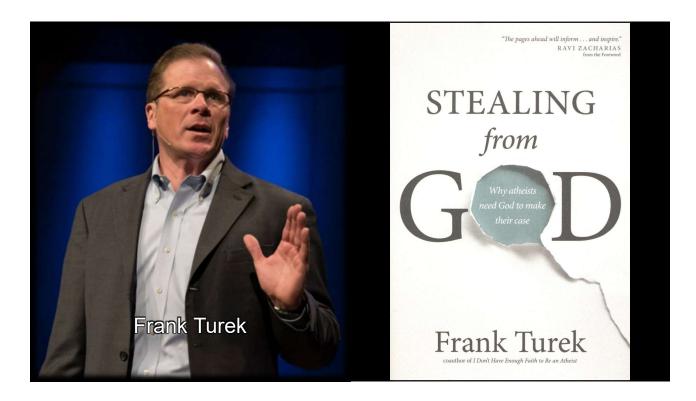


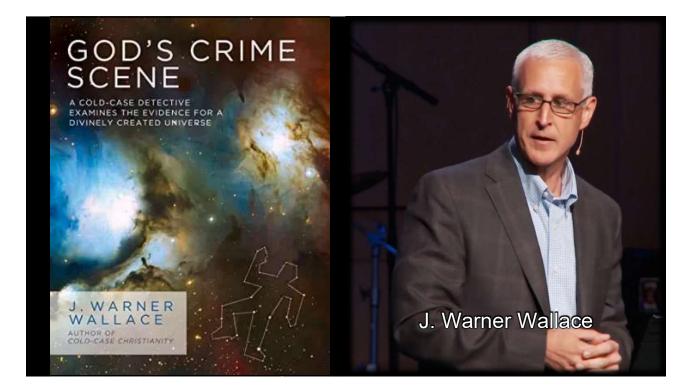


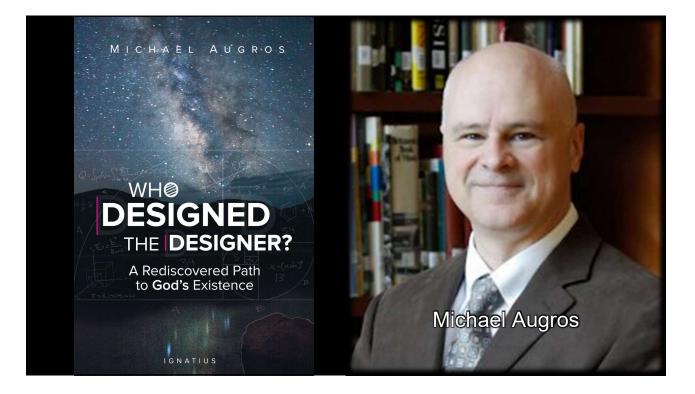




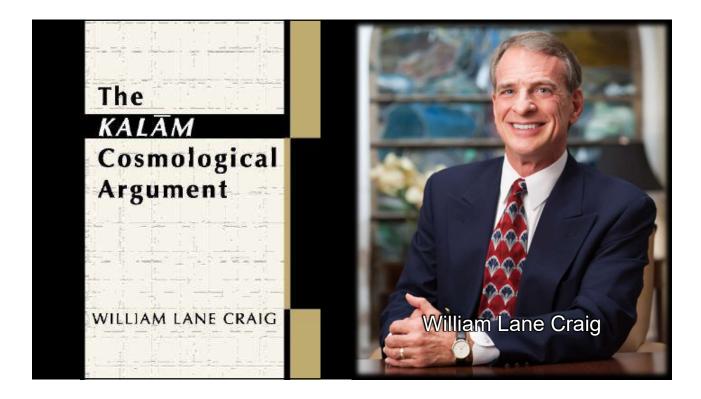


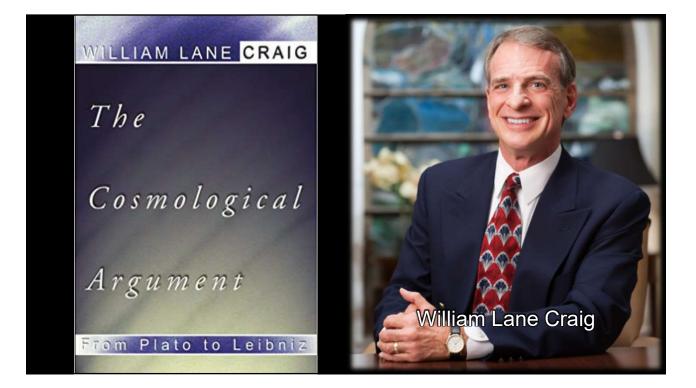


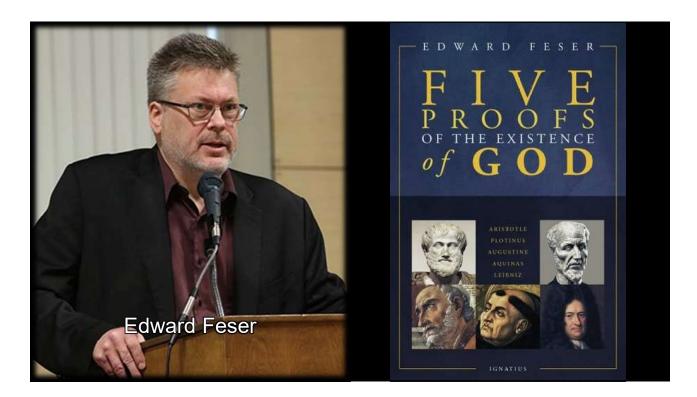




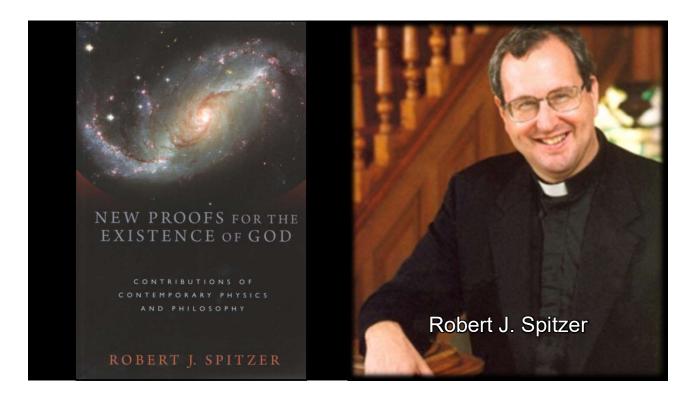


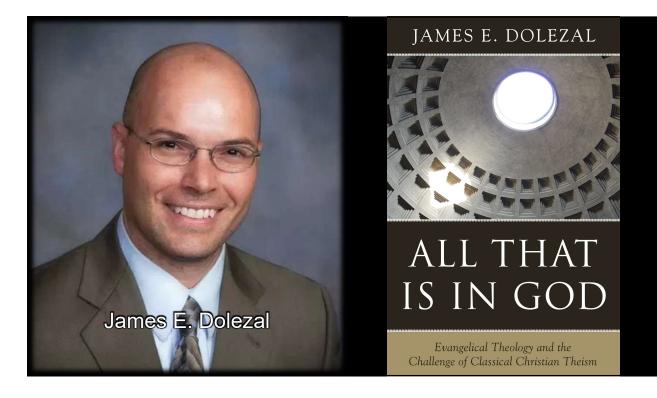


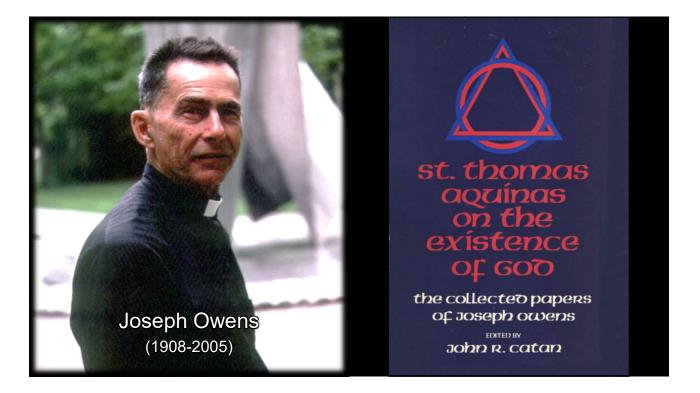














An Introduction to Natural Theology

MAURICE R. HOLLOWAY

