

**Christianity**  
 Historicity and inspiration of the Bible  
 Uniqueness of Christ

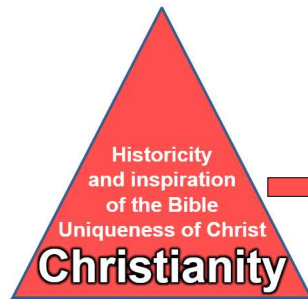
**III. The Truth of Christianity**  
 A. The Historicity of the Bible  
 1. Do We Have What They Wrote?  
 2. Did What They Write Happen?  
 B. What Does the Bible Say About Jesus?  
 1. Messianic Prophecies  
 2. Life of miracles/Resurrection  
 3. Lord, Liar, Lunatic  
 C. What Does Jesus Say About the Bible?  
 1. What Jesus Affirmed About the OT  
 2. Jesus Pre-authenticates the NT

**God's Inerrant Word:**  
 AN INTERNATIONAL SYMPOSIUM ON THE TRUSTWORTHINESS OF SCRIPTURE  
 Edited by John Warwick Montgomery

**"The Case for Inerrancy: A Methodological Analysis"**

John Warwick Montgomery (1931-2024)

R. C. Sproul (1939-2017)



### III. The Truth of Christianity

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





## Religion

### Modernizing the Case for God

*Philosophers refurbish the tools of reason to sharpen arguments for theism*

**G**od? Wasn't he chased out of heaven by Marx, banished to the unconscious by Freud and denounced by Nietzsche to be deceased? Did not Darwin drive him out of the empirical world? Well, not entirely. In a quiet revolution in thought and argument that barely anyone could have foreseen only two decades ago, God is making a comeback. Most intriguingly, this is happening not among theologians or ordinary believers—most of whom never accepted for a moment that he was in any serious trouble—but in the intellectual circles of academic philosophers where the consensus had long banished the Almighty from fruitful discourse.

Now it is more respectable among philosophers than it has been for a generation to talk about the possibility of God's existence. The shift is most striking in the Anglo-American academy of thought, where strict forms of empiricism have reigned. "What science cannot tell us, mankind cannot know," declared Bertrand Russell. And A.J. Ayer, on behalf of logical positivism, decreed that "all utterances about the nature of God are nonsensical." The accepted wisdom was that the only valid statements were those verifiable through the senses.

Today even atheistic philosophers agree that Ayer's rigid rule is inadequate to deal with human experience. Meanwhile, science, the market for learning has become less presumptuous and ambitious in theorizing about cosmic astronomy closer to theology, its promise as savior and absolute explainer of the world never that tarnished. In the era of quarks, black holes, physics can seem as baffling as Genghis Khan in the age of the Ayatollah. Philosophers of science, such as Thomas Kuhn of Princeton, have applied relativism, formerly employed against religion, to scientific knowledge. Cornell President Frank Rhodes, a geologist, once observed that "the qualities that [scientific] manure may have as little relation to the world itself as a telephone number has to its subscriber."

Broad cultural forces are also at work. Says Douglas Hall, a theologian at Montreal's McGill University: "The experiment with secularism finally proved to be too much for the human psyche to cope with, both in the Marxist world and our

world. If you begin to doubt that there is some meaning in the process of history, then you get frightened of your own secularity, and you return to religion."

Though still a distinct minority in secular universities, some philosophers are not only willing to talk about God but to believe in him. In the U.S., 300 of them belong to the Society for Christian Philosophy. Some scholars are attacking atheism and reviving and refining arguments

pher and guru of the Great Books Program, published *How to Think About God: A Guide for the 20th Century* (Paper Macmillan, \$9.95). In September Doubleday will issue the English version of diastent Roman Catholic Theologian Hans King's latest, which clocks in at 350 pages in a huge bestseller in West Germany. The title: *Does God Exist?*

Has predictable answer: yes. Even nonbelievers, King writes, know that an ancient world raises the question of morality and, in turn, religion. Besides that, the 20th century is cluttered with the sorry results of supplanting God with an inhuman force that is not divine, such as the "people" in Nazism or the party in Communism. King's lucid analysis contends that atheism's 19th century patriarchs proclaimed their theories but never bothered to prove them. Ludwig Feuerbach, the founder of modern atheism, asserted that religious beliefs were mere projections of mankind's jobbed qualities. King responds that such philosophers' belief in the goodness of human nature is far more likely to be such a projection.

Whatever atheism's weaknesses, what about the other side? Can God's existence be established by reason, without resorting to the Bible, revelations, church dogmas or a leap of faith? The attempt is traditionally known as "natural theology," and every far the largest self-contained world of Roman Catholic philosophy, it went out of style more than a century ago.

In the current revival, most arguments still employ the traditional definition of God as a unique personal creative entity. What is new is the effort to refurbish and enhance the traditional approaches to the problem. A summary of the work being done so to put new wine in these old wine skins.

**The Moral Proof.** This is especially King's approach. Conscience, he makes Christians—or at least theists—of in all. The case builds upon the universal sense among mankind of conscience, of some moral law and of each person's inability to keep it satisfactorily, all of which cannot be explained as mere conditioning or self-interest. The source of that spark of conscience, theists contend, is God. The most celebrated exponent, Immanuel



God: William Blake



God: Michelangelo



God: 13th century France



God: Lucas Cranach

for faith that have been largely unfashionable since the Enlightenment, using modern techniques of analytic philosophy and symbolic logic that were once used to discredit belief.

A generation ago, atheistic empiricists like Harvard's Willard V. Quine were influential simply because "they were the brightest people," says Philosophy Professor Roderick Chisholm of Brown University, adding that now the "brightest people include theists, using a kind of tough-minded intellectualism" that was often lacking on their side of the debate.

The proofs of God's existence long pursued in impenetrable books and journals are engaging wider audiences. Last week Mortimer Adler, popular philos-

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God: William Blake



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## Religion

Kant (1724-1804), wrote that each person's quest for the "highest good" implies the existence of a moral being as the necessary condition for this idea, who is himself the source of all morality.

Updating Kant, Dartmouth Scholar Ronald Green argues in *Religious Reason* (Oxford, \$12) that though skeptics may think primitive instincts or emotions are the basis for religion, faith actually stems from the sophisticated reasoning process that distinguishes humans from animals. To Green, man must seek an independent, coherent source for his morality. Although Kant ended with a personal God, Green will only go so far as to postulate "some kind of supreme moral causal agency," whether a personal deity or Hinduism's impersonal karma.

**The Mental Proof.** In this formulation, an all-intelligent Being is offered as the only explanation for the power of reason and for humanity's other nonmaterial qualities of mind and imagination. A contemporary restatement is the 1947 classic *Miracles* by the late English literary critic C.S. Lewis, the century's most read apologist for God. Lewis dismissed the philosophy that mind results from nature: "If any thought is valid, its eternal, self-existent Reason must exist and must be the source of my own imperfect and intermittent rationality."

America's leading orthodox Protestant philosopher of God, Alvin Plantinga of Michigan's Calvin College, develops a related argument from one of the pressing issues in modern epistemology. Though it sounds strange to the man in the street, philosophers ponder how an individual can know that there is any creature besides himself who thinks, feels and reasons, or how he can know that anything ever existed in the past. How, for instance, can we know if any other person is in pain? Plantinga answers that such knowledge is acquired through analogy, and in *God and Other Minds* (Cornell, \$13.50) he makes an intricate case that this is the way believers know God. Since it is perfectly plausible to infer that other minds exist, he thinks it is reasonable to believe that God does as well.

**The Experiential Proof.** Because religious experiences are so widespread, this argument runs, there must be something for them. Someone inspiring them. Skeptics, of course, reply that experiences are subjective, hence unreliable as evidence, and besides they can be explained apart from God. Harvard's Quine, for example, dismisses beliefs as the product of "tradition, whitish thinking or something in the genes." However, one of Britain's most

distinguished zoologists, Alister Hardy, begs to wonder. A project he founded at Oxford has assayed a rigorous scientific study of 3,000 religious experiences and reports a striking—and intriguing—commonality among them.

**The Teleological Proof.** Here the infinitely complex structure of the universe is used to argue the necessary existence of an intelligent Designer. In English Archdeacon William Paley's famous analogy of 1802, anyone who sees a watch is forced to assume the existence of a watchmaker who made it. The marvels of nature's design, from snowflakes to developing embryos, are comforting buttresses to faith for many people.

Since the Enlightenment, though, philosophers have not been impressed. The great skeptic was David Hume (1711-76),

tends that narrowly antireligious Darwinism ignores the way in which human nature is in harmony with organic evolution. Nor, he asserts, can evolutionary theory possibly explain the rapid emergence of the large brain in the developing human species.

**The Ontological Proof.** This, the most controversial approach, moves from a mental concept of God to his actual existence. It was originated by Anselm, the 11th century Archbishop of Canterbury who defined God as "a being than which nothing greater can be thought." The Archbishop reasoned that since existence would have to be part of any such perfect and necessary being, this being must actually exist. This is "too good to be true," says one skeptic, and even one of its current defenders admits that it "looks

too much like word magic."

The method lay in disrepute after Kant supposedly demolished it, until Norman Malcolm, then at Cornell, suddenly claimed in a 1960 article that it was partly defensible. Since then it has been the most debated proof among philosophers. Three current advocates renovate it by applying a technique known as modal logic. Plantinga, Unitarian Charles Hartshorne, a follower of Alfred North Whitehead's "process" philosophy, now retired from the University of Texas, and Roman Catholic Layman James F. Ross of the University of Pennsylvania.

In *The Nature of Necessity* (Oxford, \$8.50), Plantinga, who had long opposed ontological theories, explains that his mind was changed through the curious logical process of speculating about "possible worlds" in which things could be different. For example, he says, Rudolf Weich has "impressive assets" in our world, but there are possible worlds in which she is "mousy and 50 lbs. overweight," and others in which she is totally nonexistent, adding "What Anselm means to suggest is that Rudolf Weich enjoys very little greatness in those worlds in which she does not exist."

Ross, a leader in modernizing the thought of medieval scholars, favors the revision of Anselm done by John Duns Scotus (1265-1308) but does some renovation himself. In the forthcoming new edition of his *Philosophical Theology* (Hackett, \$17.50), Ross is bold enough to claim that he has an airtight proof that "certainly unshakable" after a decade of scrutiny. Ross does this with his "Principle E" (for explicability), which is virtually inexplicable to the uninitiated. Roughly, it means that it is possible for everything, including God's existence, to be



Anselm of Canterbury



Immanuel Kant



Thomas Aquinas



David Hume

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Anselm of Canterbury

Immanuel Kant



Thomas Aquinas

David Hume

explained, but that God's nonexistence does not admit of explanation. Even atheistic philosophers grant that by the latest rules of logic, the updates of Aquinas are right: if it is even possible that a highest conceivable being exists, then he must exist in actuality. The trouble is the atheist does not accept that he is even possible.

**The Cosmological Proof.** The term applies technically to any argument for God through reflection upon the natural world. But most often "cosmological" refers to sweeping generalizations about ultimate origins and why the cosmos exists at all. Evolutionary schools of thought do not entertain such notions because they fall, by definition, outside what can be observed or tracked. If such questions are never asked, of course, they require no answer. Bertrand Russell once remarked in a BBC debate that the universe is "just there, and that's all." He was convinced that "all the labors of the ages, all the devotion, all the inspiration, all the noonday brightness of human genius, are destined to extinction in the vast death of the solar system."

The classic cosmological inquirer was Thomas Aquinas (1224-74), and the classic modern innovator is Canadian Jesuit Bernard J.F. Lonergan, whose "transcendental Thomism" in *Imphit* (Philosophical Library, 1961) justifies Aquinas to the modern world through a complex philosophy of human understanding. Chicago's Mortimer Adler has long been interested in Aquinas' thought. Though not formally religious, he nonetheless pondered the God problem for most of his 75 years before writing his readable *How to Think About God*.

Aquinas reasoned that each effect must have a cause and that an endless chain must proceed back to a primordial First Cause or Prime Mover. In *How to Think About God*, Adler rejects that starting point because a universe with a beginning presupposes the Creator that it seeks to prove. Therefore Adler assumes that the universe had no beginning. He also rejects the idea that a higher cause underlies and explains all phenomena in the universe, on the ground that natural processes provide sufficient explanation.

That leaves the most extreme of Aquinas' "five ways" of proving God, from "contingency." Things can be divided into two categories: "contingent" ones that could either exist or not exist, and "necessary" ones that cannot not exist. The latter is a category of one, namely God. The reason that anything at all exists, cosmologists argue, is that there must be a "necessary" being.

At one time Adler embraced Aquinas' proof, then for decades he thought it did not work because although everything in the universe is contingent, nothing ceases to exist absolutely *u.e.* burning wood only changes form, so no God is needed to explain the existence of contingent things. Last May he suddenly changed his mind again after applying the "possible worlds" approach. Adler speculated that the universe is only one of many possible universes, any of which—including this actual universe—can just as easily not exist as exist. The universe is "radically contingent," the only thing capable of not existing and leaving behind absolutely nothing. An "efficient cause" is needed to explain "the actual existence here and now of a merely possible cosmos," something that preserves it in being and prevents it from being replaced by nothingness. Color that cause God. Philosopher Ross

what nature and history show to be quite likely—that there is a God who made and sustains man and the universe." Hans J. Mitchell, a philosopher of religion at Oxford, advocates a "many-stranded rope of reason" that that employed by historians or scientists to develop the best explanation of evidence. Among his strands: individuals' experience of a mysterious "order" outside nature; the simple faith of believers and "cosmic awe" in encountering unusually saintly persons.

**The procedure** is double-edged. Oxford's J.L. Mackie, perhaps the ablest of today's atheistic philosophers, offers nonsupernatural explanations for such evidence, and raises the problem, as old as the *Book of Job*, of evil. The existence of evil is no "knock-down" proof of an omnipotent and "wholly good God," he says, but it does make God improbable.

Plantinga renovates the theistic "lemon" reply to this: the free will argument. Examining whether a semiautonomous, corrupt Boston mayor would have taken smaller bribes in other "possible worlds," he argues that even an all-powerful God cannot create a world in which mayors can choose to take bribes and that also contains no evil. In religious circles, natural theology is not in vogue. Not all Roman Catholics, for example, can wholeheartedly accept the First Vatican Council's decree that "man can know the one true God and Creator with certainty by the natural light of human reason." At the same time, though few people come to believe through the exercise of reason, Catholics of thought can provide sanctuary for many when faith falters or is attacked by skeptics. Jude Dougherty, dean of philosophy at the Catholic University of America, also sees value in continuing to labor to reason God out in a day when all sorts of bizarre cults flourish.

"If religion is not placed on a rational footing then anything can be considered religion."

Probably the major failing of such enterprise is that the results, however persuasive, tell too little about the nature and will of God. Blaise Pascal, anticipating modern objections to natural theology, believed that one cannot worship a dry concept, only the living God. Though a genius in science and mathematics, Pascal believed that "the heart has its reasons, which reason cannot know." But if in an age of science, faith in God can be more rationally grounded, as a growing number of philosophers now attest, then the reasoning soul who is so inclined can more surely and assuredly feel comfortable in moving beyond reason.



England's J.L. Mackie



West Germany's Hans Küng



Chicago's Mortimer Adler



Michigan's Alvin Plantinga

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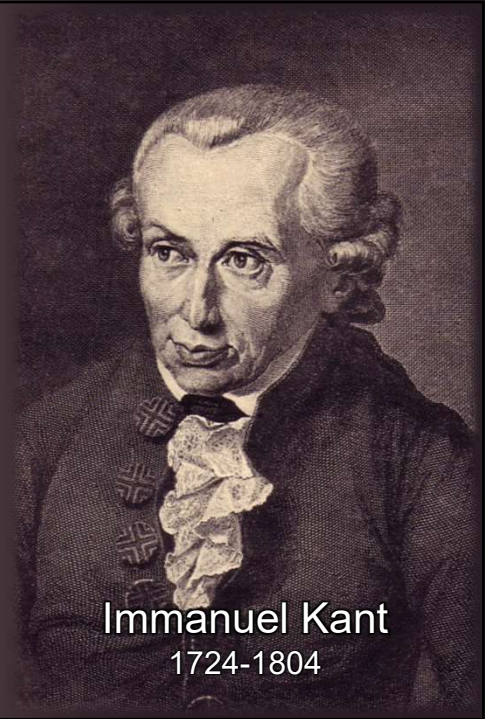


Michigan's Alvin Plantinga

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***"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."***

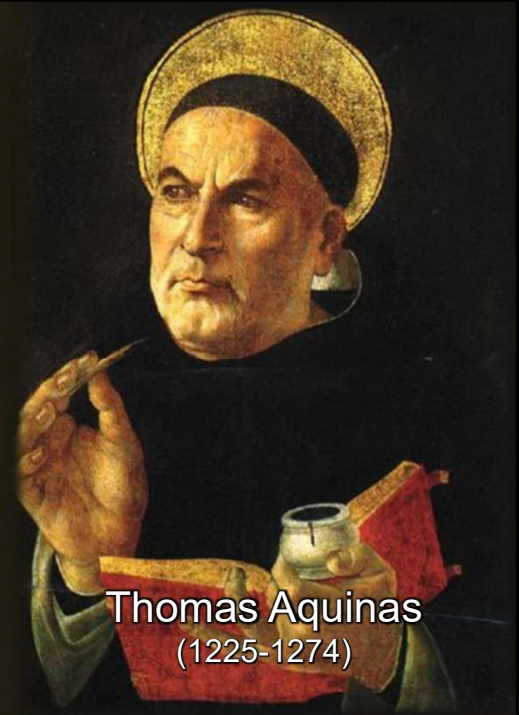
[*Critique of Practical Reason*, trans. Lewis White Beck (New York: Macmillan Publishing, 1956), 166]



**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."***

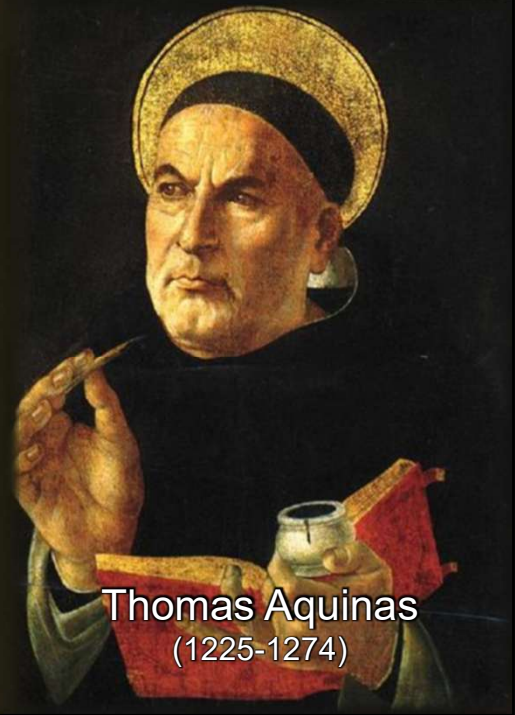
[*Summa Contra Gentiles*, I, 3, §3, trans. Anton C. Pegis (Notre Dame: University of Notre Dame Press, 1975, 64)]



**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 ∞

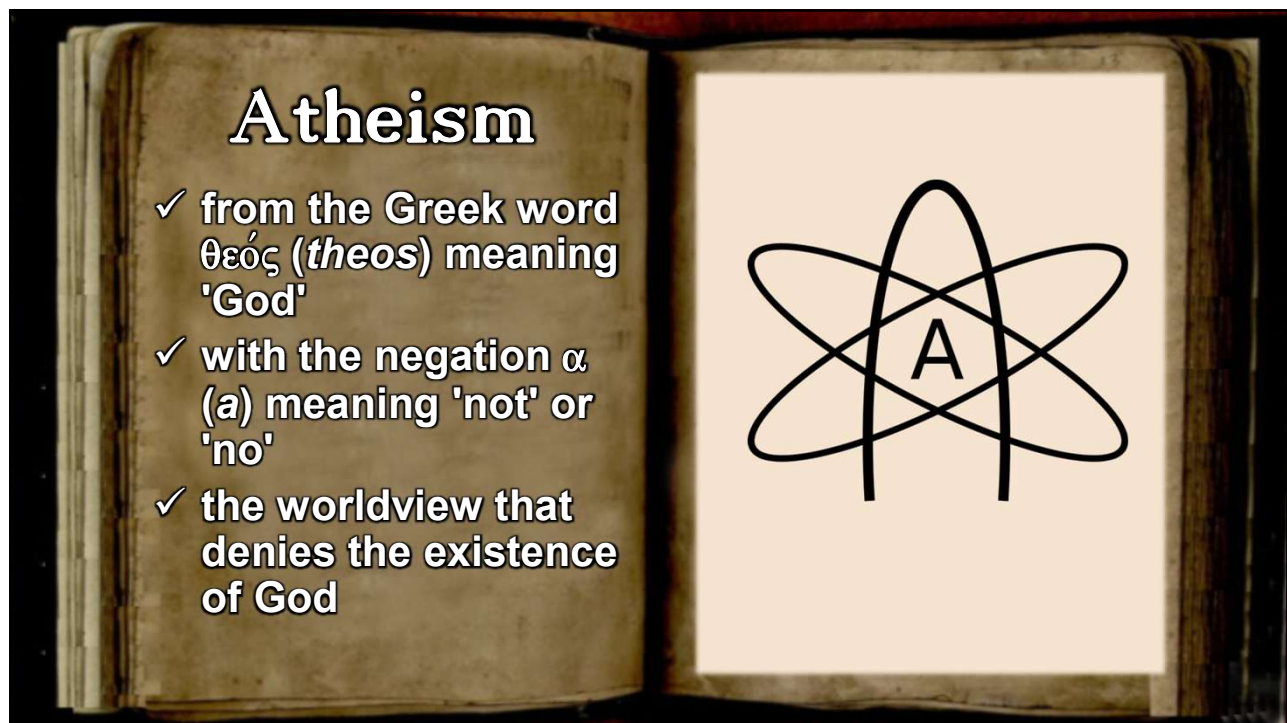
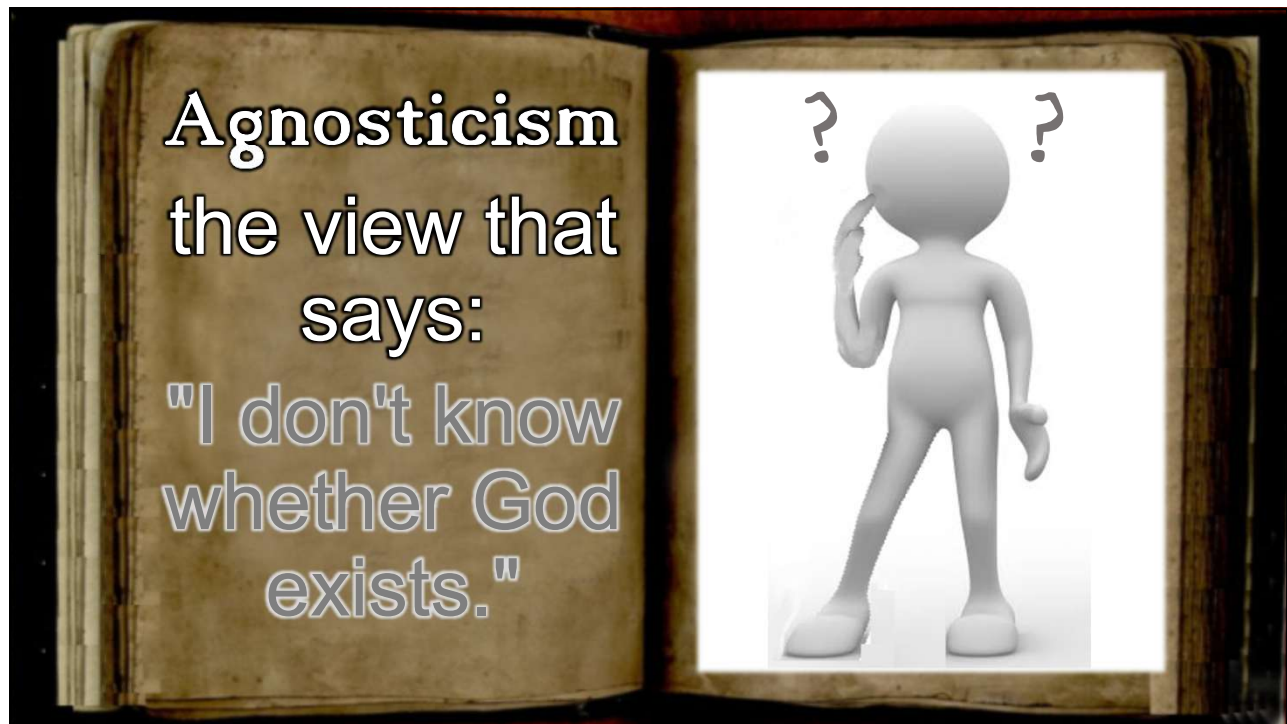
all is in god

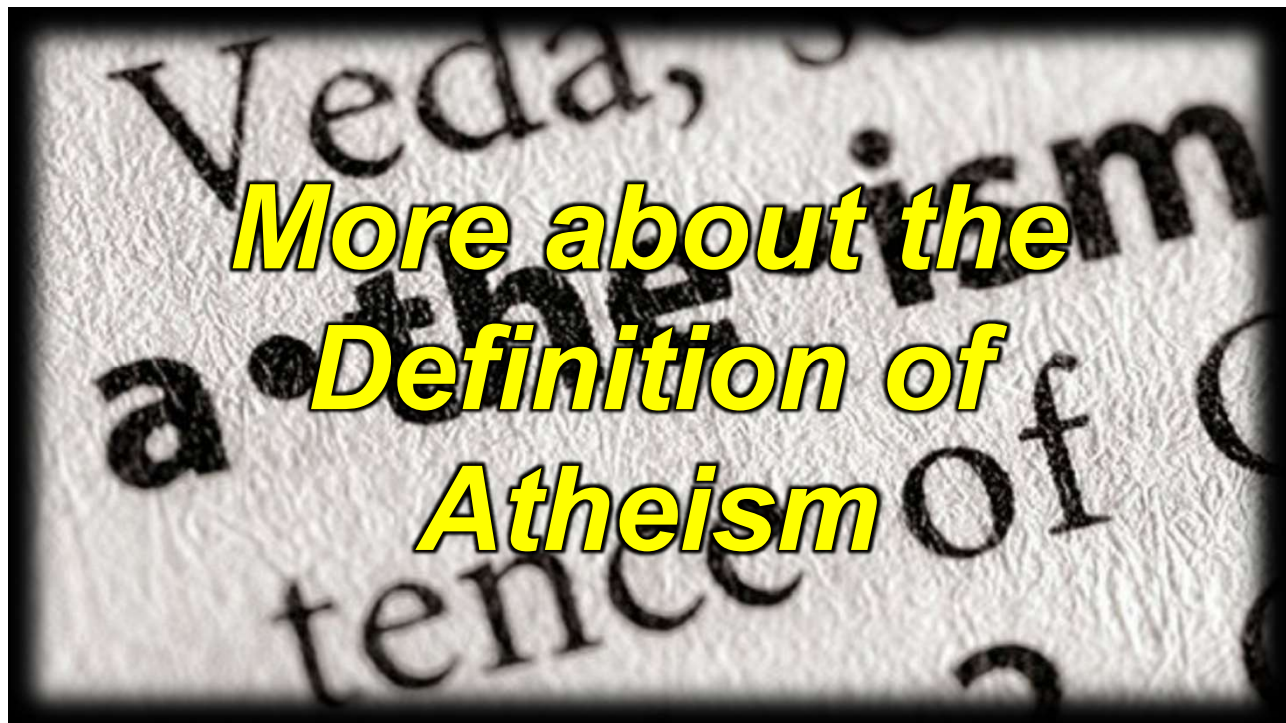
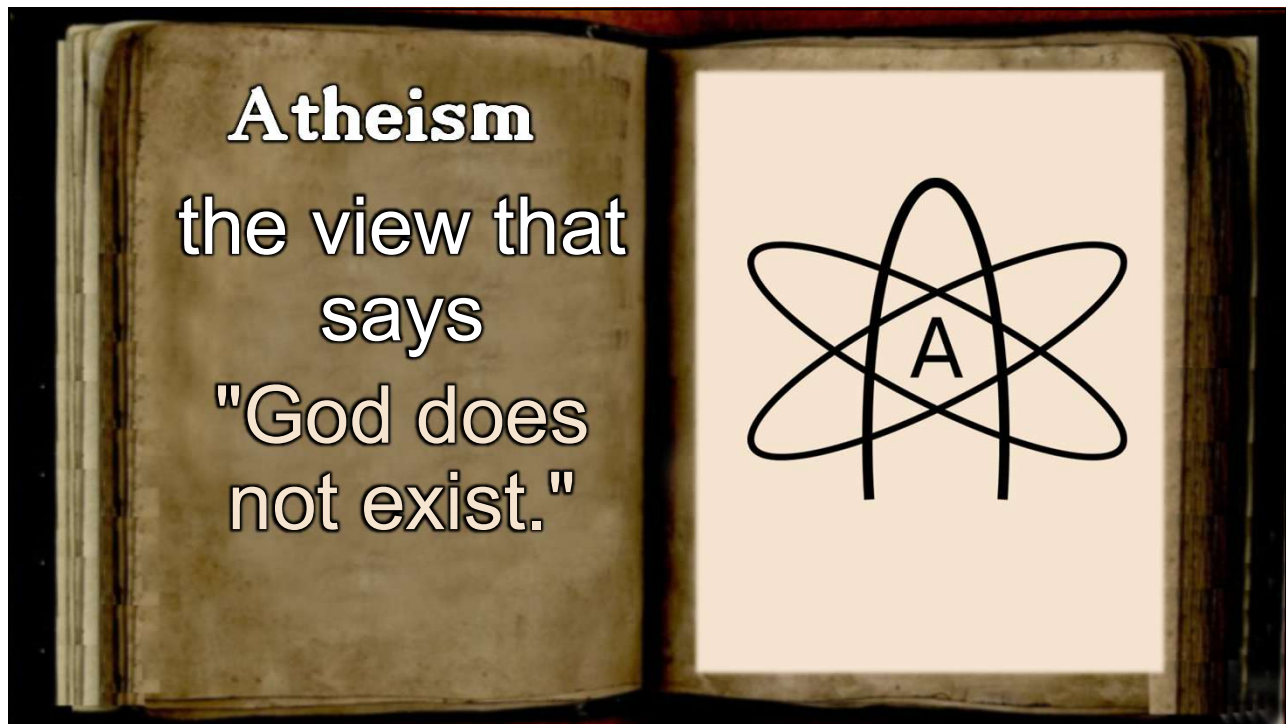


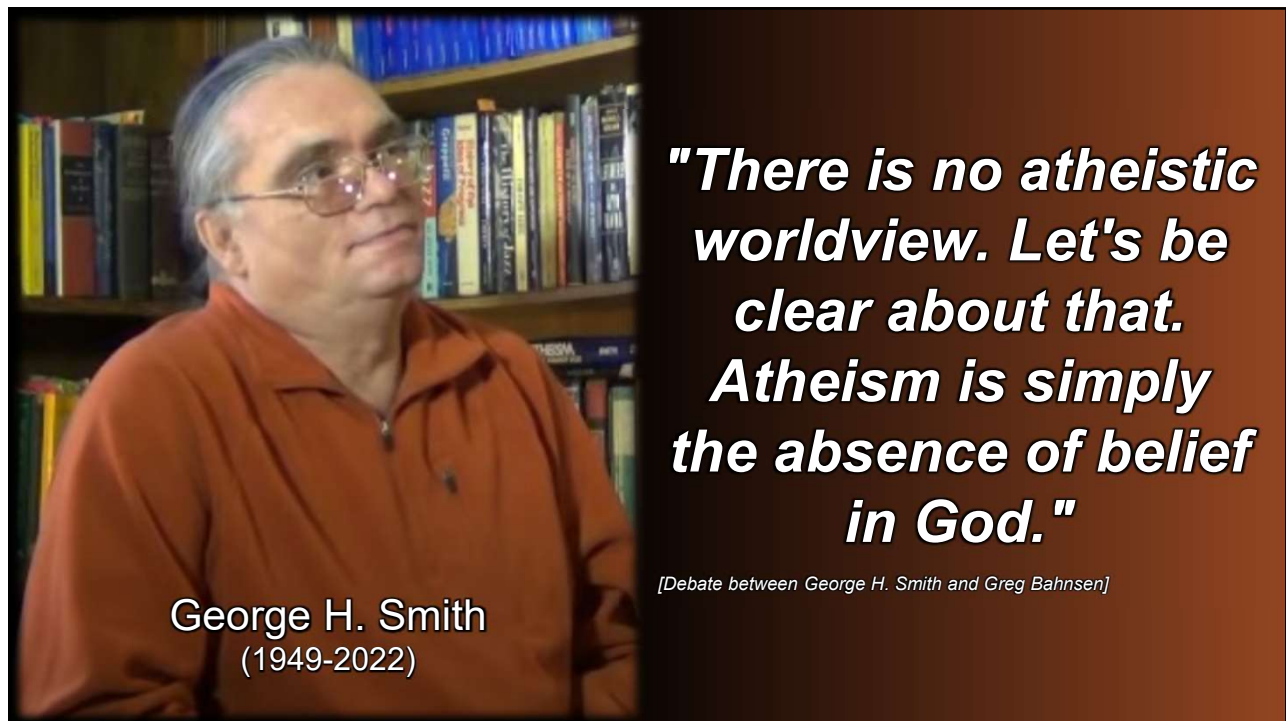
# Agnosticism

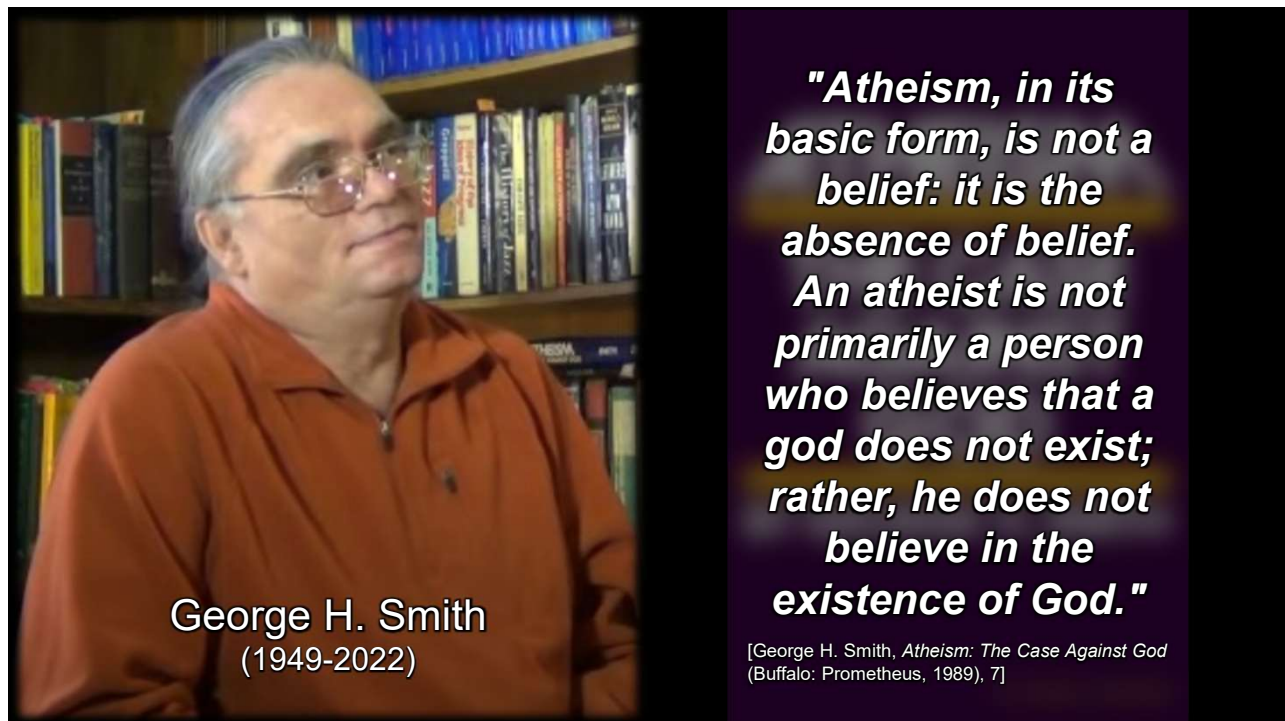
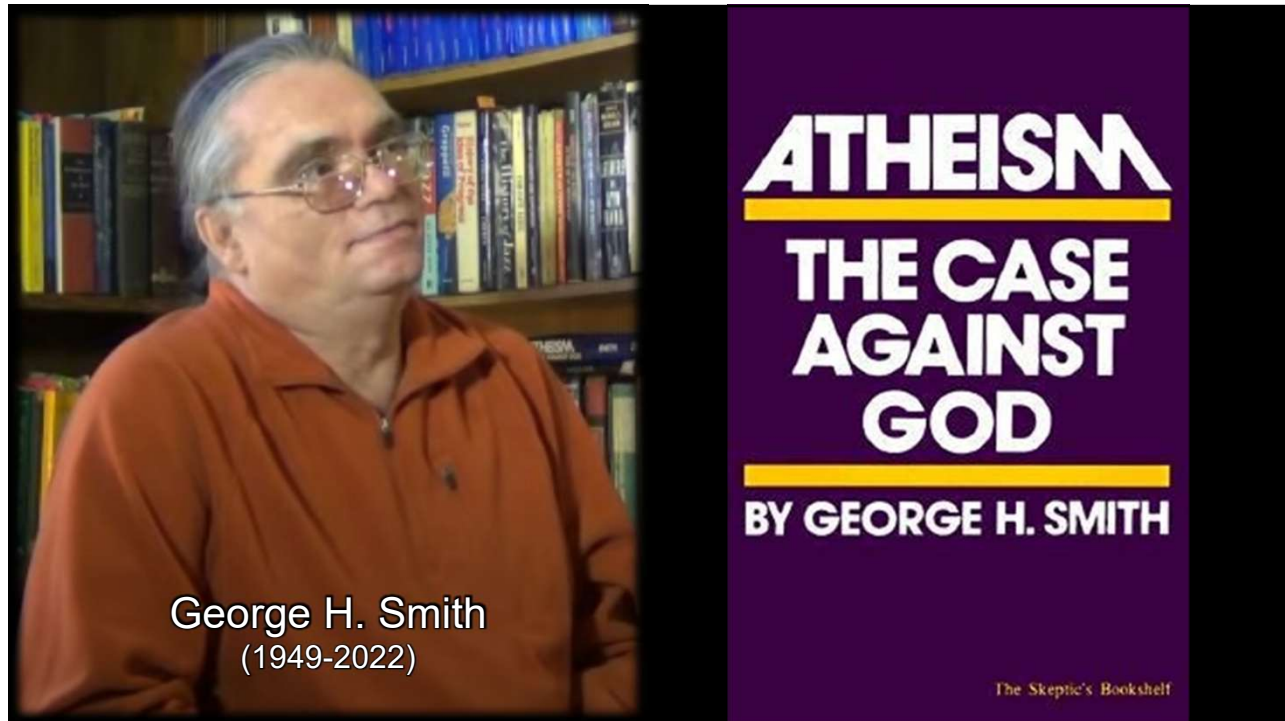
- ✓ from the Greek word γνῶσις (*gnosis*) meaning 'knowledge'
- ✓ with the negation α (*a*) meaning 'not' or 'no'
- ✓ the suspension of judgment on the question of God's existence

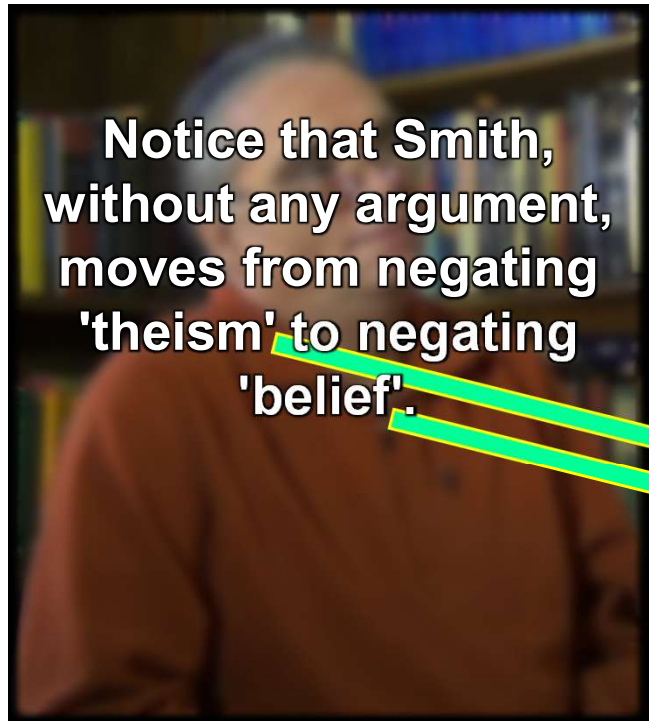








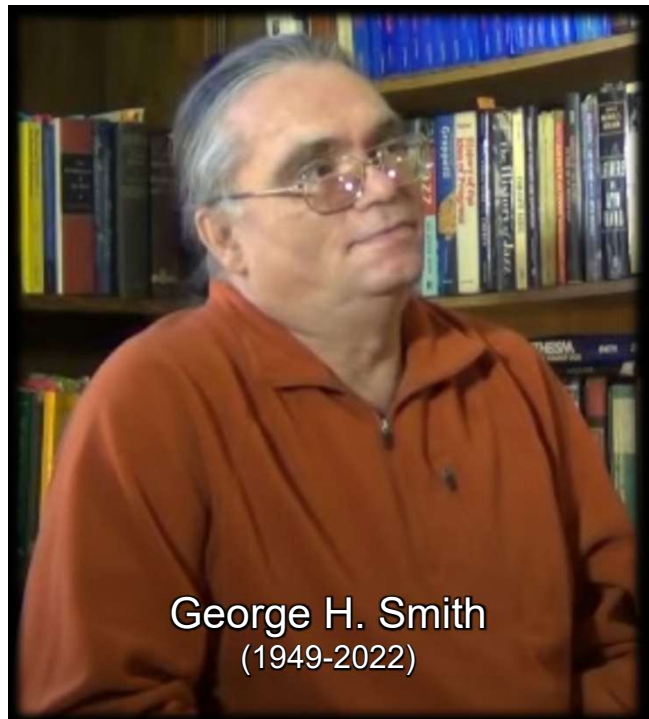




Notice that Smith, without any argument, moves from negating 'theism' to negating 'belief'.

*"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]



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, *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*

# DOES GOD EXIST

The Debate between Theists & Atheists

J.P. MORELAND AND  
KAI NIELSEN

with Contributions by:

\* Peter Kreeft \* Antony Flew \*

\* William Lane Craig \*

\* Keith Parsons \* Dallas Willard \*



Keith Parsons

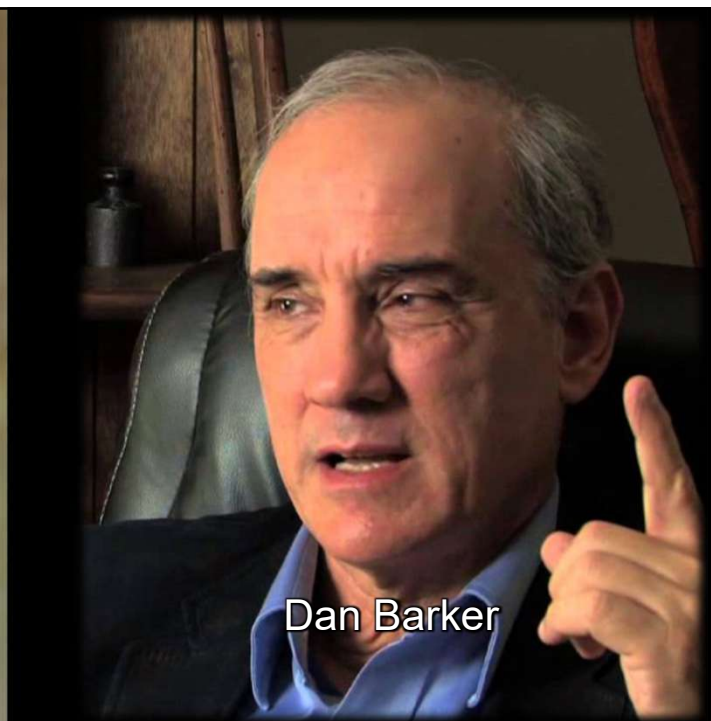
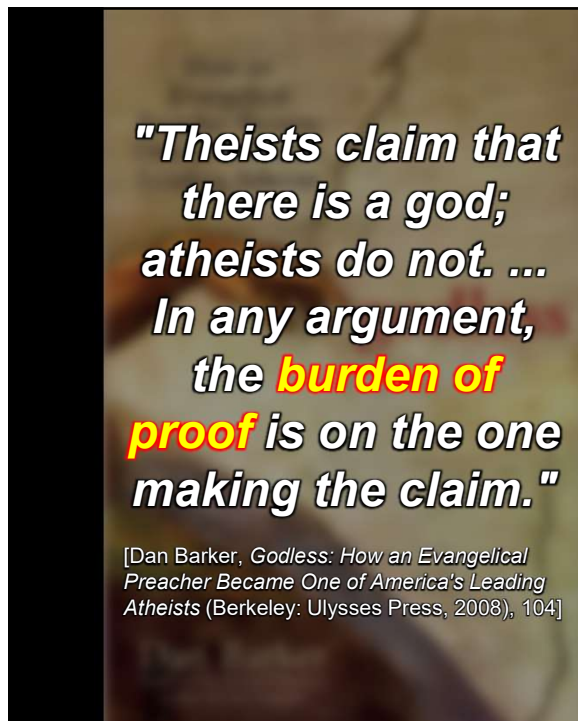
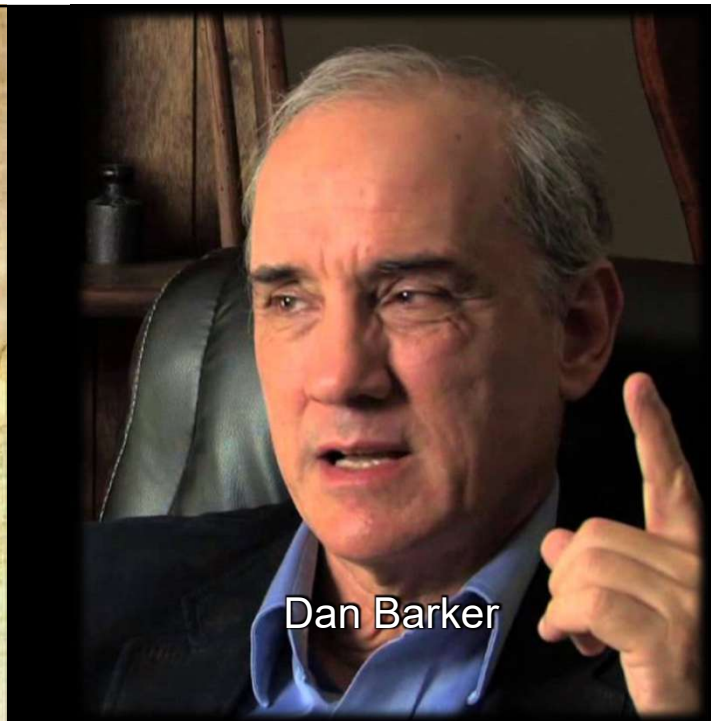
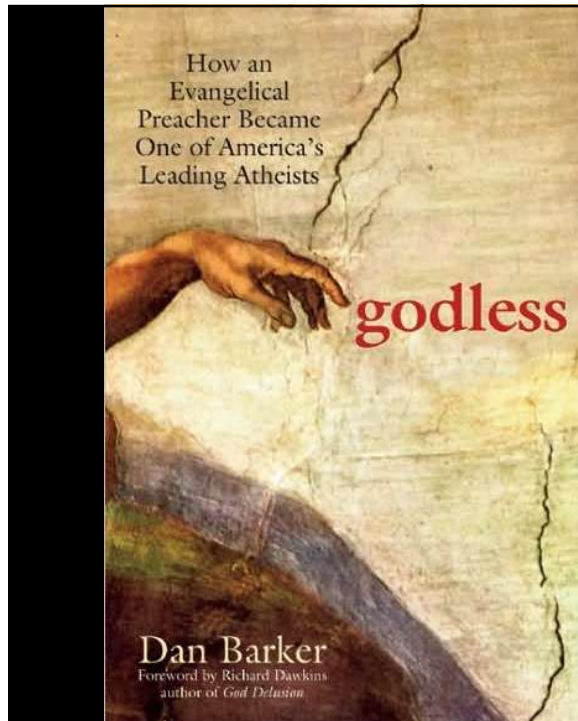
**"After all, 'atheism' means simply **the lack of belief in God** (and not, as is commonly supposed, the denial of God's existence)."**

[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]



Keith Parsons

***What's at stake in the definition of atheism?***



*"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 Atheist Debater's Handbook* (Buffalo: Prometheus Books, 1983): 11]

## The Atheist Debater's Handbook

by B. C. Johnson

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

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



George H. Smith  
(1949-2022)

# ATHEISM

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## THE CASE AGAINST GOD

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BY GEORGE H. SMITH

The Skeptic's Bookshelf



George H. Smith  
(1949-2022)

*"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."*

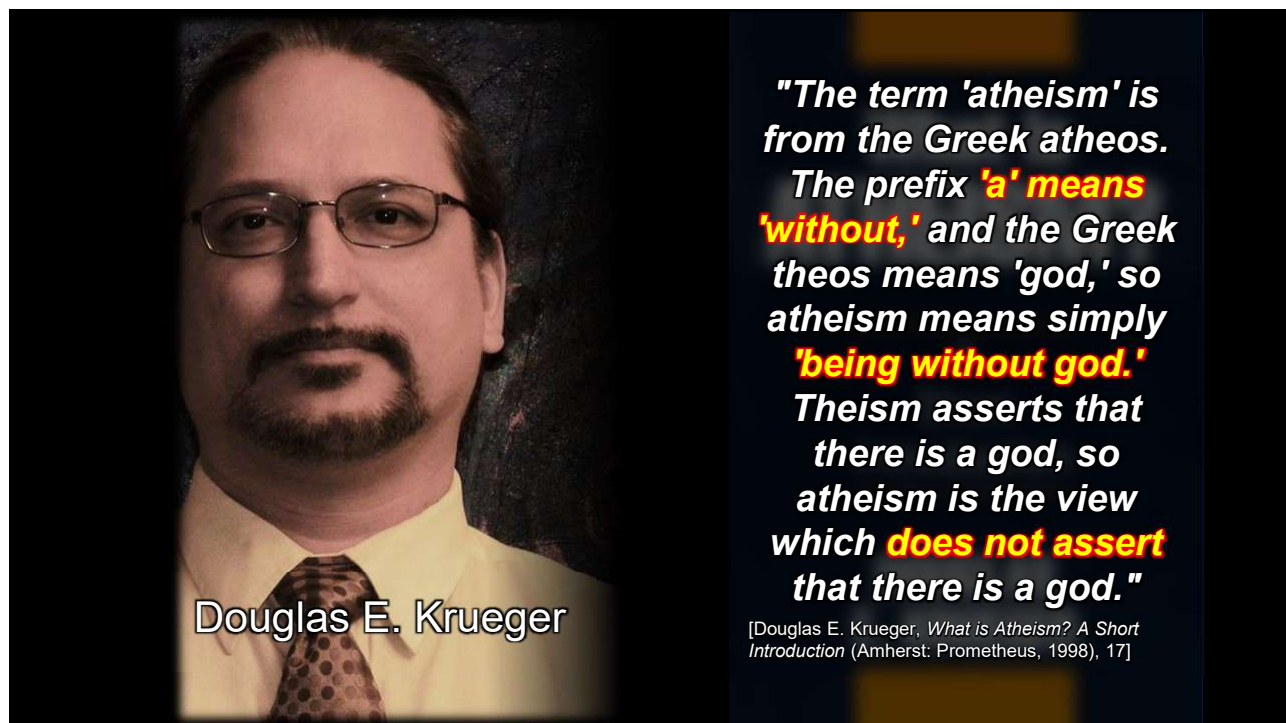
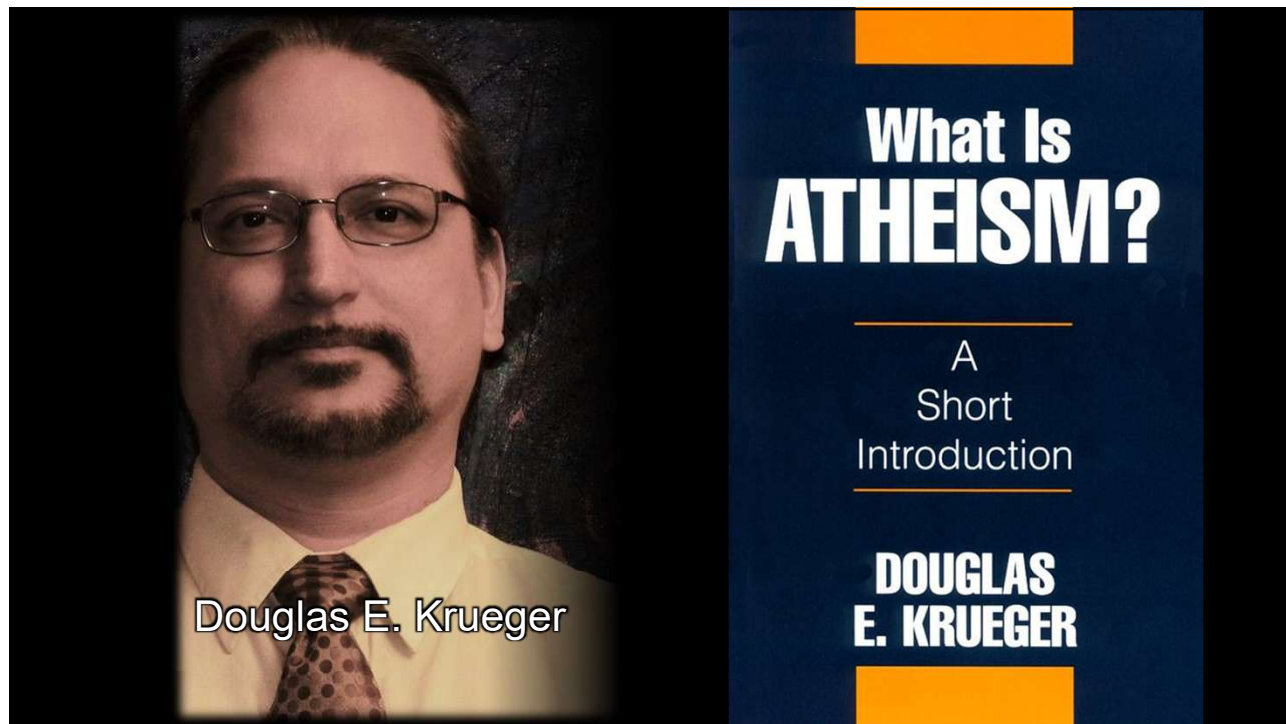
[George H. Smith, *Atheism: The Case Against God* (Buffalo: Prometheus, 1989), 7]

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."*

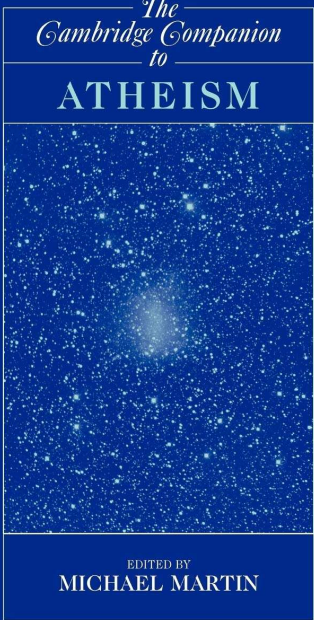
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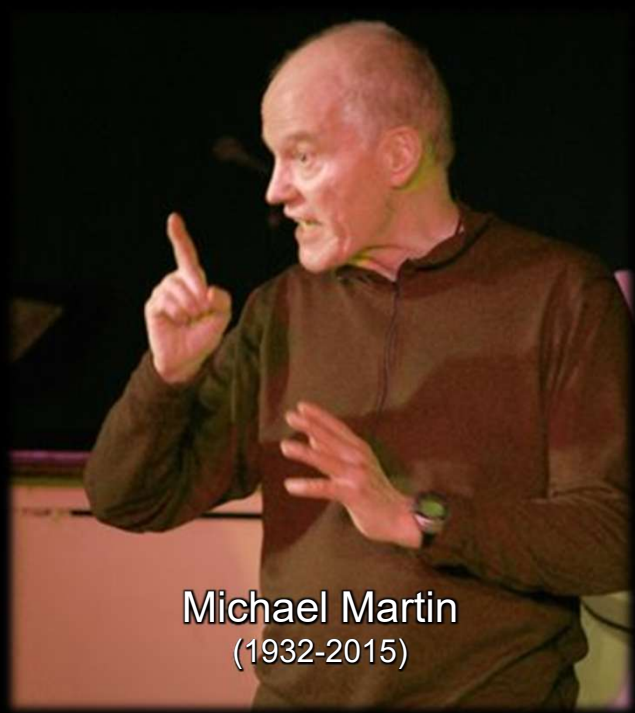


Notice that Krueger moves from the alpha negating 'god'-(which would mean 'without god' or 'not-god') to the alpha negating the **assertion**-(which means the absence of the assertion of god instead of the absence of god).

"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.**"

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

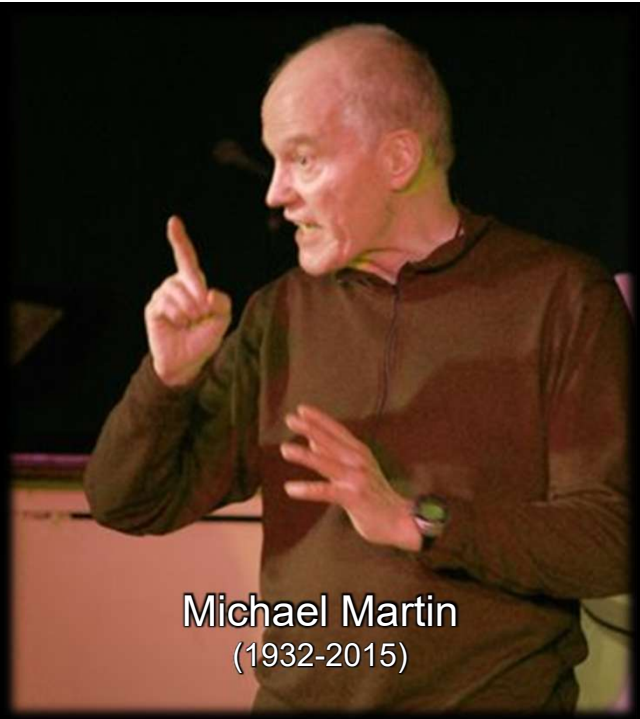




Michael Martin  
(1932-2015)

"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 standpoint, an atheist is someone **without a belief in God**; he or she need not be someone who believes that God does not exist."

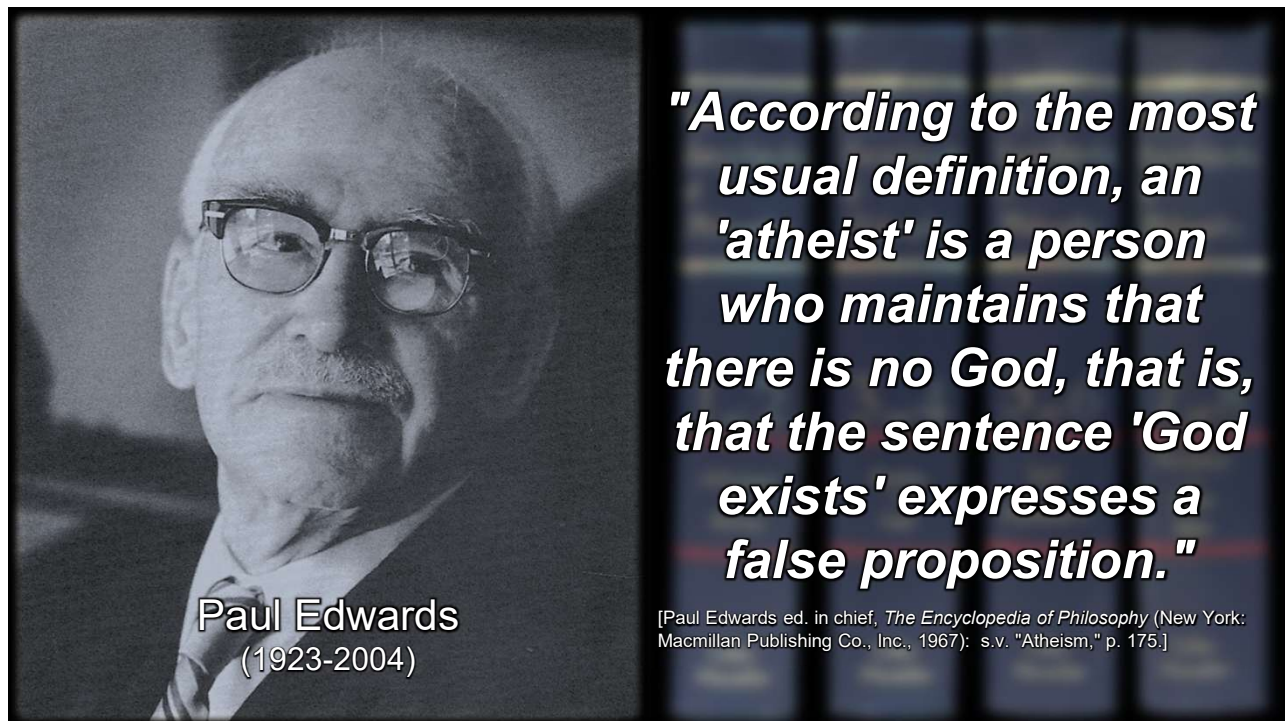
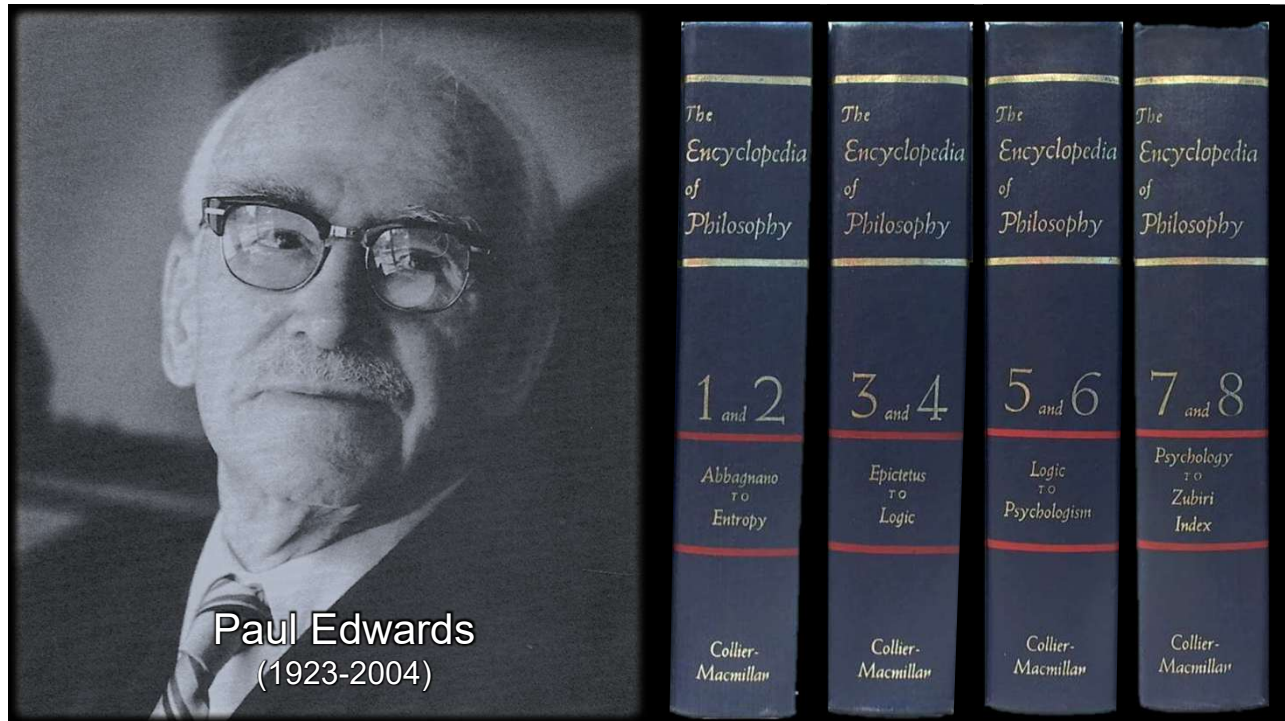
[n.a., "General Introduction," in *The Cambridge Companion to Atheism* (Cambridge: Cambridge University Press, 2007), 1]

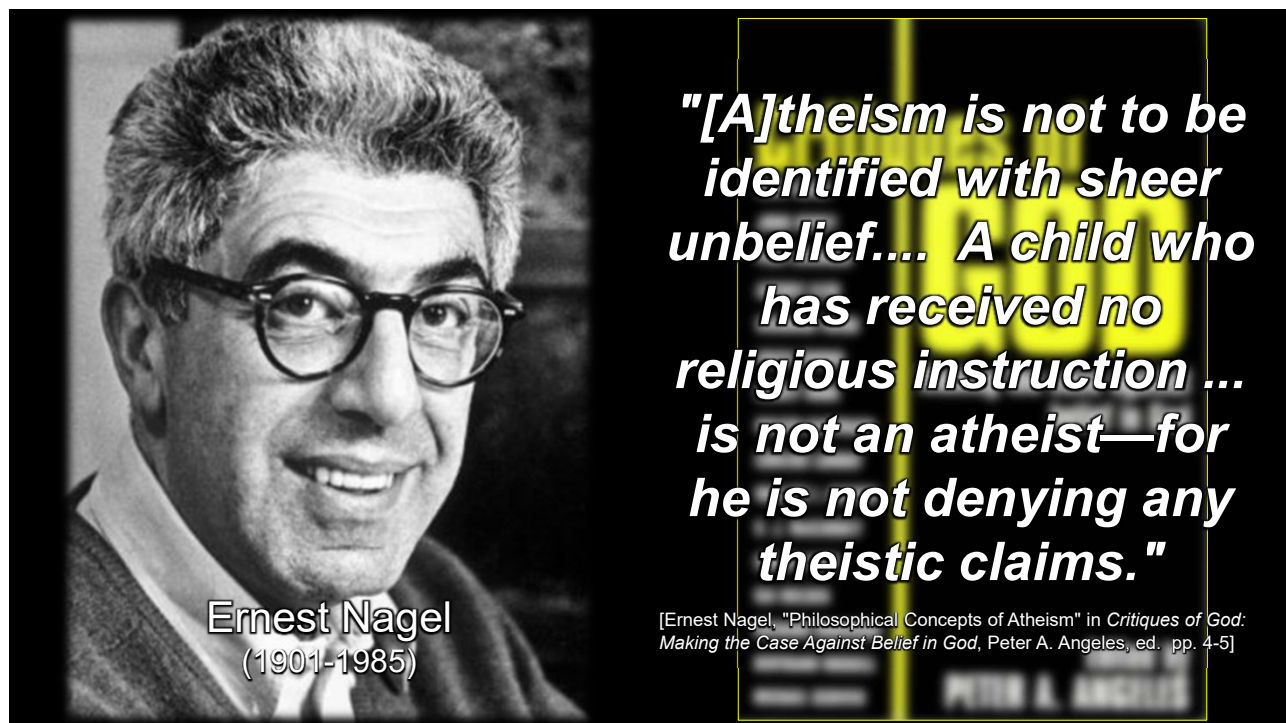
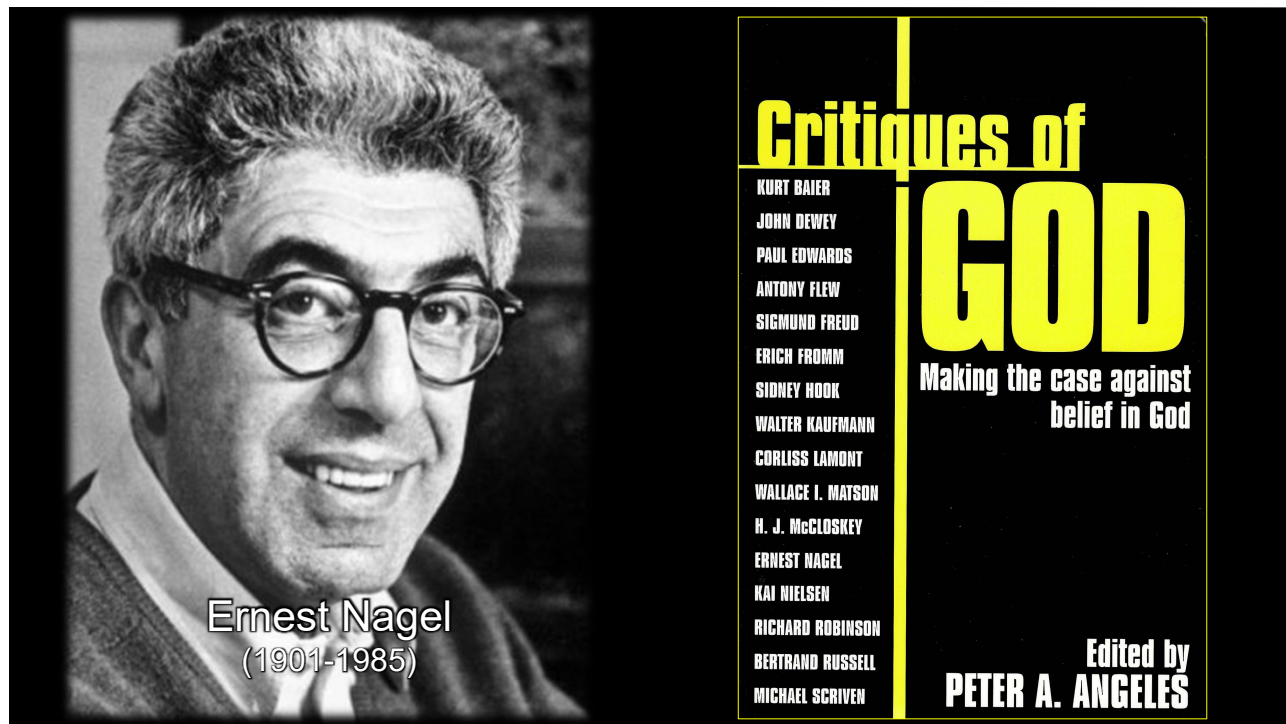


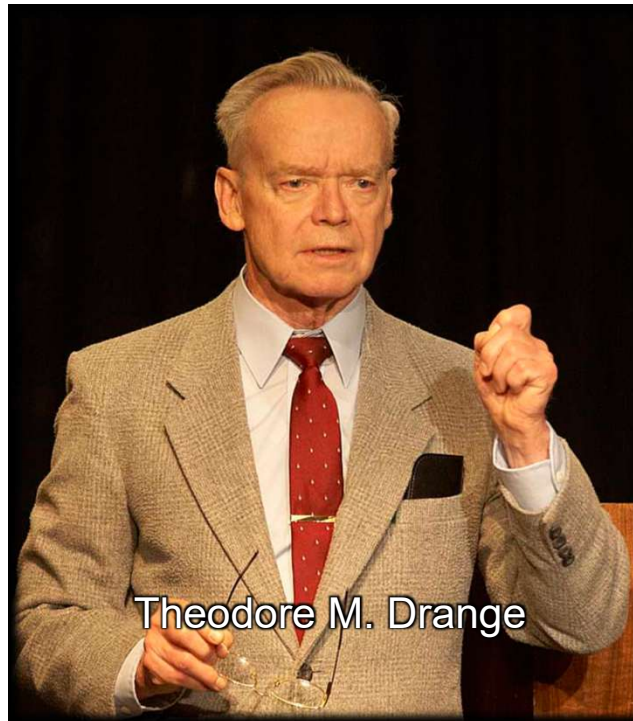
Michael Martin  
(1932-2015)



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



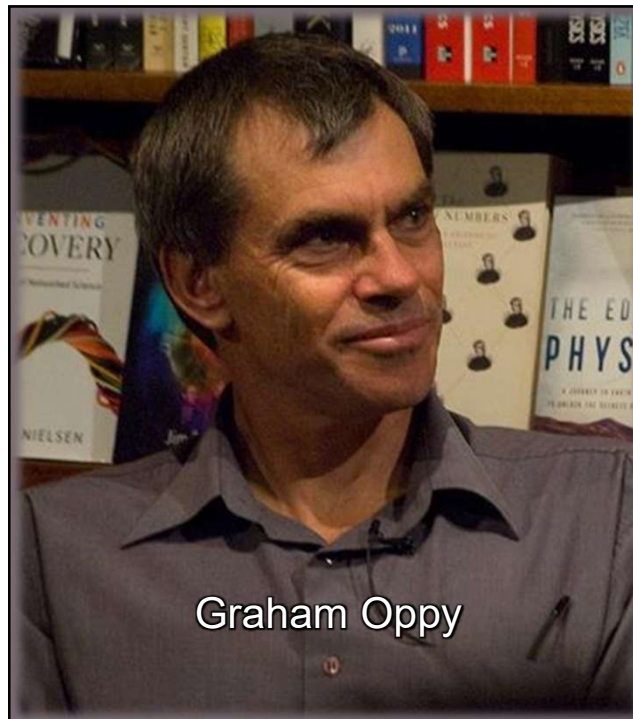




Theodore M. Drange

***"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)."***

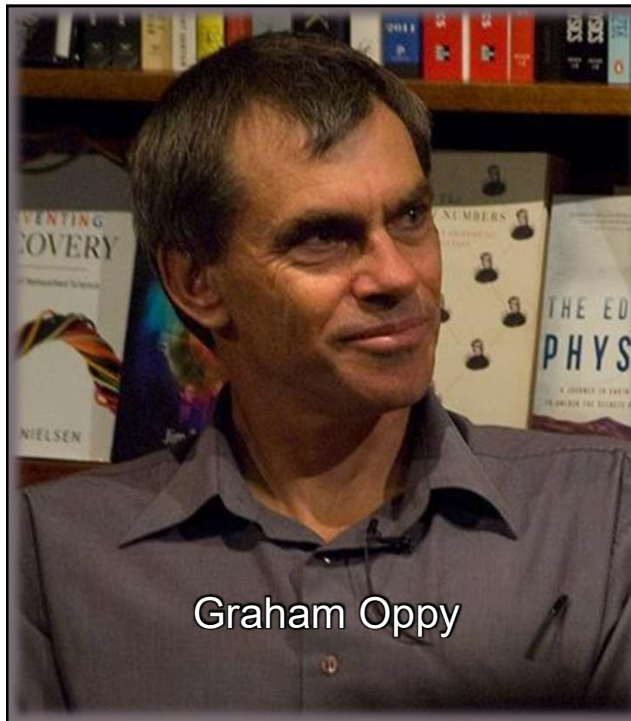
[Theodore M. Drange "Atheism, Agnosticism, Noncognitivism," from [https://infidels.org/library/modern/theodore\\_drange/definition.html](https://infidels.org/library/modern/theodore_drange/definition.html), accessed 01/15/19]



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."***

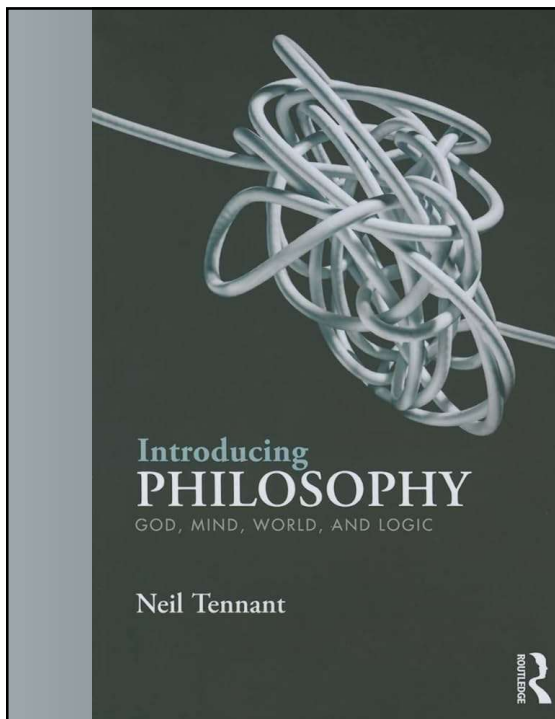
...



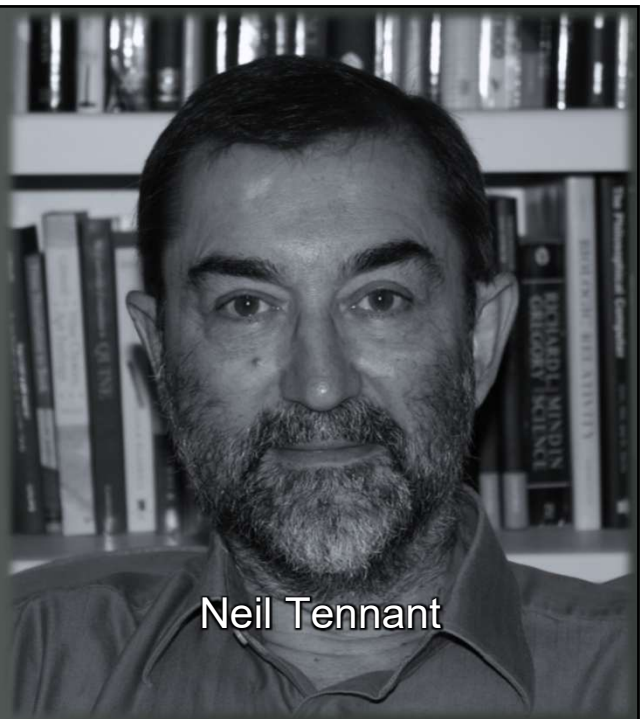
Graham Oppy

***"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 08/12/25]



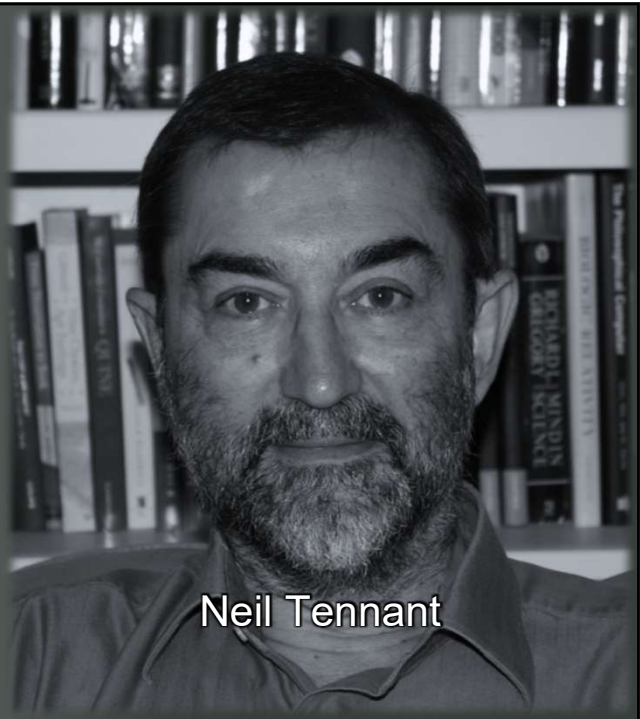
Neil Tennant



Neil Tennant

***"['Does God exist?'] is a philosophical question. At one extreme, the theist will answer 'Yes', and offer all manner of arguments and considerations in support of that answer. At the other extreme, the atheist will answer 'No', and likewise offer all manner of arguments and considerations in support of that answer."***

[Neil Tennant, *Introducing Philosophy: God, Mind, World, and Logic* (New York: Routledge, 2015), 29]



Neil Tennant



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

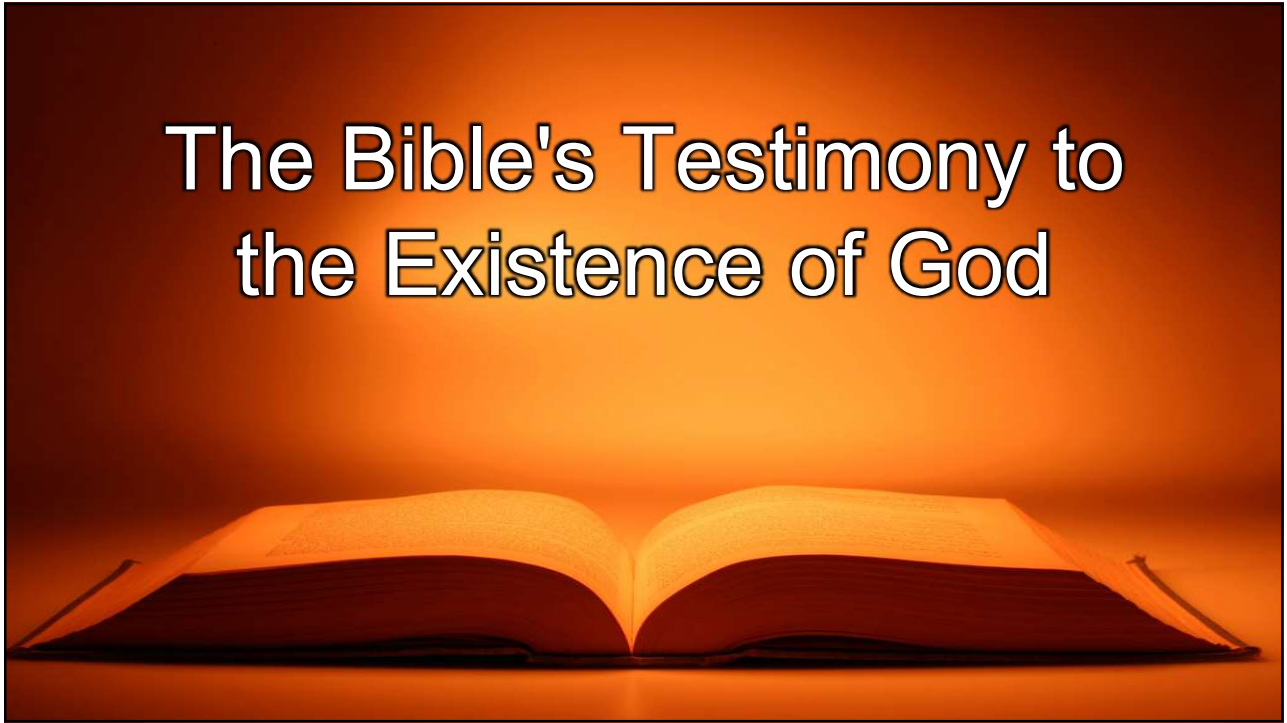


***The absurdity is that atheism could be true and God still exist. In other words, atheism would be indifferent to the question of God's existence.***



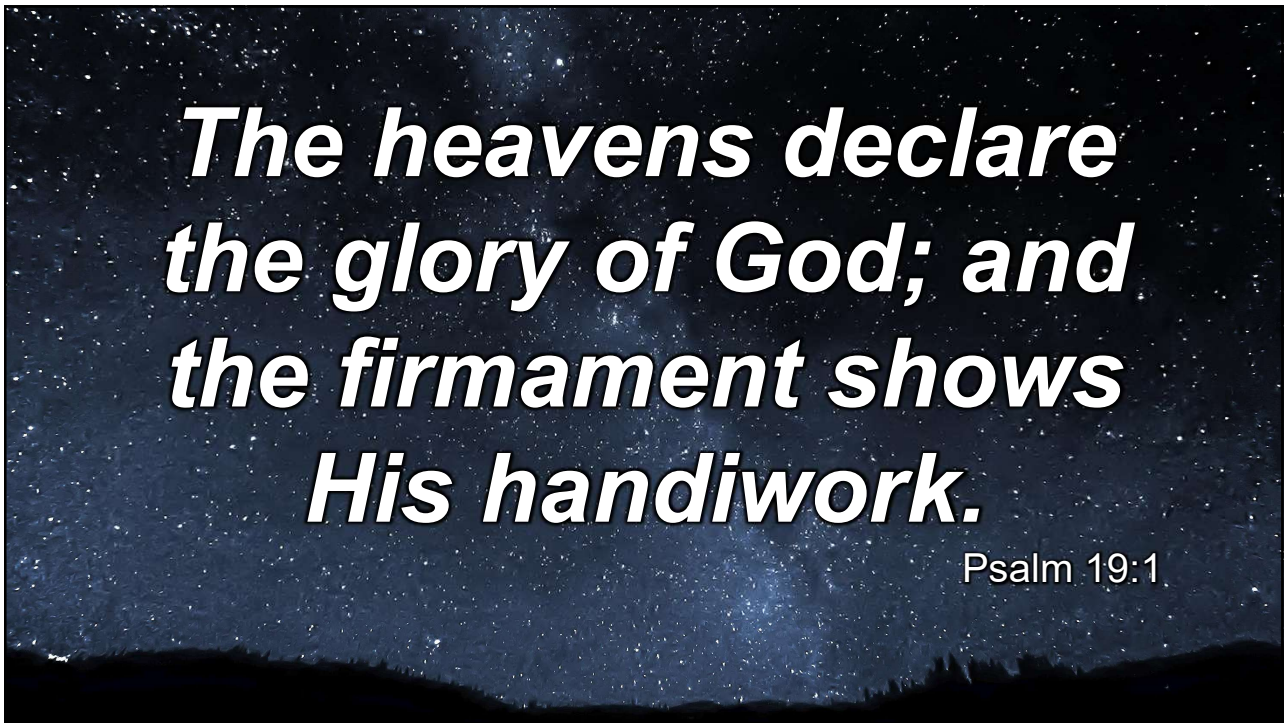
***The contradiction would be that theism and its opposite, atheism, could both be true at the same time!***

# The Bible's Testimony to the Existence of God



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

Psalm 19:1



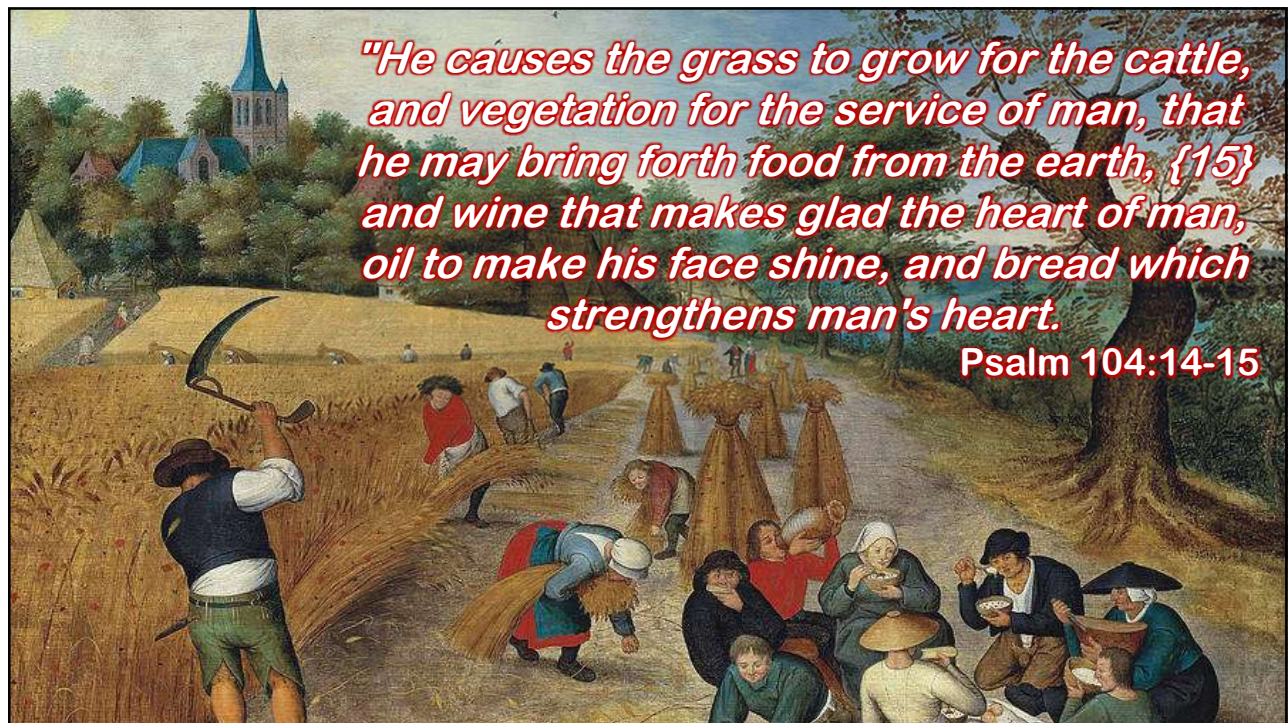
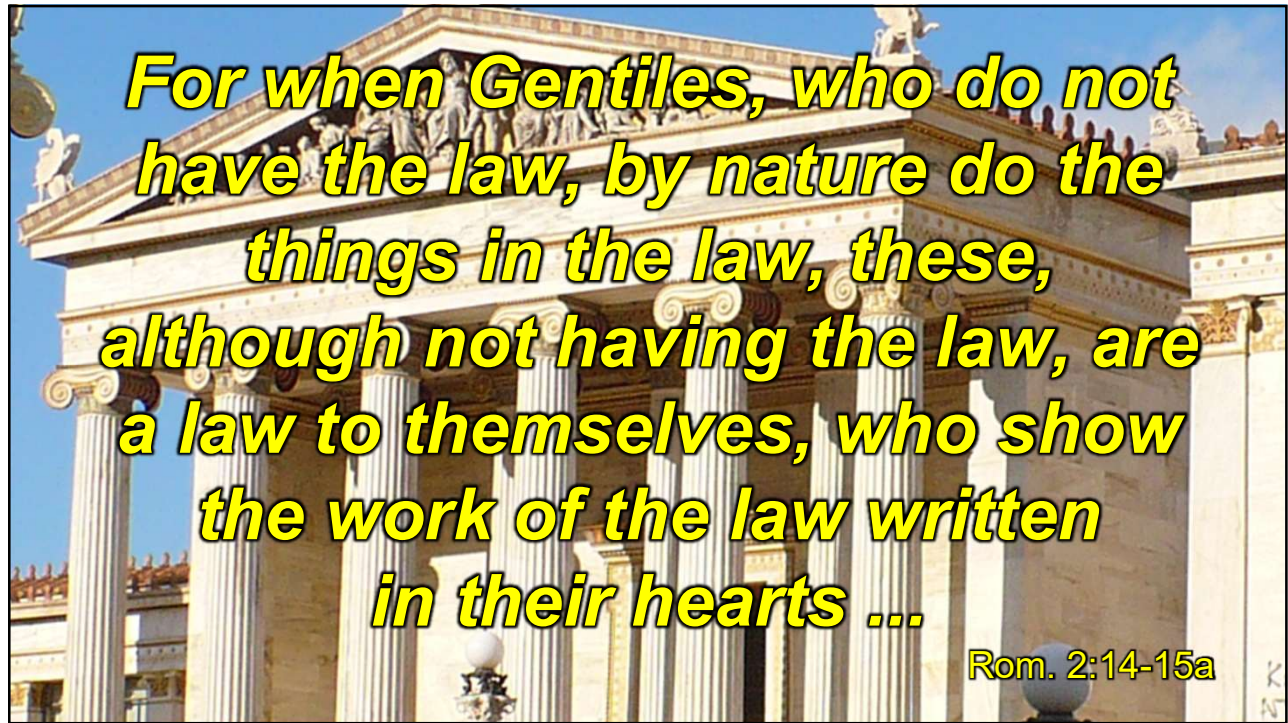
***The heavens declare  
His righteousness,  
And all the peoples  
see His glory.***

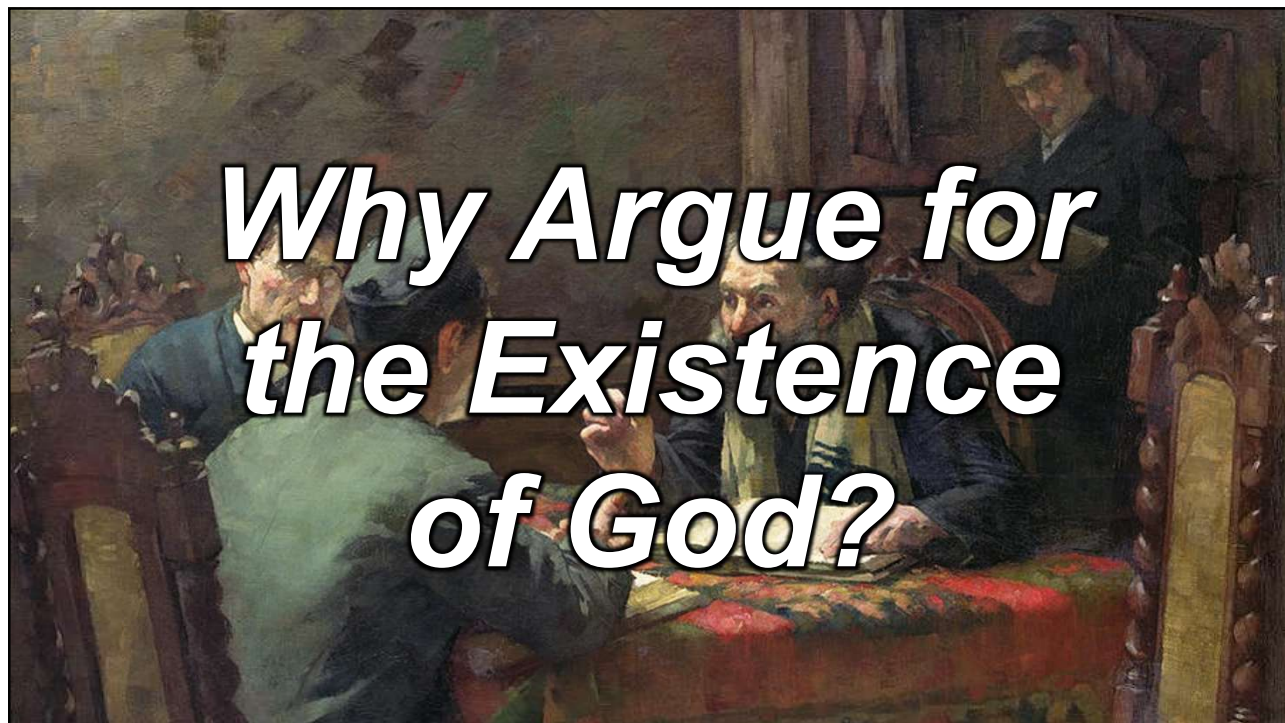
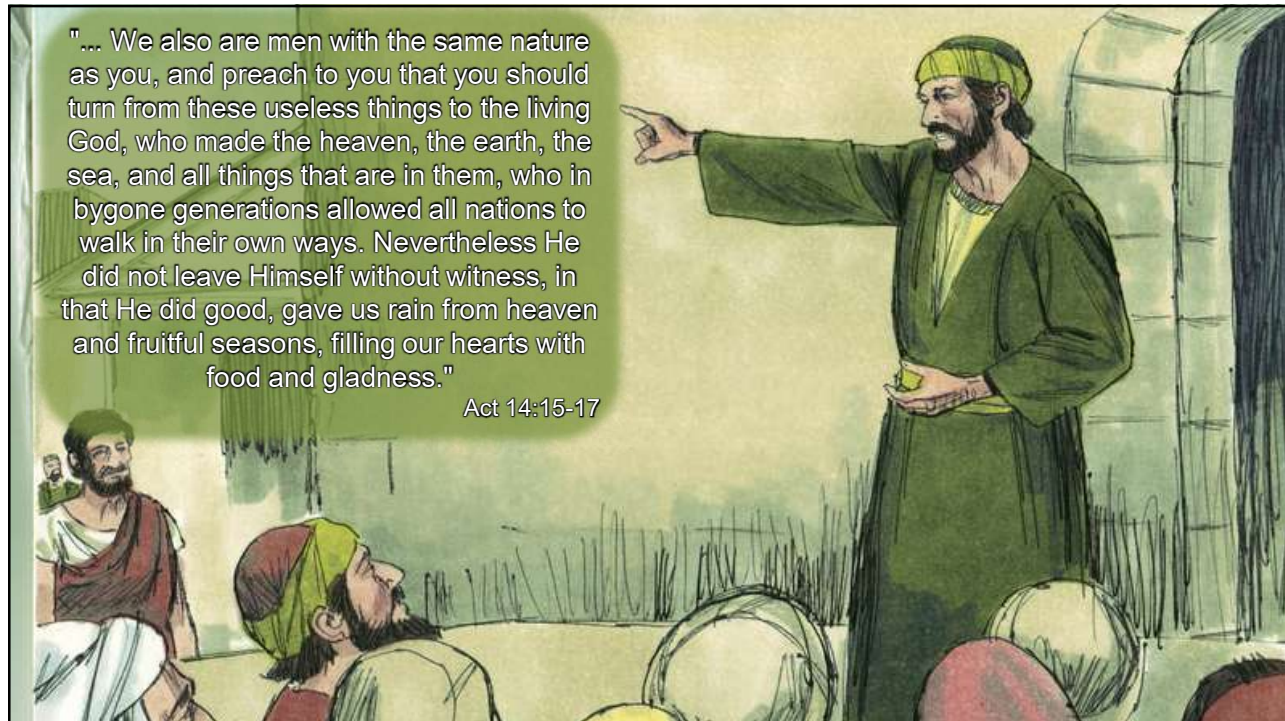
Psalm 97:6

***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 ...***

Rom. 1:20a



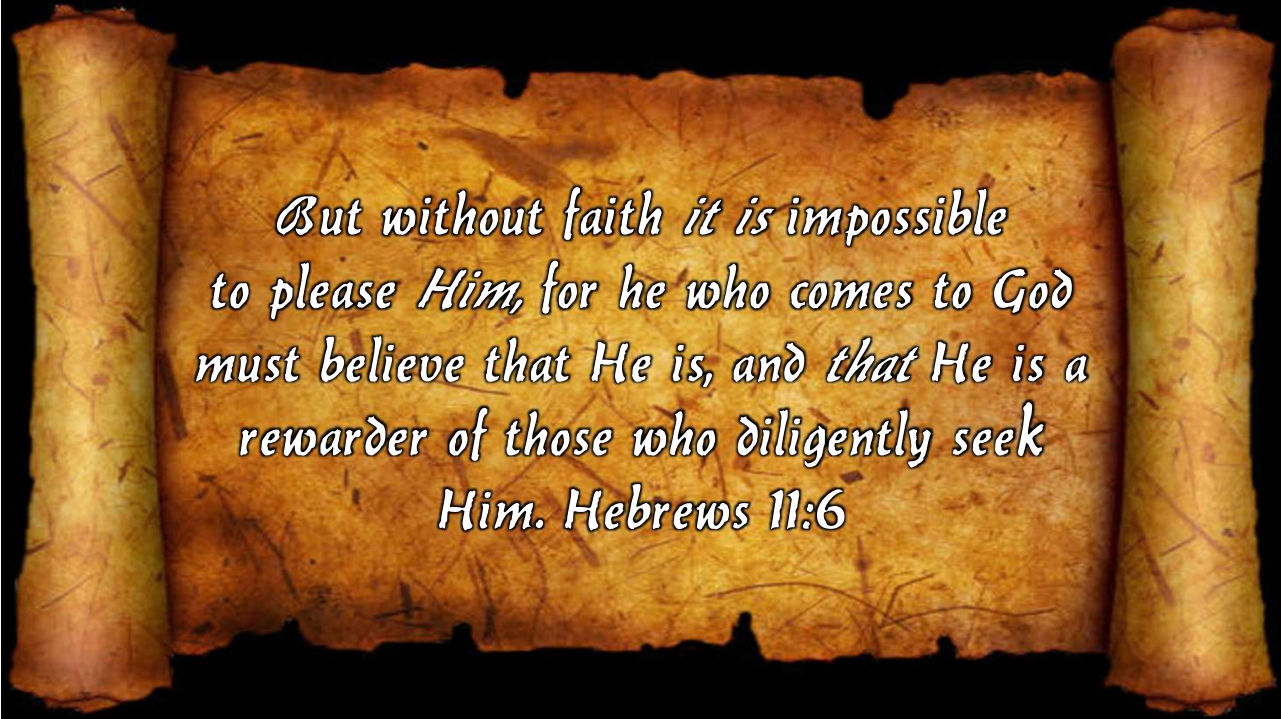


## ∞ Belief in God and Eternal Life ∞

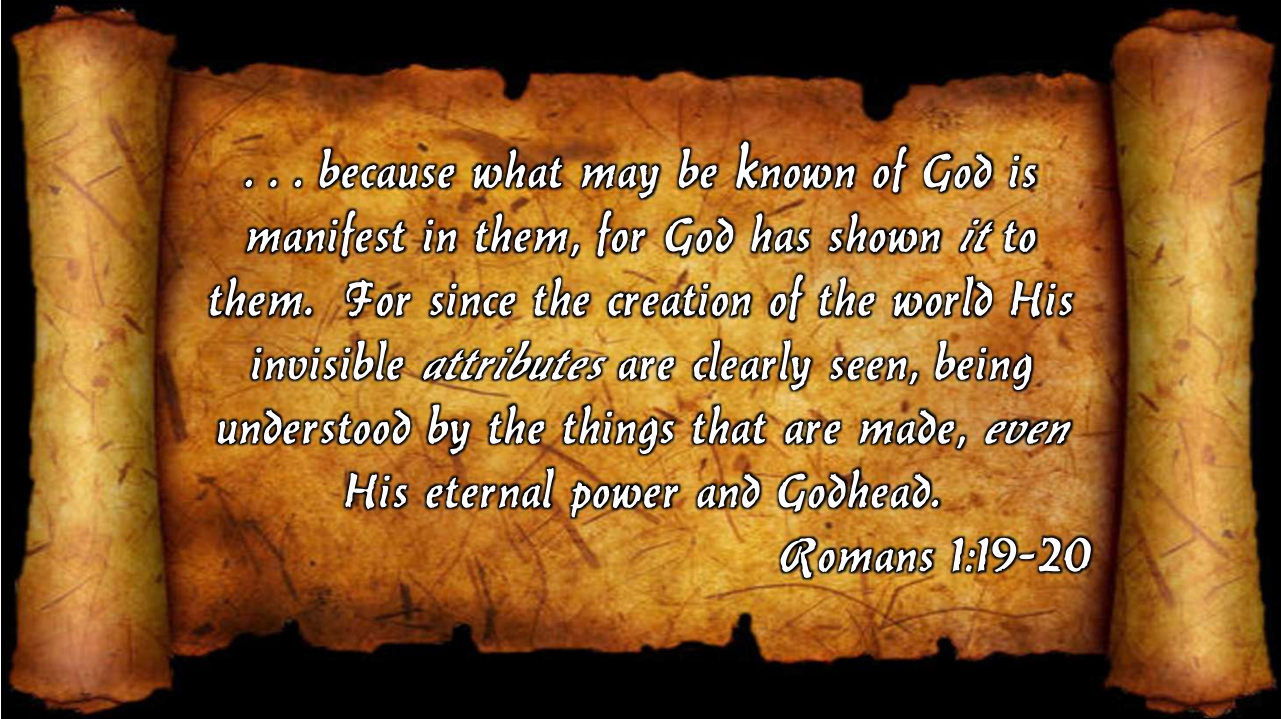
*You can't argue someone into  
faith in Christ.*

*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 section with a slightly darker, more uniform color and irregular, torn edges. The scroll is set against a dark 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 text and two vertical side panels. The text is written in a stylized, cursive font.

*... 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.***

*... 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.*



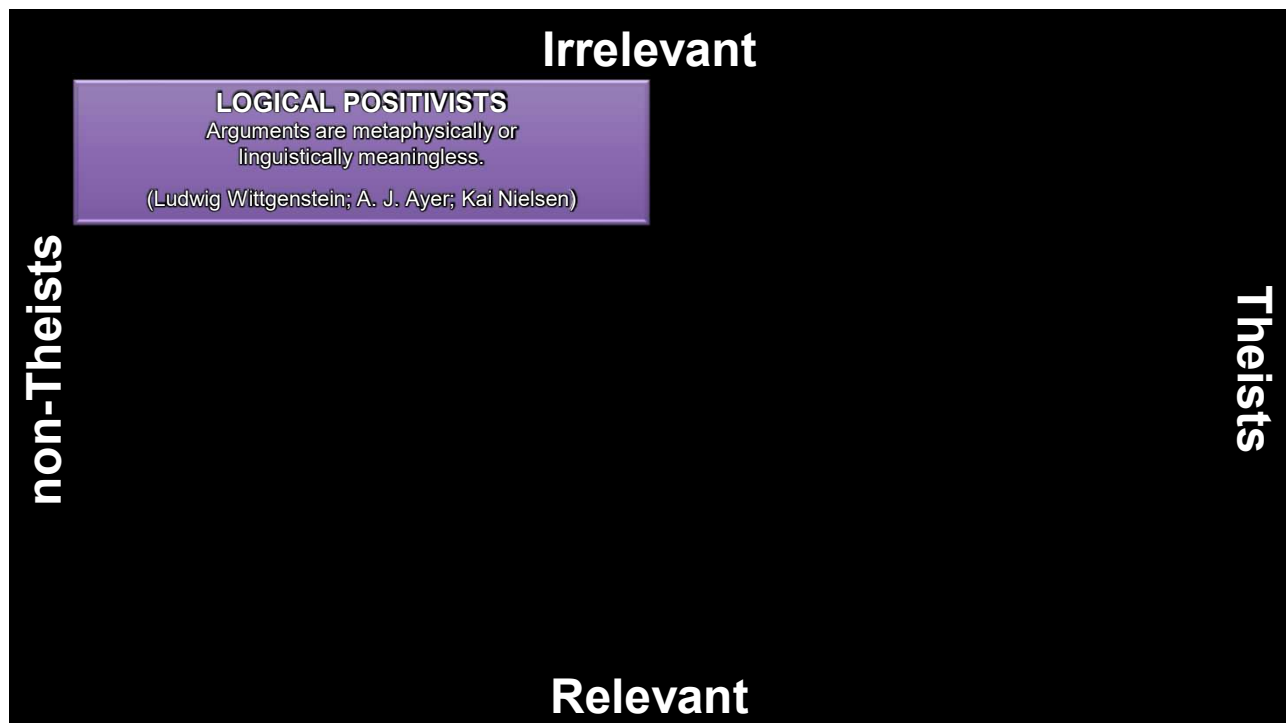
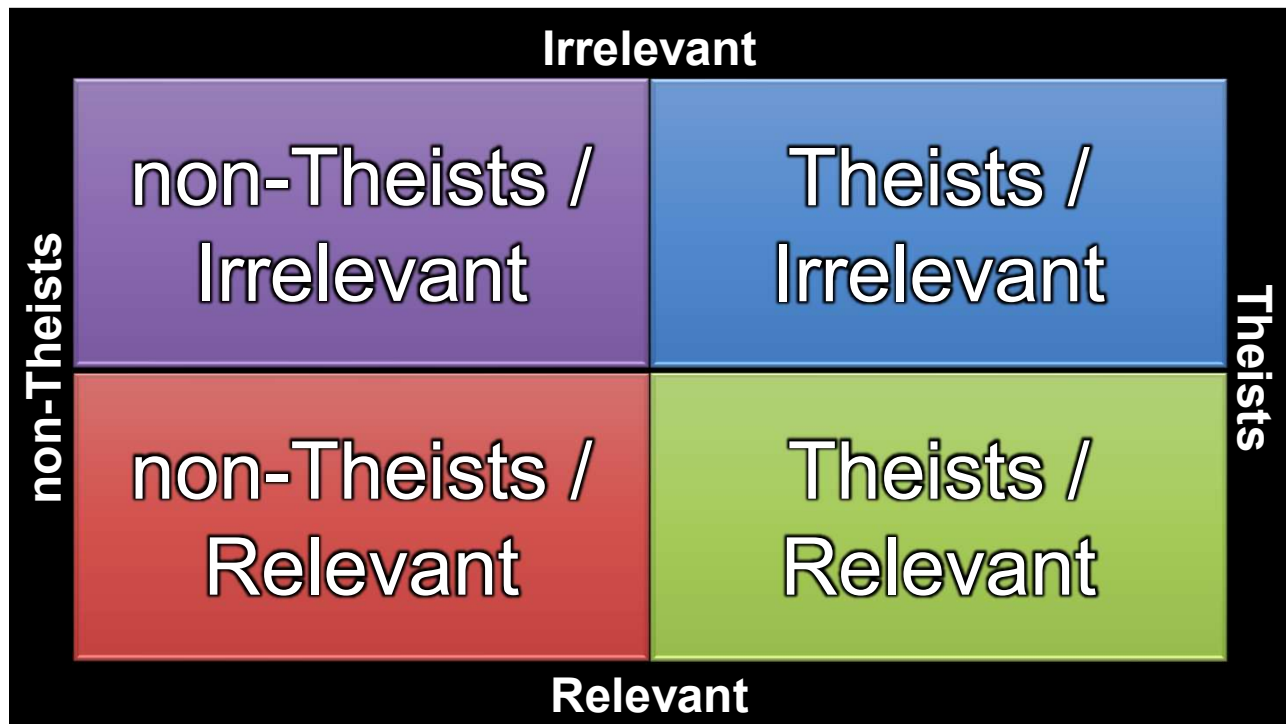
A detail from Michelangelo's famous fresco 'The Creation of Adam' in the Sistine Chapel. It shows the two hands reaching toward each other: the hand of God on the right, extended from a reclining position, and the hand of Adam on the left, reaching out from a similar reclining position. The fingers are just inches apart, creating a sense of tension and divine spark.

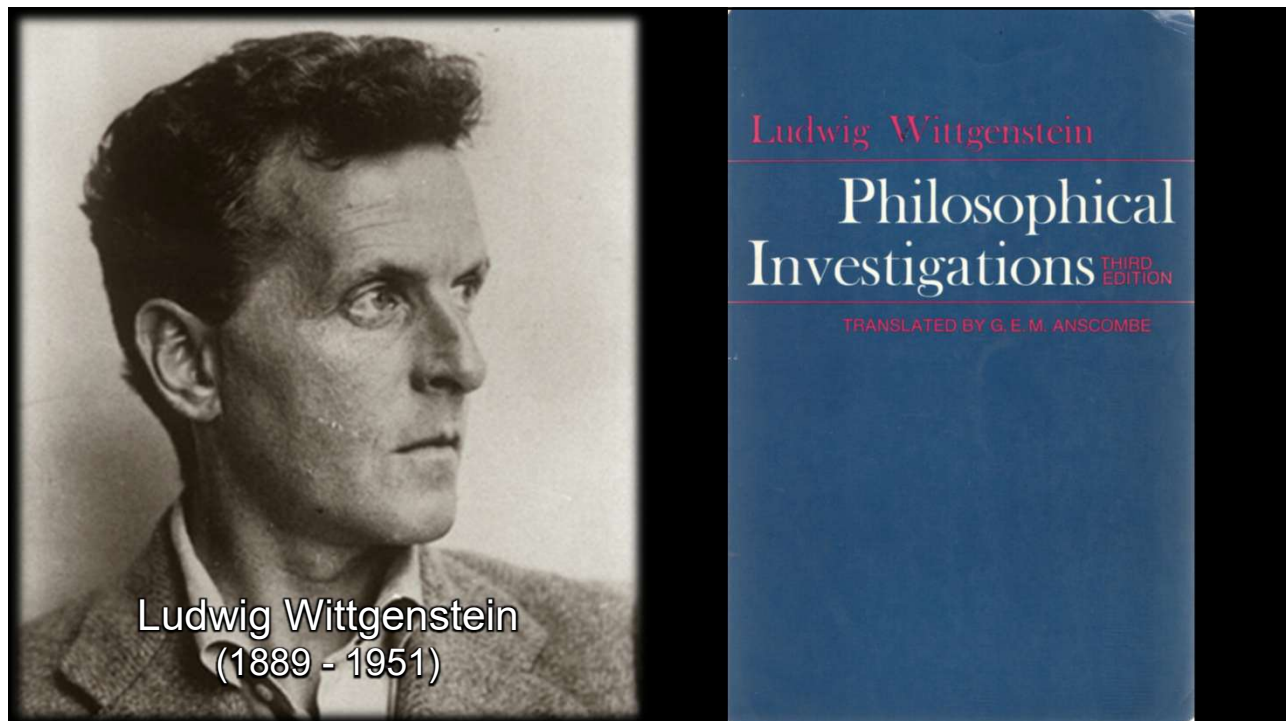
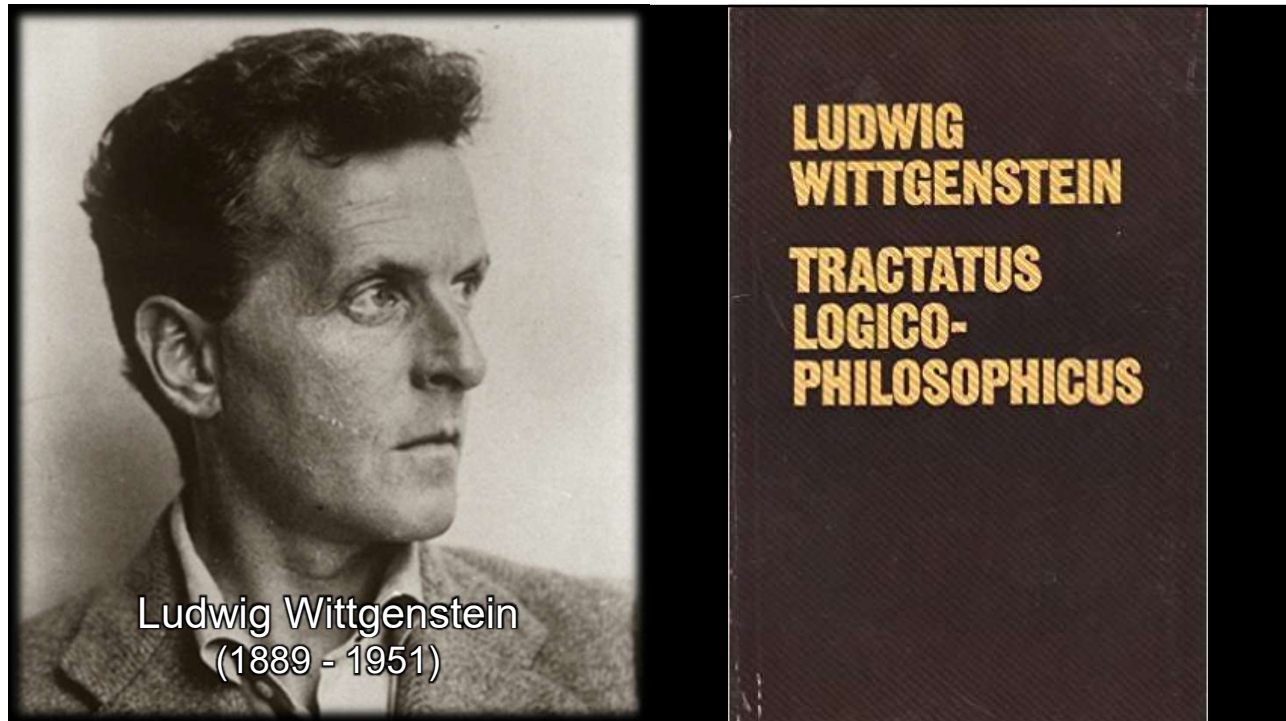
# ***Positions on Arguments for God's Existence***

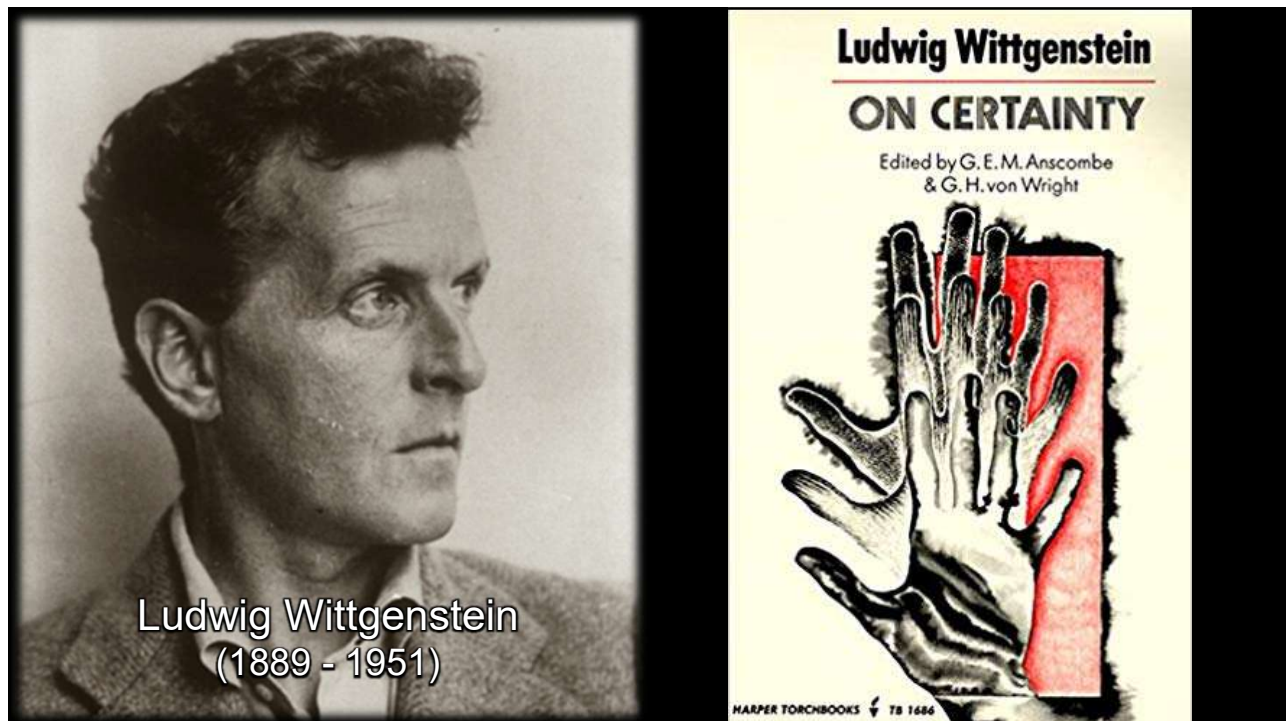
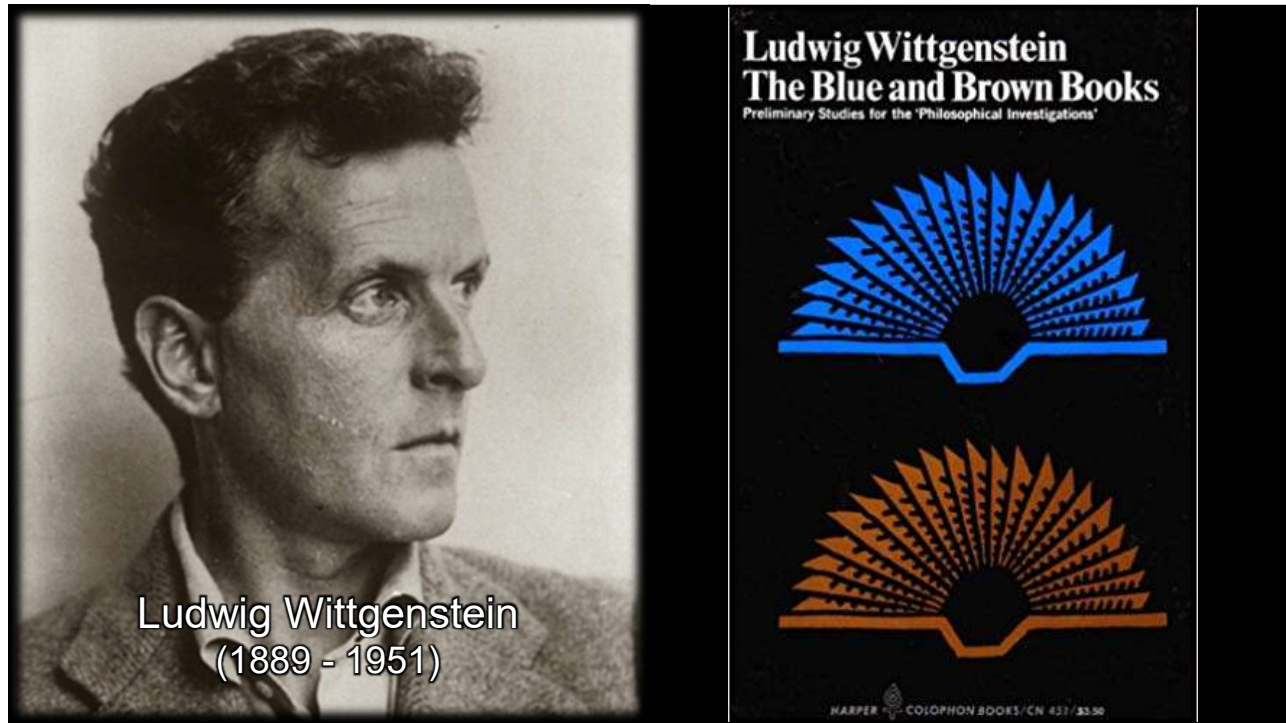
***Perhaps it is not surprising that  
there are different views on  
whether or how there is any  
relevance for the arguments for  
the existence of God.***

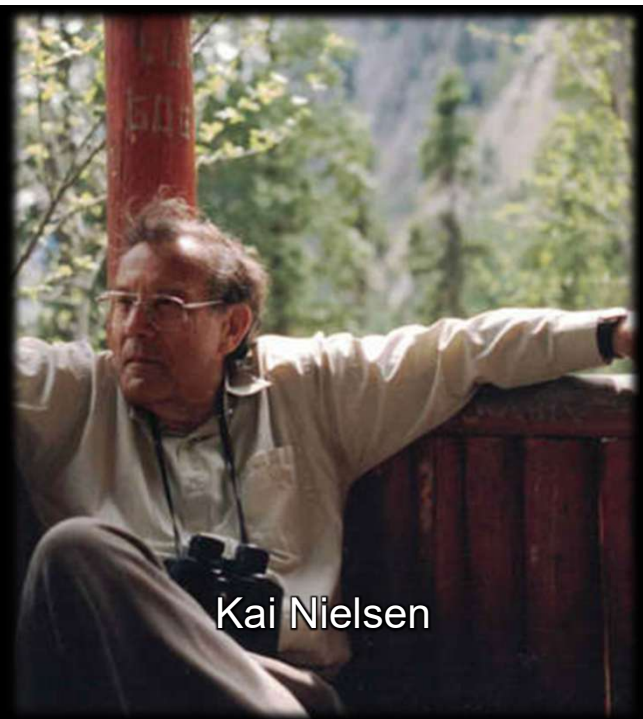
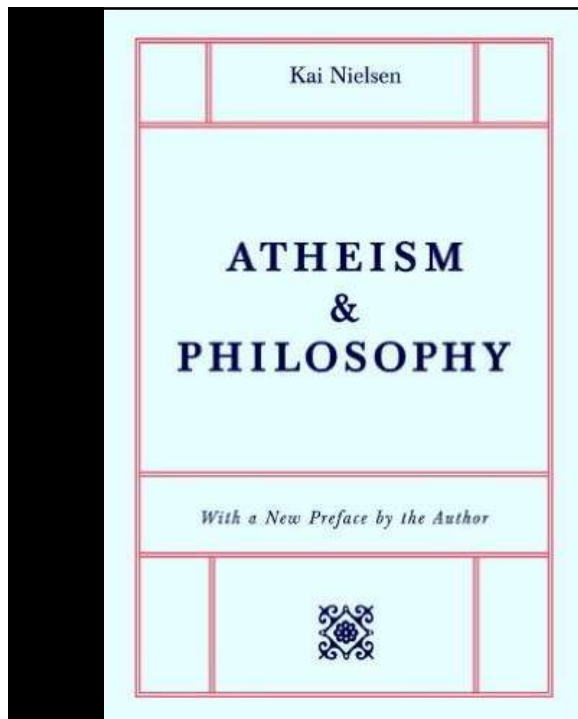
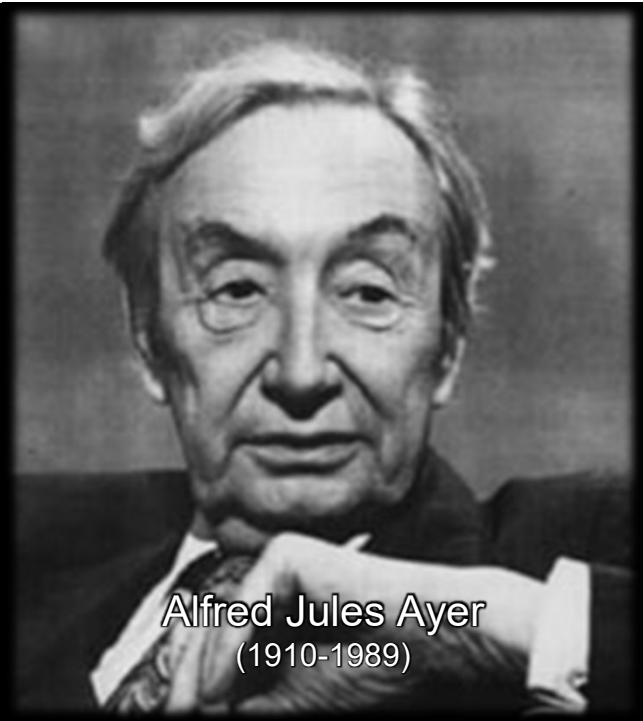
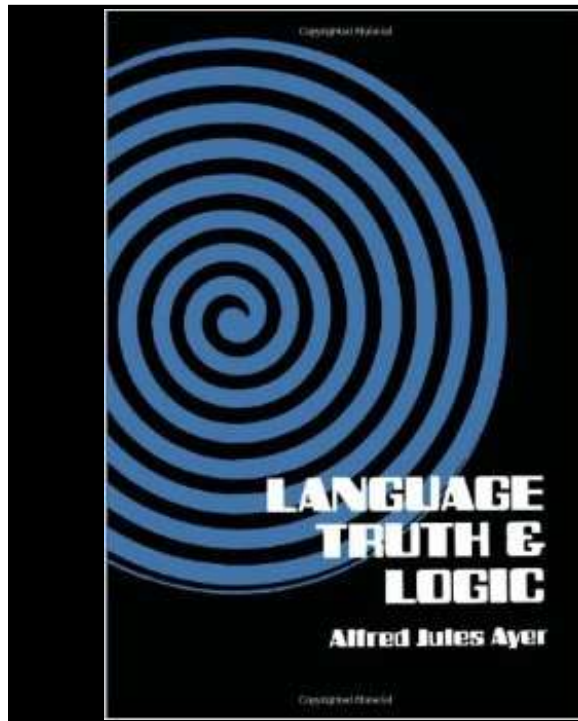
***It might be surprising to some, however, that the different views do not fall along the lines of theists and non-theists.***

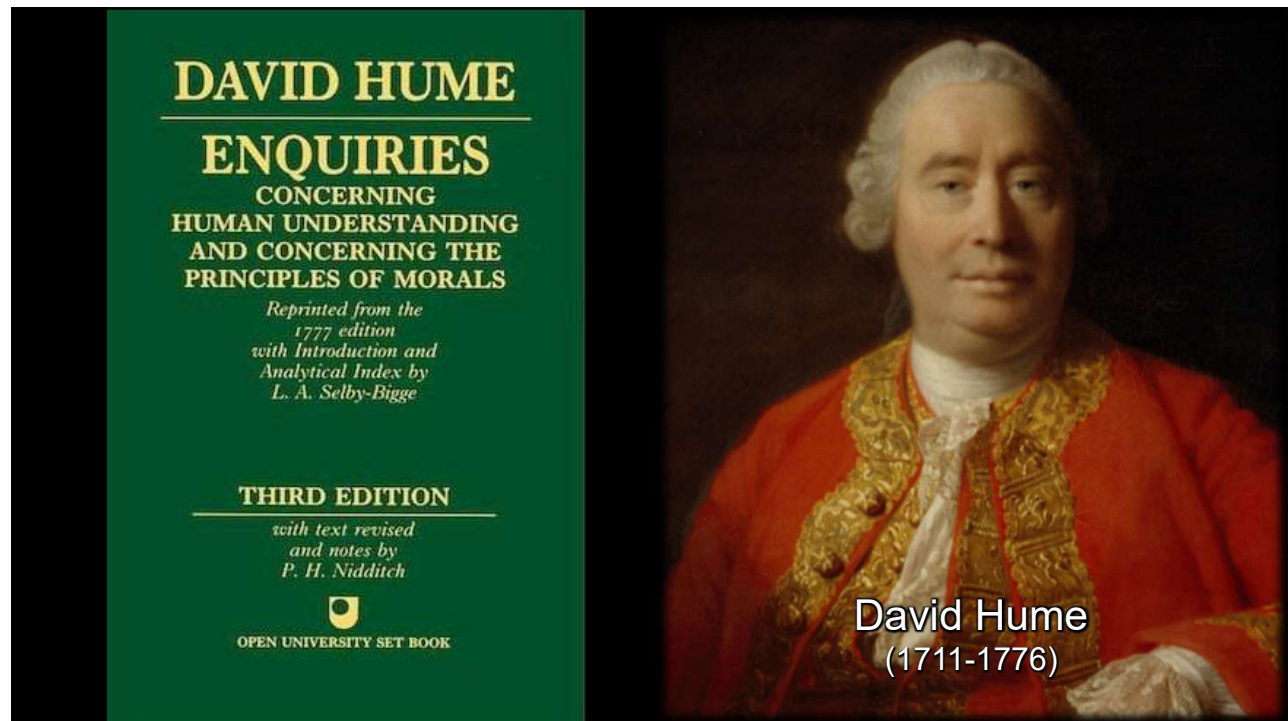
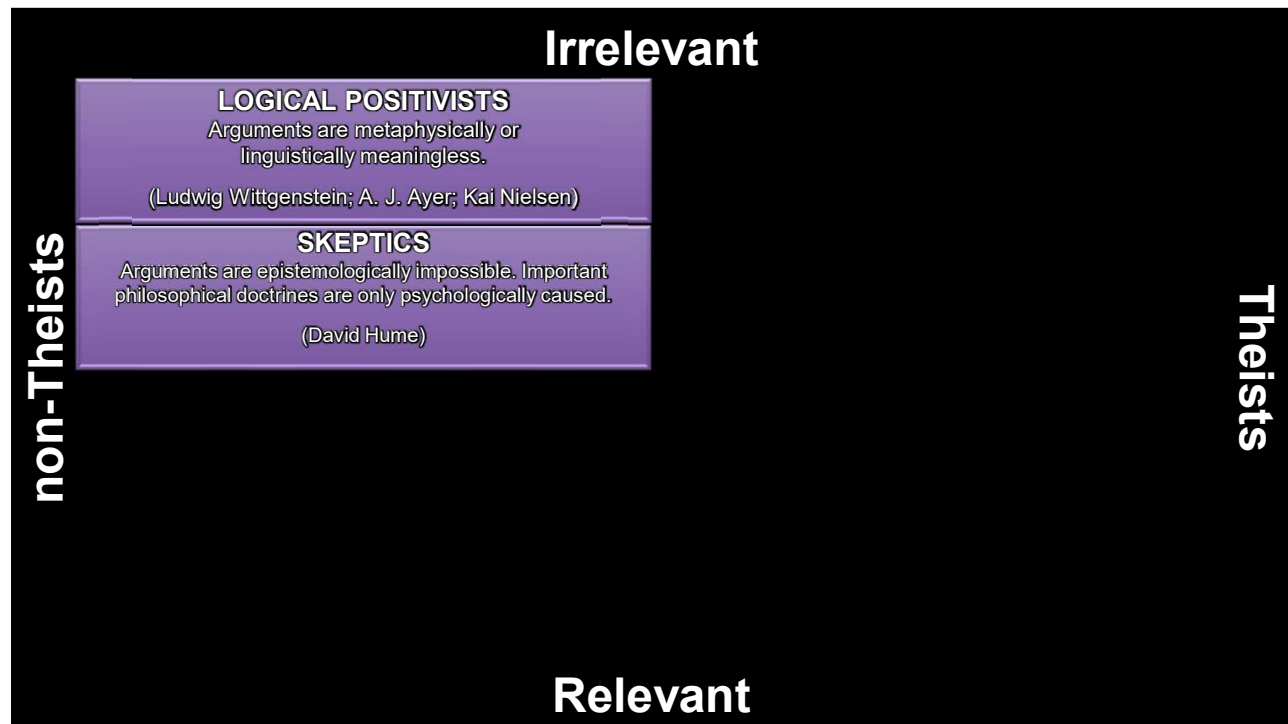
***In combining the options of theists and non-theists together with the options of relevant and irrelevant we get these results.***

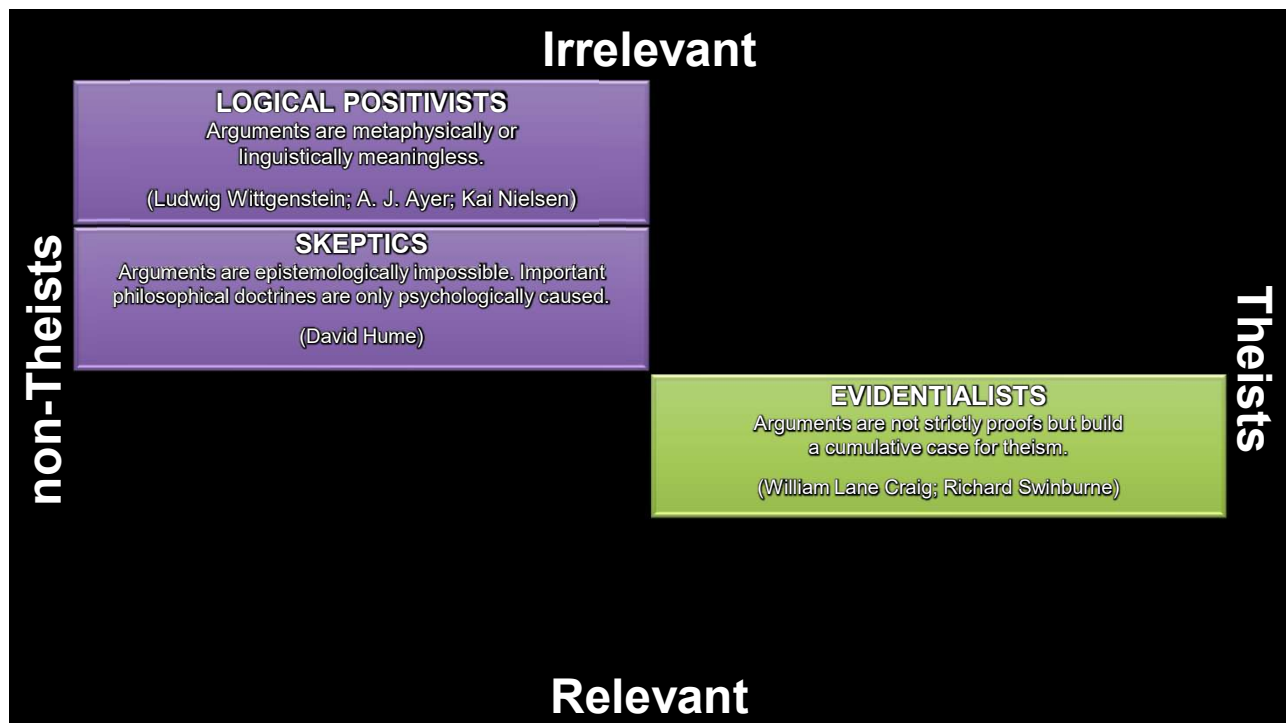
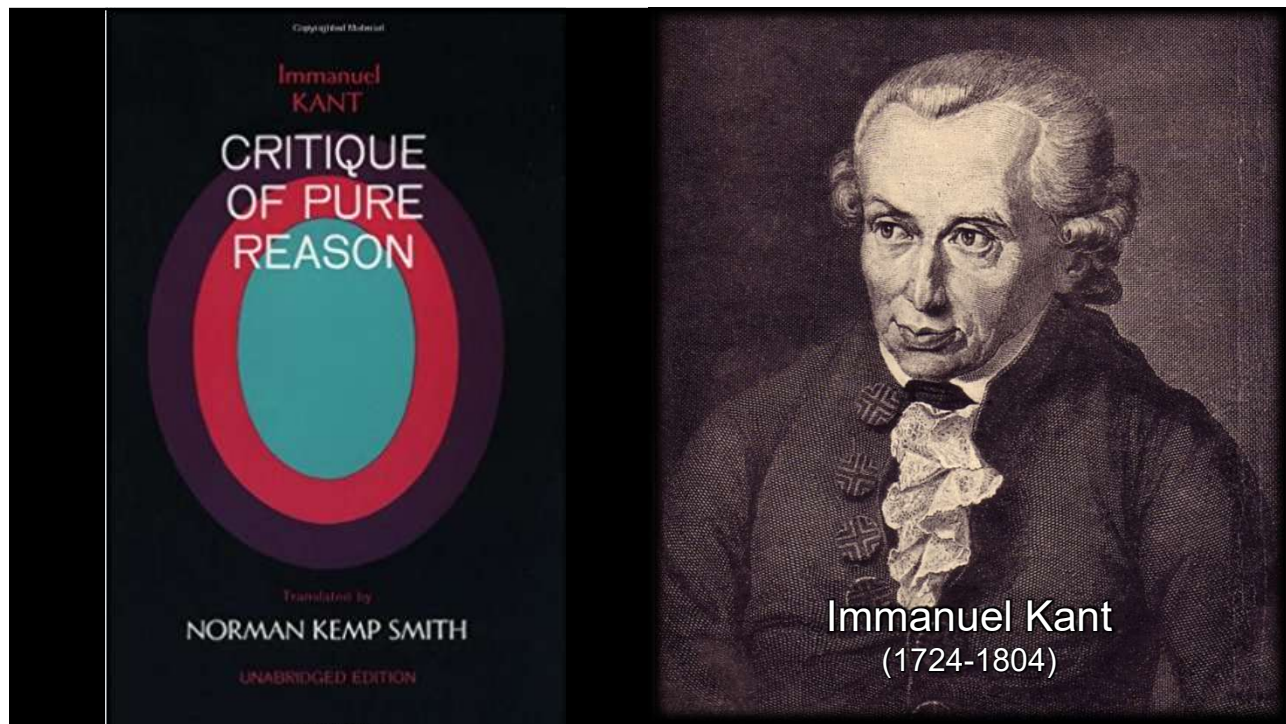


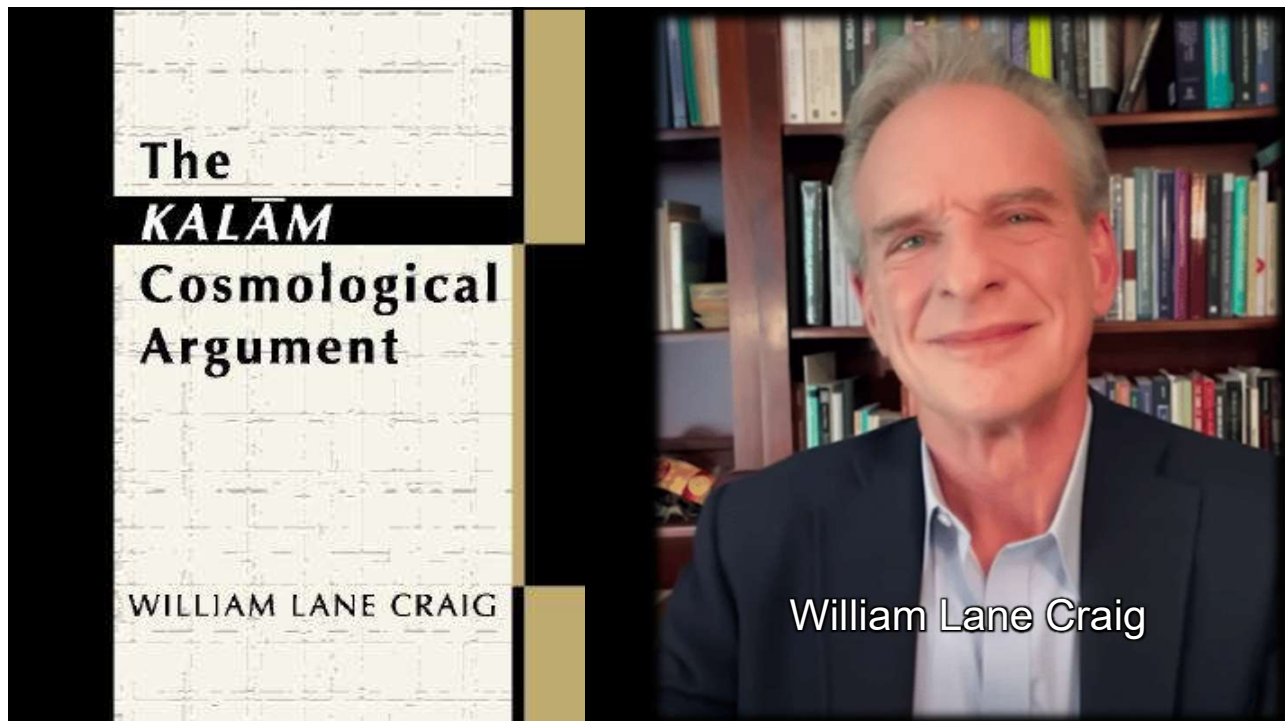
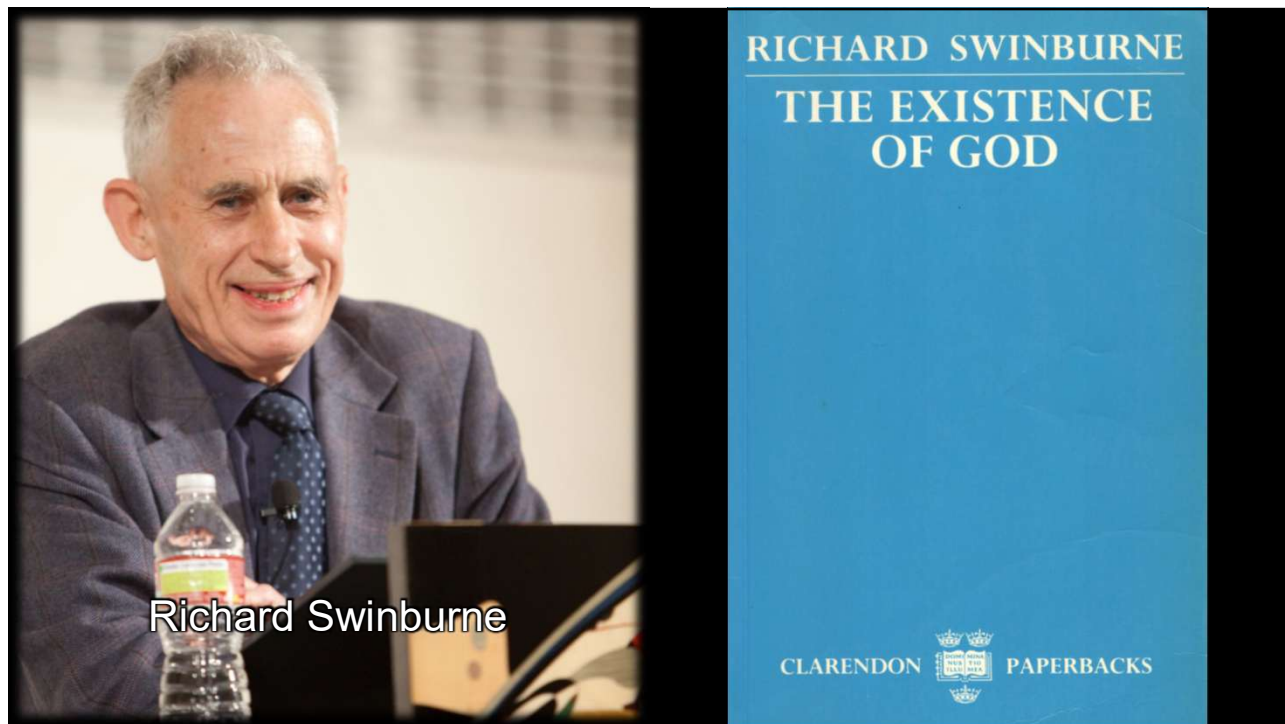


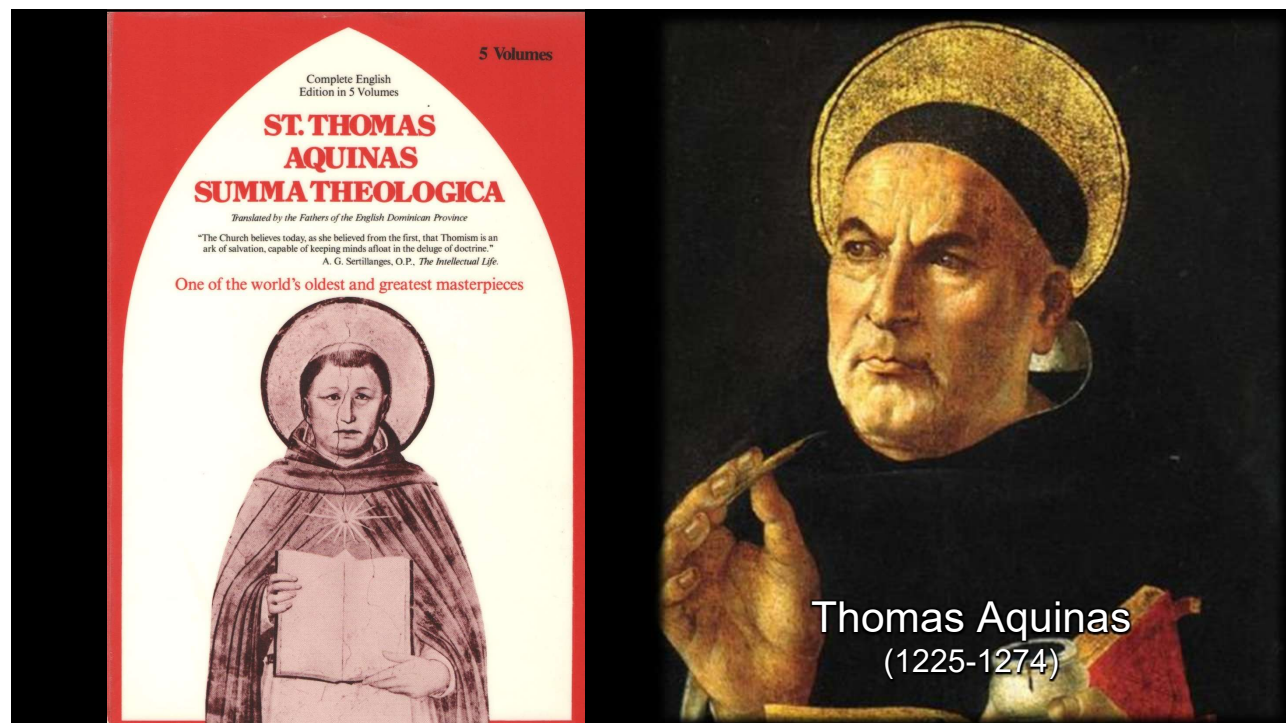
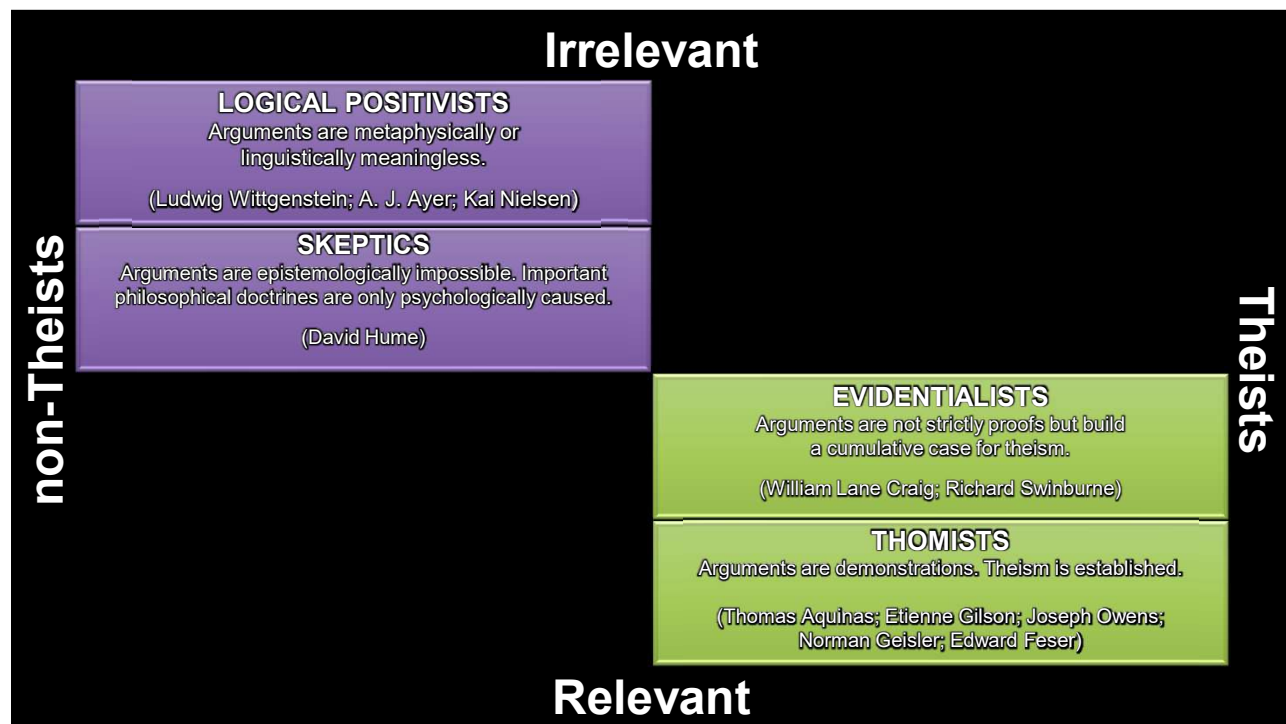






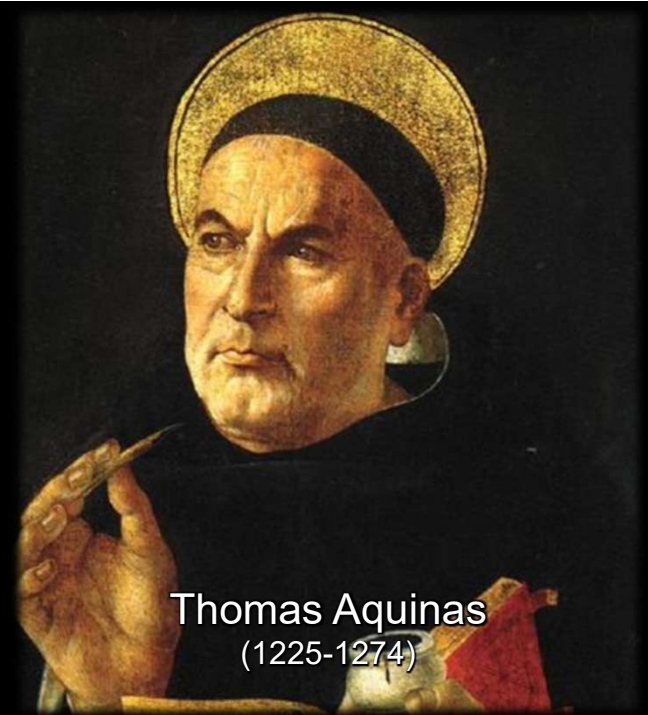
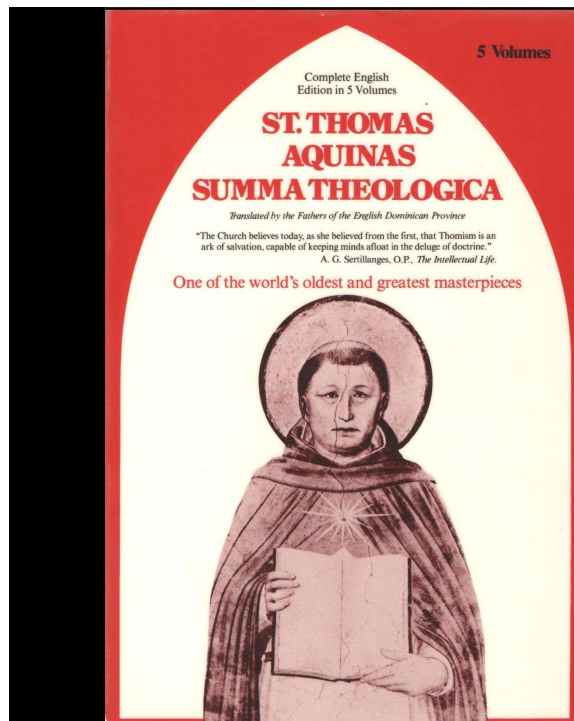
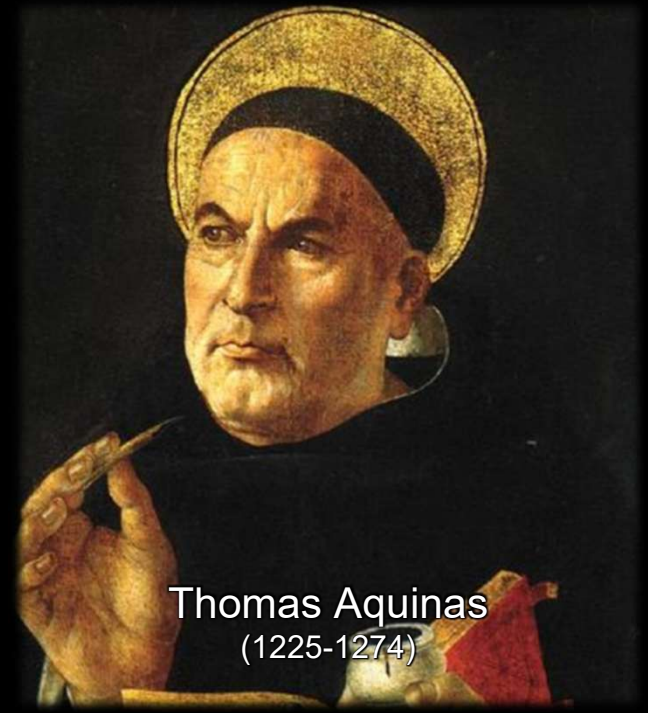


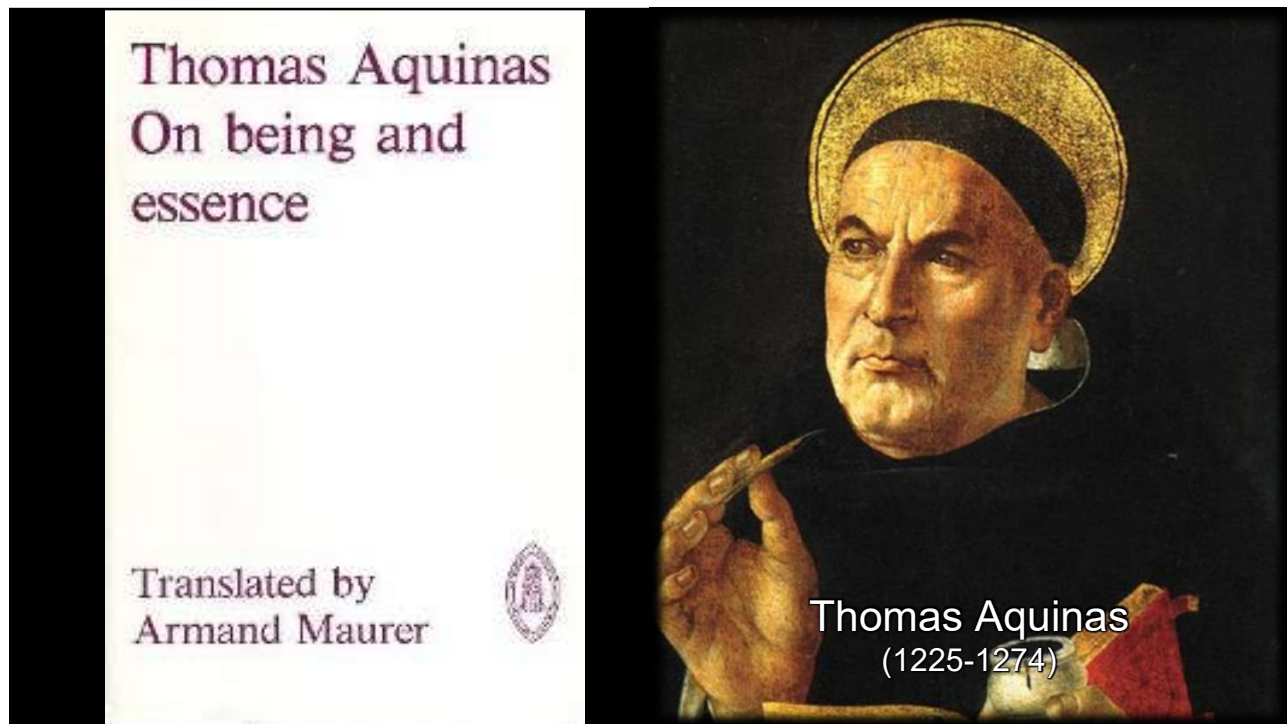


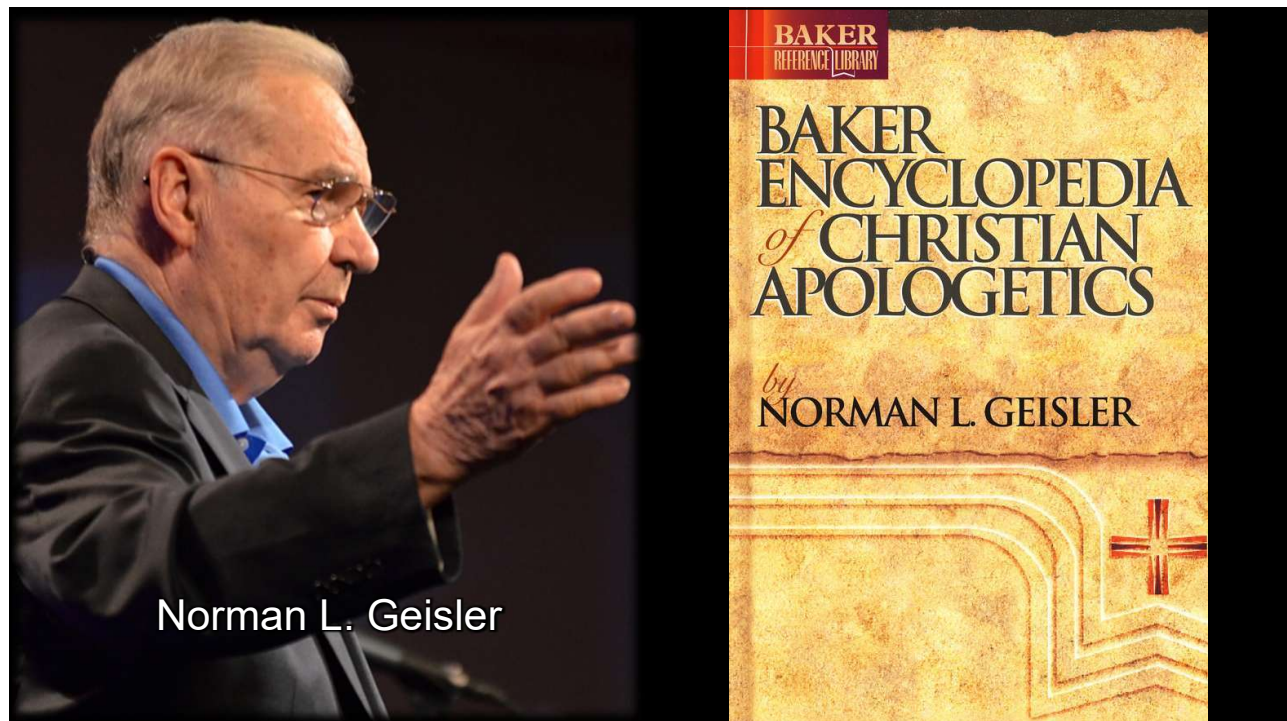
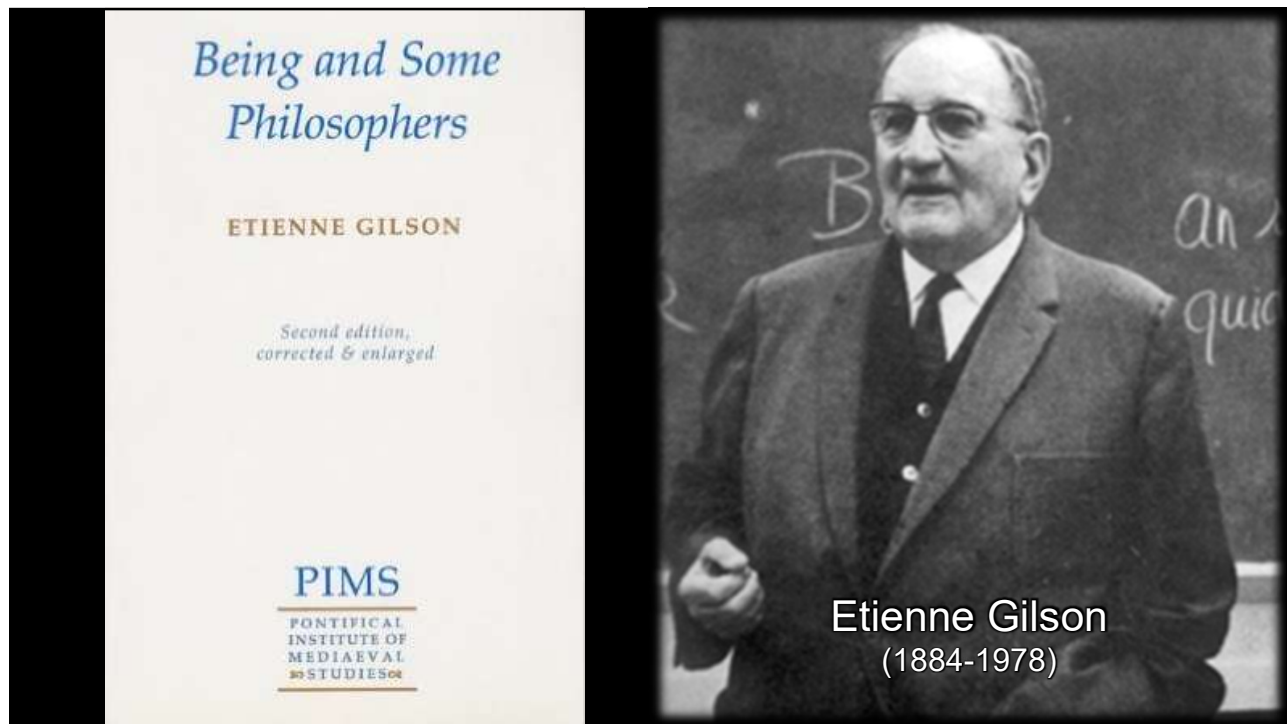


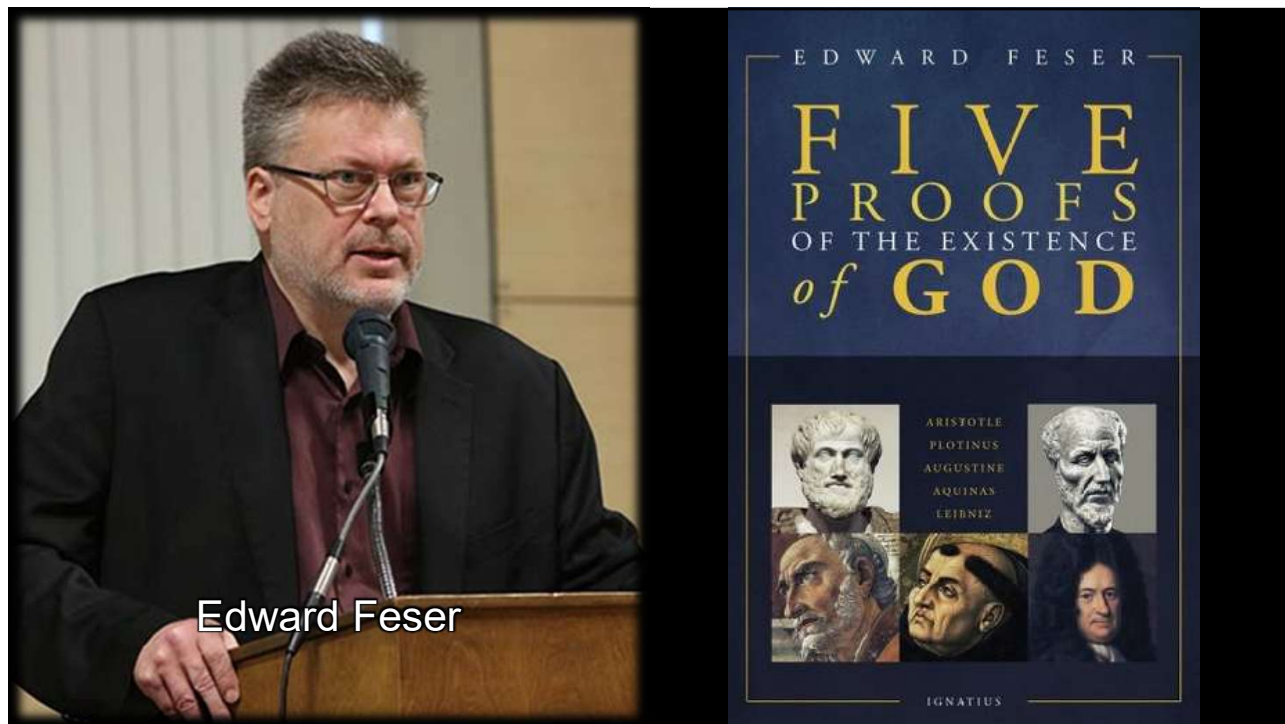
## Thomas Aquinas's "Five Ways"

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



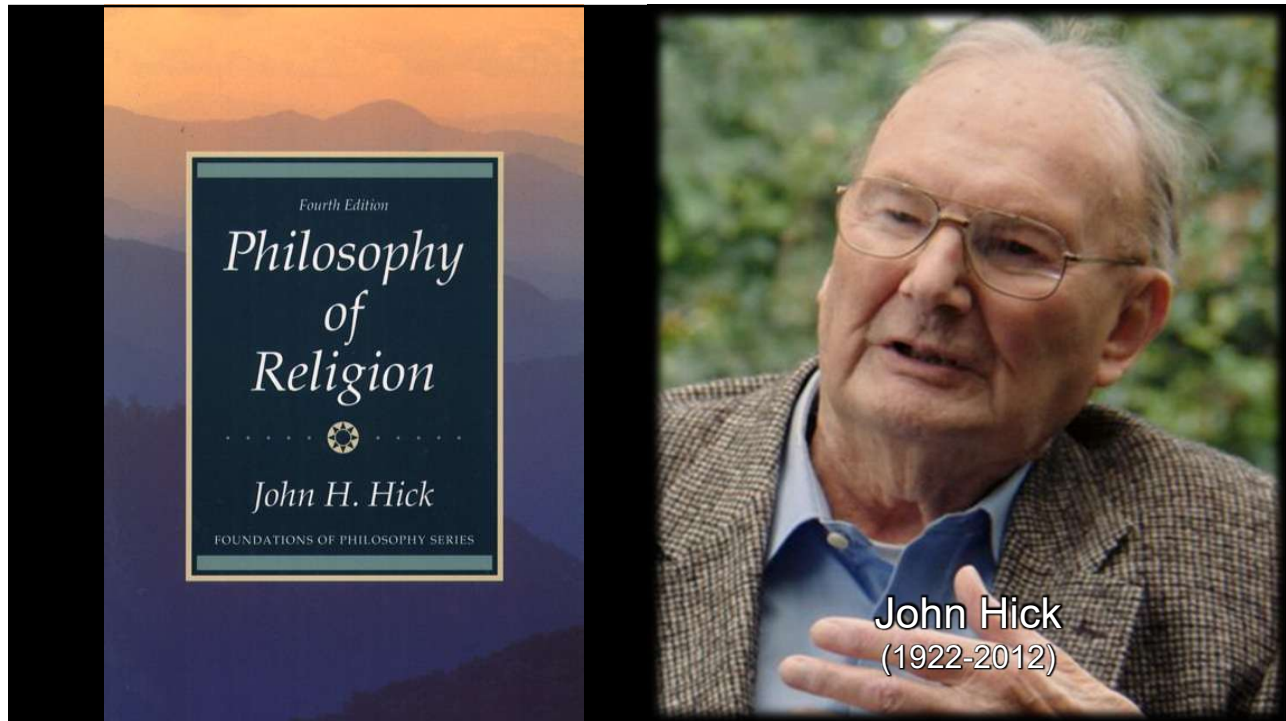


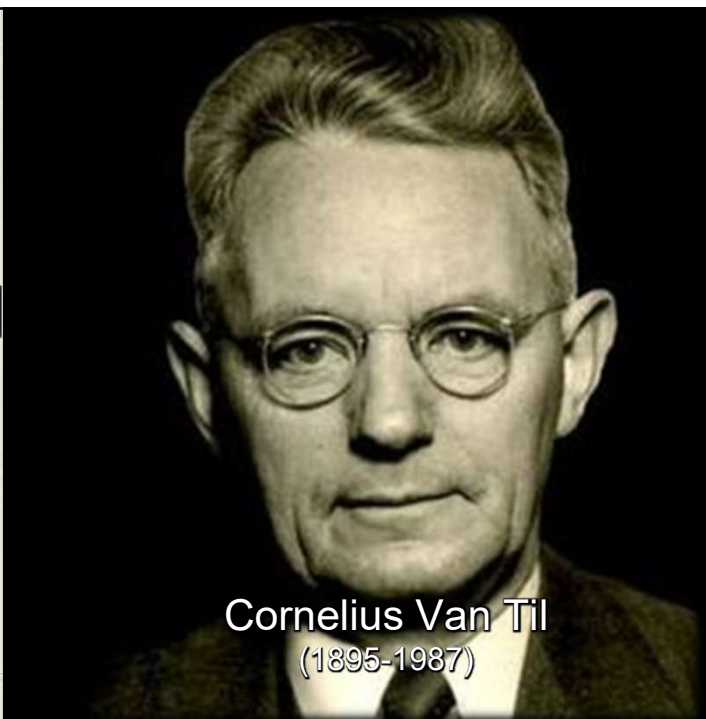
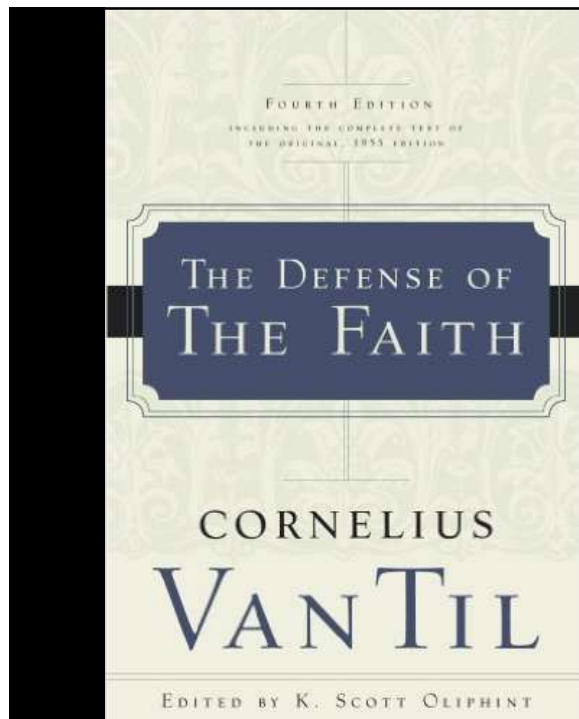
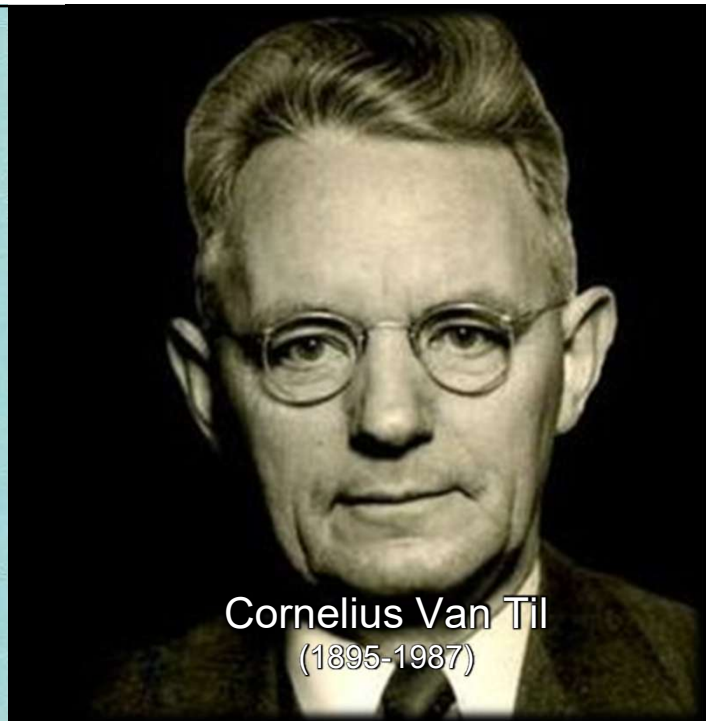
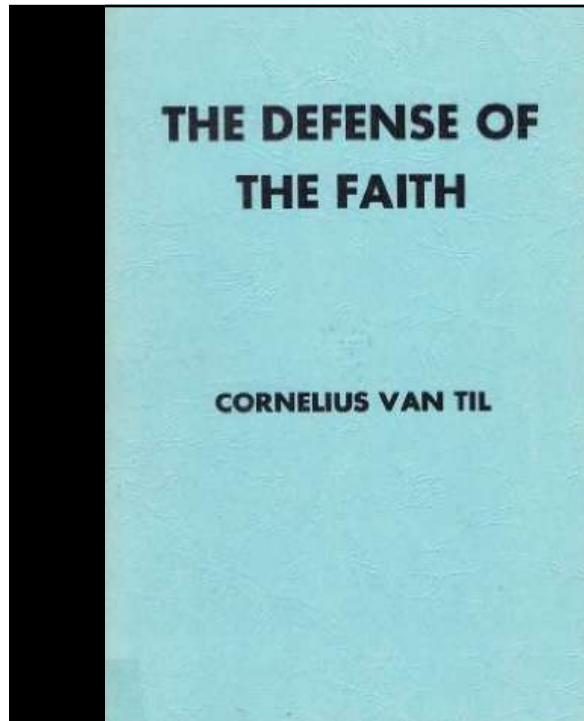




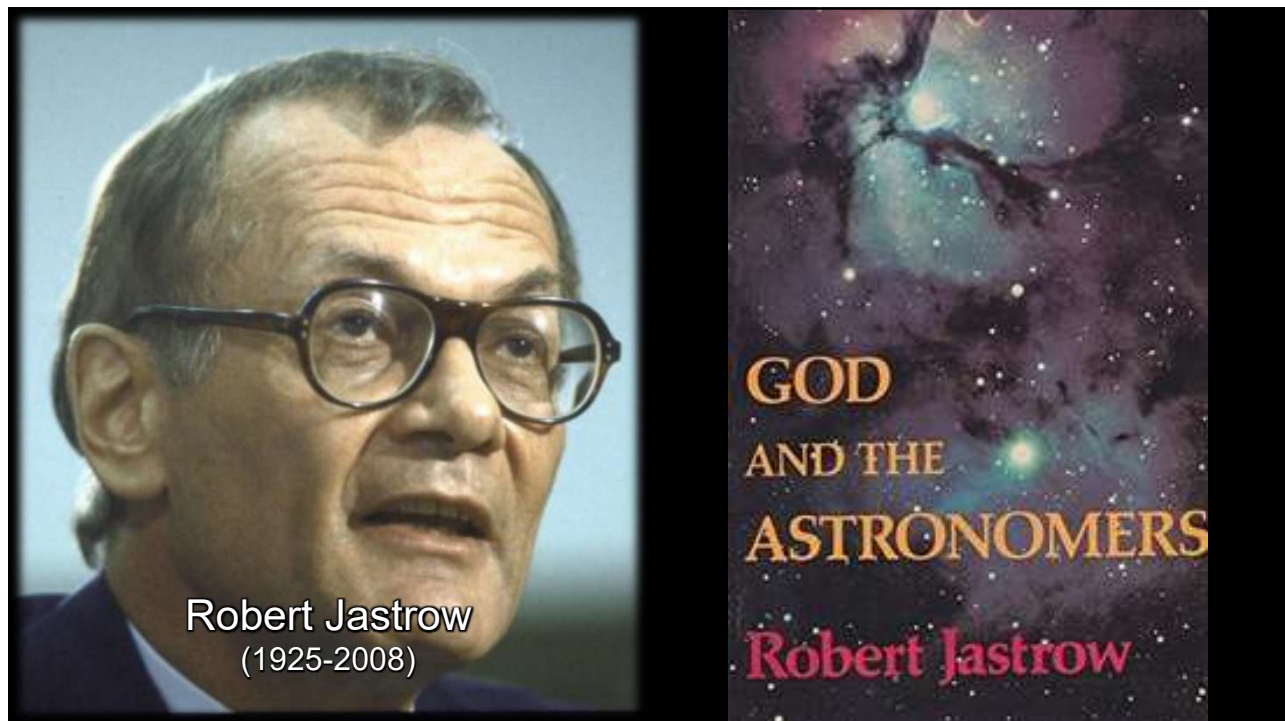
Irrelevant	
non-Theists	<p><b>LOGICAL POSITIVISTS</b>  Arguments are metaphysically or linguistically meaningless.  (Ludwig Wittgenstein; A. J. Ayer; Kai Nielsen)</p>
	<p><b>EXISTENTIALISTS</b>  Arguments are relatively or entirely unnecessary. They have little to nothing to do with religion. Religion is primarily experiential and non-propositional.  (Søren Kierkegaard)</p>
Theists	<p><b>SKEPTICS</b>  Arguments are epistemologically impossible. Important philosophical doctrines are only psychologically caused.  (David Hume)</p>
	<p><b>EVIDENTIALISTS</b>  Arguments are not strictly proofs but build a cumulative case for theism.  (William Lane Craig; Richard Swinburne)</p>
	<p><b>THOMISTS</b>  Arguments are demonstrations. Theism is established.  (Thomas Aquinas; Etienne Gilson; Joseph Owens; Norman Geisler; Edward Feser)</p>
Relevant	

55





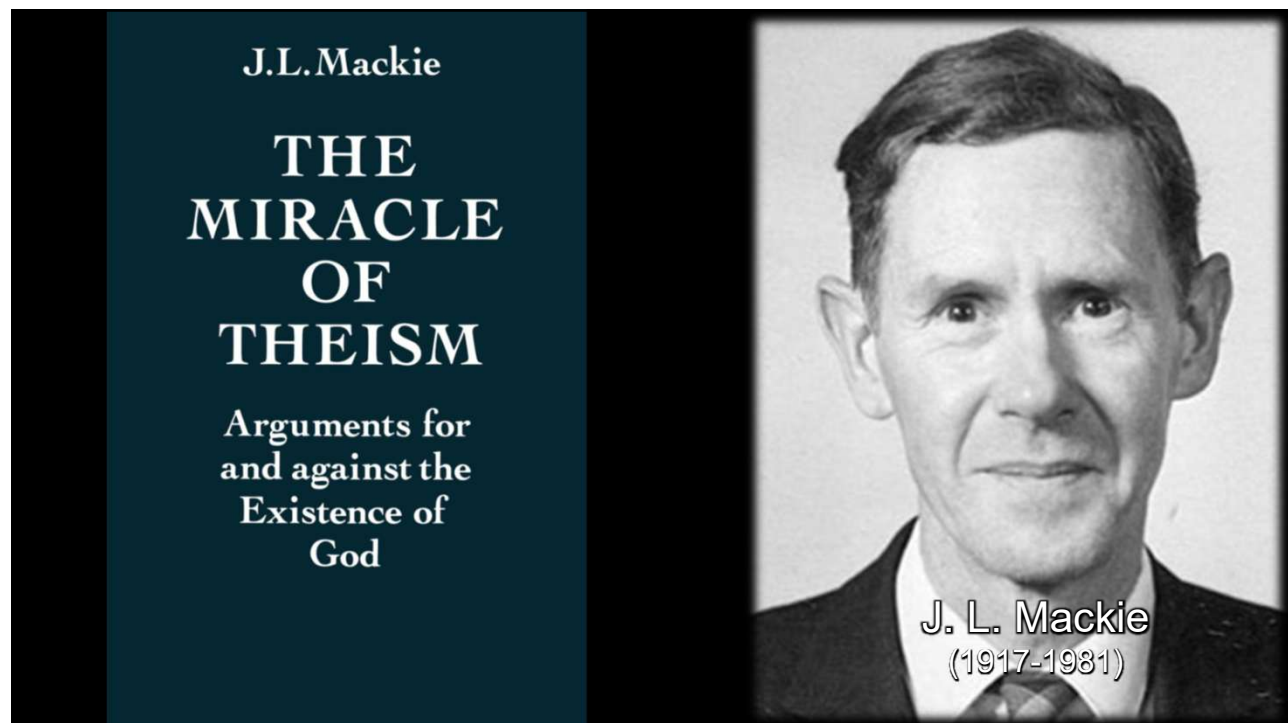
non-Theists	Irrelevant	
	<b>LOGICAL POSITIVISTS</b> Arguments are metaphysically or linguistically meaningless. (Ludwig Wittgenstein; A. J. Ayer; Kai Nielsen)	<b>EXISTENTIALISTS</b> Arguments are relatively or entirely unnecessary. They have little to nothing to do with religion. Religion is primarily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

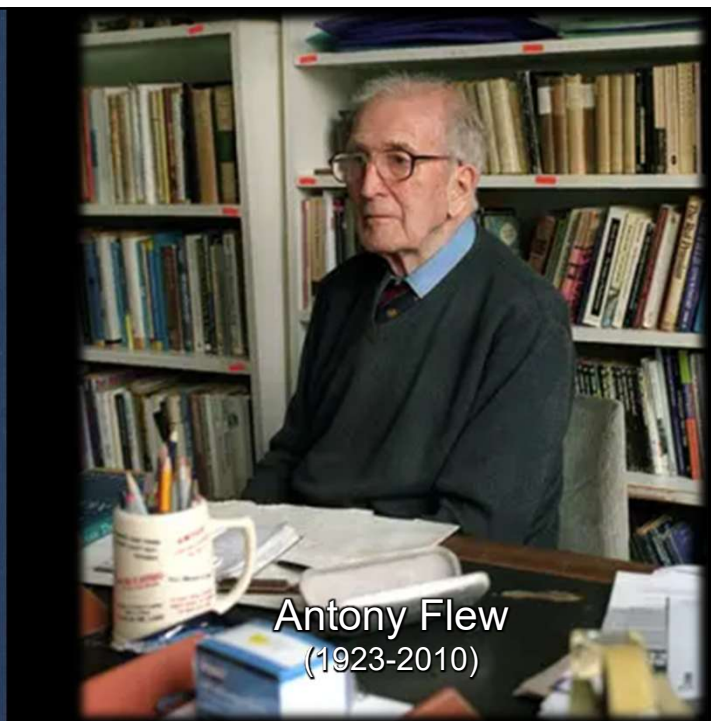
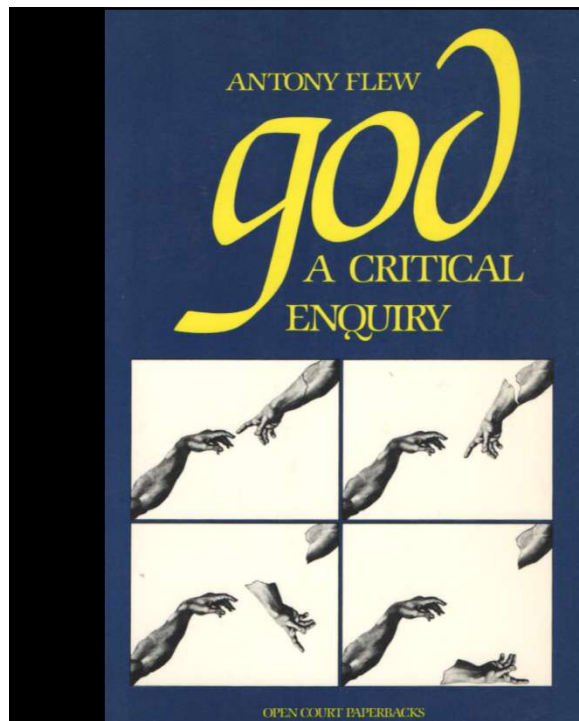
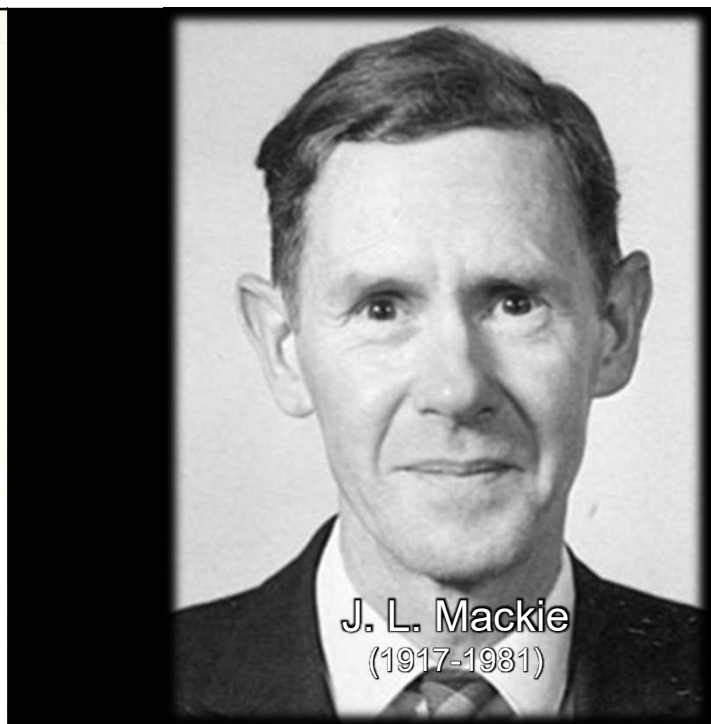
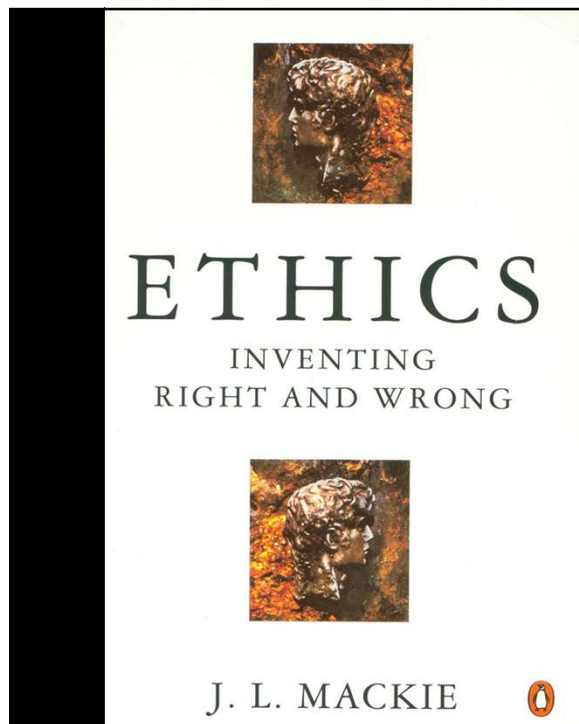


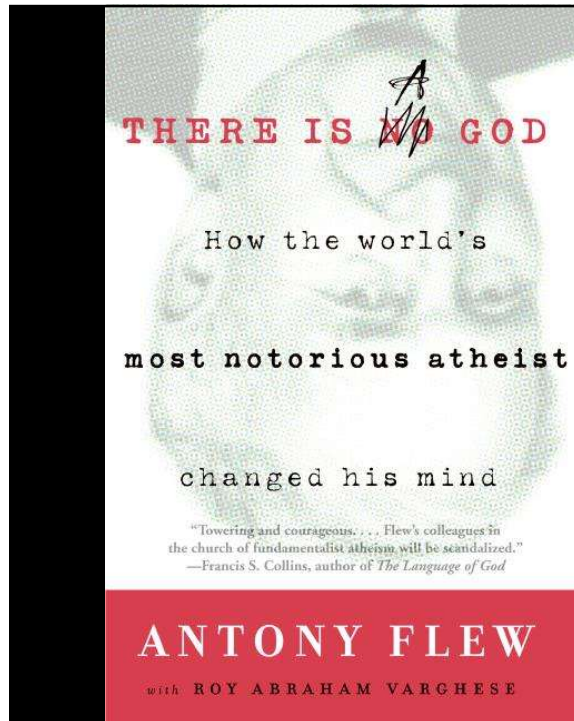
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	<b>AGNOSTICS</b> Not all of the evidence is in. Theism may be established with further proof. (Robert Jastrow; Anthony Kenny)	<b>EVIDENTIALISTS</b> Arguments are not strictly proofs but build a cumulative case for theism. (William Lane Craig; Richard Swinburne)
	<b>ATHEISTS</b> Arguments surface important philosophical issues. The evidence proves atheism. (J. L. Mackie; early Antony Flew; Michael Scriven, Theodore Drange; Michael Martin)	<b>THOMISTS</b> Arguments are demonstrations. Theism is established. (Thomas Aquinas; Etienne Gilson; Joseph Owens; Norman Geisler; Edward Feser)
	Relevant	

Irrelevant

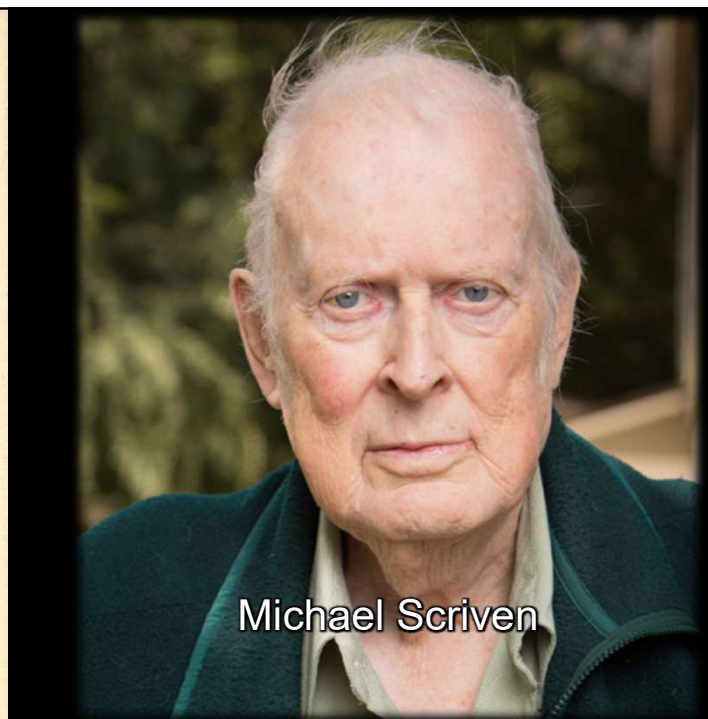
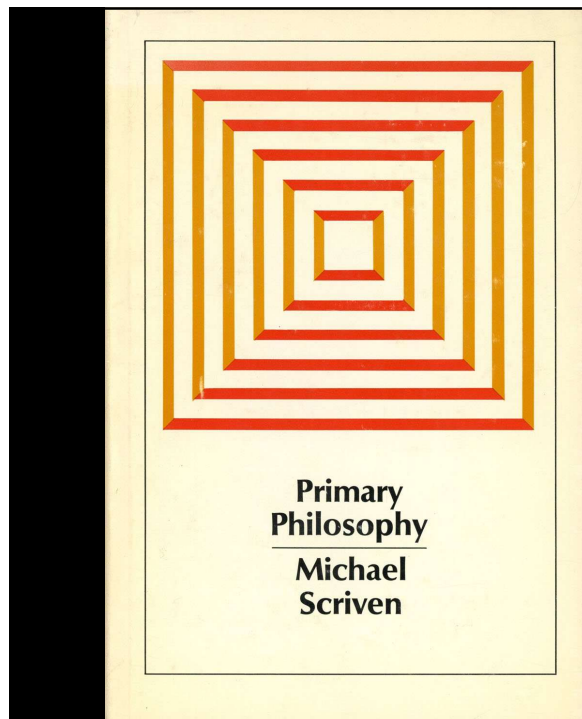
Theists



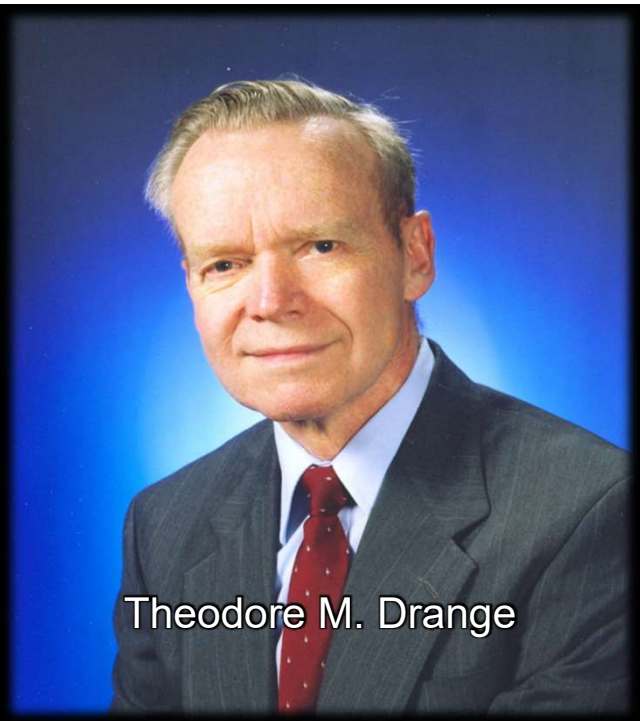
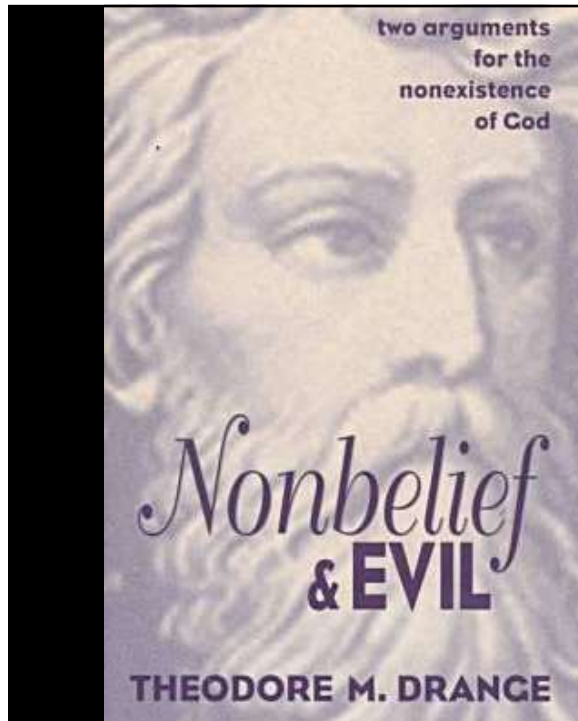




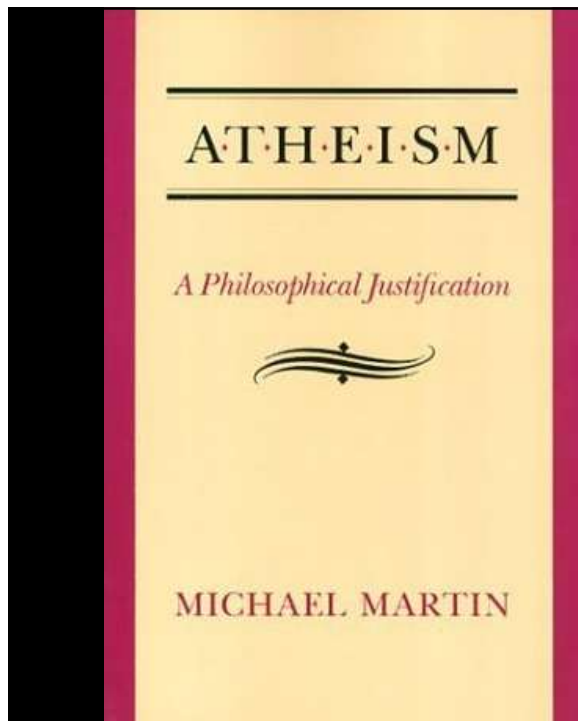
Antony Flew  
(1923-2010)



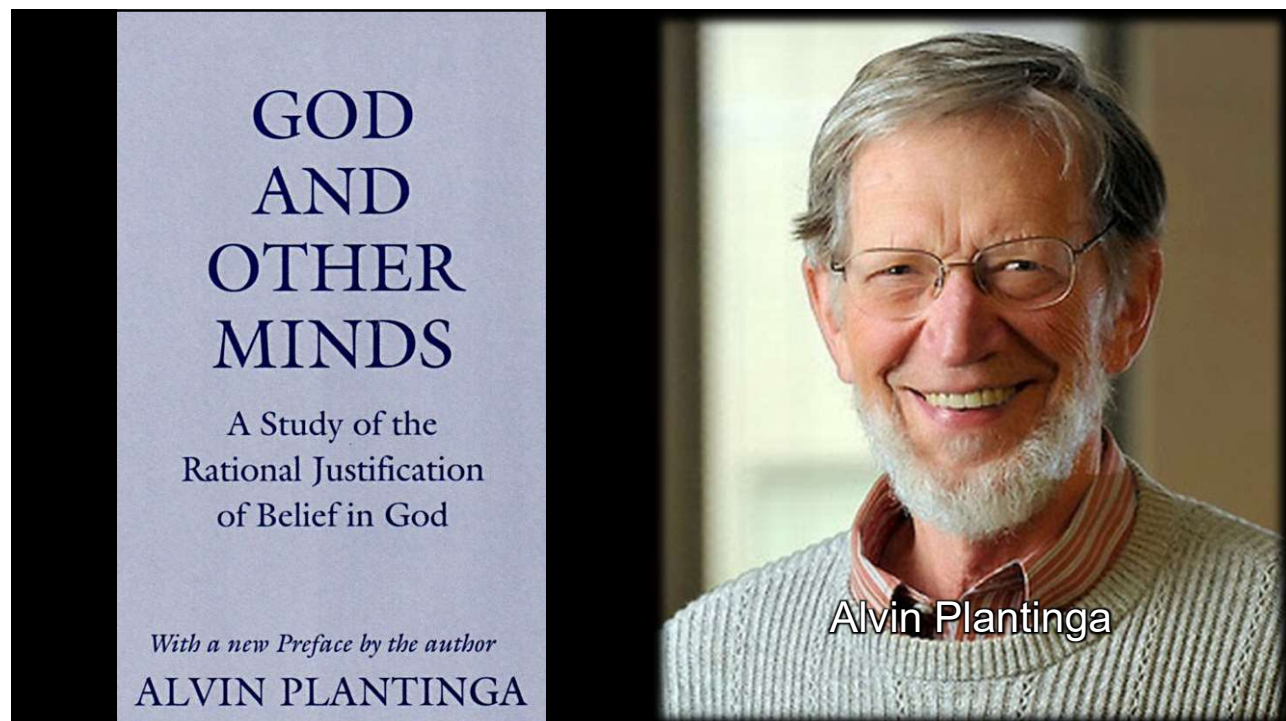
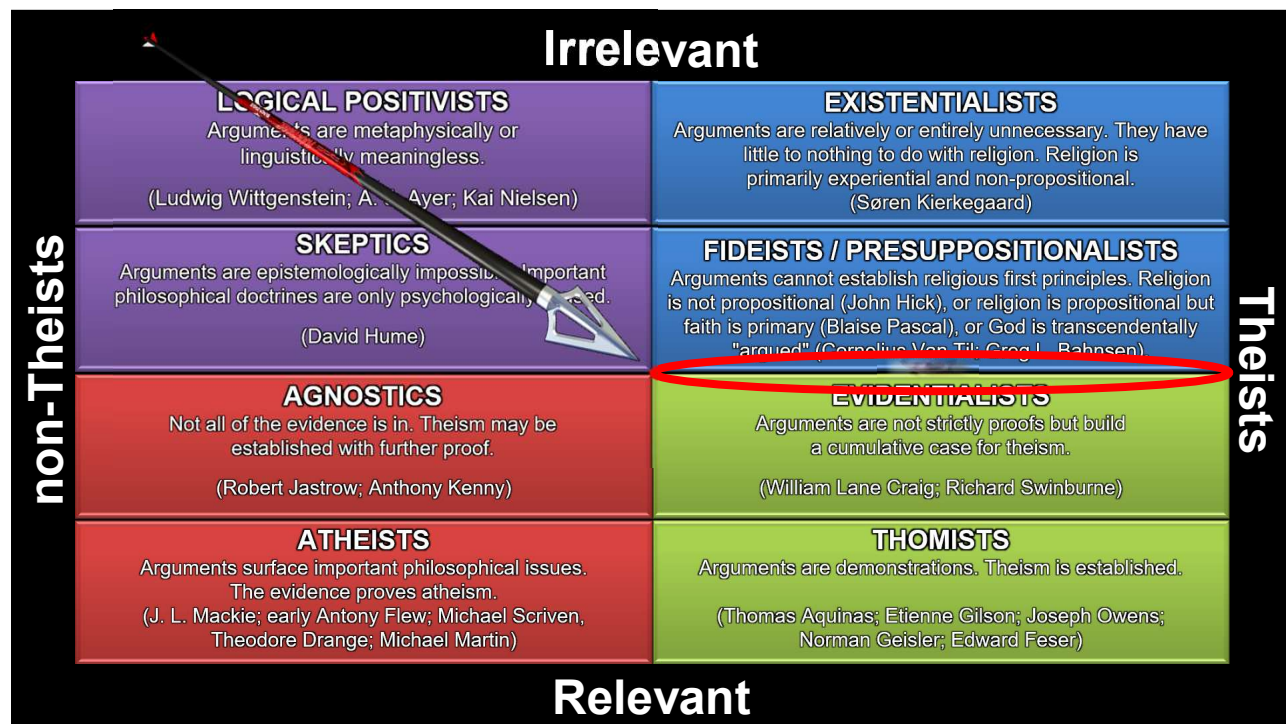
Michael Scriven

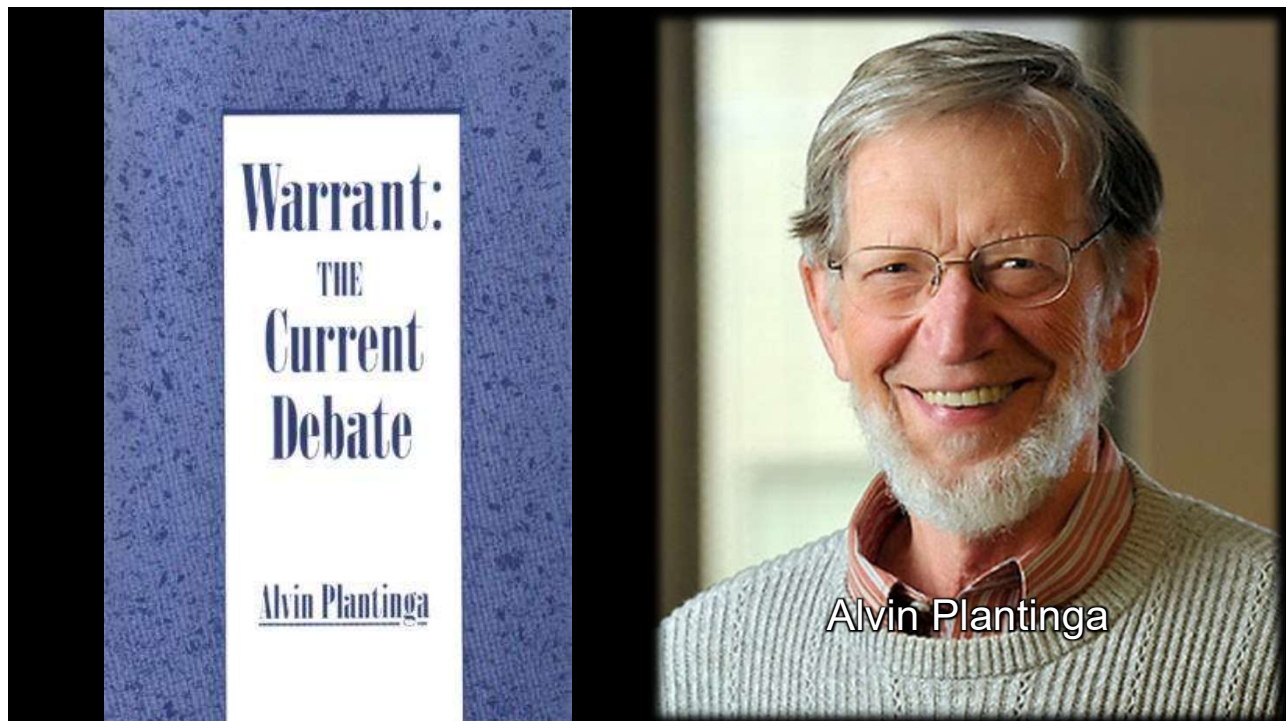
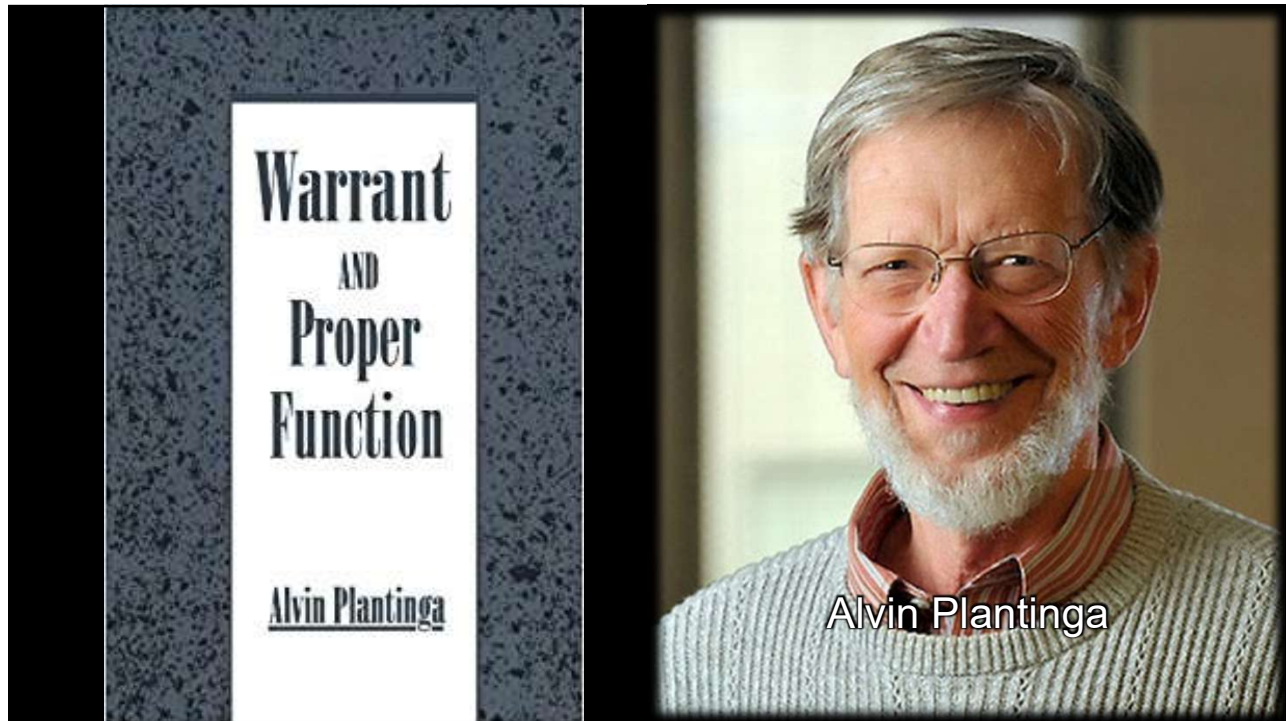


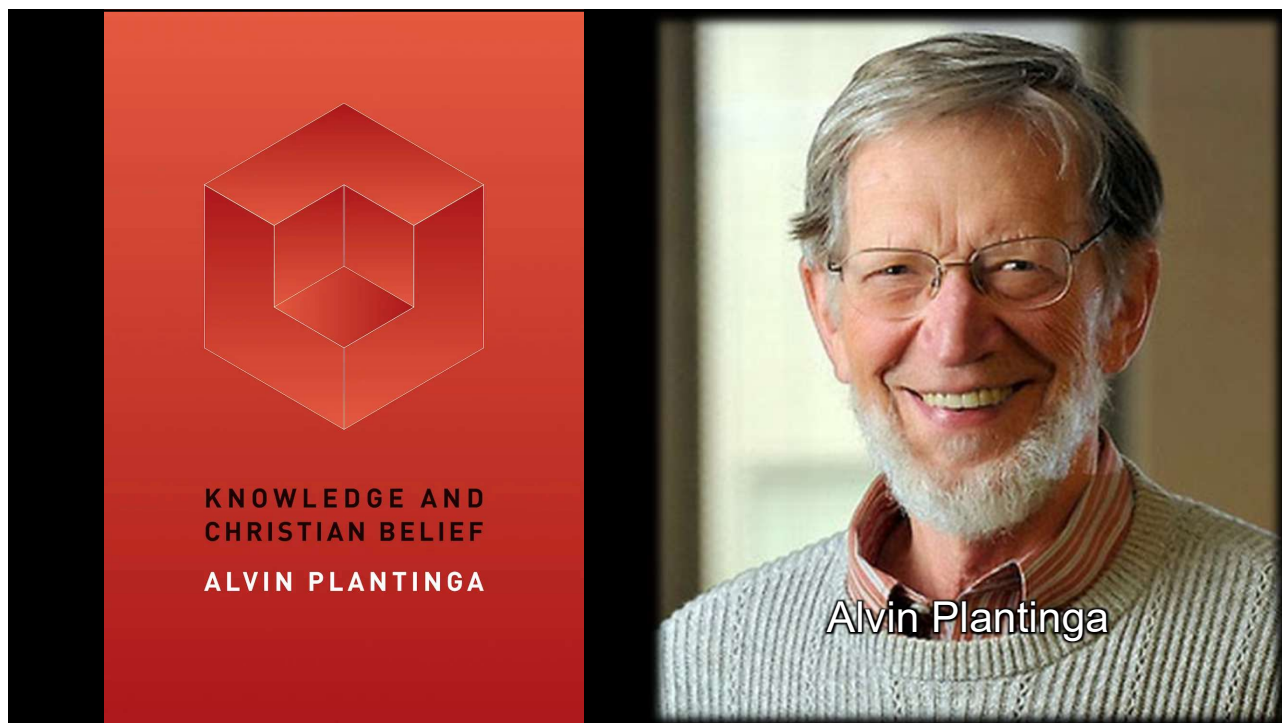
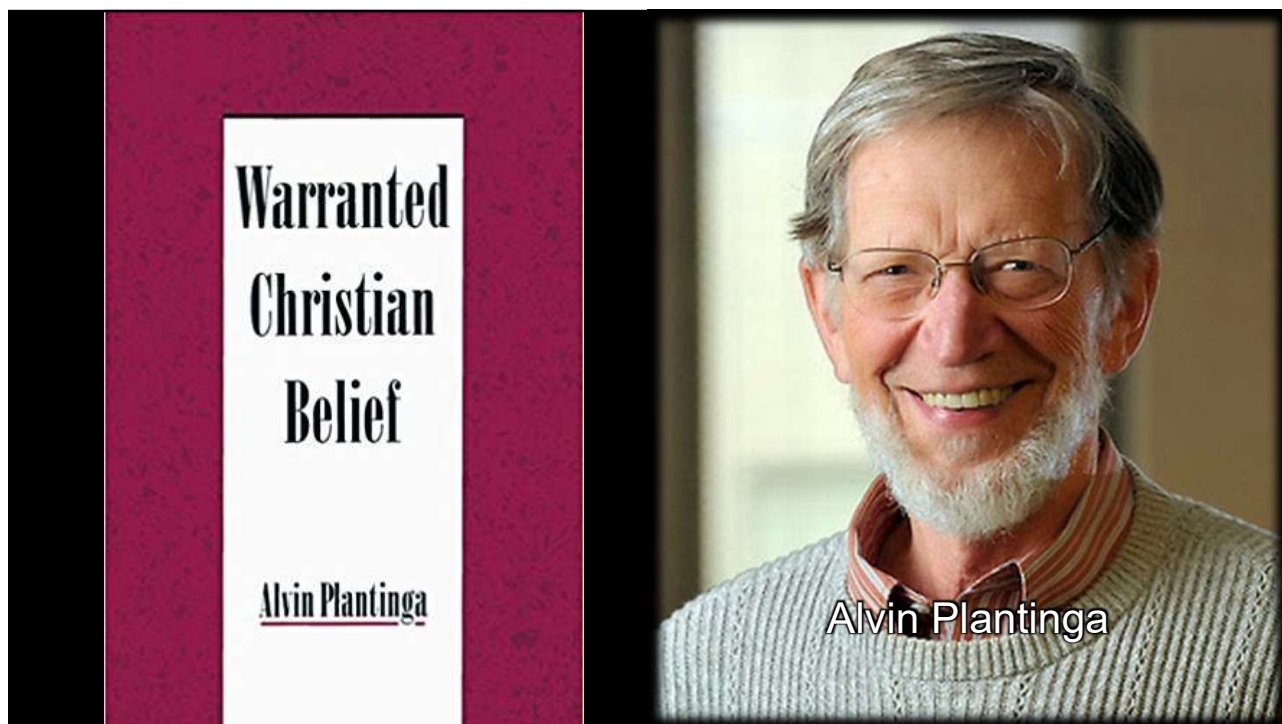
Theodore M. Drange



Michael Martin  
(1932-2015)









**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



# THE DESIGN ARGUMENT: AQUINAS VS. PALEY

**Richard G. Howe, Ph.D.**

Provost

Norman L. Geisler Chair of Christian Apologetics

Professor of Philosophy and Apologetics

Southern Evangelical Seminary

Past President, International Society of Christian Apologetics

**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.***

A detail from Michelangelo's famous fresco 'The Creation of Adam' in the Sistine Chapel. It shows the two hands reaching toward each other: the hand of God on the right, extended from a reclining position, and the hand of Adam on the left, reaching out from a similar reclining position. The fingertips are just inches apart, creating a sense of tension and divine spark.

***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.*

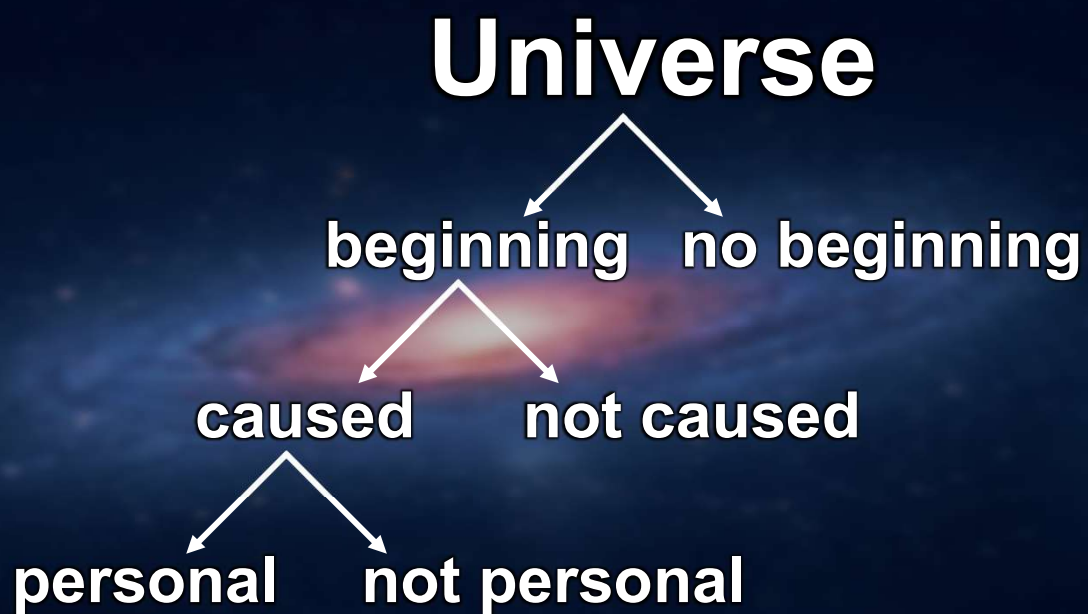


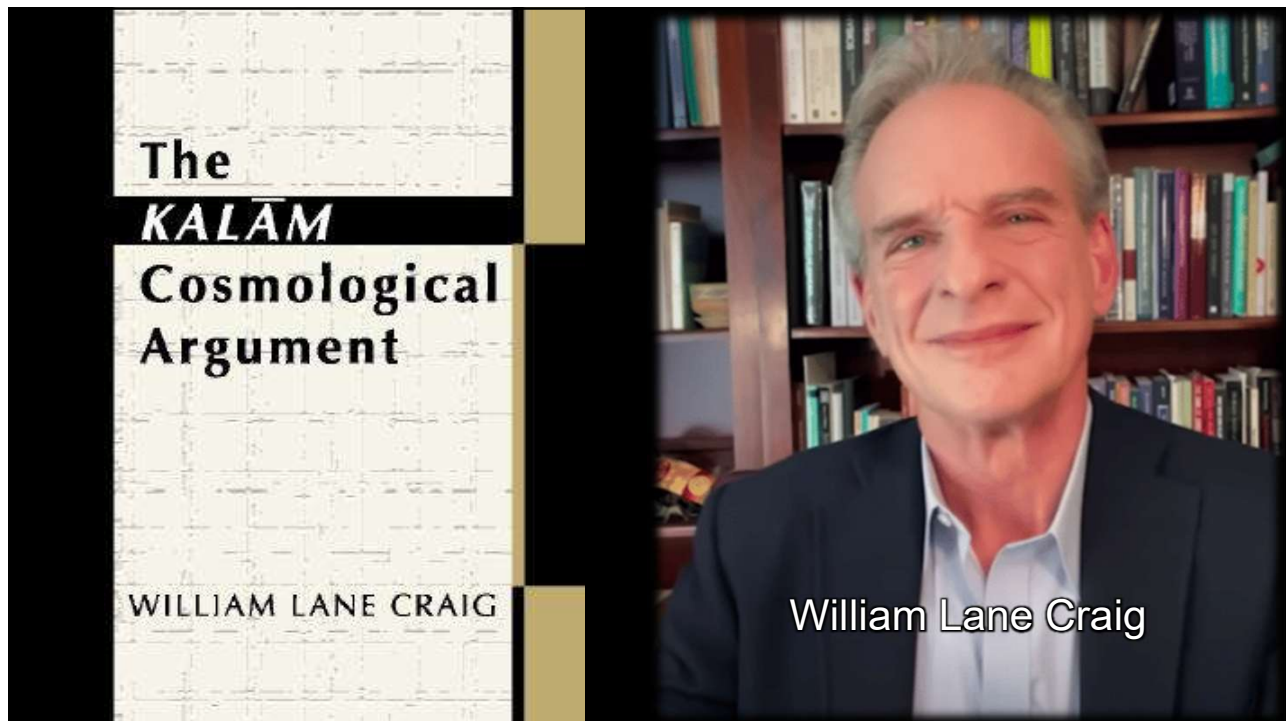
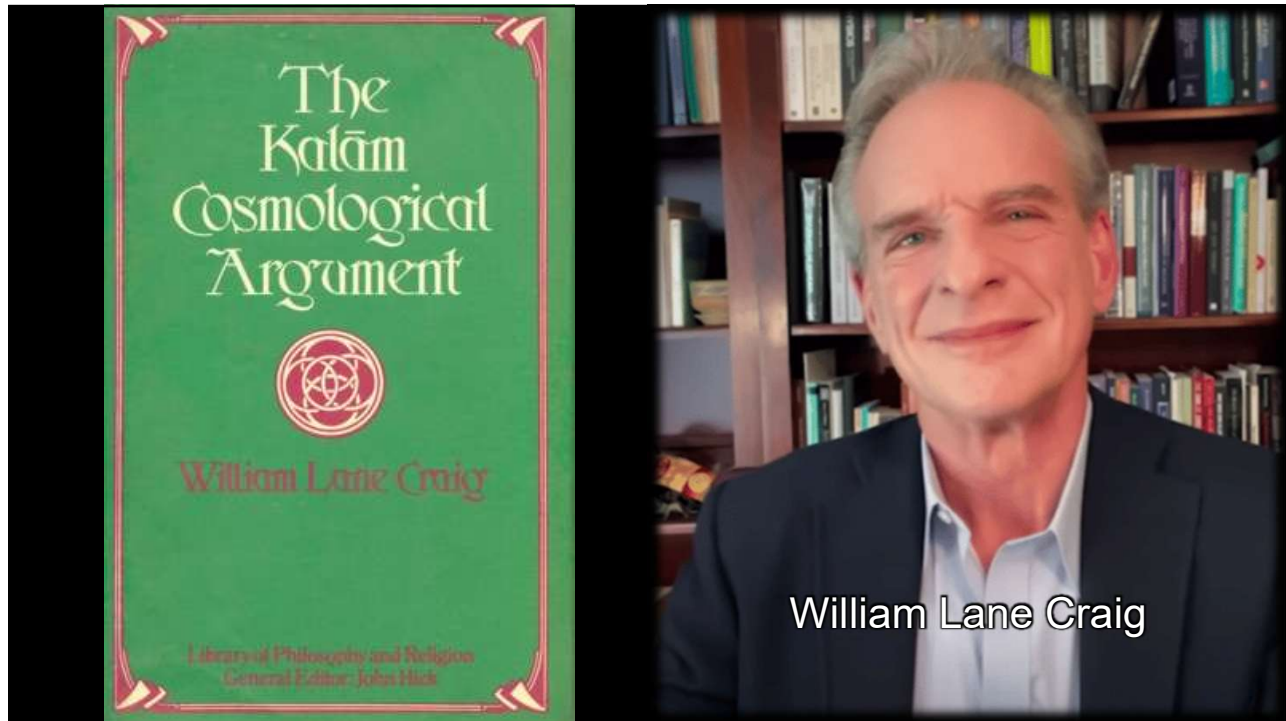
***~ My Weaknesses ~***

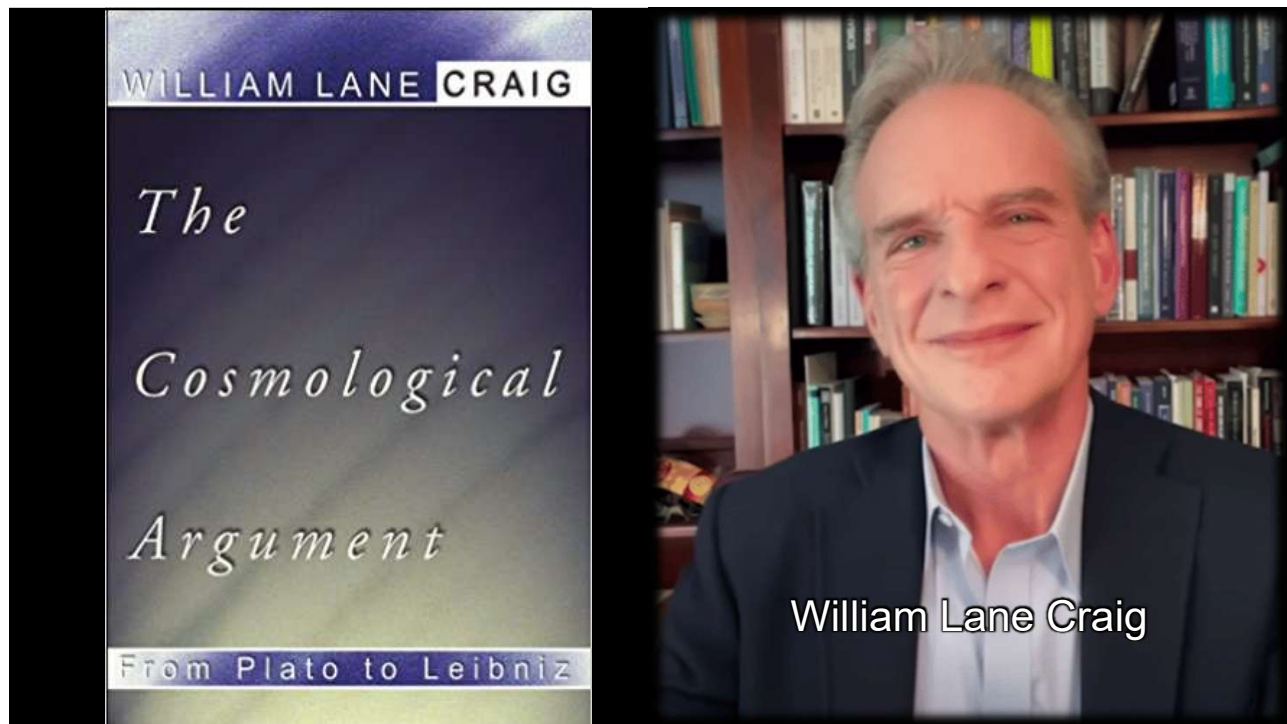
*Granted, certain aspects of the philosophy are disputed as well.*

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

# God as the Cause of the Beginning of the Universe

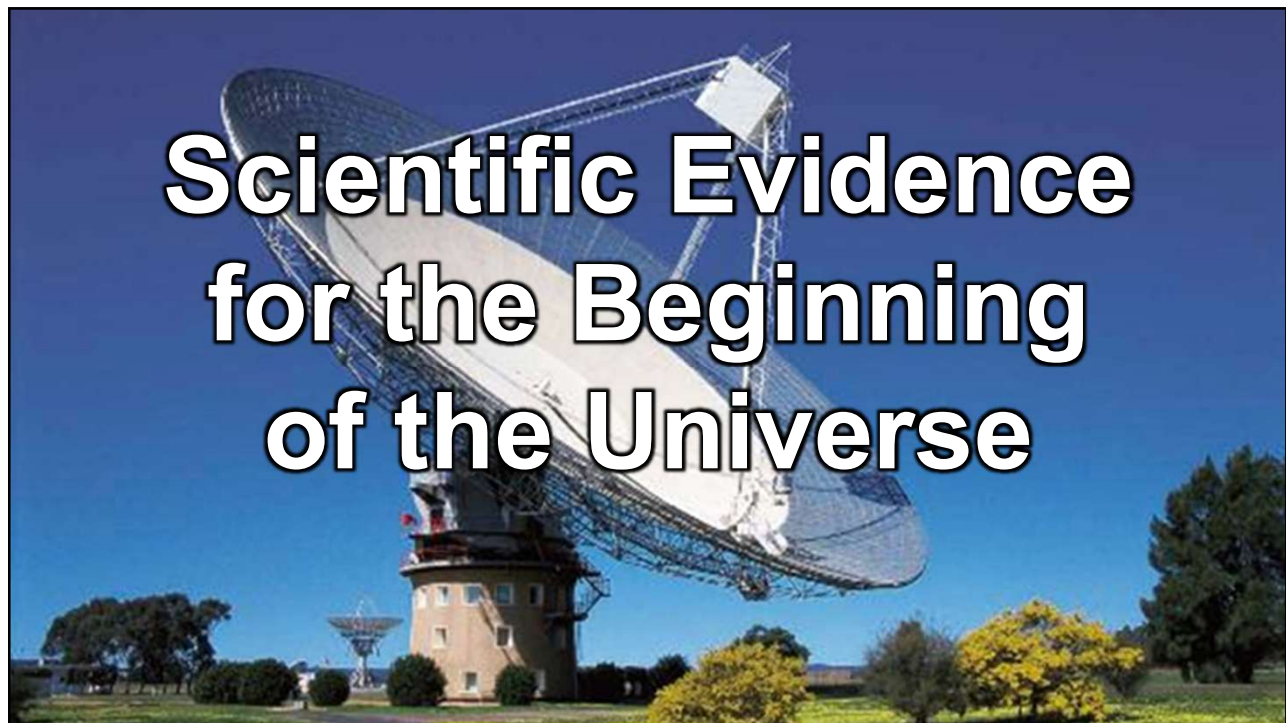


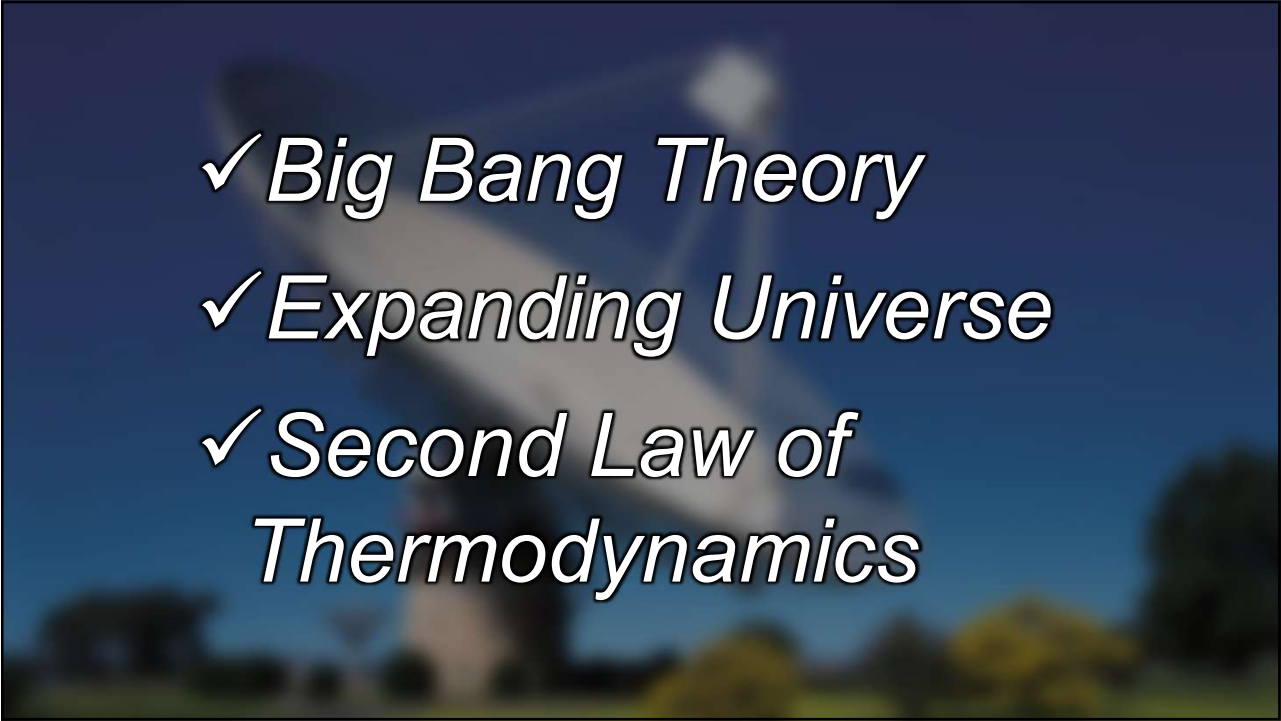




- 1. The Universe began to exist.***
  - 2. Whatever begins to exist has a cause of its existence.***
- Therefore, the universe has a cause of its existence.***

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



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



# ***The Big Bang Theory***

## ∞ Definition ∞

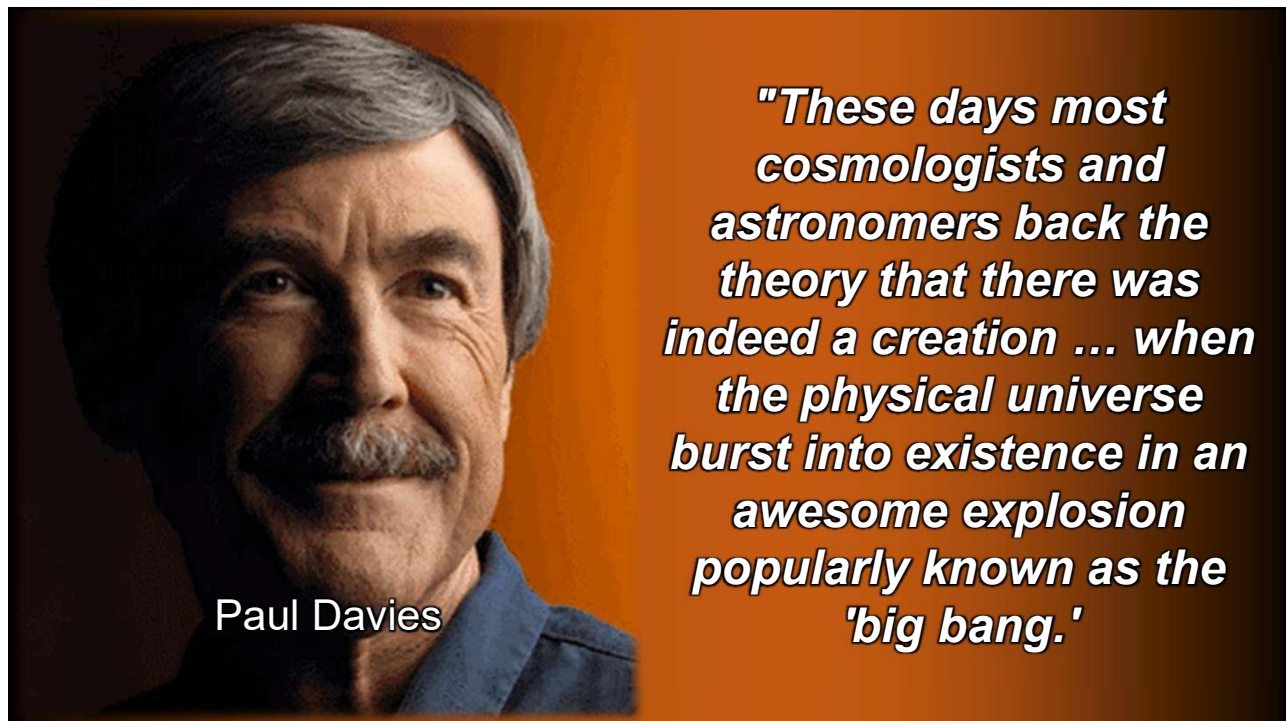
*Scientists maintain that the universe began in a colossal explosion a finite time ago.*

## ∞ Significance ∞

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

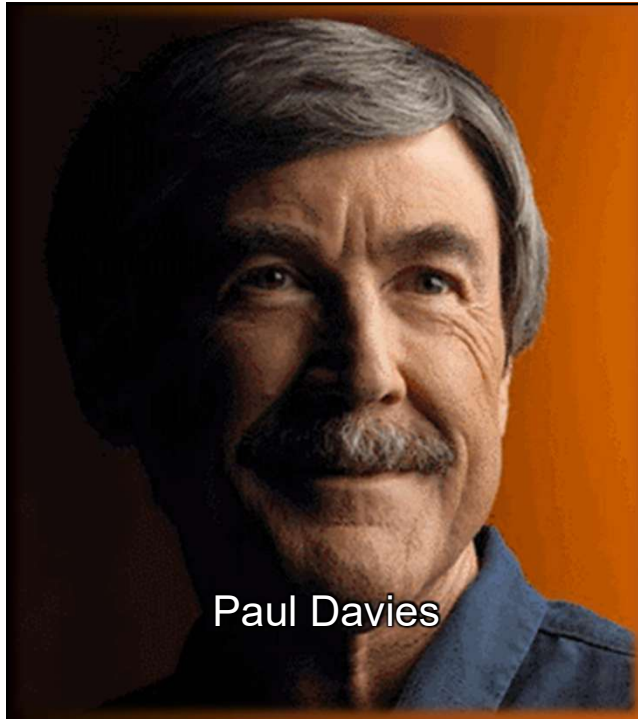
# ∞ Significance ∞

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



Paul Davies


*"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.'*



***"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



***"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]

Steven Weinberg

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



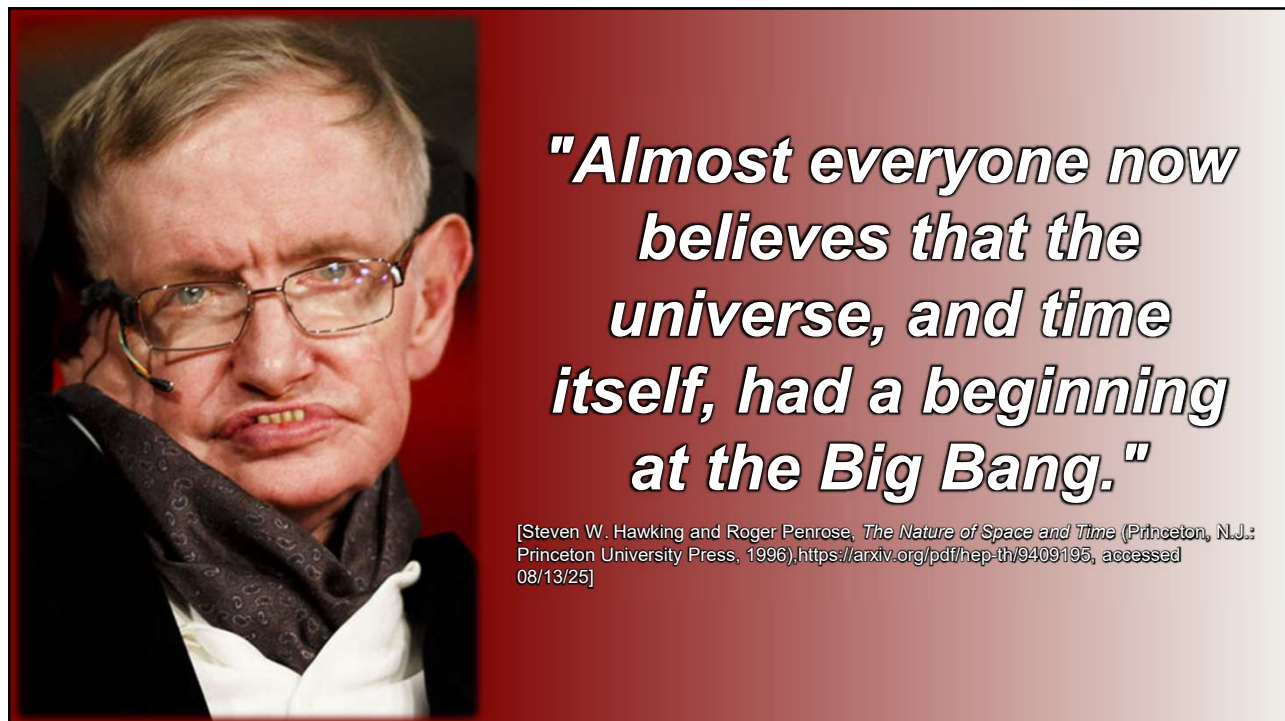
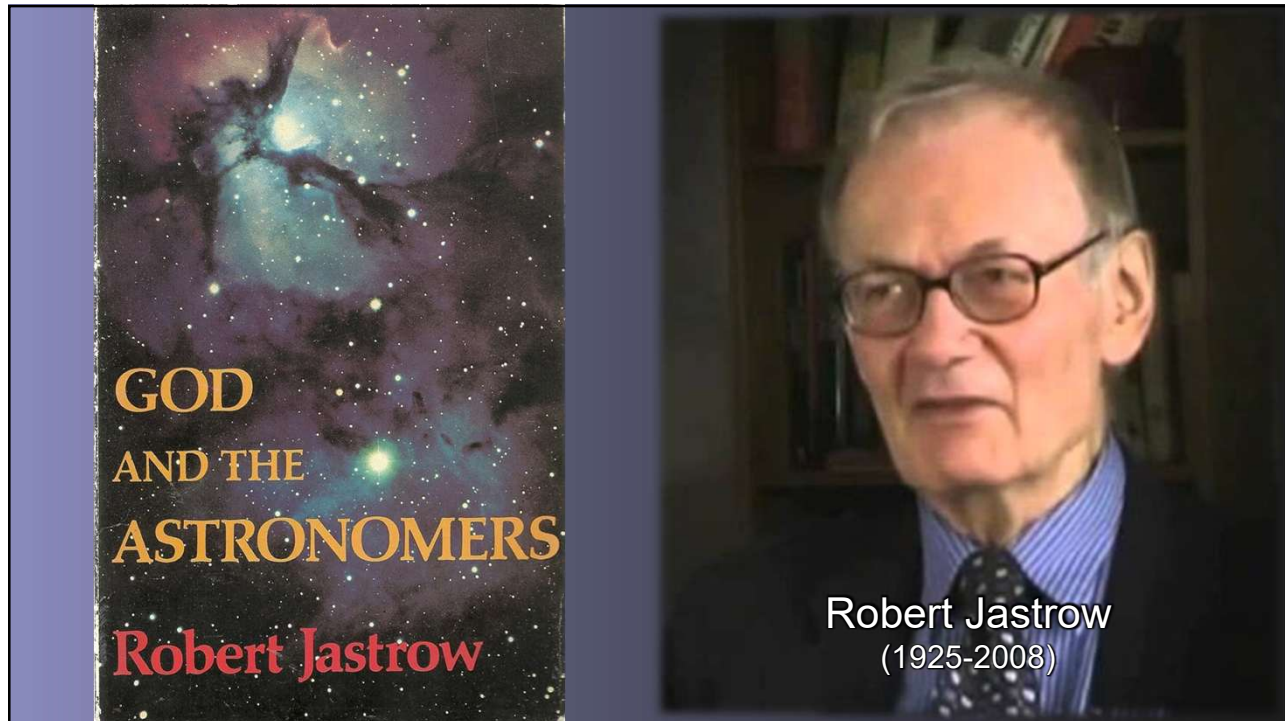
Robert Jastrow  
(1925-2008)

***"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 08/13/25]

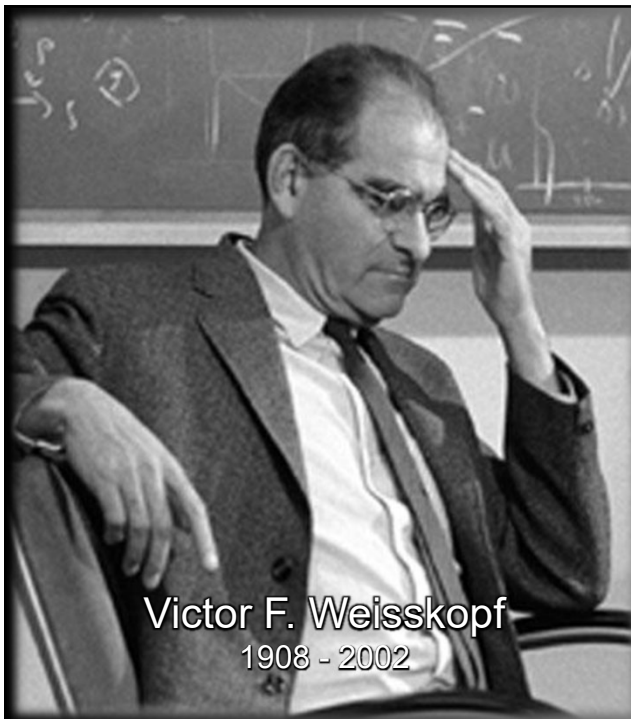
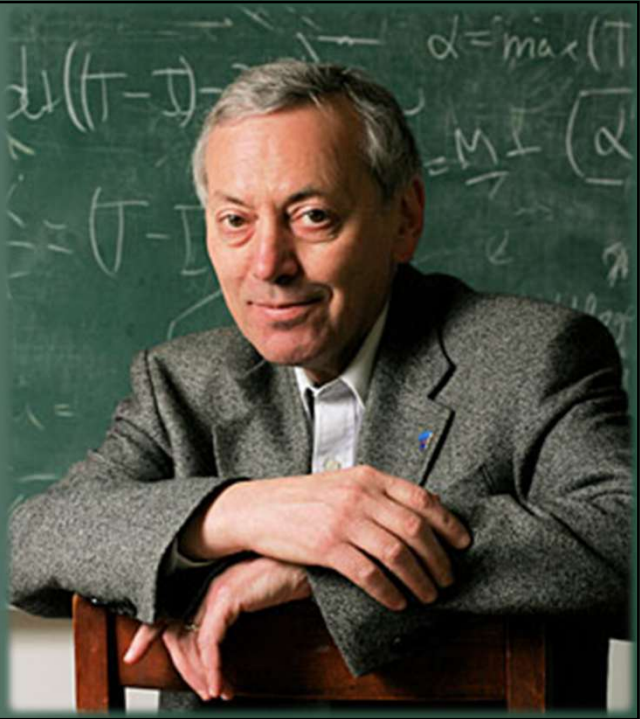


Robert Jastrow  
(1925-2008)



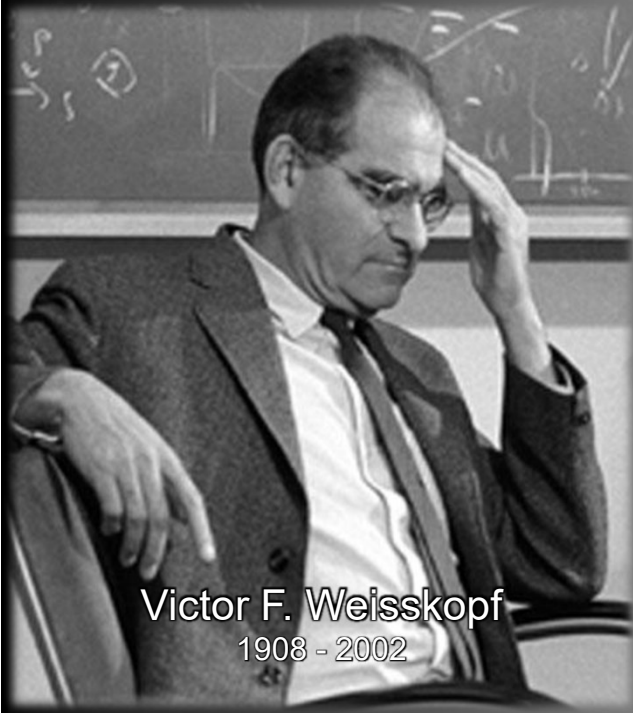
***"With the proof now in place, cosmologists can no longer hide behind the possibility of a past-eternal universe. There is no escape, they have to face the problem of a cosmic beginning."***

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



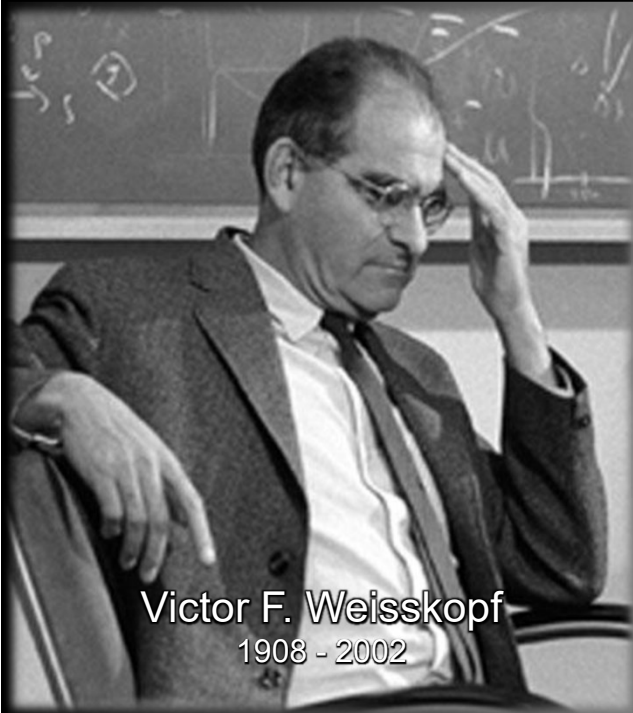
Victor F. Weisskopf  
1908 - 2002

***"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. . . ."***



***"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."***

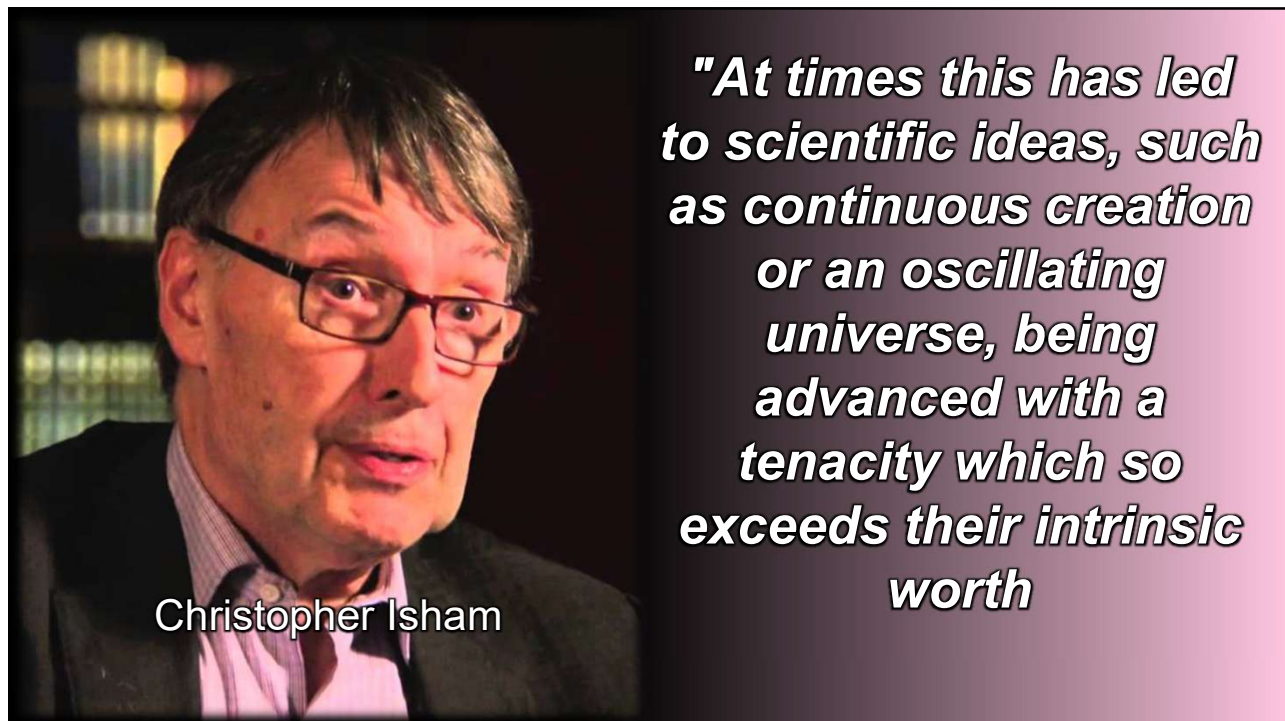
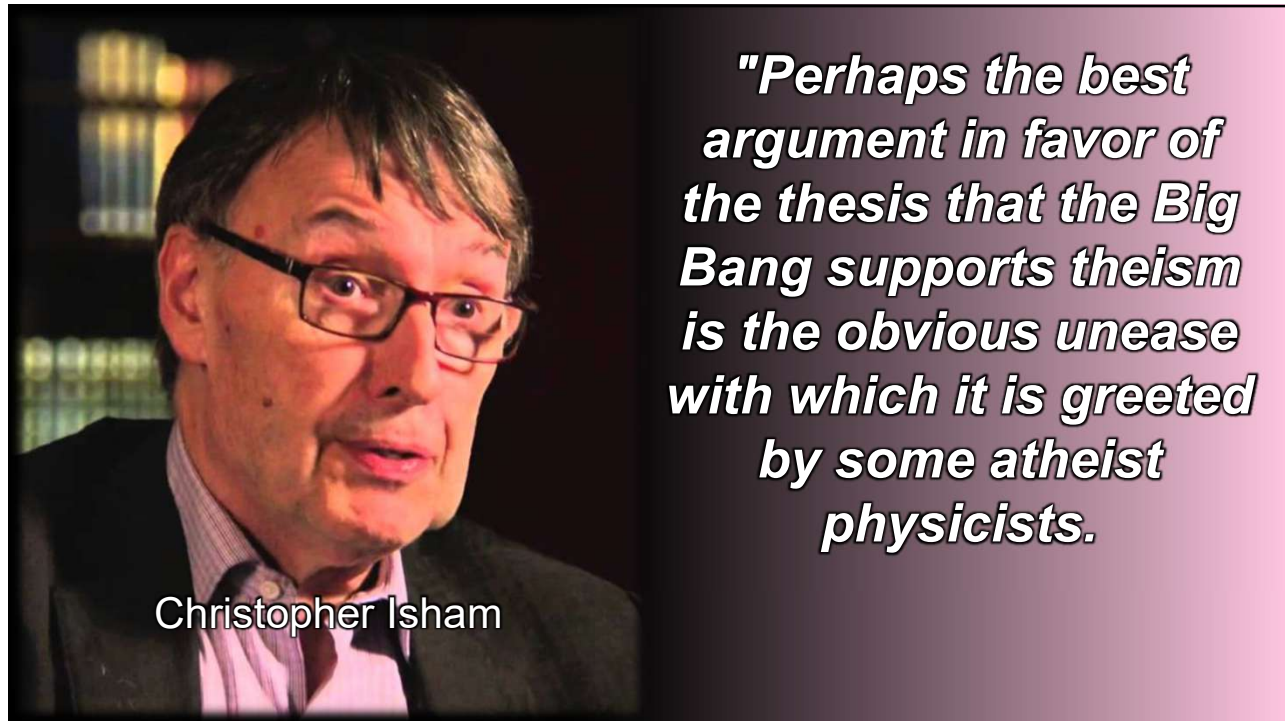
Victor F. Weisskopf  
1908 - 2002




***"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



A portrait of Christopher Isham, a man with glasses and a dark suit, looking slightly to the right. The background is dark with some blurred lights.

**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, 2003), 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?**

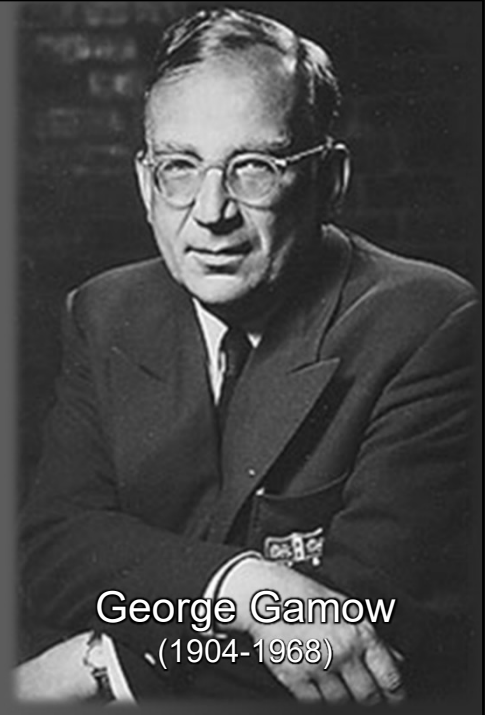
## Answer

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

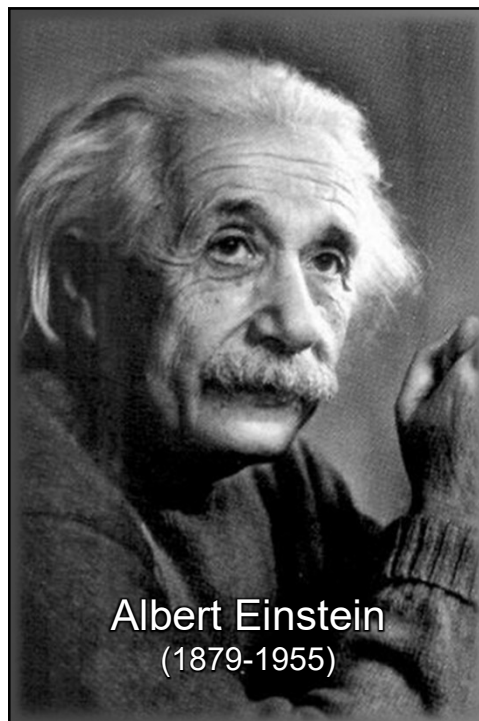
[<https://www.loc.gov/everyday-mysteries/astronomy/item/what-does-it-mean-when-they-say-the-universe-is-expanding/>, accessed 08/13/25]

***"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, 239]



**George Gamow**  
(1904-1968)



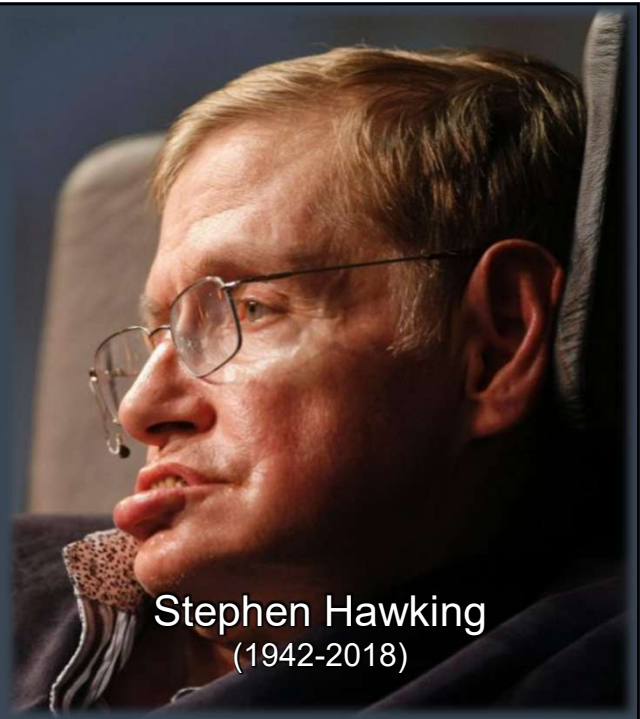
**Albert Einstein**  
(1879-1955)

***"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)

# *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 ∞

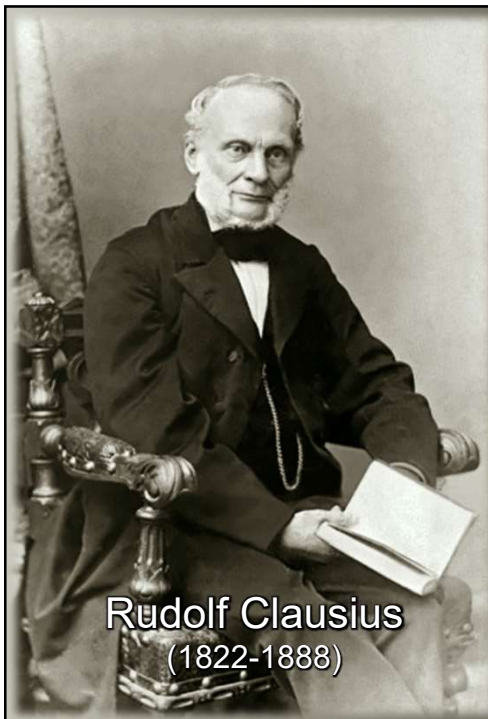
*This amounts to saying that the universe is "running down."*

## ∞ 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.**

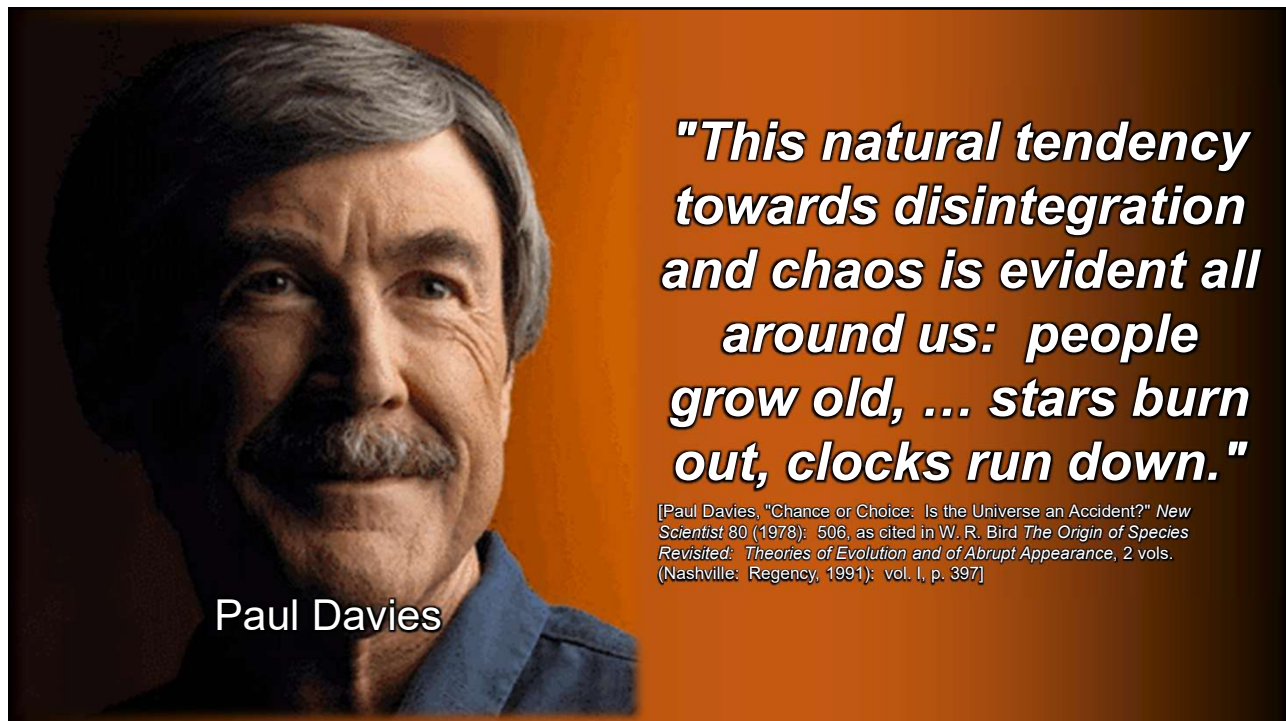
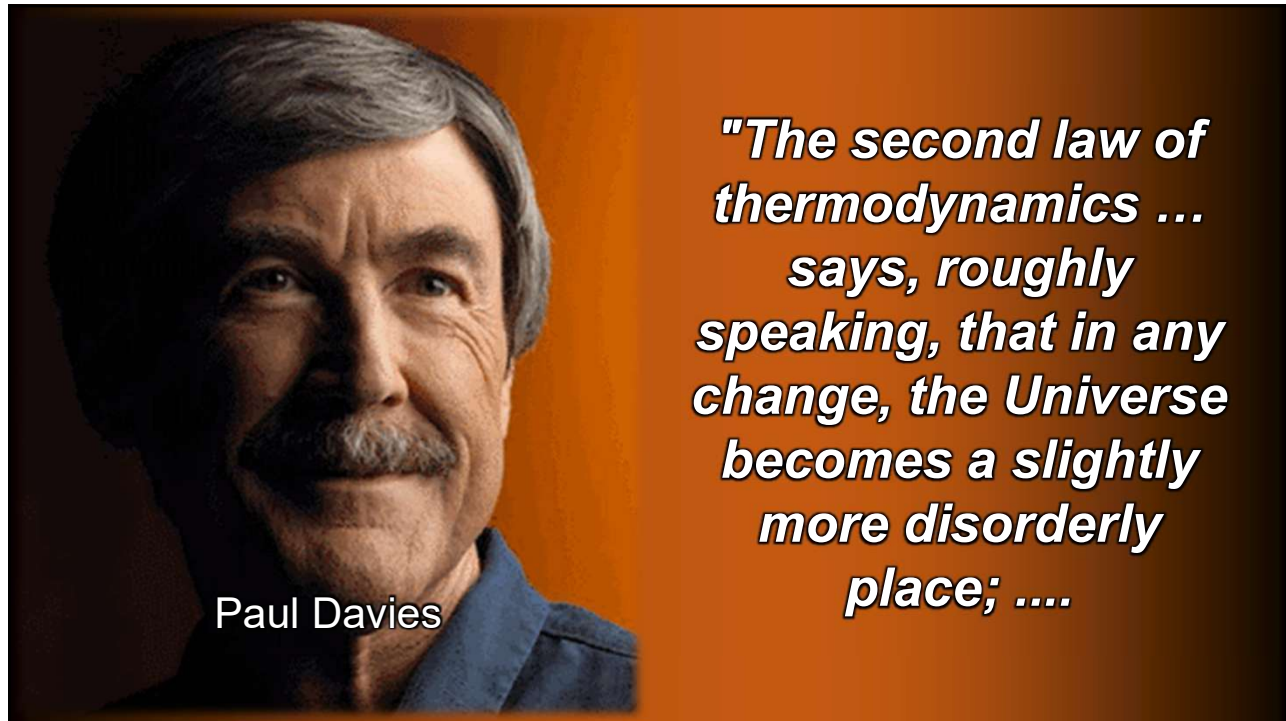


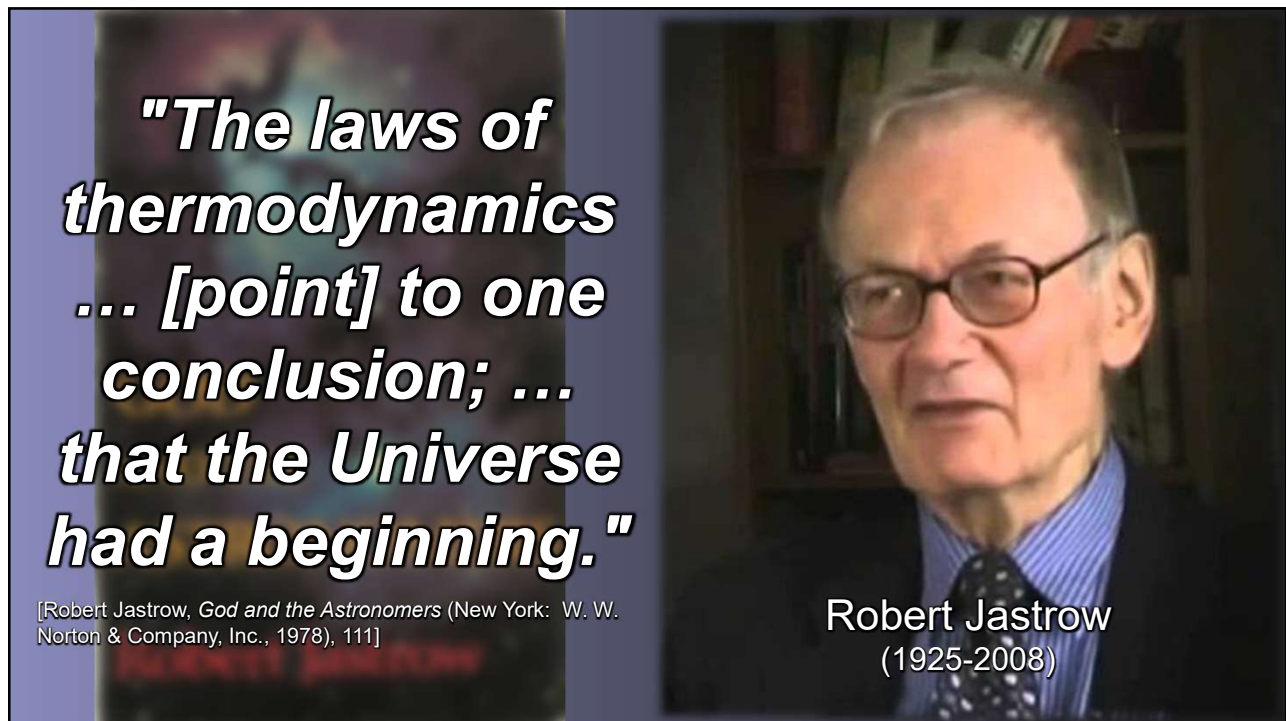
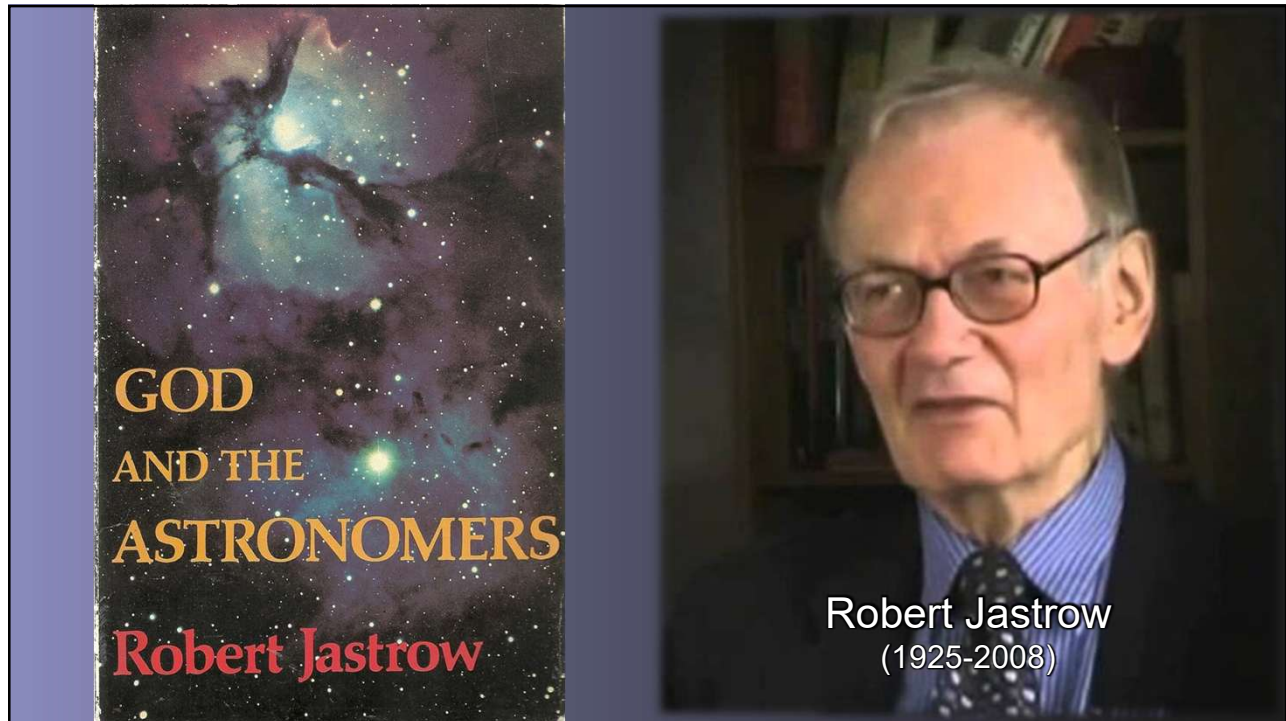
**Rudolf Clausius**  
(1822-1888)

***"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]





***"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]

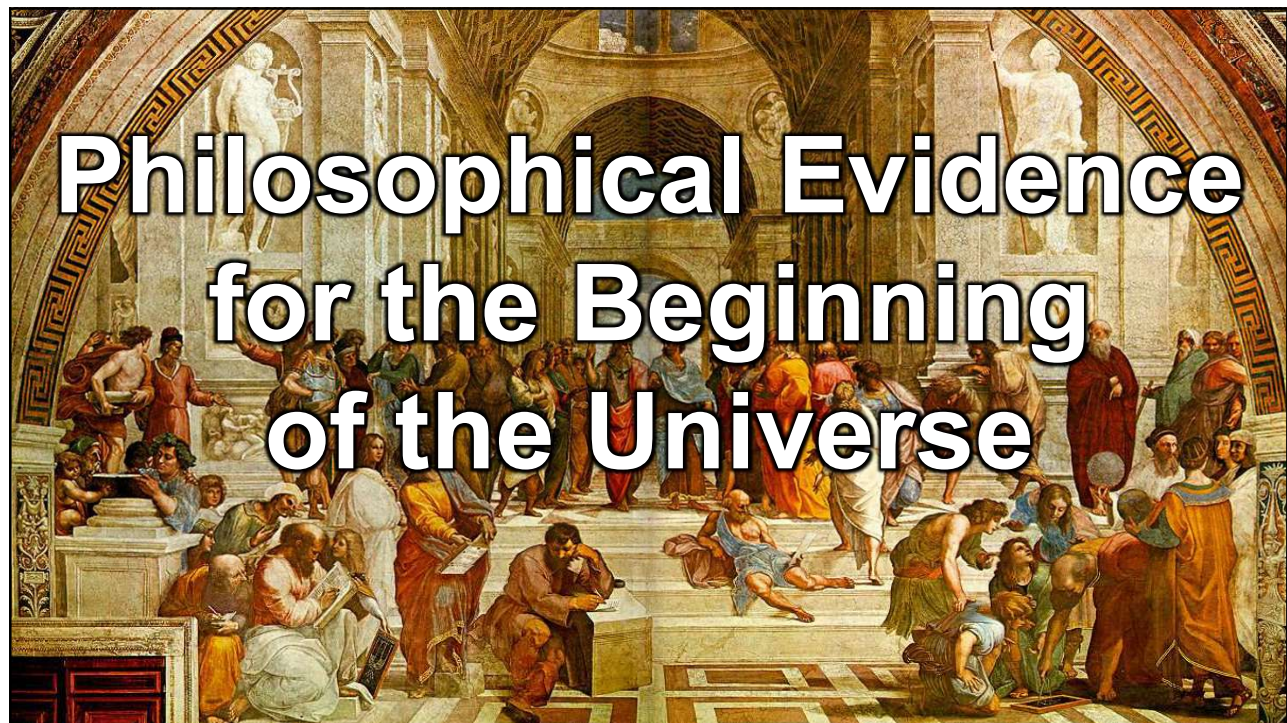
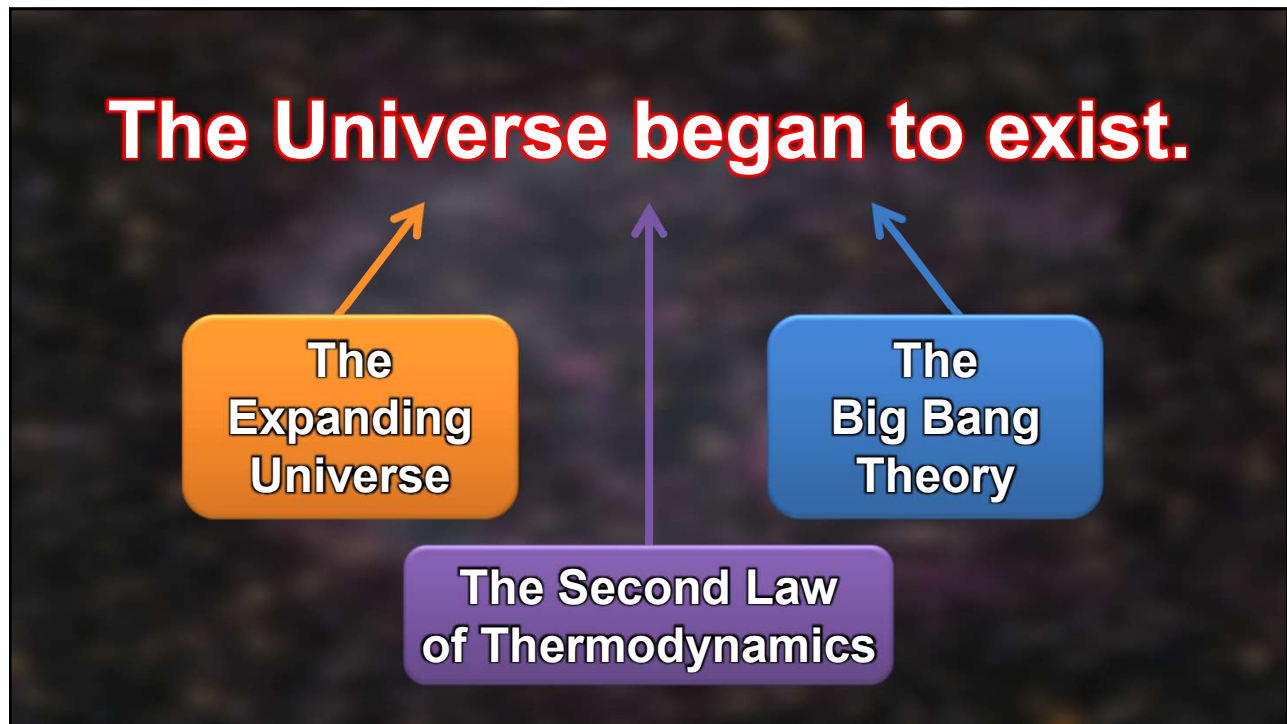


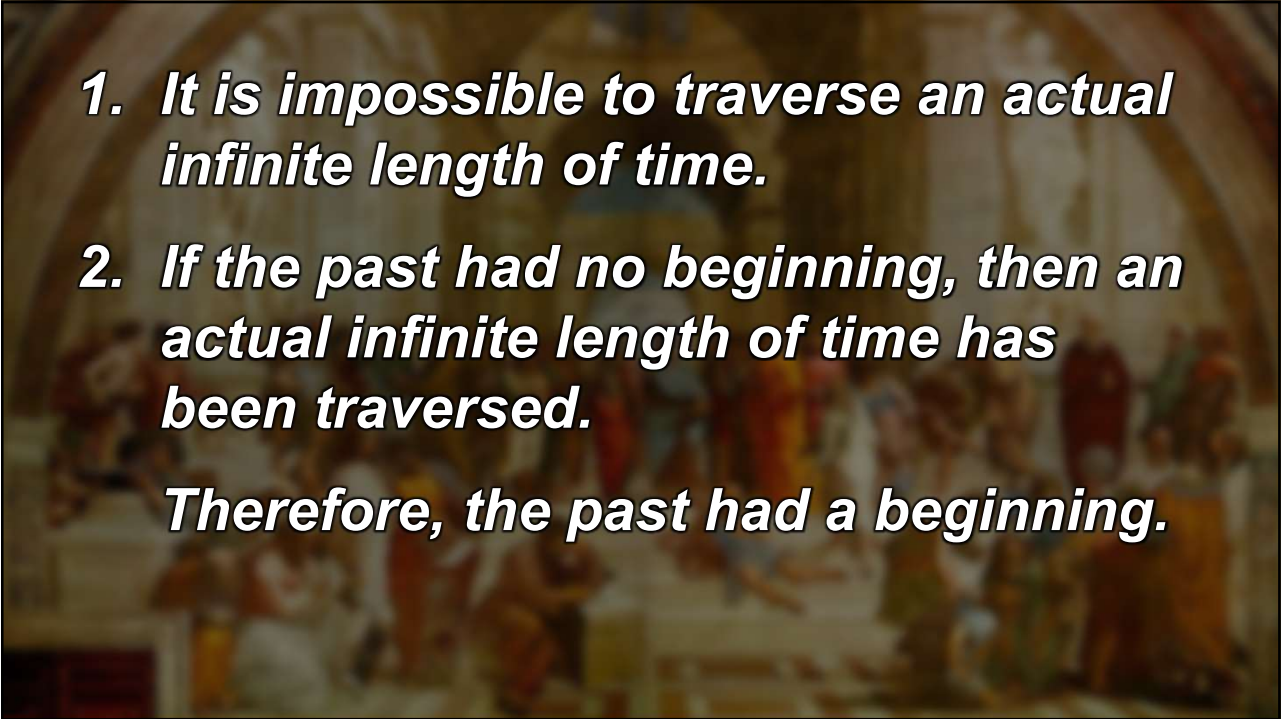
**Robert Jastrow**  
(1925-2008)

**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.**

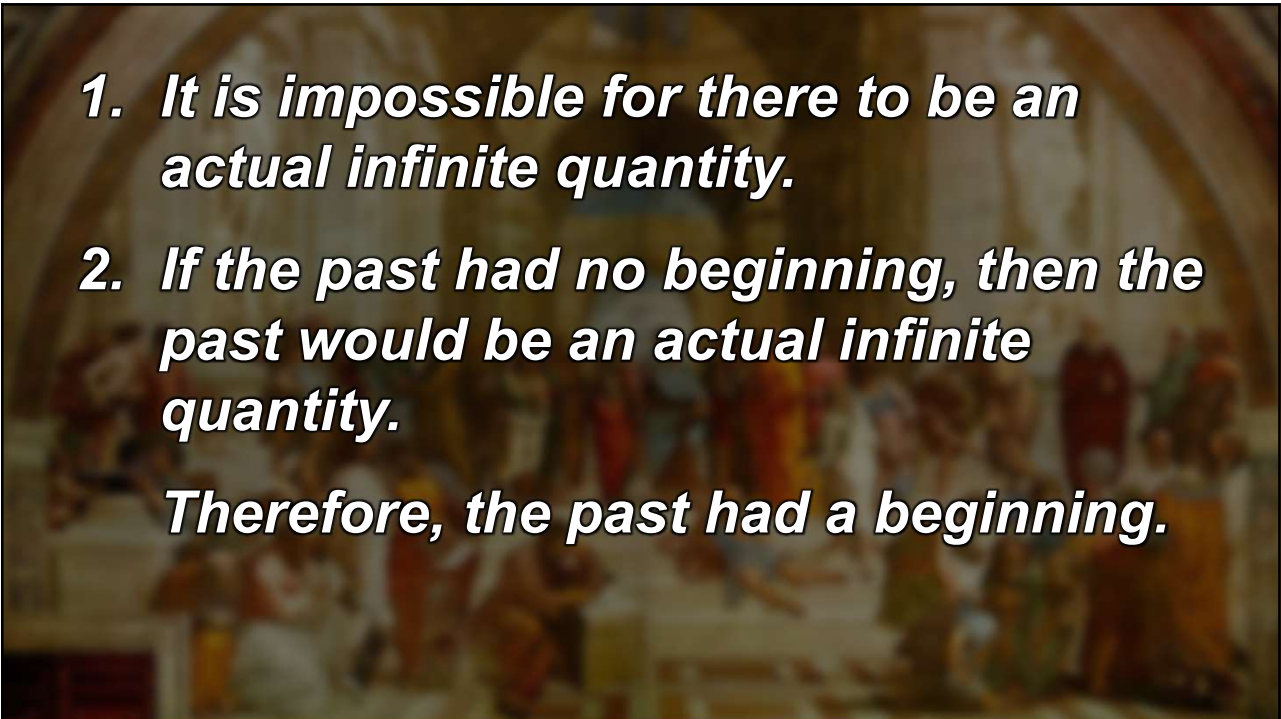
**The evidence for the expansion of the universe shows that the universe could not have been expanding from eternity. Therefore the universe began to exist a finite time ago.**

**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.**

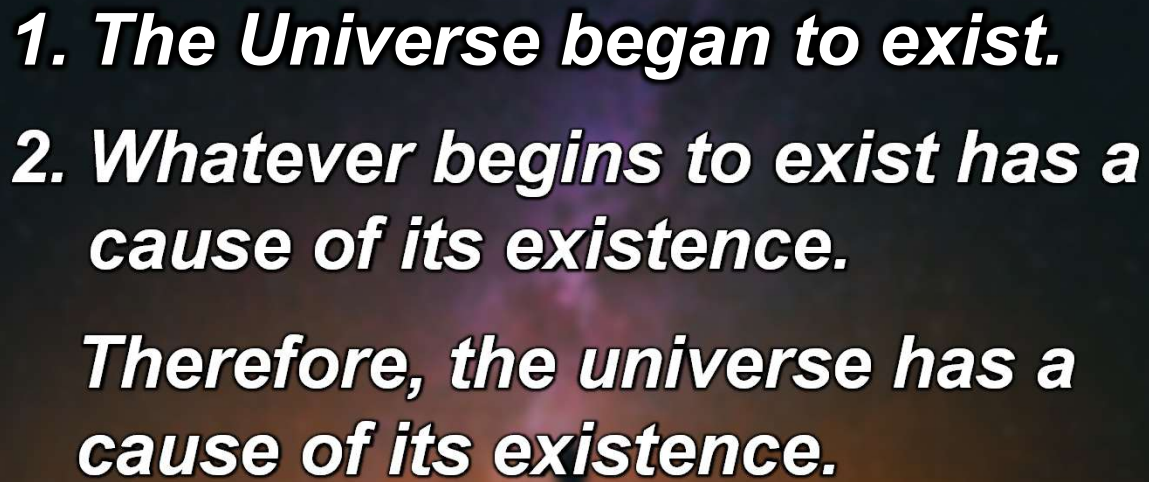


- 
- 1. It is impossible to traverse an actual infinite length of time.***
  - 2. If the past had no beginning, then an actual infinite length of time has been traversed.***

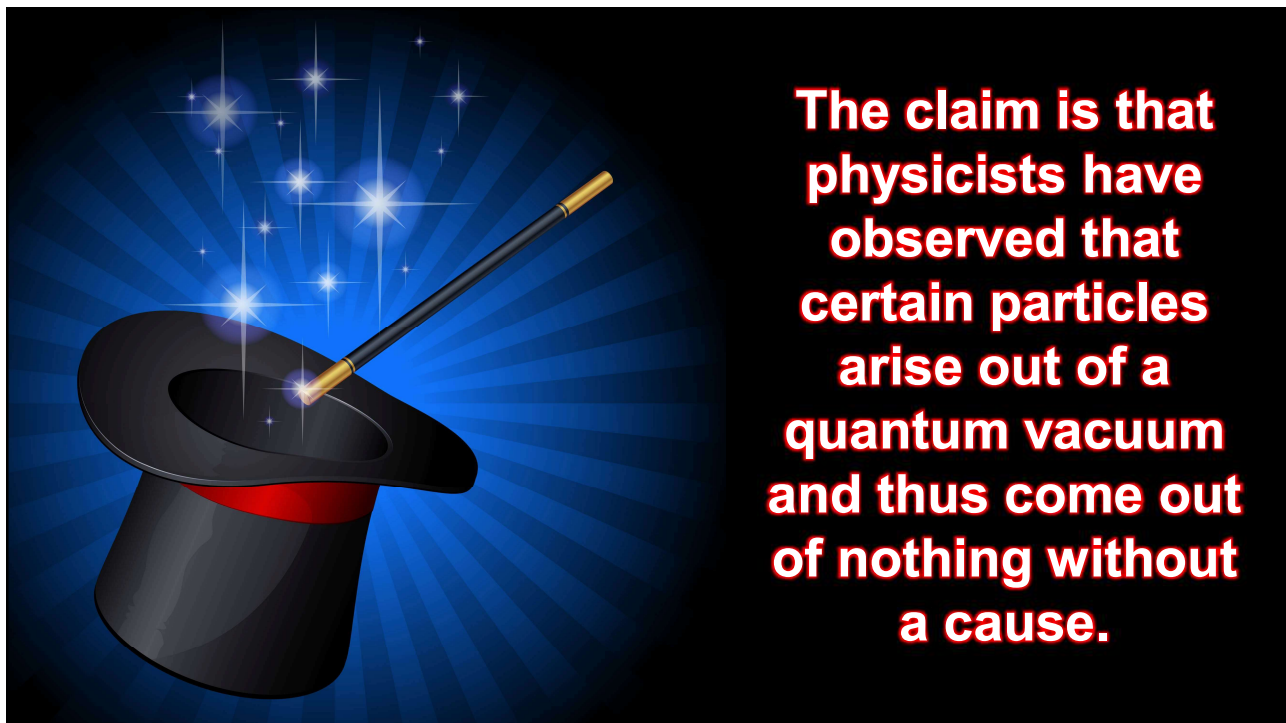
***Therefore, the past had a beginning.***

- 
- 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.***

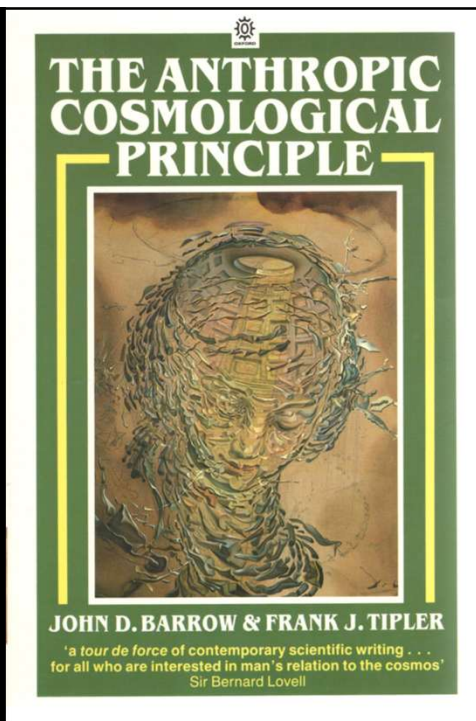
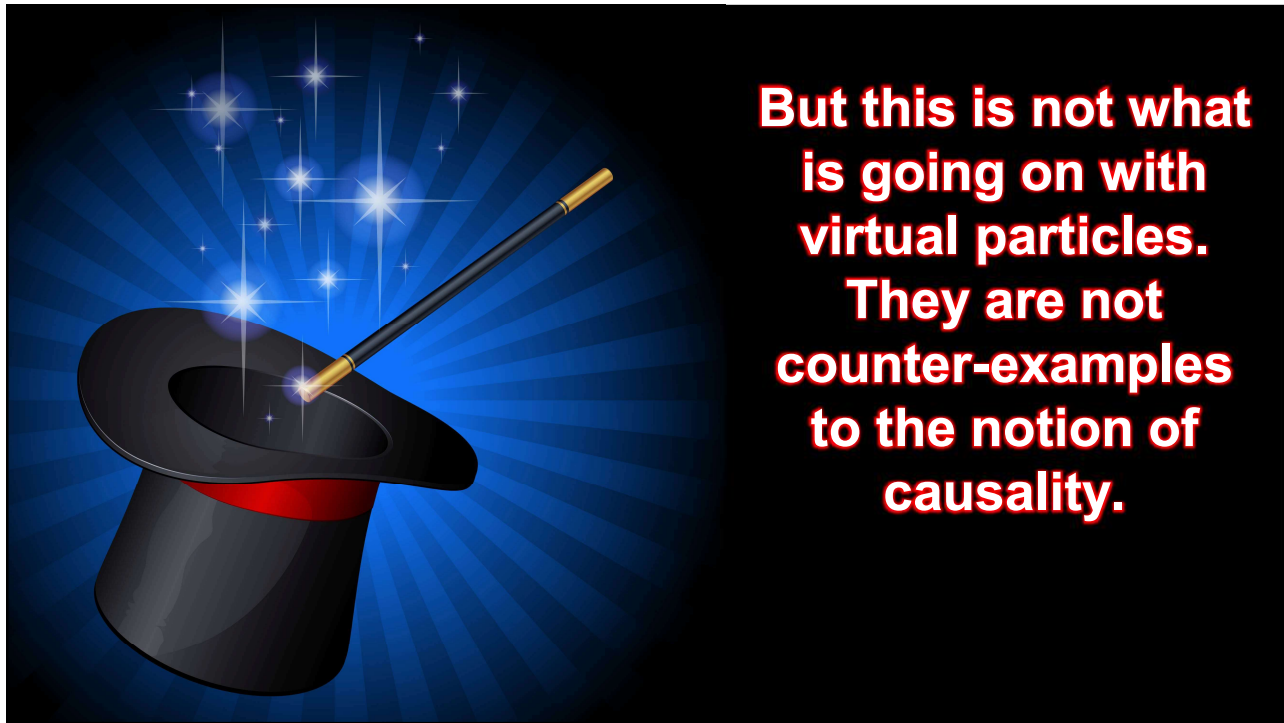
***Therefore, the past had a beginning.***

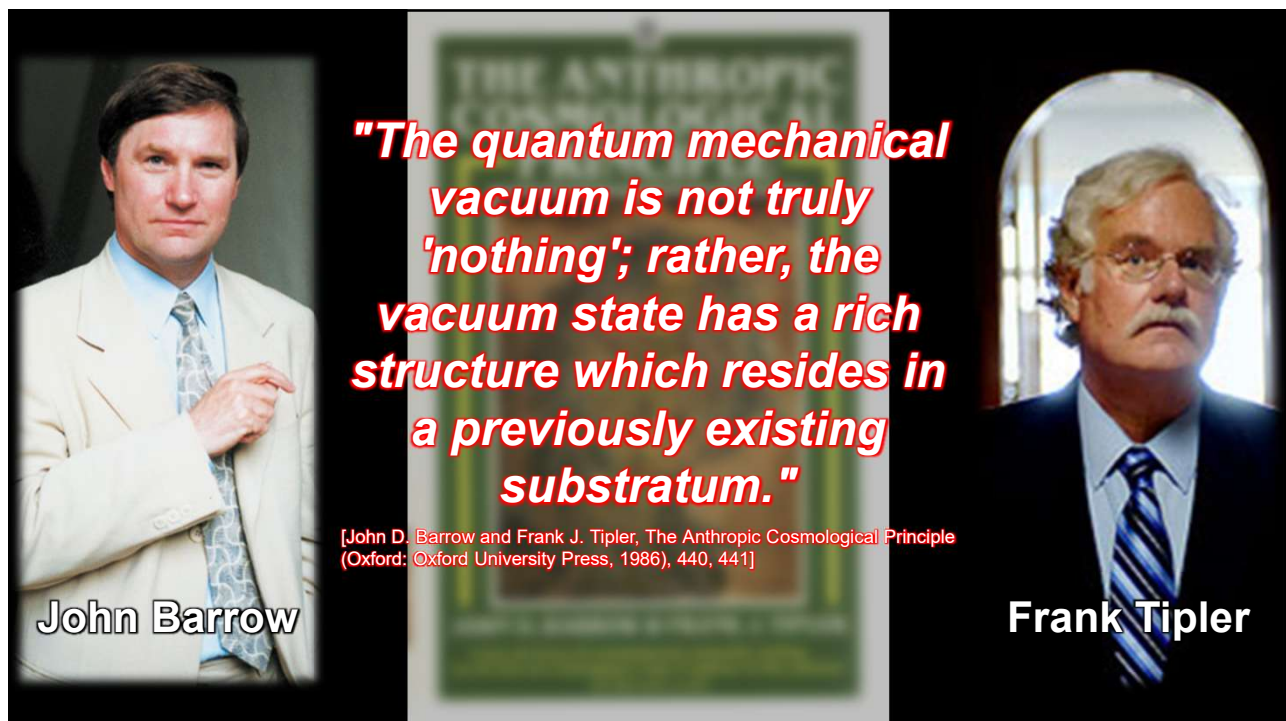
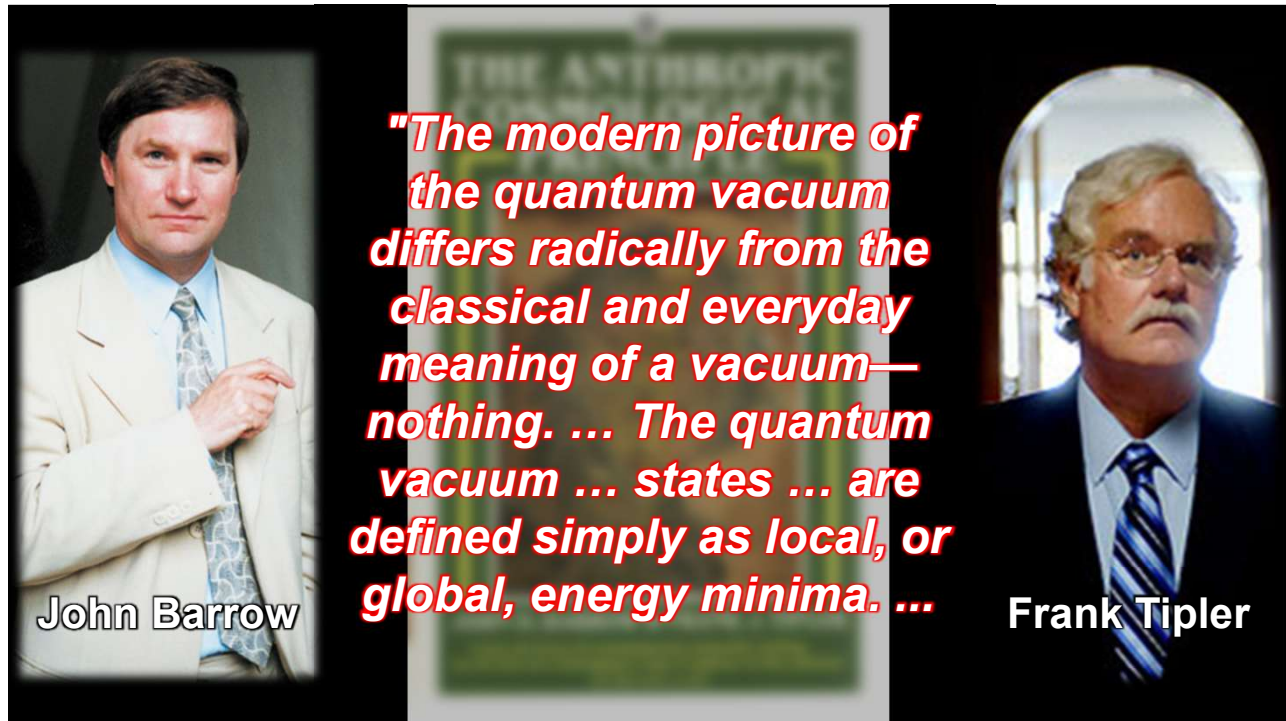
- 
- 1. The Universe began to exist.***
  - 2. Whatever begins to exist has a cause of its existence.***
- Therefore, the universe has a cause of its existence.***

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

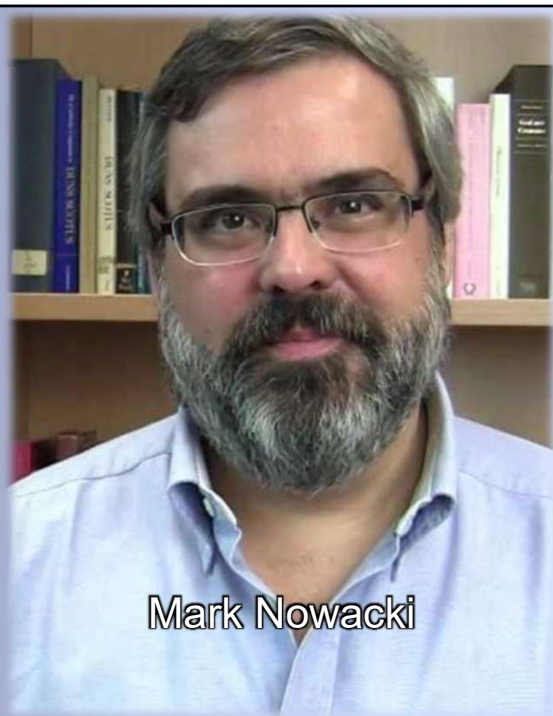


**The claim is that  
physicists have  
observed that  
certain particles  
arise out of a  
quantum vacuum  
and thus come out  
of nothing without  
a cause.**





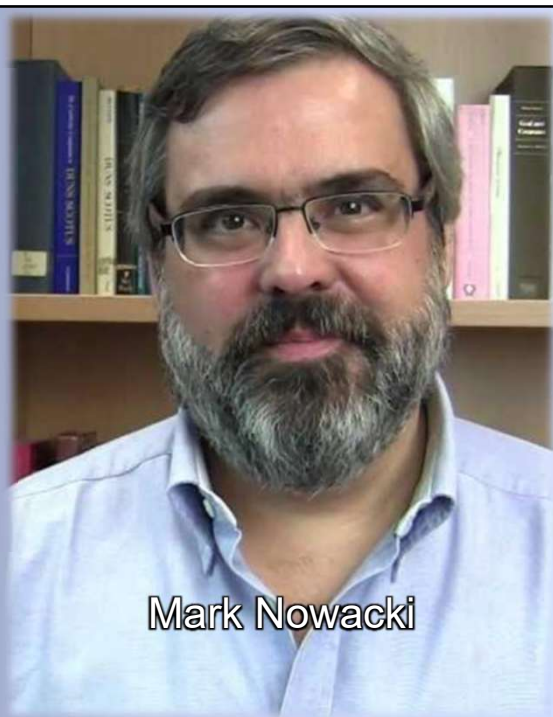
*"... the quantum vacuum is very different from the void of Newton: the quantum vacuum is a soupy morass of energy and particles in constant flux; and virtual particles derive their existence from the surrounding quantum gumbo."*



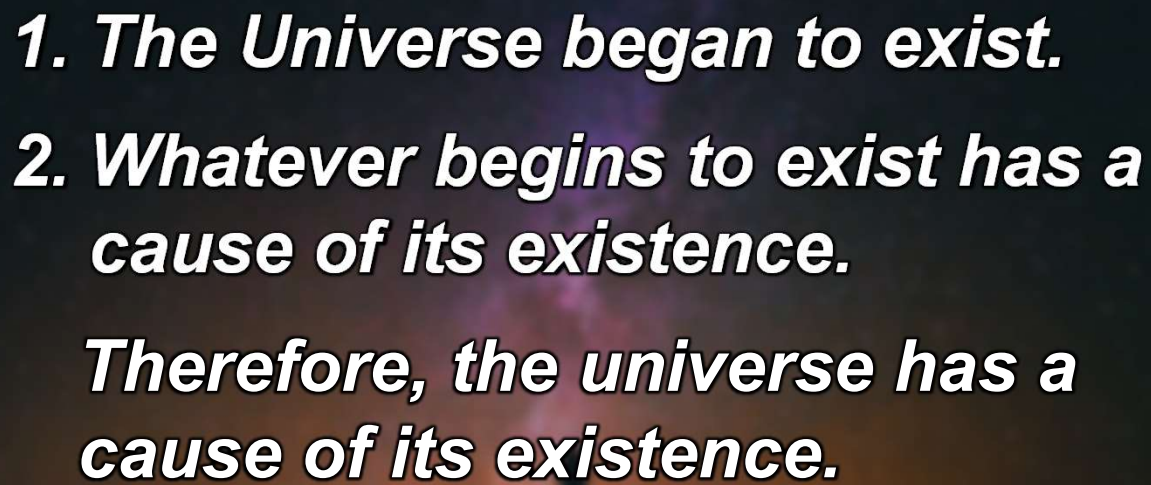
Mark Nowacki

*"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]

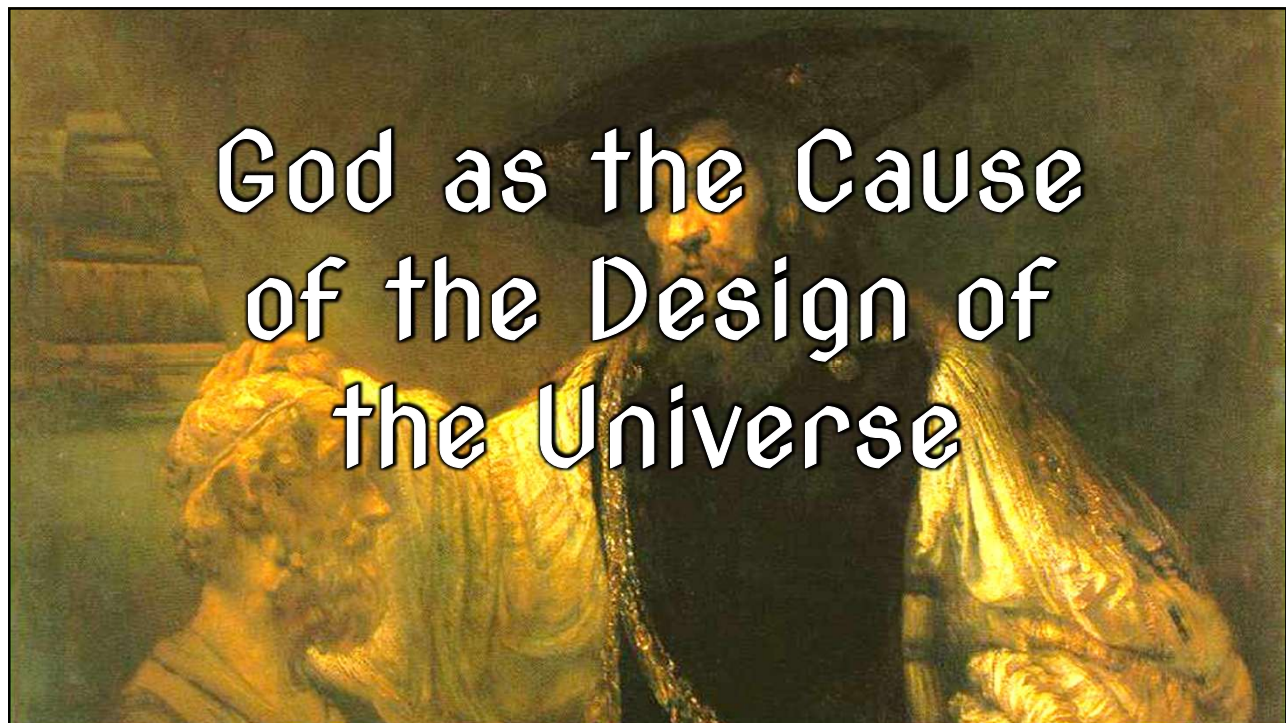
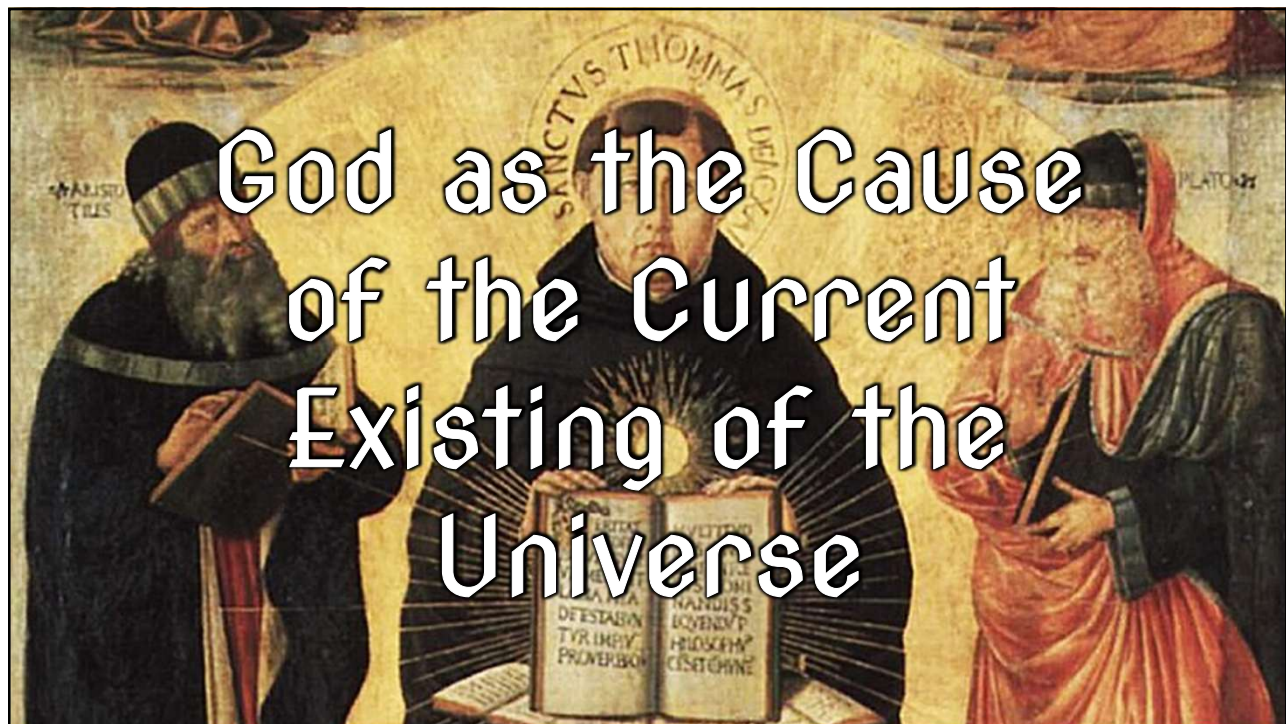


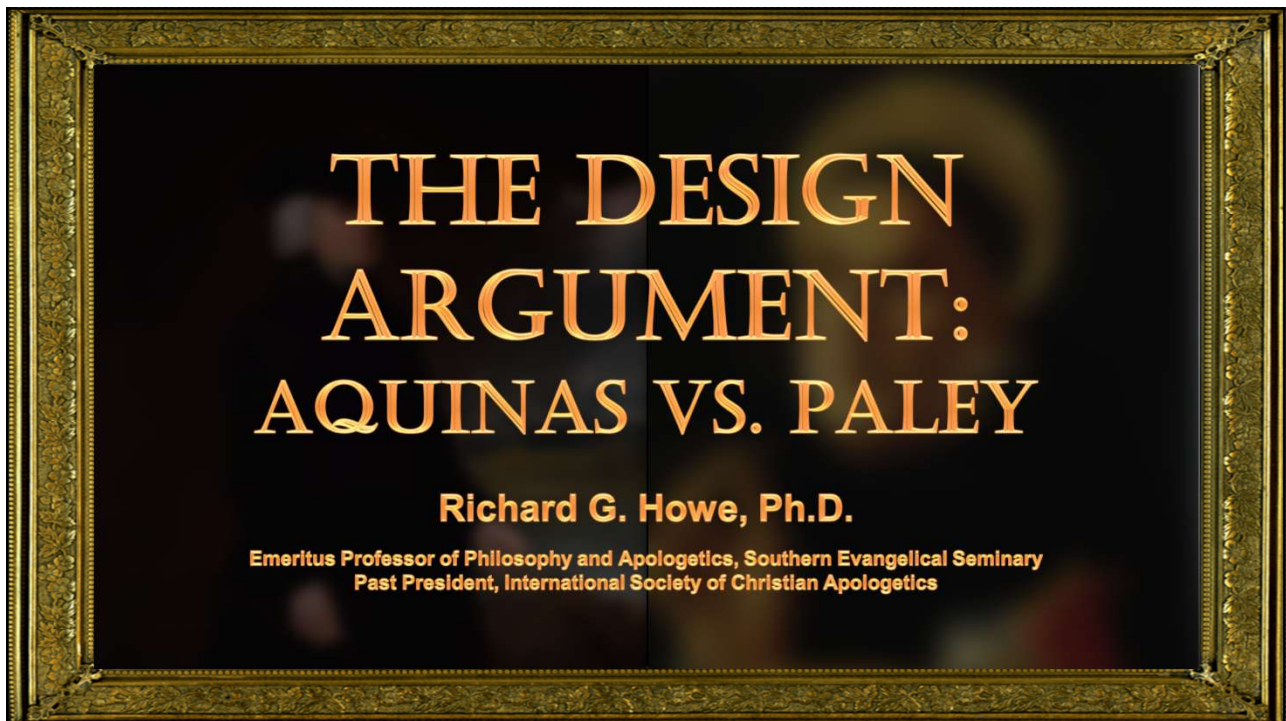
Mark Nowacki

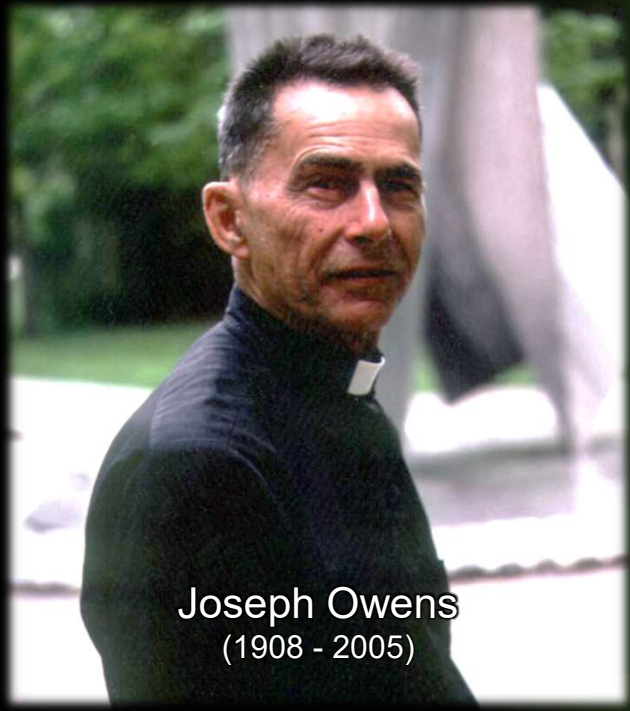
- 
- 1. The Universe began to exist.***
  - 2. Whatever begins to exist has a cause of its existence.***
- Therefore, the universe has a cause of its existence.***



***Therefore, the universe has a cause of its existence.***

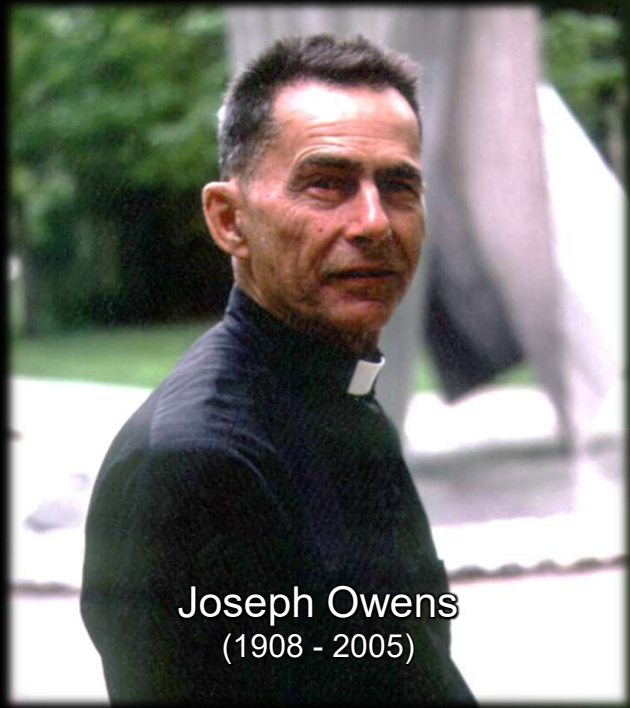




A portrait of Joseph Owens, a man with short dark hair, wearing a black clerical shirt with a white collar. He is looking slightly to the right with a thoughtful expression. The background is blurred, showing greenery and a white structure.

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."**

A portrait of Joseph Owens, a man with short dark hair, wearing a black clerical shirt with a white collar. He is looking slightly to the right with a thoughtful expression. The background is blurred, showing greenery and a white structure.

Joseph Owens  
(1908 - 2005)

**"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]



# God as the Cause of the Design of the Universe



## Scientific Evidence for the Design in the Universe

## ∞ Design of the Universe ∞

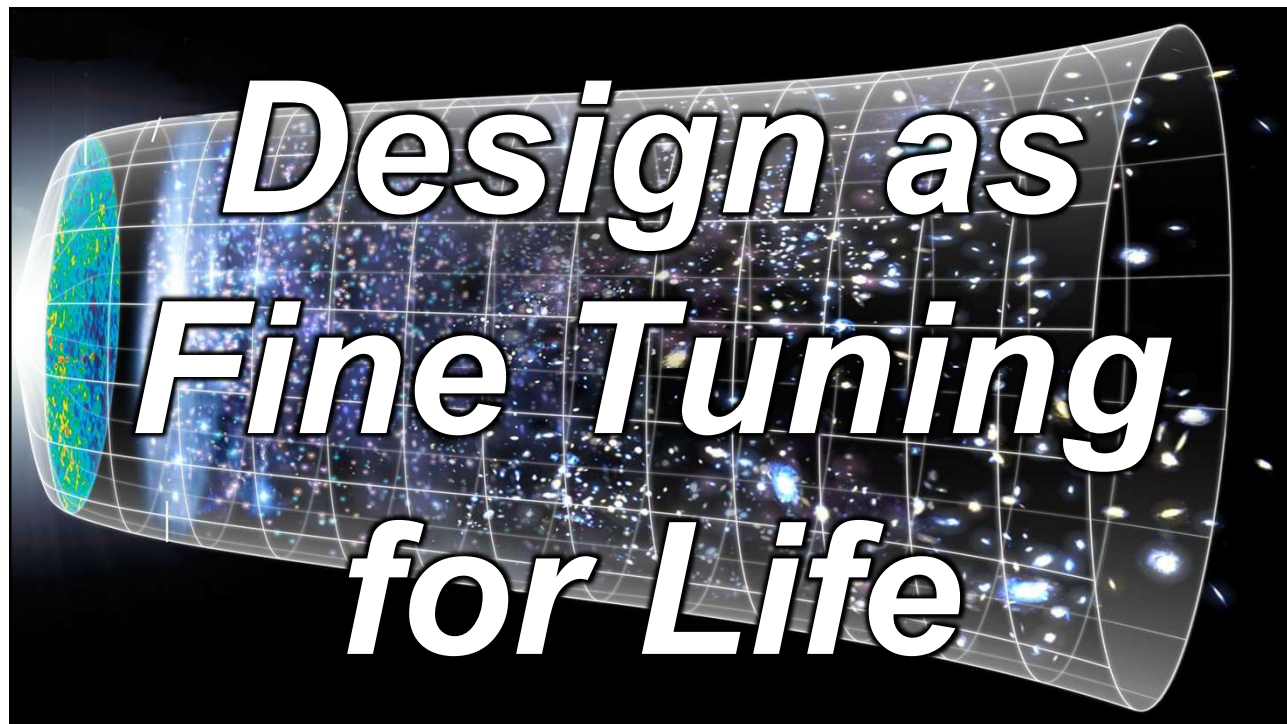
*Design as fine tuning for life*

*Design as the origin of life*

## ∞ Design of Living Systems ∞

*Design as information*

*Design as irreducible complexity*



## ∞ Definition ∞

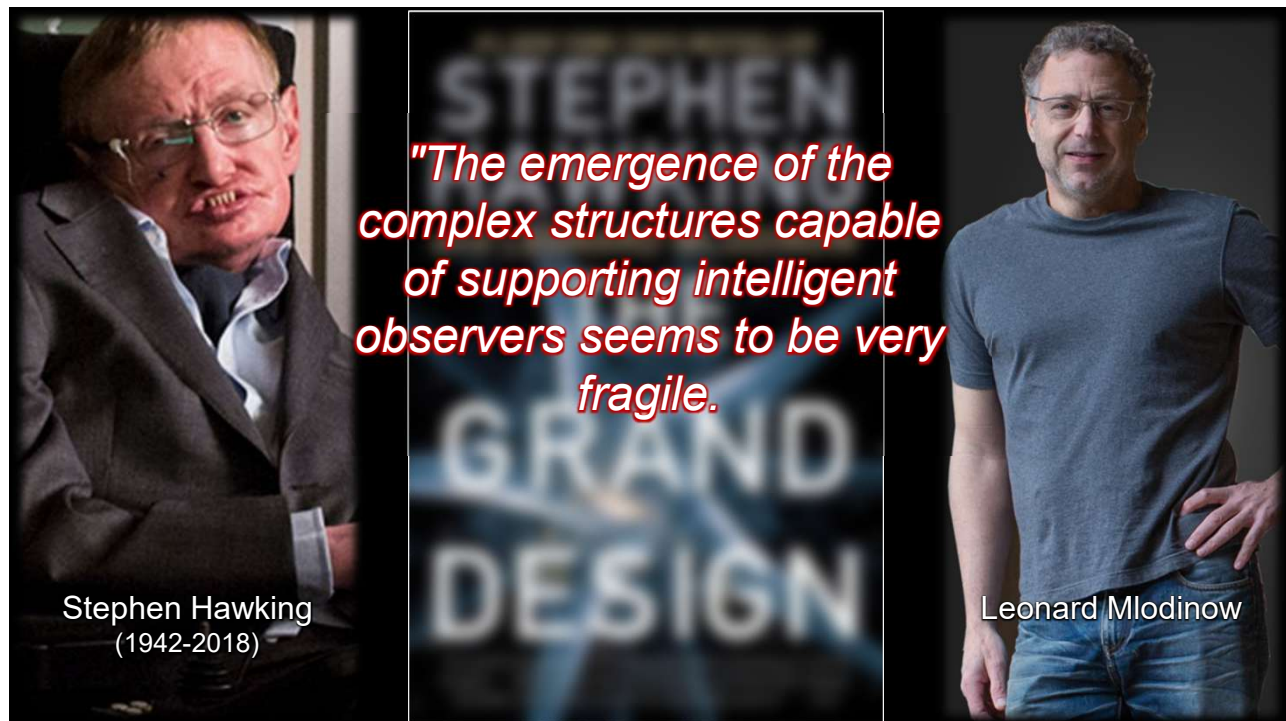
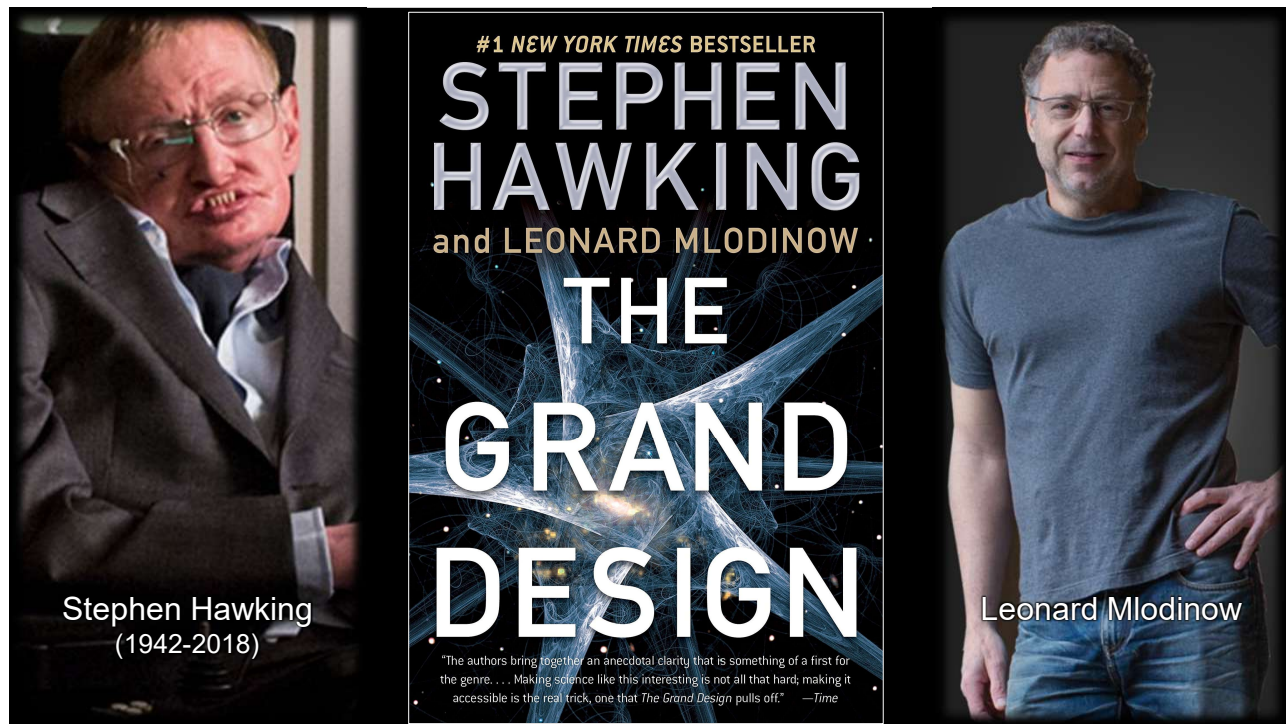
*Scientists recognize that the universe's initial condition contained an array of physical values (constants) that are necessary for the universe to support life.*

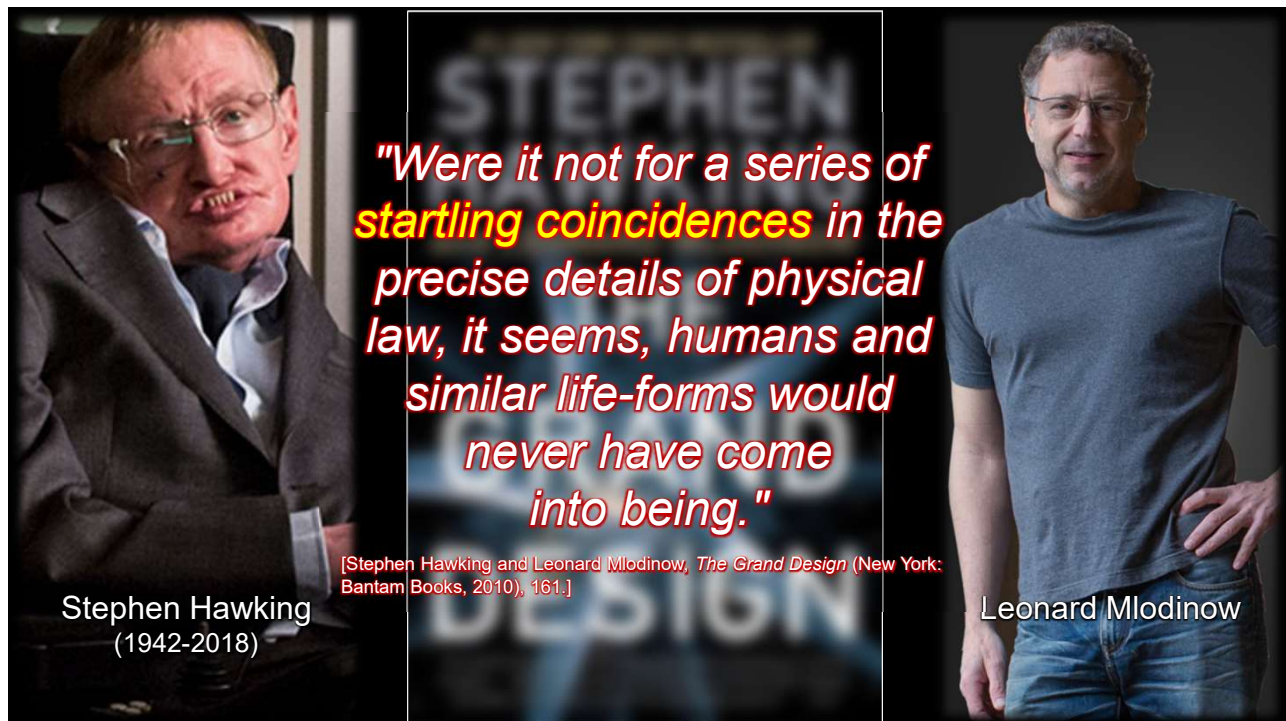
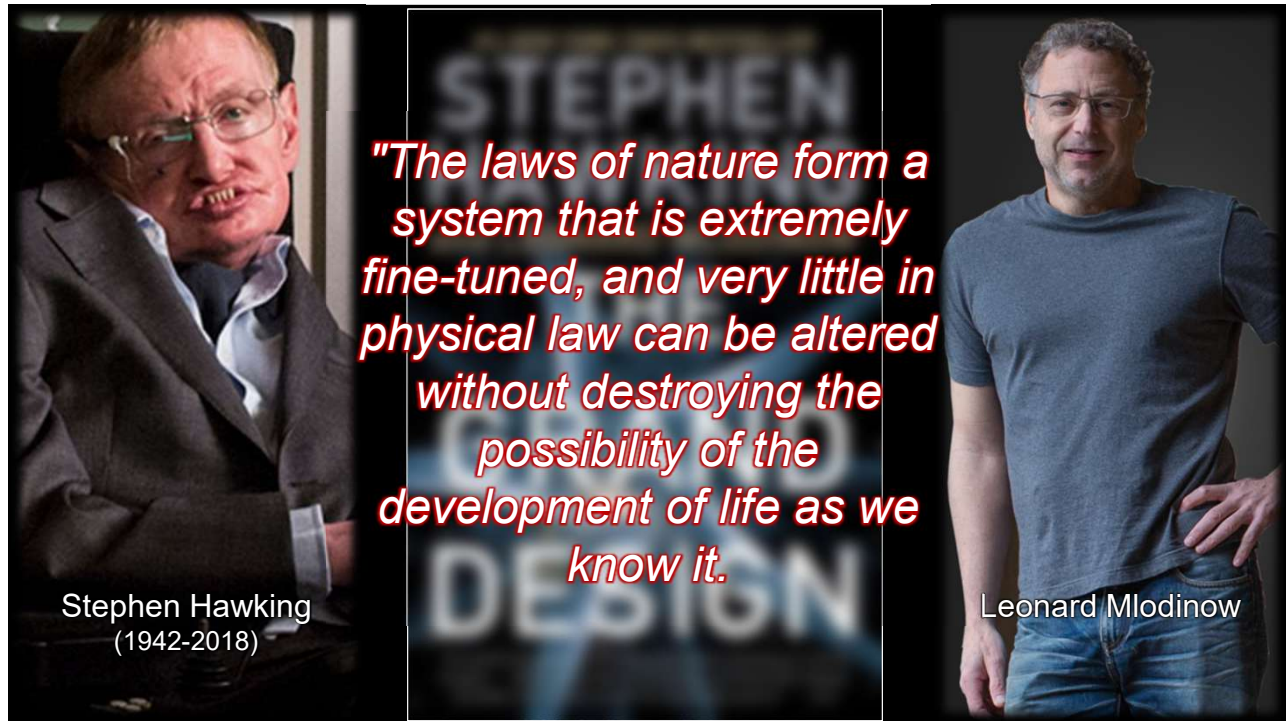
# ∞ Significance ∞

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

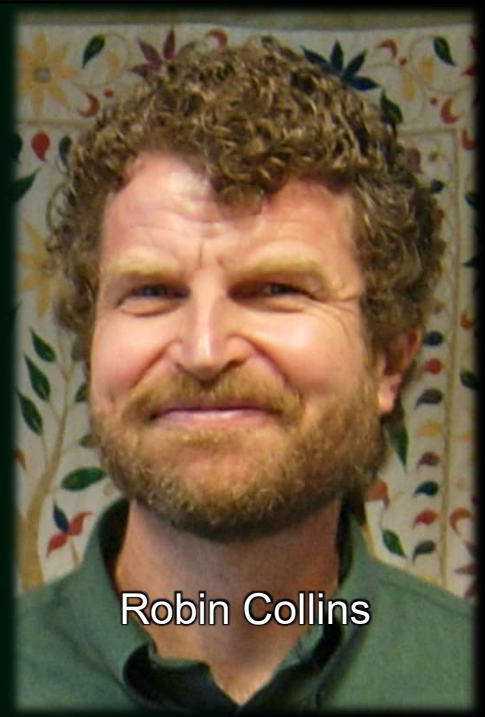
# ∞ Significance ∞

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





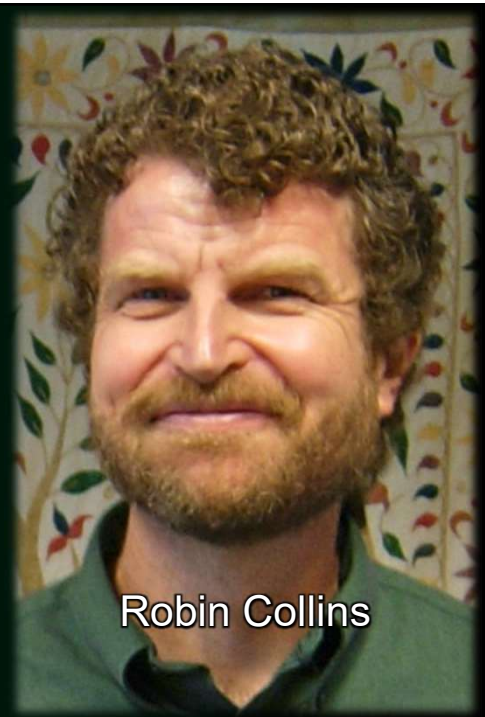
***"When scientists talk about the fine-tuning of the universe they're generally referring to the extraordinary balancing of the fundamental laws and parameters of physics and the initial conditions of the universe."***



Robin Collins

***"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]

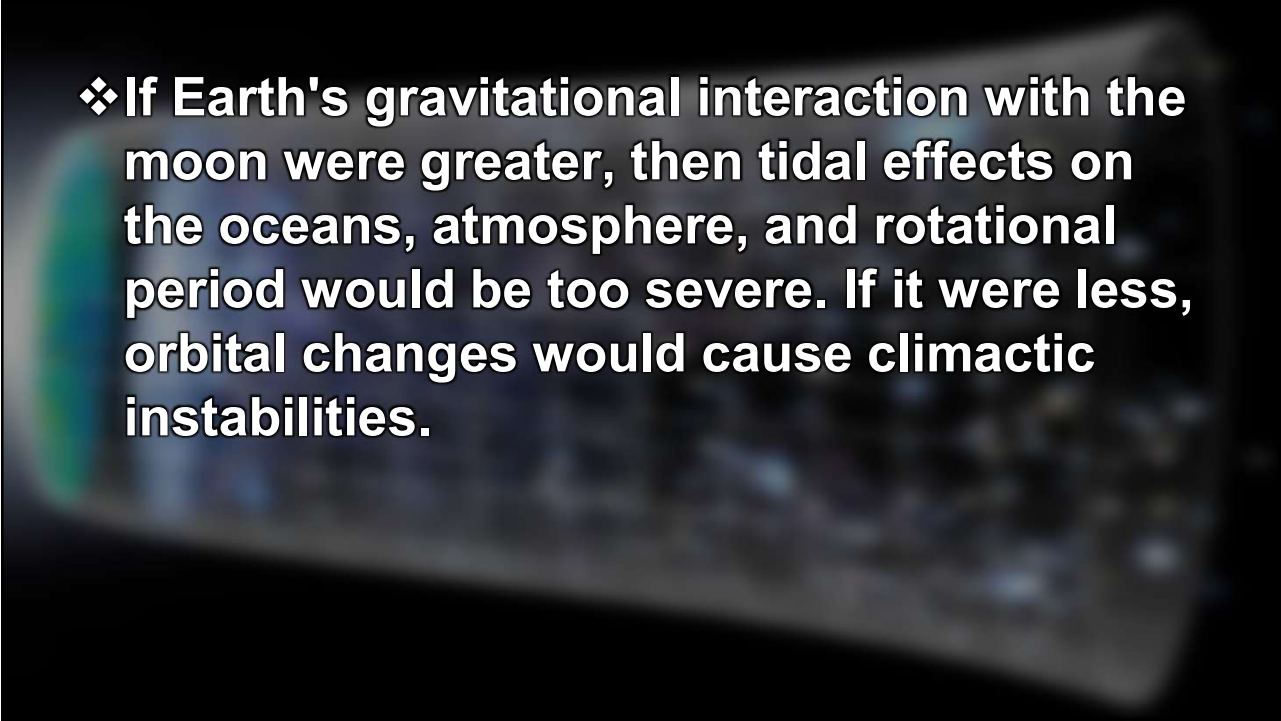


Robin Collins

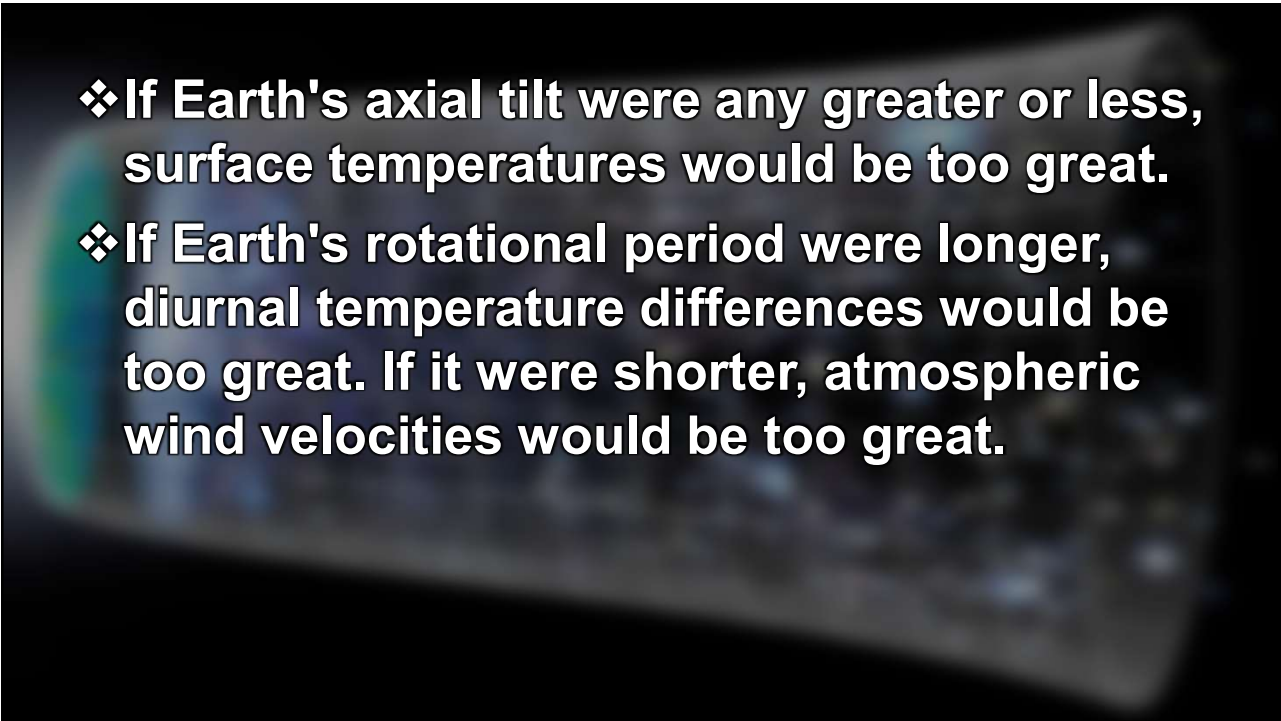
1. strong nuclear force constant
2. weak nuclear force constant
3. gravitational force constant
4. electromagnetic force constant
5. ratio of electromagnetic force constant to gravitational force constant
6. ratio of electron to proton mass
7. ratio of number of protons to number of electrons
8. expansion 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.  $^{12}\text{C}$  to  $^{16}\text{O}$  nuclear energy level ratio
20. ground state energy level for  $^4\text{He}$
21. decay rate of  $^8\text{Be}$
22. mass excess of the neutron over the proton
23. initial excess of nucleons over anti-nucleons
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

[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  $10^{138}$ .

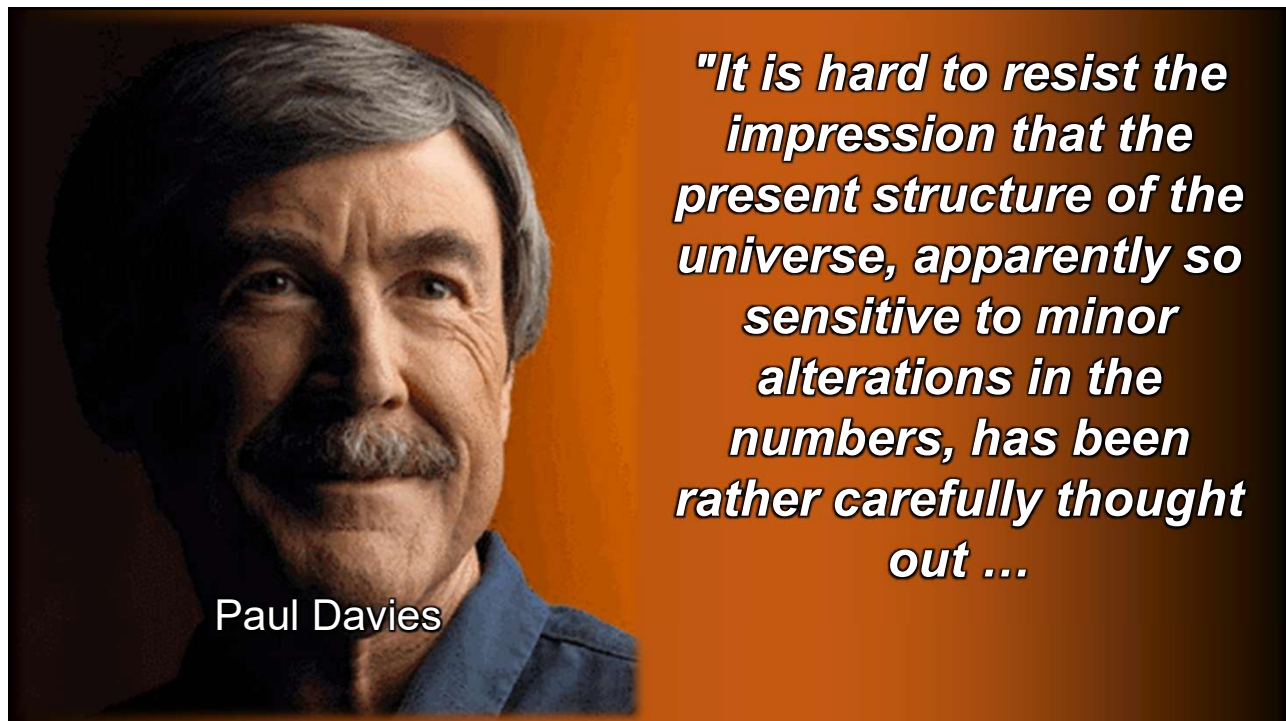


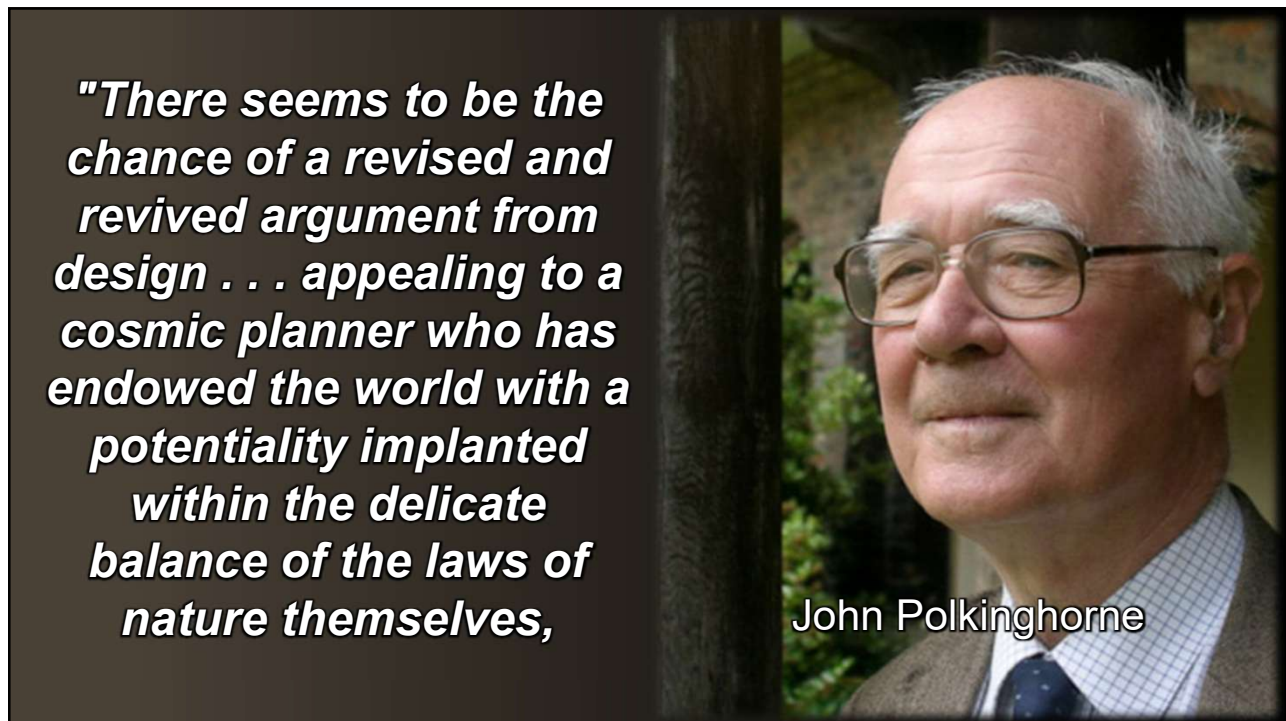
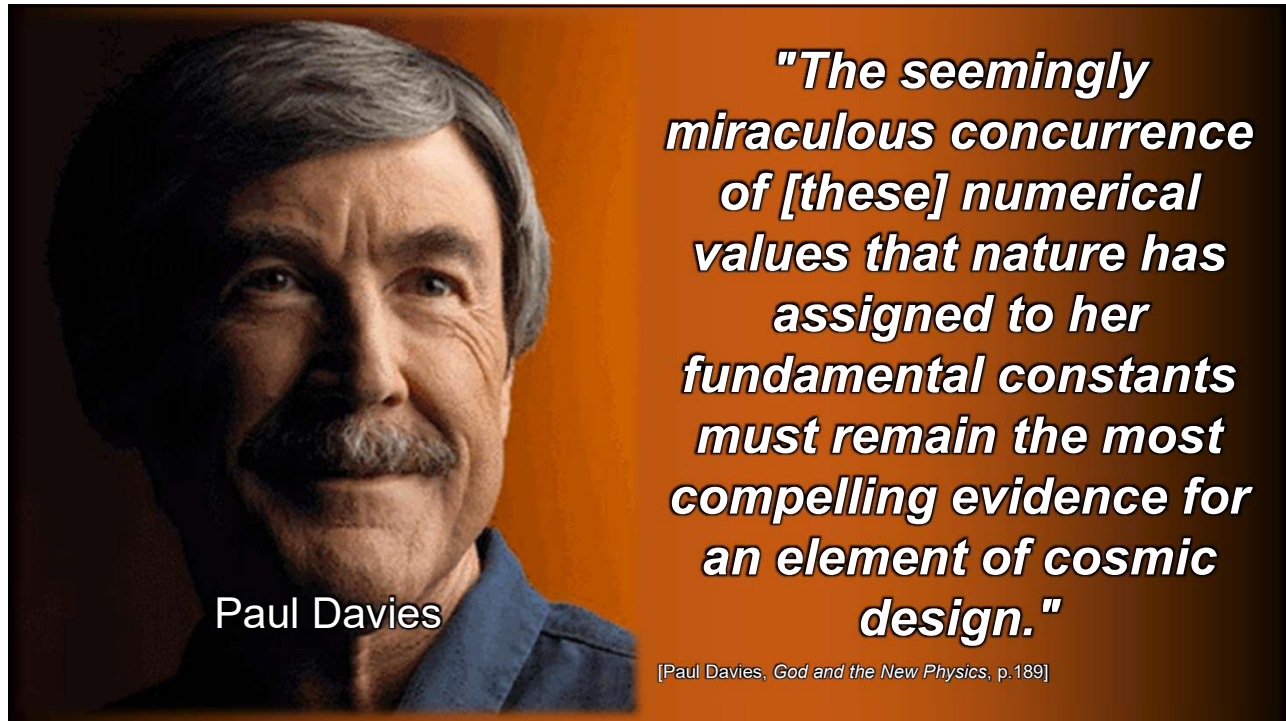
**But just how big  
of a number is  
1 in  $10^{138}$ ?**



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

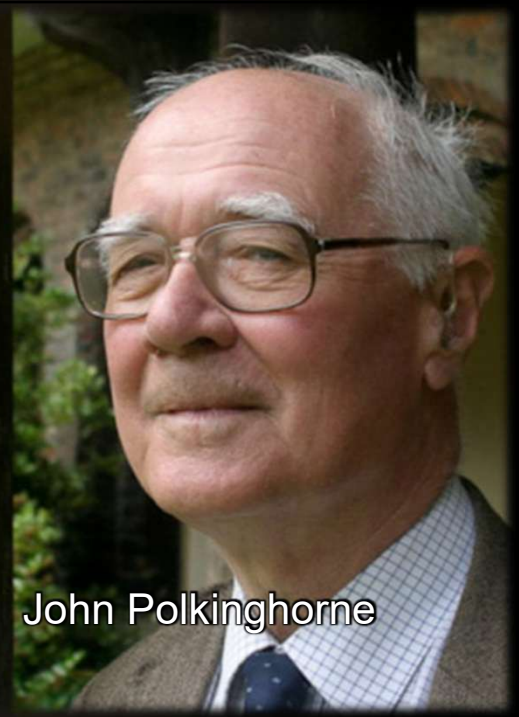
**The number of atoms in  
the known universe =  
 $10^{79}$ .**





***"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."***

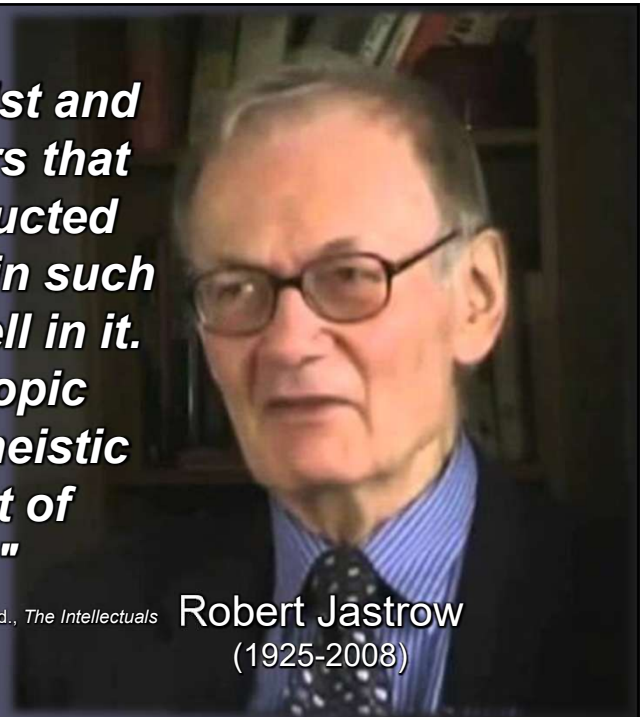
[John Polkinghorne, *Serious Talk: Science and Religion in Dialogue* (Valley Forge: Trinity Press International, 1995), 69-70]



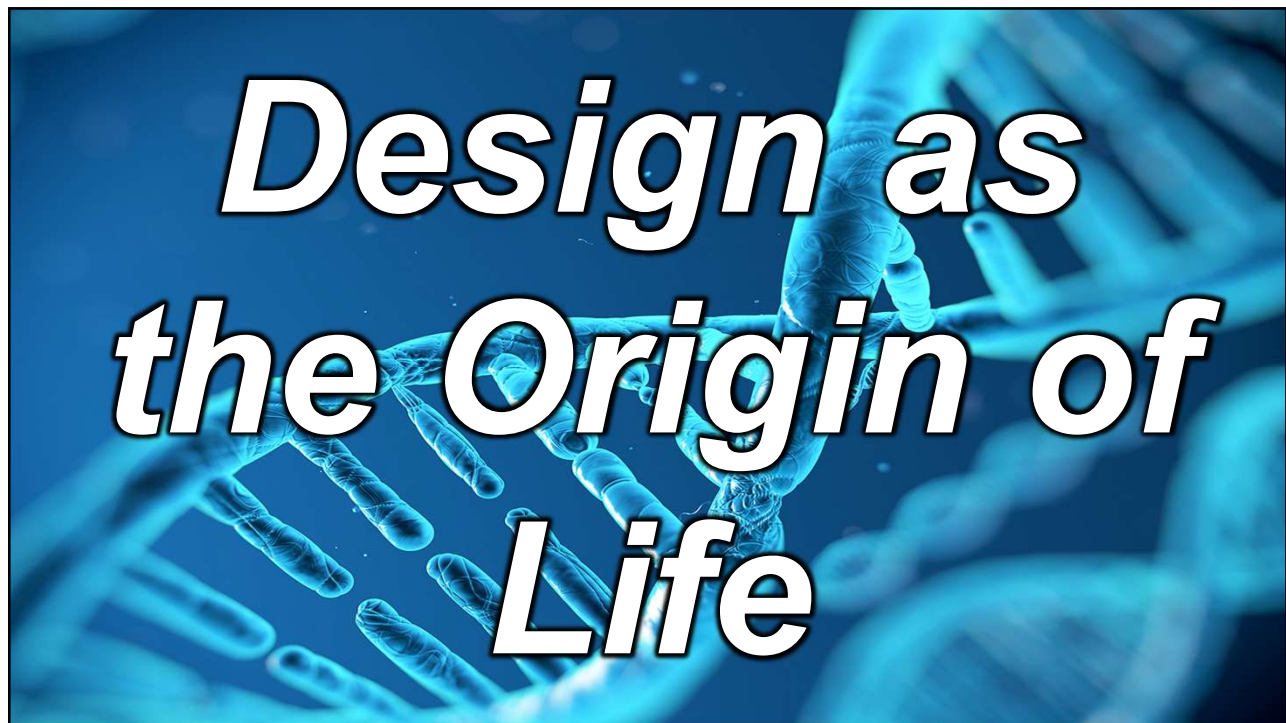
John Polkinghorne

***"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)

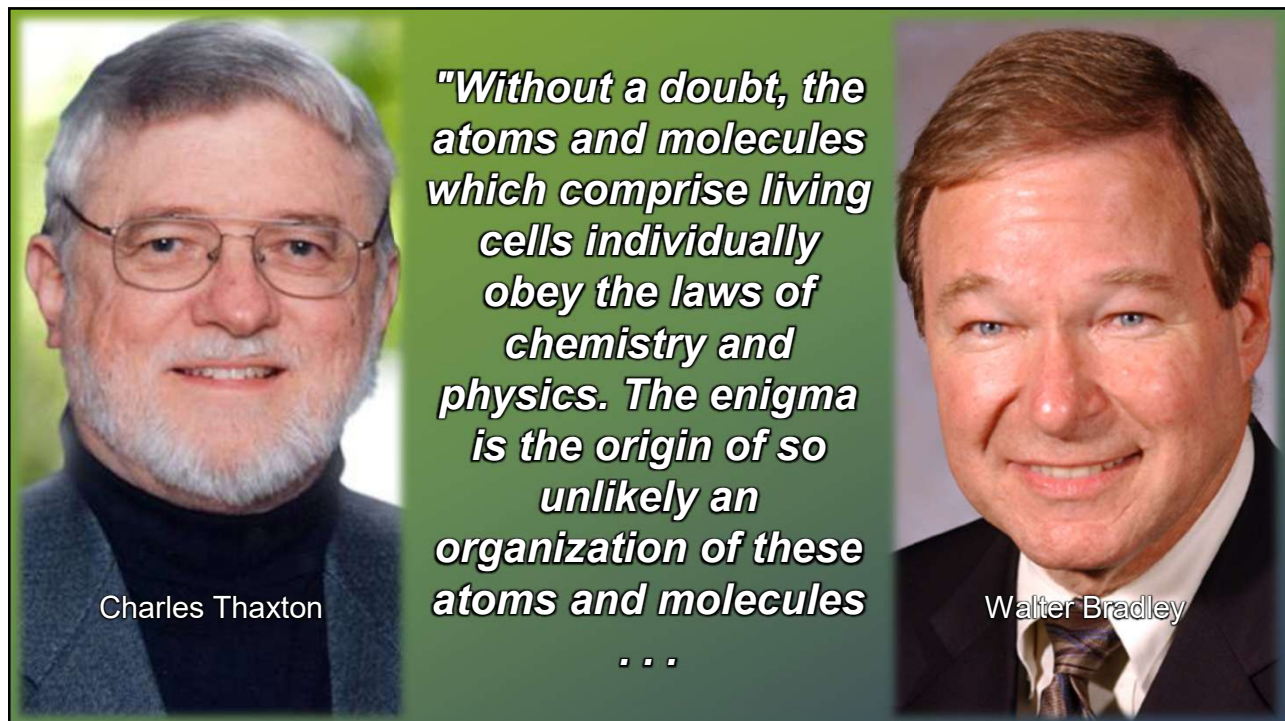
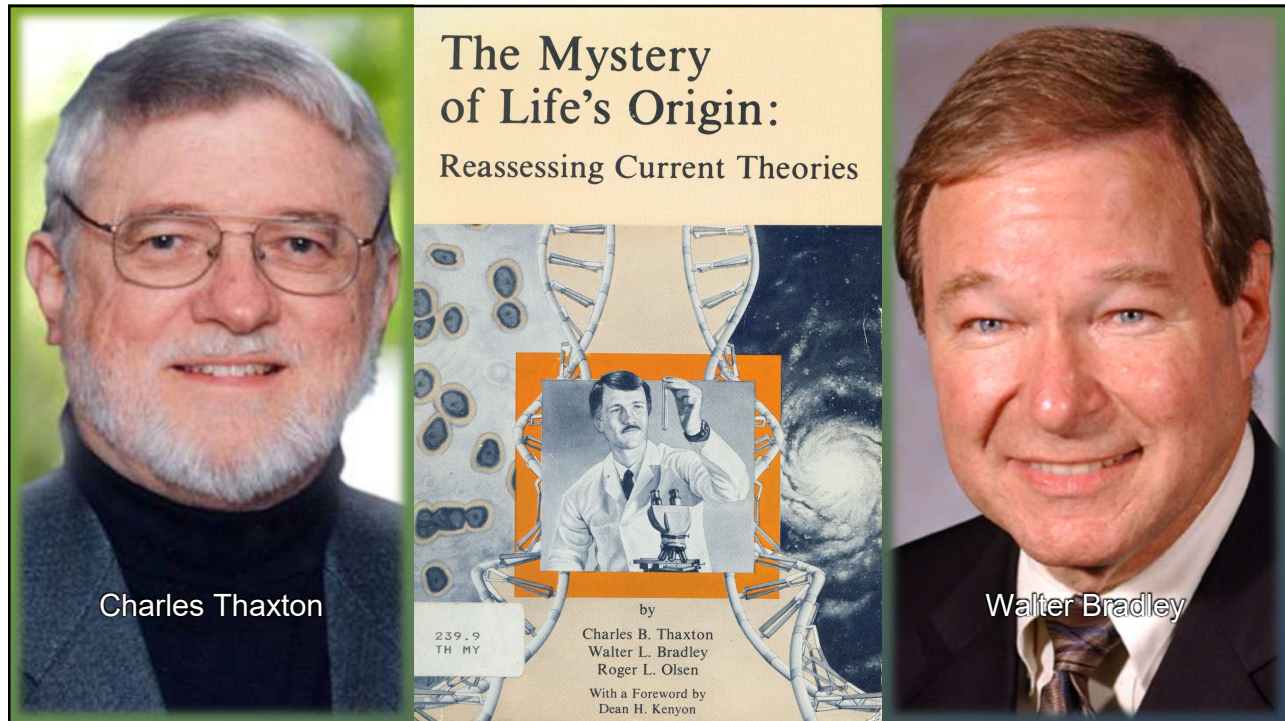



## ∞ Definition ∞

***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.***







***"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]

Charles Thaxton




Walter Bradley




***"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)



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 40,000<sup>th</sup> power of being the correct explanation ..."***




Sir Frederick Hoyle  
(1915-2001)

Chandra Wickramasinghe



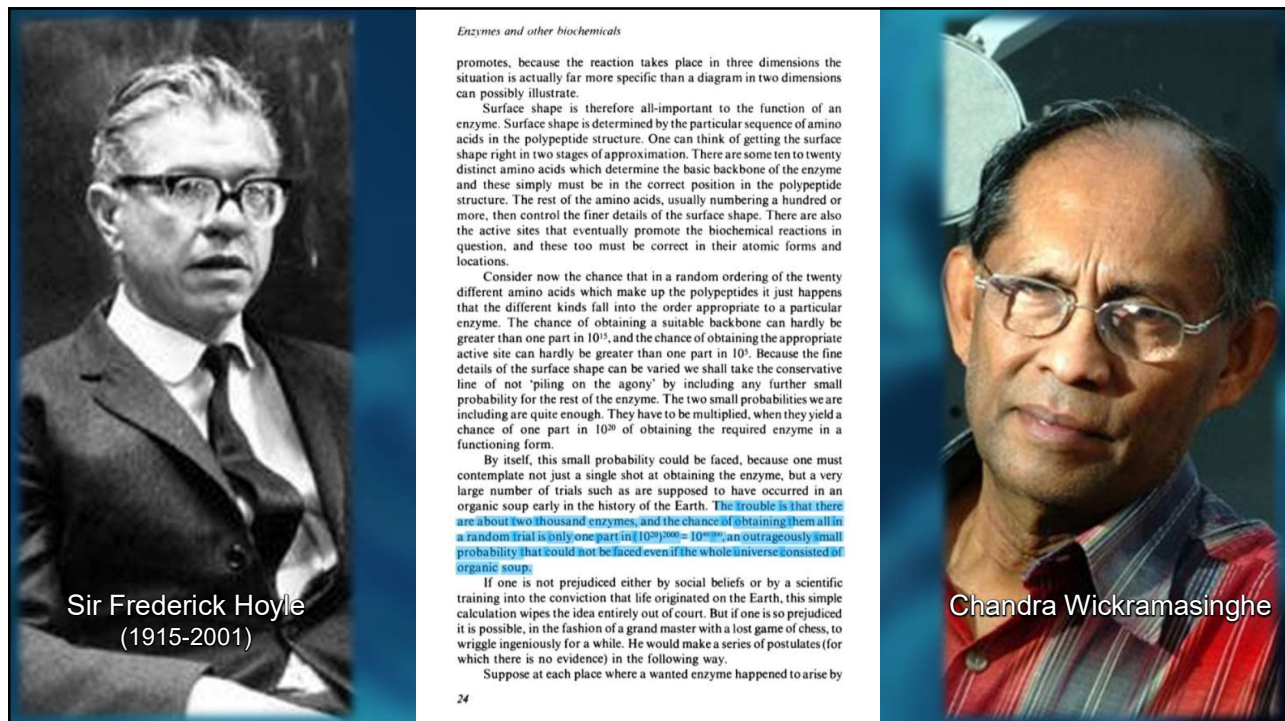
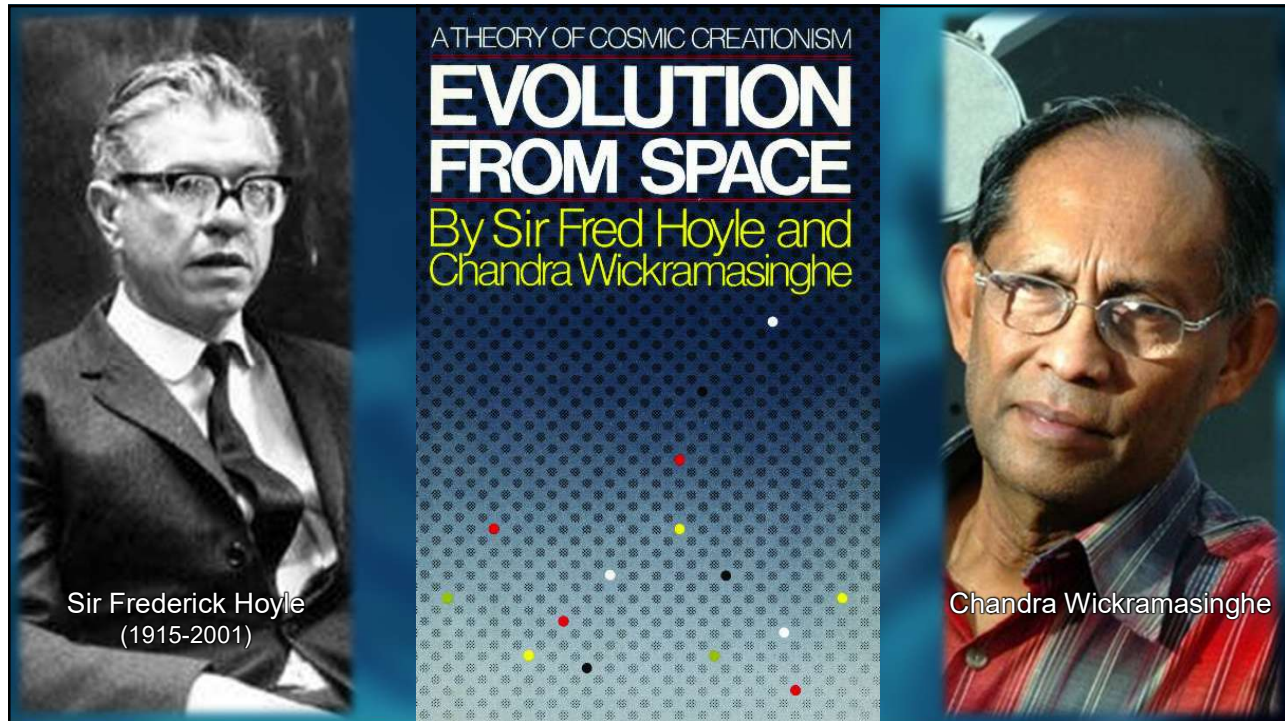
***"Indeed, such a theory is so obvious that one wonders why it is not widely accepted as being self-evident. The reasons are psychological rather than scientific."***



Sir Frederick Hoyle  
(1915-2001)

Chandra Wickramasinghe

[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]





Sir Frederick Hoyle  
(1915-2001)

*Enzymes and other biochemicals*

*"The two small probabilities we are including are quite enough. They have to be multiplied, when they yield a chance of one part in  $10^{20}$  of obtaining the required enzyme in a functioning form. By itself, this small probability could be faced, because one must contemplate not just a single shot at obtaining the enzyme, but a very large number of trials such as are supposed to have occurred in an organic soup early in the history of the Earth."*

24



Chandra Wickramasinghe



Sir Frederick Hoyle  
(1915-2001)

*Enzymes and other biochemicals*

*"The trouble is that there are about two thousand enzymes, and the chance of obtaining them all in a random trial is only one part in  $(10^{20})^{2000} = 10^{40,000}$ , an outrageously small probability that could not be faced even if the whole universe consisted of organic soup."*

[Sir Fred Hoyle and Chandra Wickramasinghe, *Evolution from Space: A Theory of Cosmic Creationism* (New York: Simon & Schuster), 24]

24



Chandra Wickramasinghe

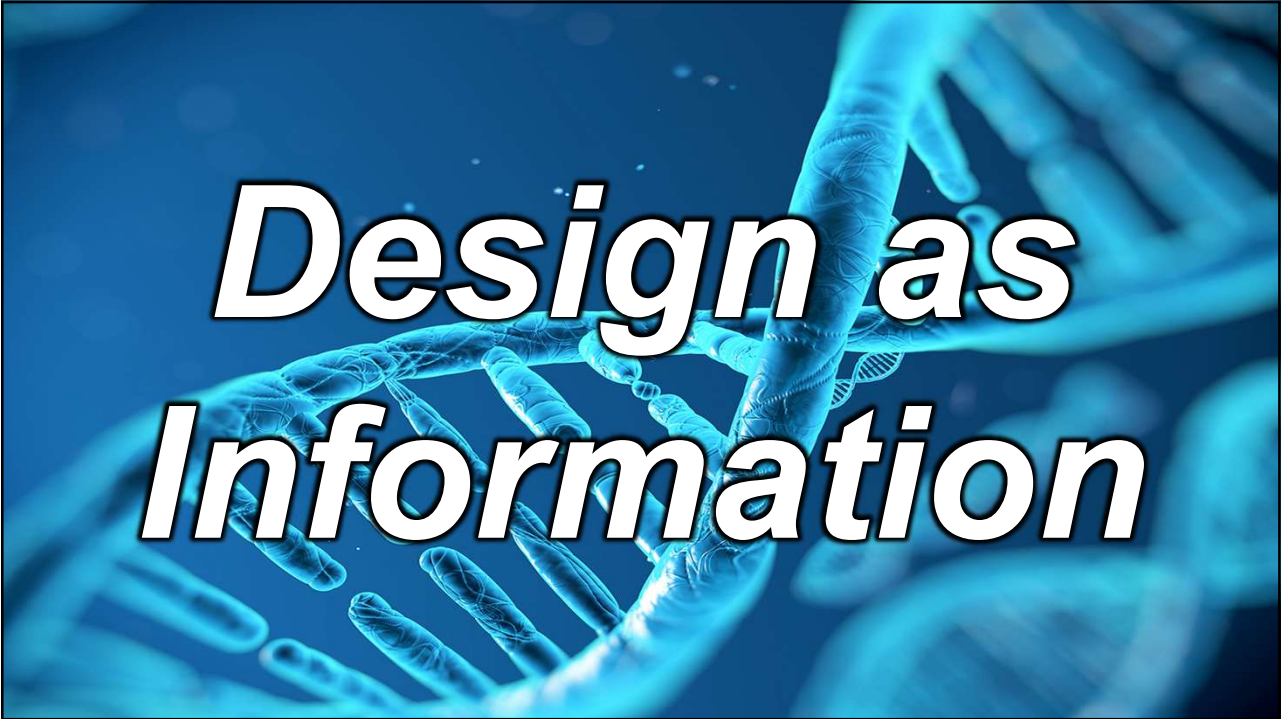


*"If the universe  
wasn't fine tuned to  
be able to support  
life, we wouldn't be  
here to observe it!"*

## ∞ The Response ∞



*The Firing Squad Example*



# ***Design as Information***

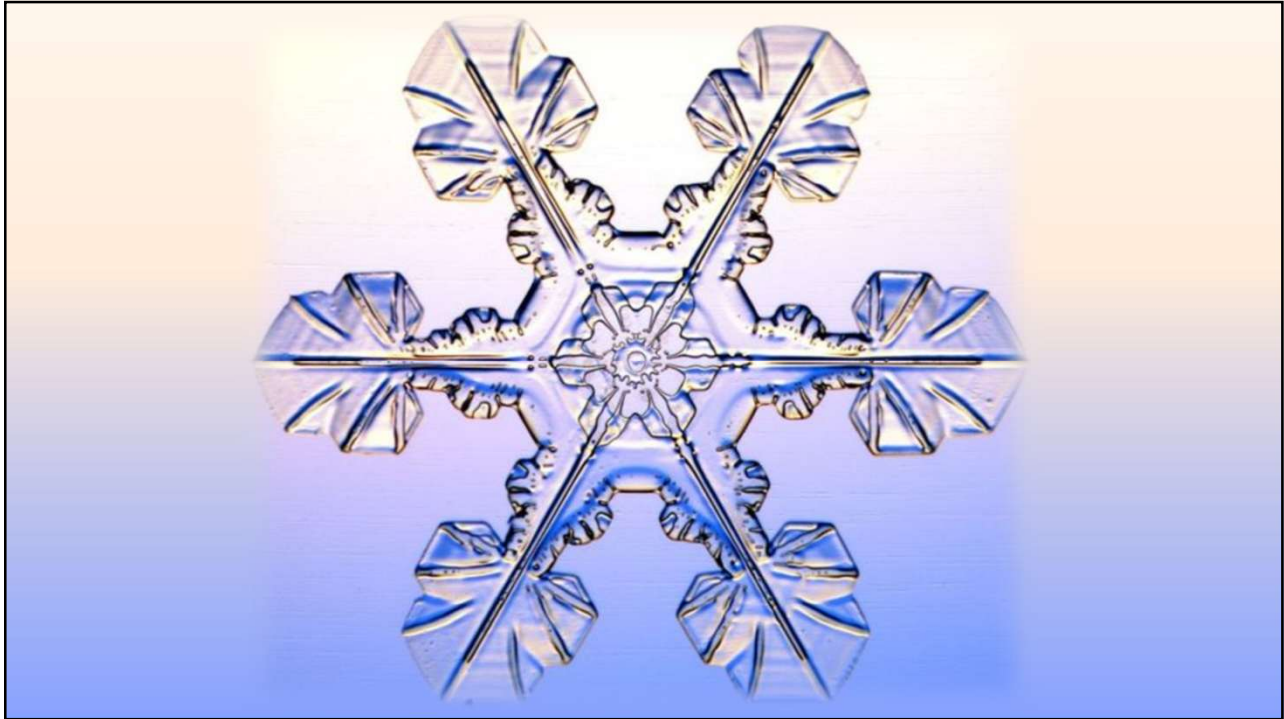
## ***∞ Definition ∞***

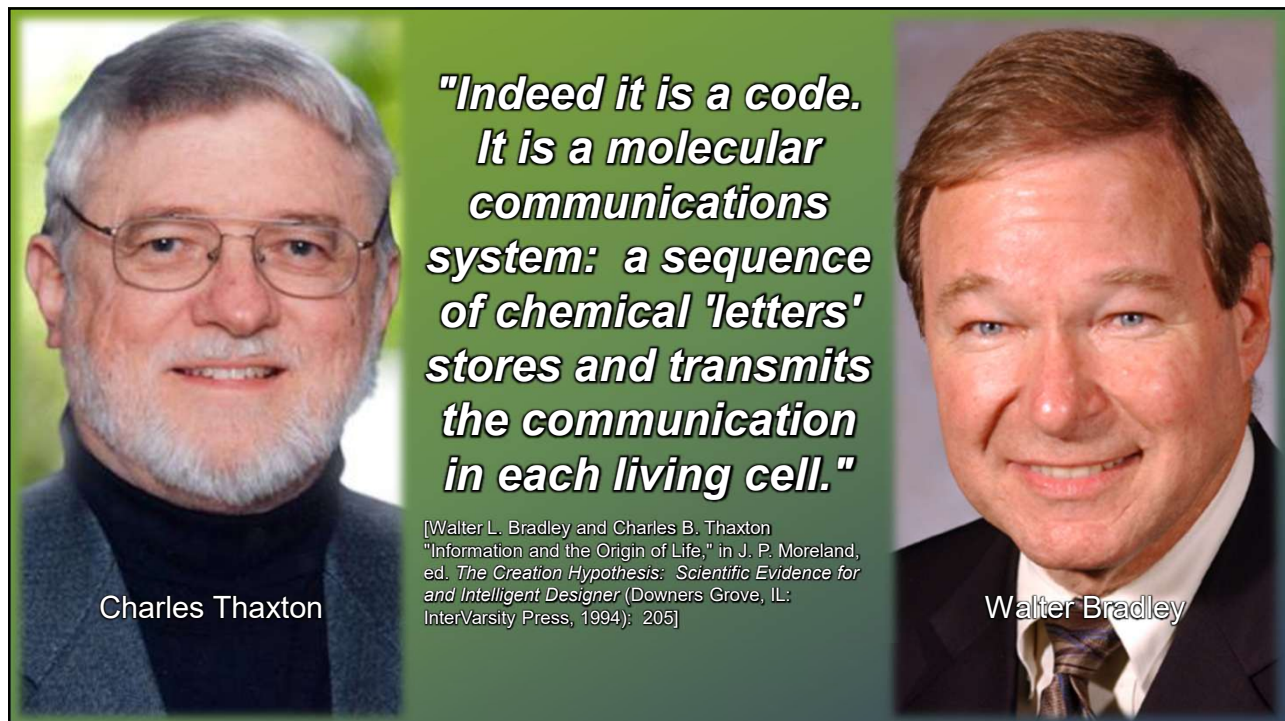
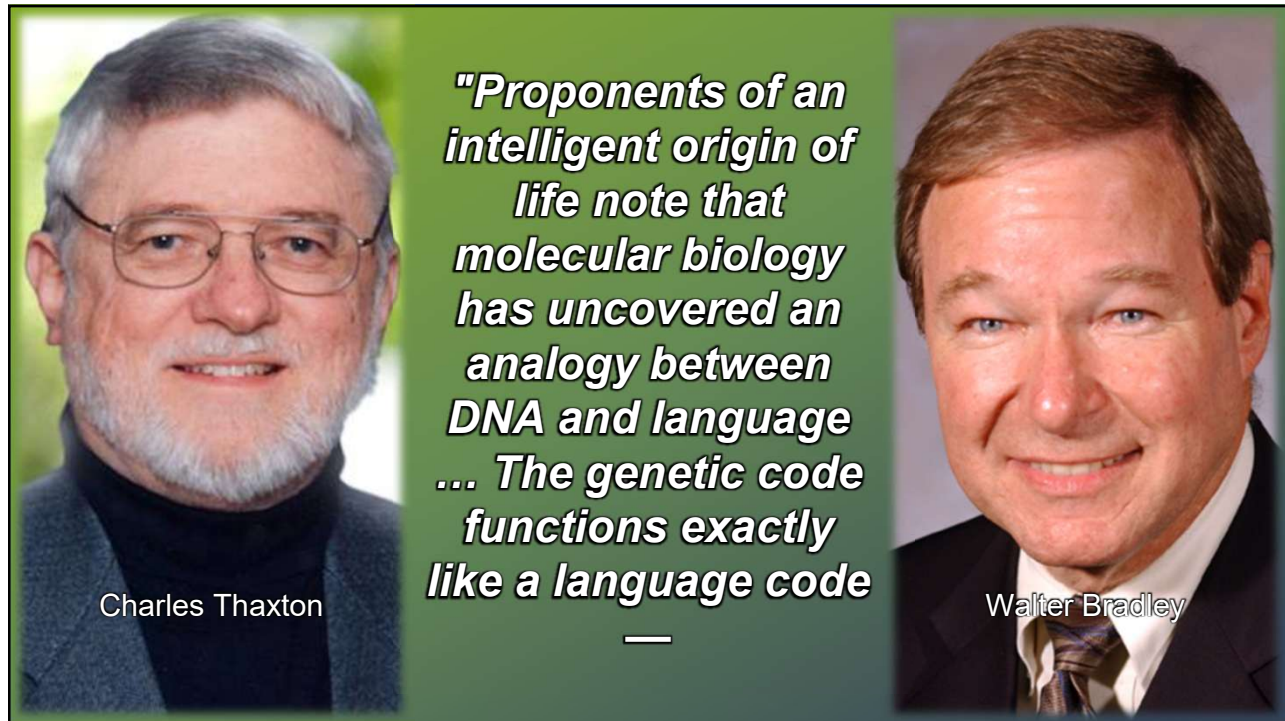
***Information, known also as  
specified complexity, is  
physically distinguishable from  
simple complexity and  
simple order.***

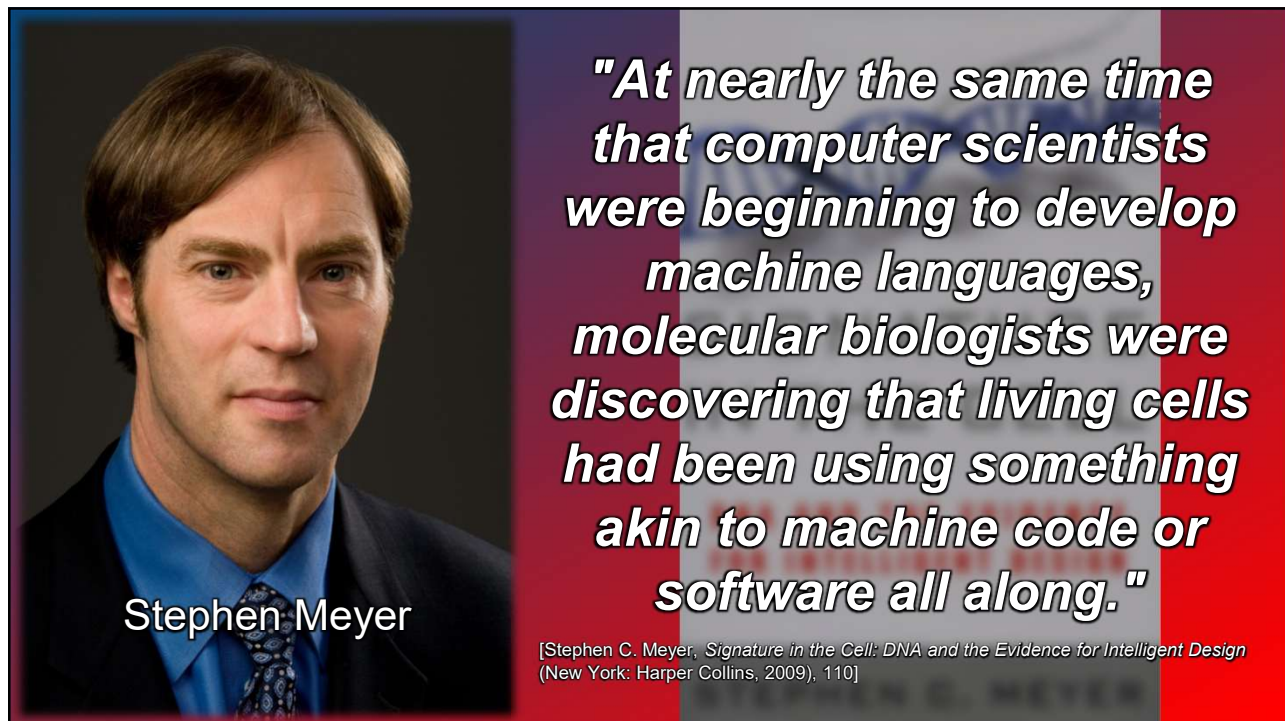
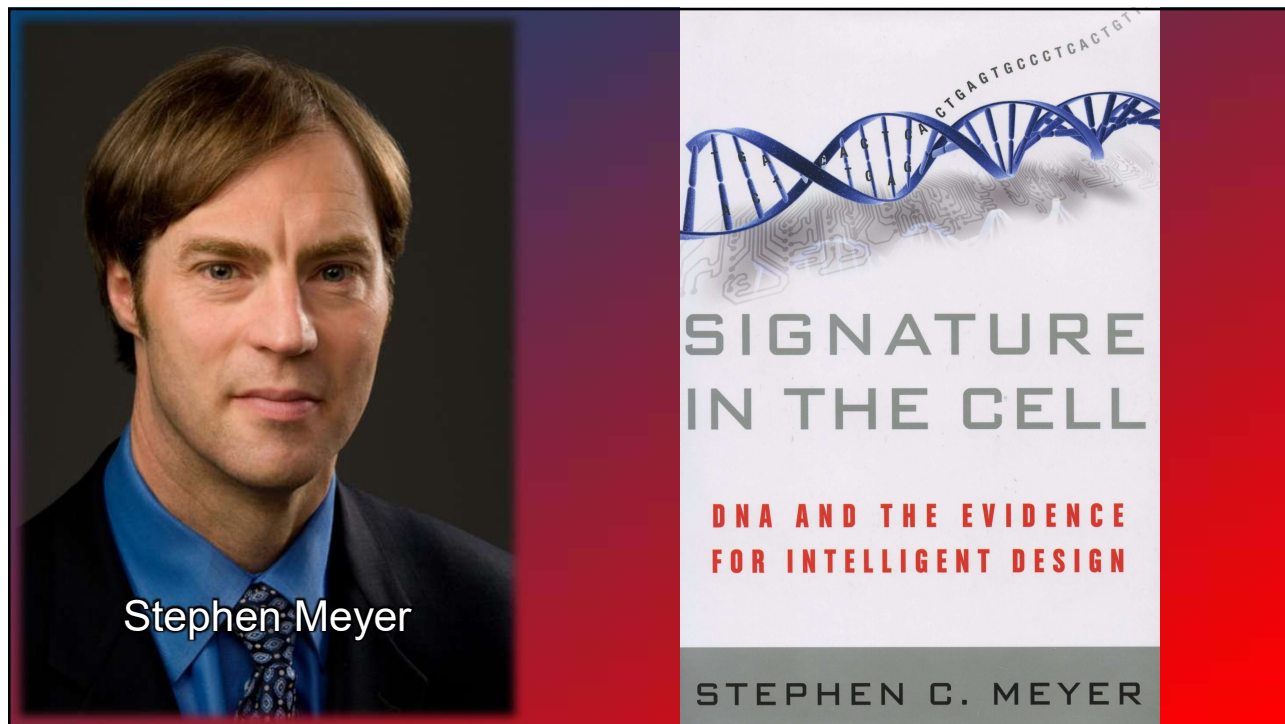
# ∞ Significance ∞

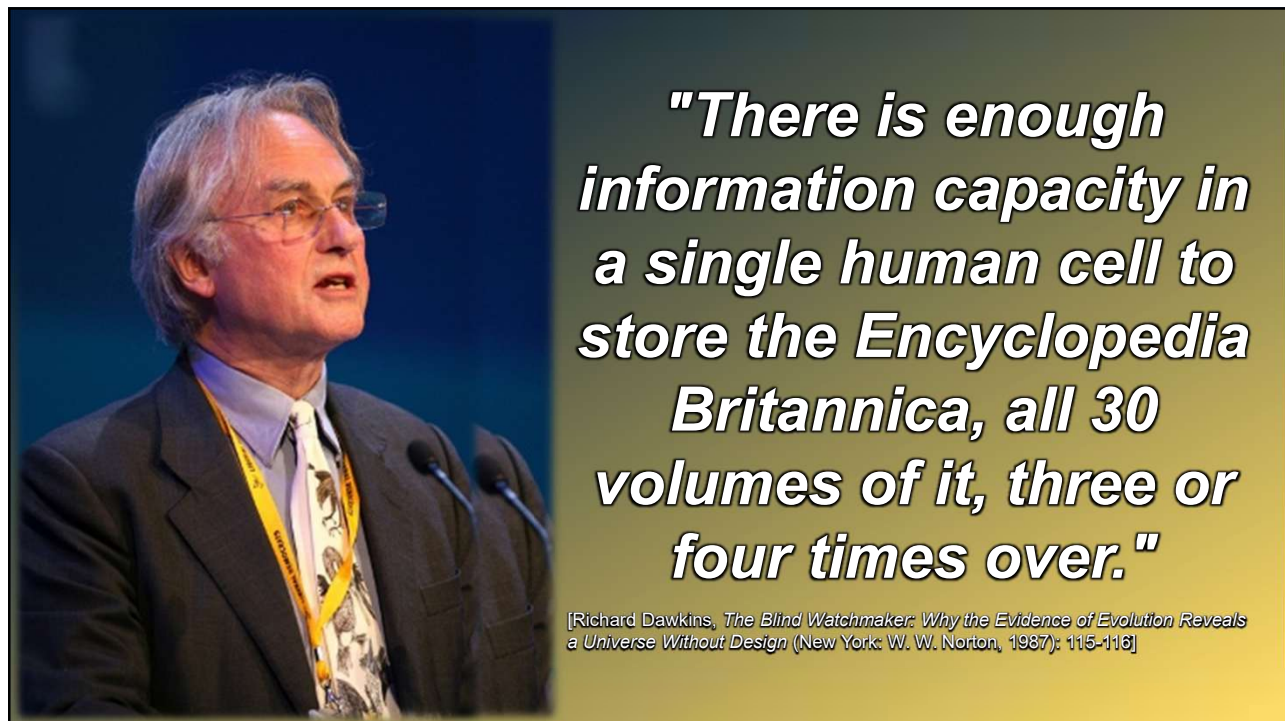
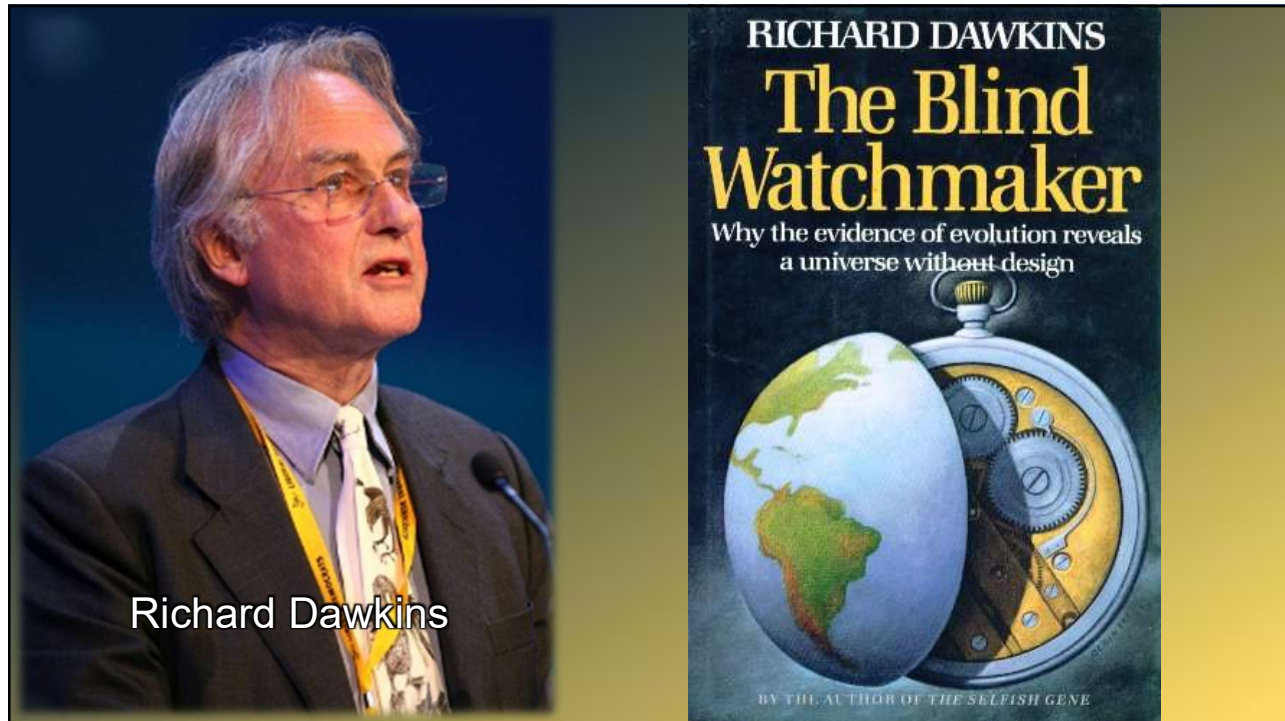
*The presence of information  
always points to an  
intelligent cause.*

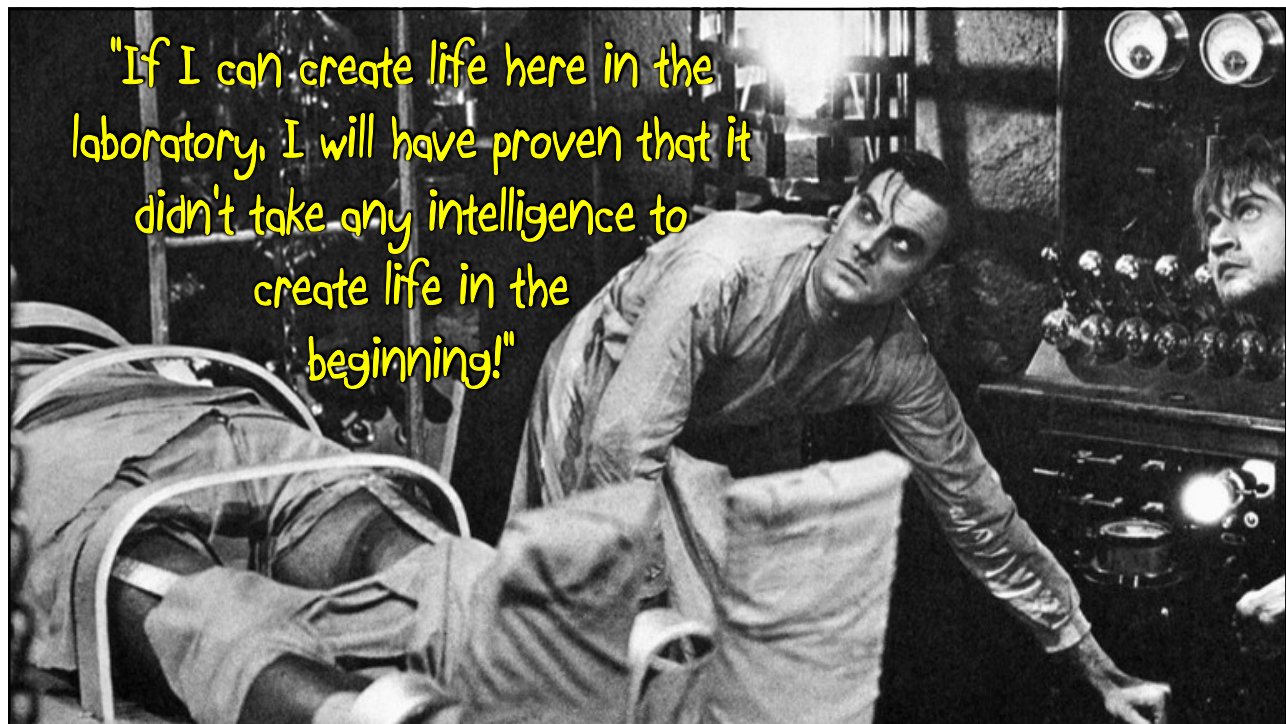










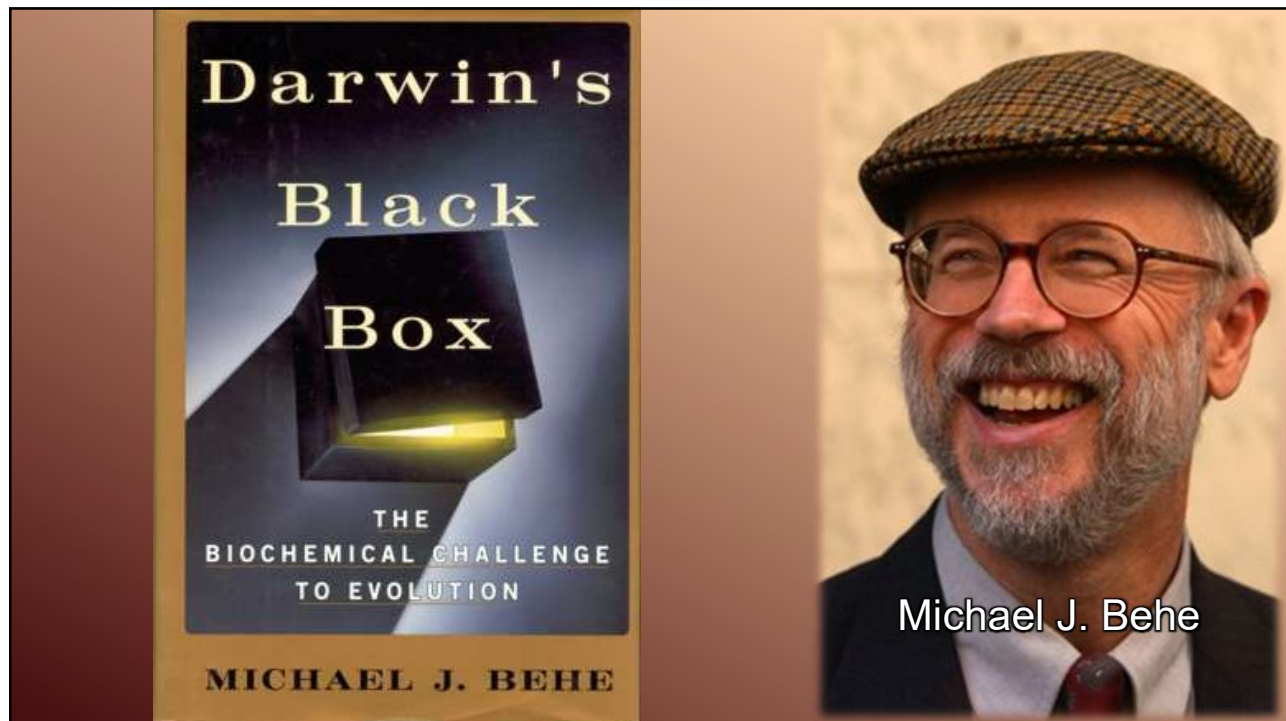
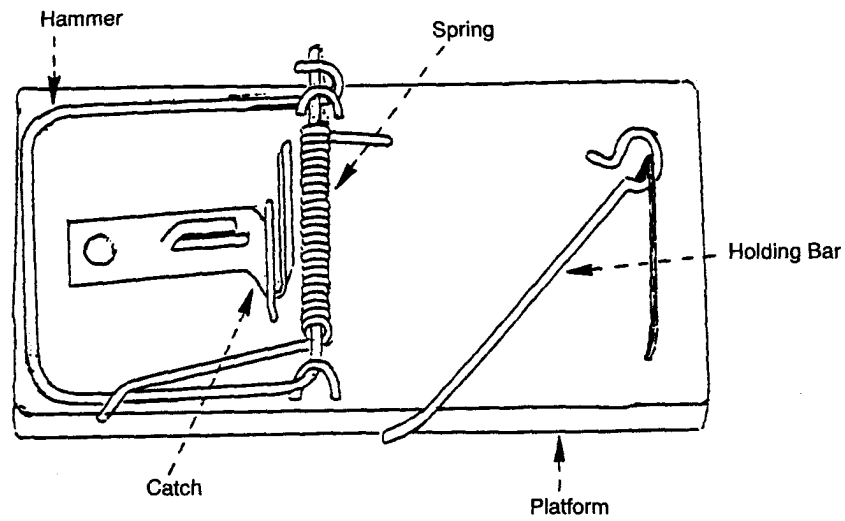


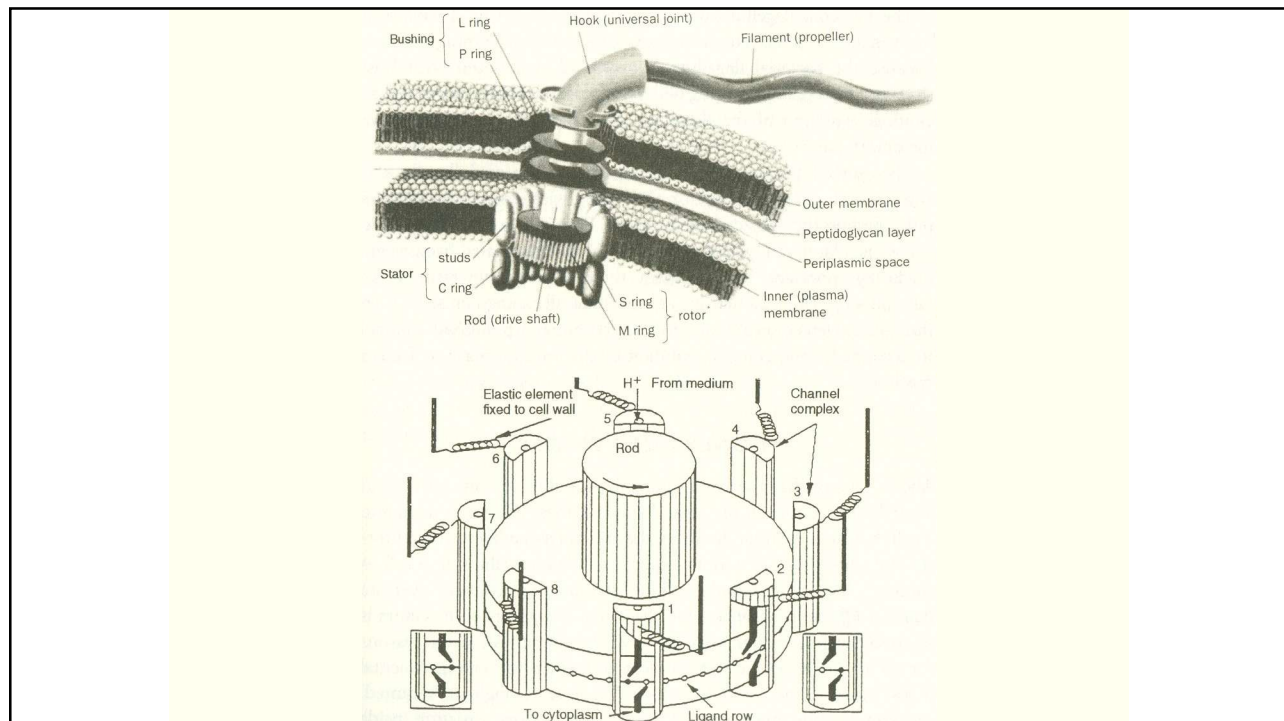
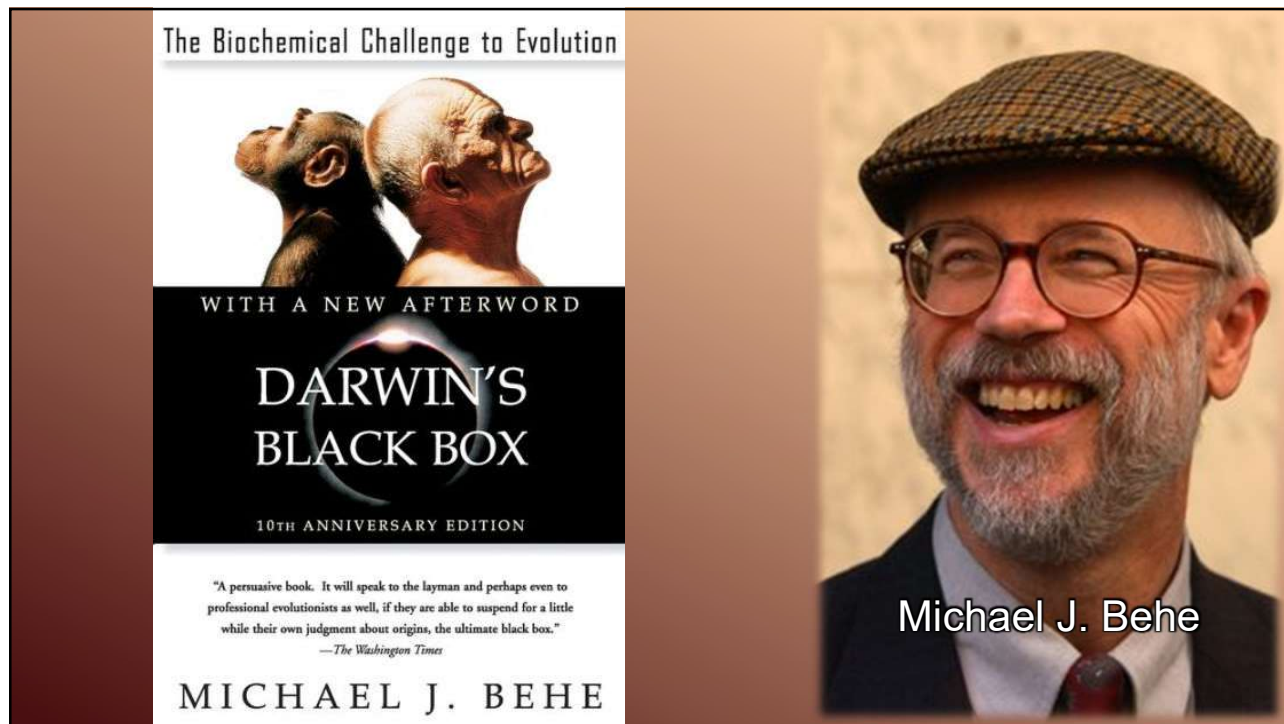
## ∞ Definition ∞

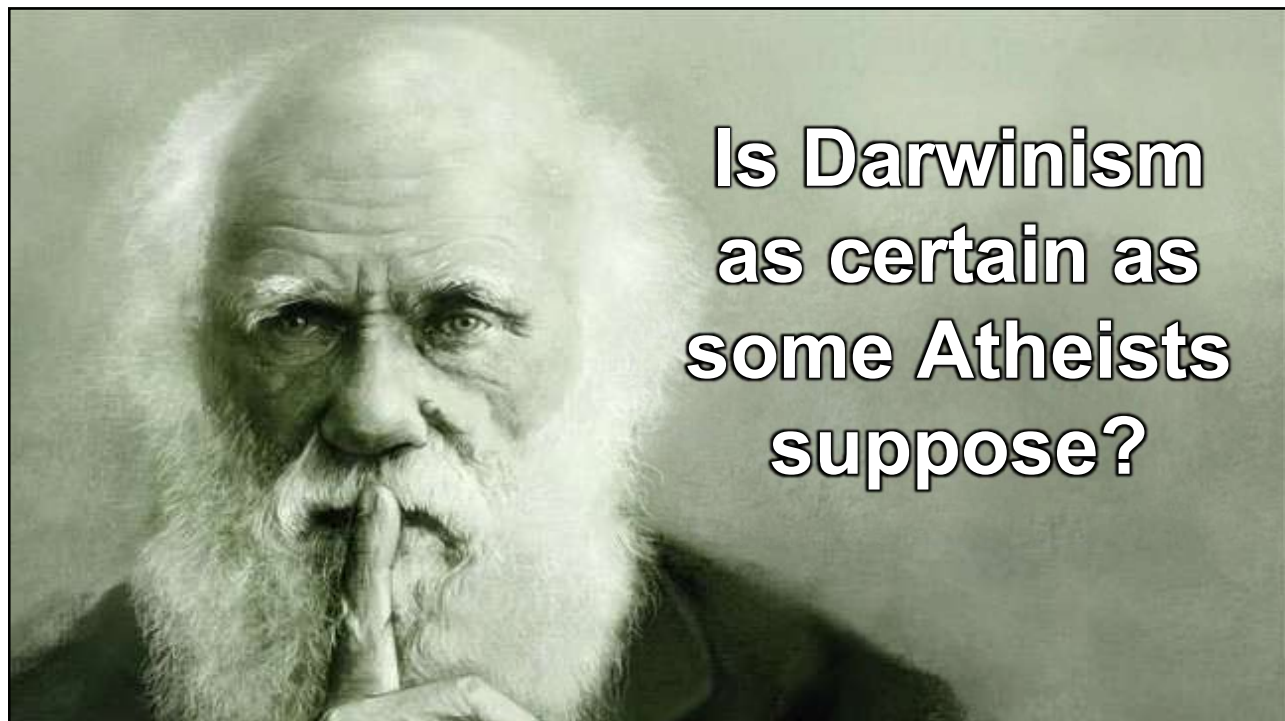
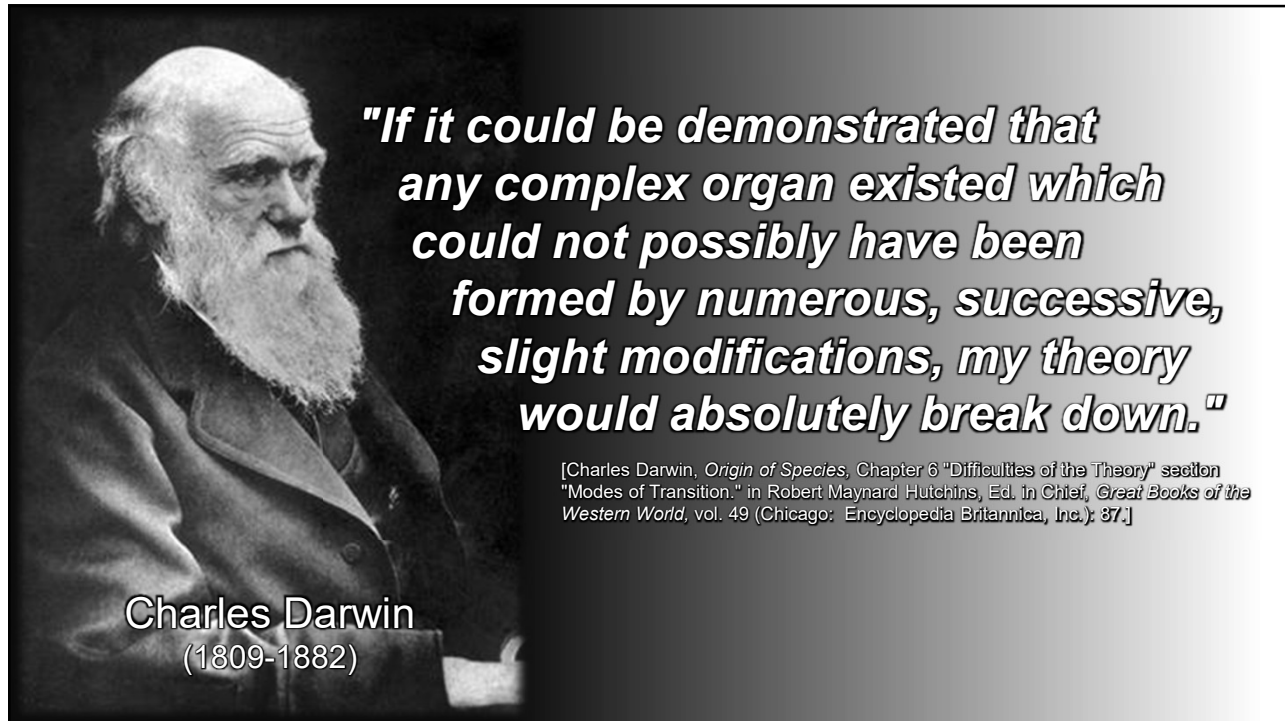
*Some biological systems consist of several interlocking parts that must be in place before the system can function at all.*

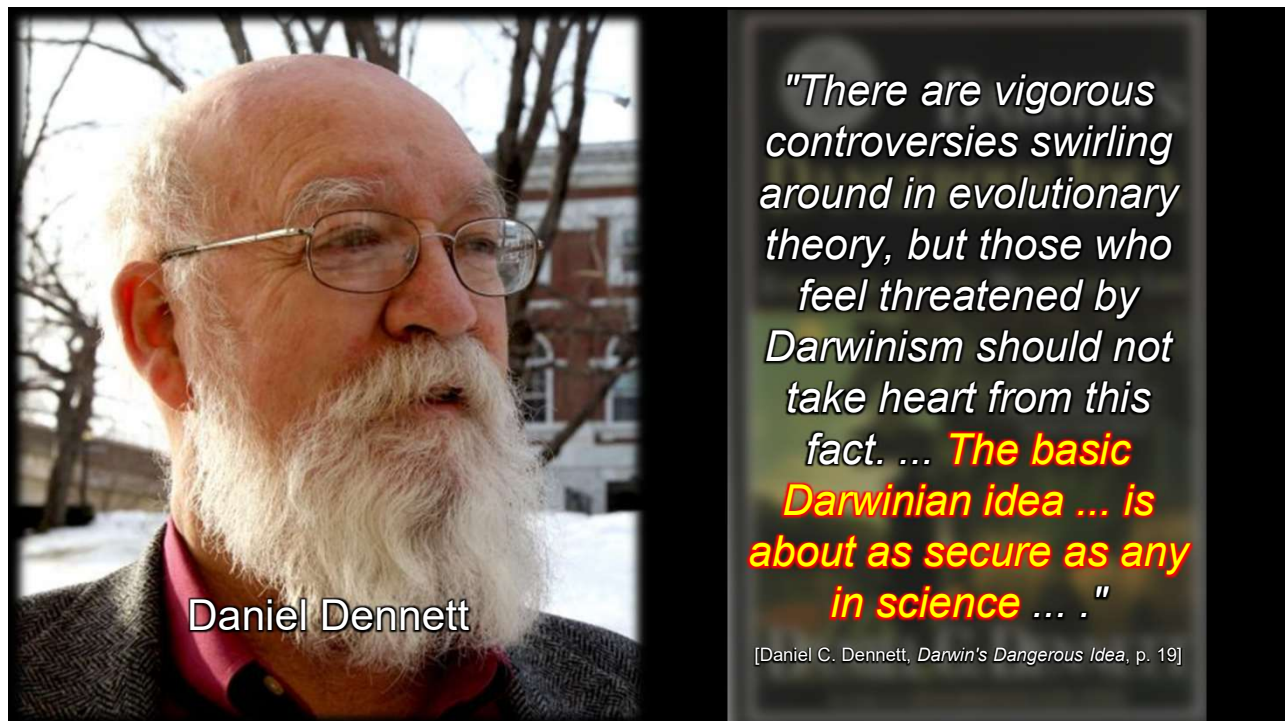
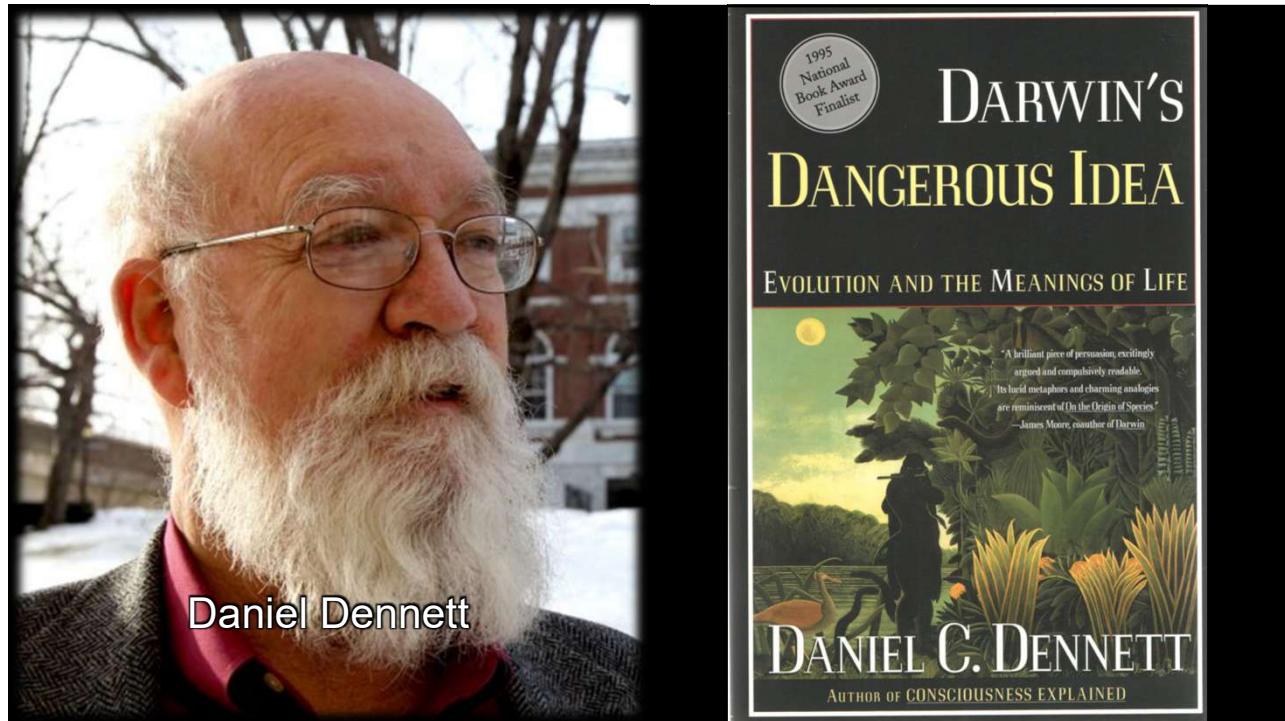
## ∞ Significance ∞

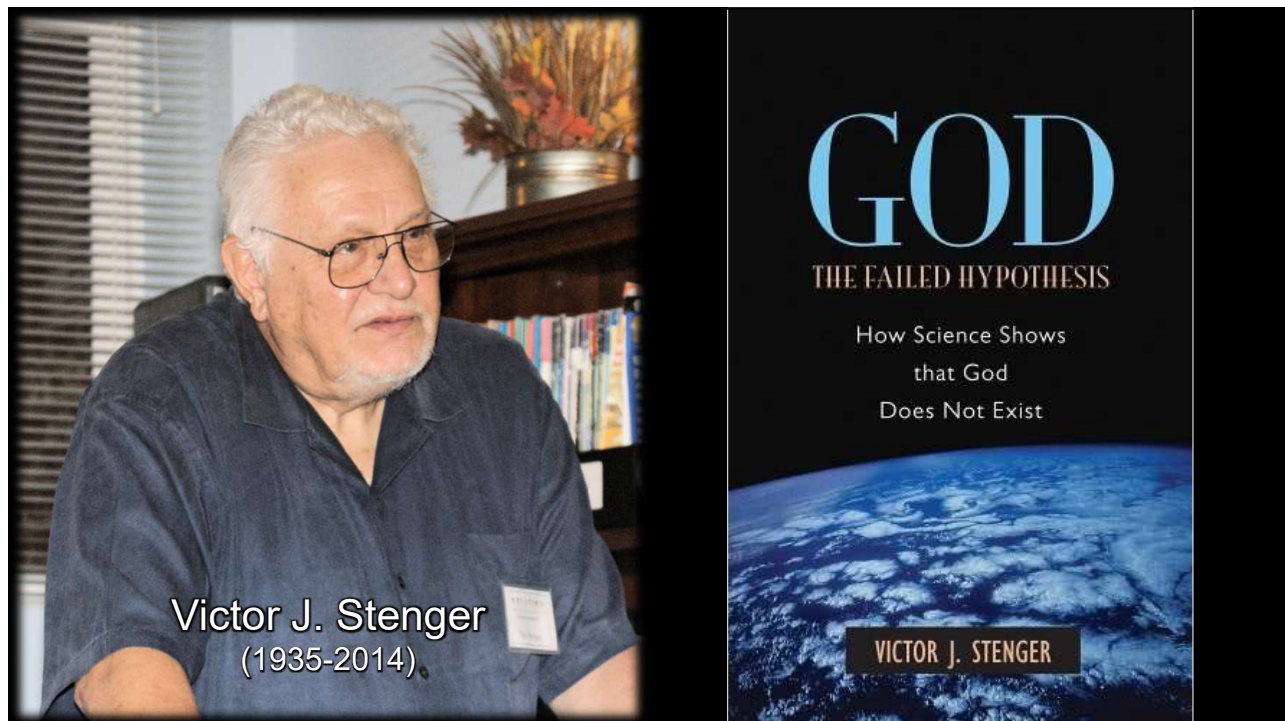
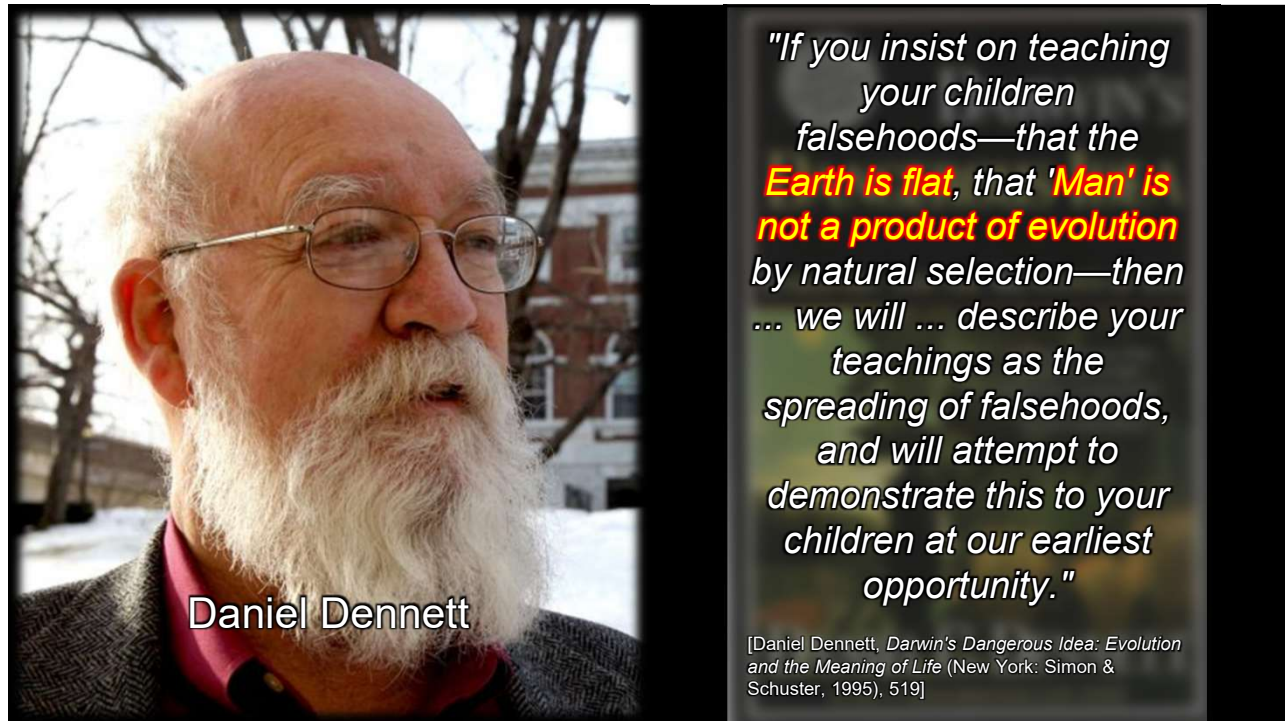
*Since such complexity cannot be accounted for by gradual accumulations of random mutations, the systems must have arisen all at once by an intelligent cause.*

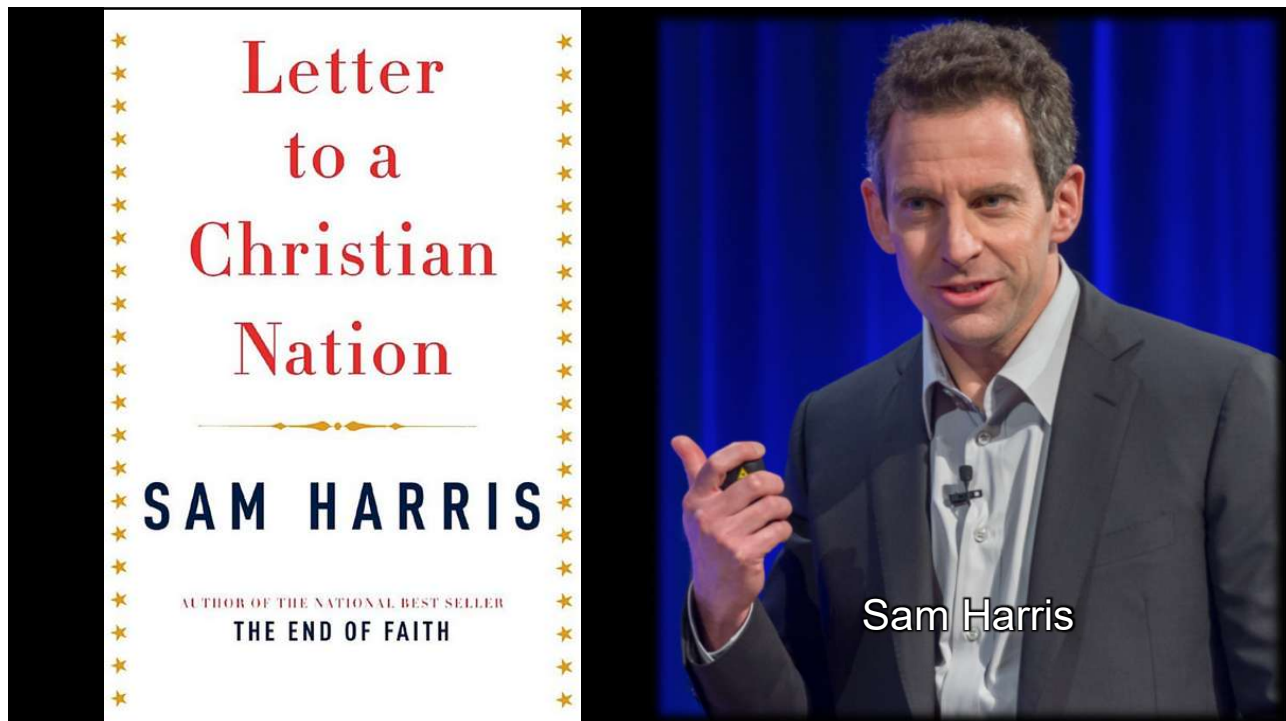
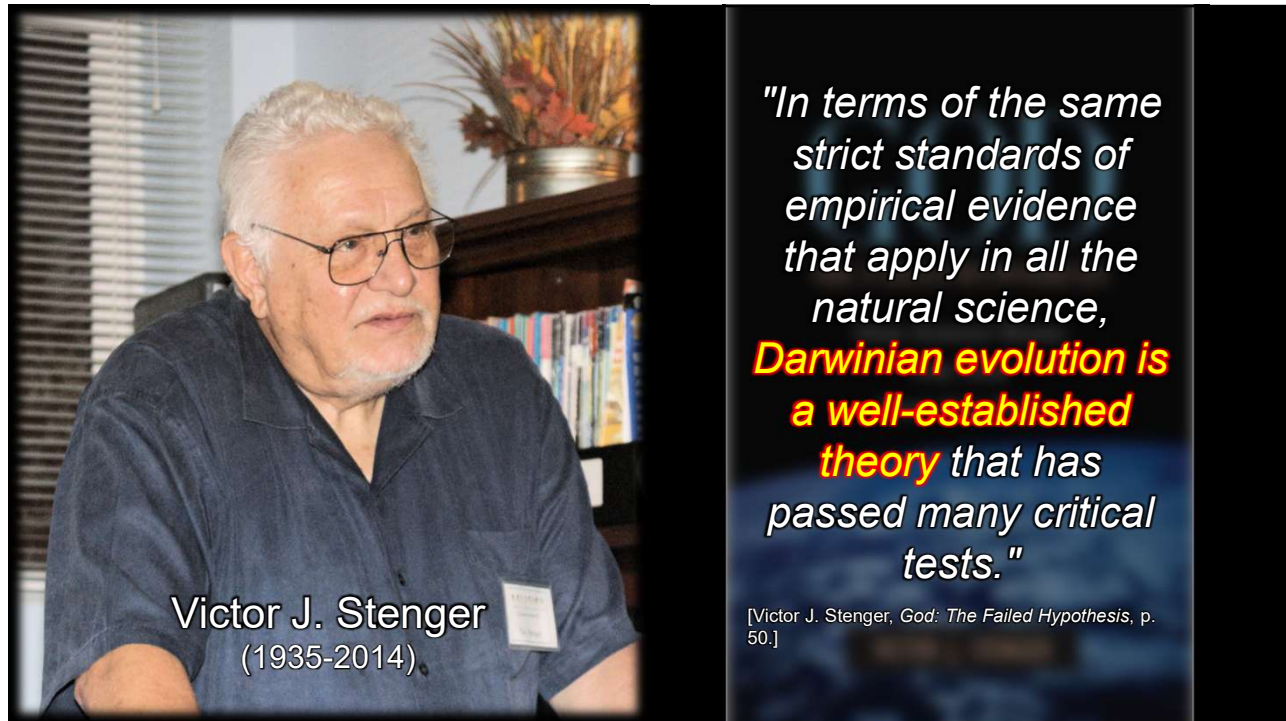
**FIGURE 2-2****A HOUSEHOLD MOUSETRAP.**





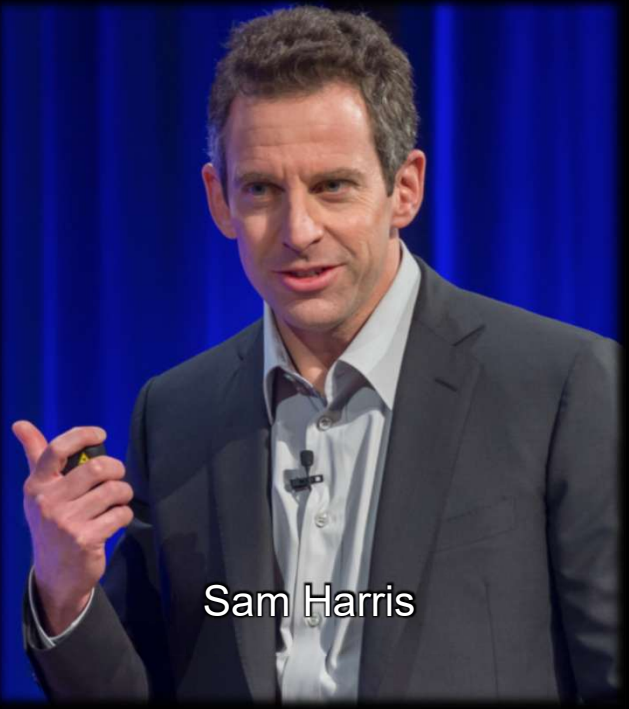






*"Here is what we know. ... **There is no question** that human beings evolved from nonhuman ancestors ... There is no reason whatsoever to believe that individual species were created in their present forms."*

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



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."

Did you know that a growing number of scientists doubt the Darwinian ...

**Growing Number of Scientists are Skeptical of Darwinian The**

158 / 1197

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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, Research Ewen 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* Lyle H. Jensen* Maciej Giertych Lev Belousov Eugene Buff	Emeritus, Evan Pugh Prof. of Chemistry, Pennsylvania State University Professor Emeritus, Dept. of Biological Structure & Dept. of Biochemistry Full Professor, Institute of Dendrology Prof. of Embryology, Honorary Prof., Moscow State University Ph.D. Genetics	Member of the National Academy of Sciences University of Washington, Fellow AAAS Polish Academy of Sciences Member, Russian Academy of Natural Sciences Institute of Developmental Biology, Russian Academy of Sciences Inst. of Biophysics, Academy of Sci., Czech Republic Fellow, Nigerian Academy of Science Hungarian Academy of Sciences Hindustan Academy of Science, Bangalore University (India)
Emil Palecek K. Mosto Onuoha Ferenc Jeszenszky M.M. Ninan	Prof. of Molecular Biology, Masaryk University; Leading Scientist Shell Professor of Geology & Deputy Vice-Chancellor, Univ. of Nigeria Former Head of the Center of Research Groups Former President	Russian Academy of Sciences (Russia) Institute of Bioorganic Chemistry and Petrochemistry Ukrainian National Academy of Sciences (Ukraine)
Denis Fesenko Sergey I. Vdovenko	Junior Research Fellow, Engelhardt Institute of Molecular Biology Senior Research Assistant, Department of Fine Organic Synthesis	University of Georgia Harvard University The College of Judea and Samaria (Israel) University of Bristol (UK)
Henry Schaefer Paul Ashby Israel Hanukoglu Alan Linton <b>Dean Kenyon</b>	Director, Center for Computational Quantum Chemistry Ph.D. Chemistry Professor of Biochemistry and Molecular Biology Chairman Emeritus Professor of Bacteriology <b>Emeritus Professor of Biology</b>	<b>San Francisco State University</b>
David W. Forslund Robert W. Bass John Hey Daniel W. Heinze Donald Ewert Russell Carlson David Chapman* Giuseppe Sermoni Stanley Salthe Marcos H. Ebedin	Ph.D. Astrophysics, Princeton University Ph.D. Mathematics (also: Rhodes Scholar; Post-Doc at Princeton) Associate Clinical Prof. (also: Fellow, American Geriatrics Society) Ph.D. Geophysics (also: Post-Doc Fellow, Carnegie Inst. of Washington) Ph.D. Microbiology Emeritus Professor of Biochemistry & Molecular Biology Senior Scientist Professor of Genetics, Ret. (Editor, Rivista di Biologia/Biology Forum) Emeritus Professor Biological Sciences Professor, The State University of Campinas (Brazil)	Fellow of American Physical Society Johns Hopkins University Dept. of Family Medicine, Univ. of Mississippi Texas A&M University University of Georgia University of Georgia Woods Hole Oceanographic Institution University of Perugia (Italy) Brooklyn College of the City University of New York Member, Brazilian Academy of Science

Joseph Atkinson	Ph.D. Organic Chemistry	Massachusetts Institute of Technology
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
John Baumgardner	Ph.D. Geophysics & Space Physics	University of California, Los Angeles
Glenn R. Johnson	Adjunct Professor of Medicine	University of North Dakota School of Medicine
George Bennett	Associate Professor of Chemistry	Millikin University
Robert L. Waters	Lecturer, College of Computing	Georgia Institute of Technology
David Berinski	Ph.D. Philosophy	Princeton University
James Robert Dickens	Ph.D. Mechanical Engineering	Texas A&M University
Philip 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 Bordon	Ph.D. Electrical Engineering	Georgia Institute of Technology
David Richard Carta	Ph.D. Bio-Engineering	University of California, San Diego
Lydia G. Thebeau	Ph.D. Cell & Molecular Biology	Saint Louis University
David Bossard	Ph.D. Mathematics	Dartmouth College
Robert W. Kelley	Ph.D. Entomology	Clemson University
David Bourell	Professor Mechanical Engineering	University of Texas, Austin
Carlos M. Murillo	Professor of Medicine (Neurosurgery)	Autonomous University of Guadalajara (Mexico)
Walter Bradley	Distinguished Professor of Engineering	Baylor University
Sami Palonen	Ph.D. Analytical Chemistry	University of Helsinki (Finland)
John Brejda	Ph.D. Agronomy	University of Nebraska, Lincoln
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 Kastello	Ph.D. Biology	University of Wisconsin-Milwaukee
Karen Rispin	Assistant Professor of Biology	LeTourneau University
Frederick Brooks	Kenan Professor of Computer Science	University of North Carolina at Chapel Hill
Omer Faruk Noyan	Assistant Professor (Ph.D. Paleontology)	Celal Bayar University (Turkey)
Neil Broom	Associate Professor, Chemical & Materials Engineering	University of Auckland (New Zealand)
Malcolm D. Chisholm	Ph.D. Insect Ecology (M.A. Zoology, Oxford University)	University of Bristol (UK)
John Brown	Research Meteorologist	National Oceanic and Atmospheric Administration
Joseph A. Kunicki	Associate Professor of Mathematics	The University of Findlay
John Brumbaugh	Emeritus Professor of Biological Sciences	University of Nebraska, Lincoln
Thomas M. Stackhouse	Ph.D. Biochemistry	University of California, Davis
Nancy Bryson	Associate Professor of Chemistry	Mississippi University for Women
Walter L. Starkey	Professor Emeritus of Mechanical Engineering	The Ohio State University
Donald Calbreath	Professor, Department of Chemistry	Whitworth College
Pingnan Shi	Ph.D. Electrical Engineering (Artificial Neural Networks)	University of British Columbia (Canada)

Bernard d'Abbrera	Visiting Scholar, Department of Entomology	British Museum (Natural History)
John C. Walton	Professor of Reactive Chemistry (Ph.D. & D.Sc.)	University of St. Andrews (UK)
	Fellow	Royal Society of Chemistry
	Fellow	Royal Society of Edinburgh
Mae-Wan Ho	Ph.D. Biochemistry	The University of Hong Kong
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
Jeffrey Schwartz	Assoc. Res. Psychiatrist, Dept. of Psychiatry & Biobehavioral Sciences	University of California, Los Angeles
Alexander F. Pugach	Ph.D. Astrophysics	Ukrainian Academy of Sciences (Ukraine)
Ralph Seelke	Professor Emeritus, Molecular and Cellular Biology	University of Wisconsin, Superior
Annikka Parantainen	Ph.D. Biology	University of Turku (Finland)
Fred Schroeder	Ph.D. Marine Geology	Columbia University
David Snoko	Associate Professor of Physics & Astronomy	University of Pittsburgh
Frank Tipler	Prof. of Mathematical Physics	Tulane University
John A. Davison	Emeritus Associate Professor of Biology	University of Vermont
James Tour	Chao Professor of Chemistry	Rice University
Pablo Yepes	Research Associate Professor of Physics & Astronomy	Rice University
David Bolender	Assoc. Prof., Dept. of Cell Biology, Neurobiology & Anatomy	Medical College of Wisconsin
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)
Kevin Farmer	Adjunct Assistant Professor (Ph.D. Scientific Methodology)	University of Oklahoma
D.R. Eiras-Stofella	Director, Electron Microscopy Center (Ph.D. Molecular Biology)	Parana Federal University (Brazil)
Neal Adrian	Ph.D. Microbiology	University of Oklahoma
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
Richard Spencer	Professor (Ph.D. Stanford)	University of California, Davis, Solid-State Circuits Research Laboratory
Mark Krejci	Ph.D. Polymer Science & Engineering (Post-docs, Stanford & Caltech)	University of Massachusetts
Braxton Alfred	Emeritus Professor, Anthropology	University of British Columbia (Canada)
R. Craig Henderson	Associate Professor, Dept. of Civil & Environmental Engineering	Tennessee Tech University
Michael J. Kavaya	Senior Scientist	NASA Langley Research Center
Wesley Allen	Professor of Computational Quantum Chemistry	University of Georgia
James Pierre Hauck	Professor of Physics & Astronomy	University of San Diego
Olen R. Brown	Former Professor of Molecular Microbiology & Immunology	University of Missouri, Columbia
Eshan Dias	Ph.D. Chemical Engineering	King's College, Cambridge University (UK)

John B. Cannon	Ph.D. Organic Chemistry	Princeton University
John L. Burba	Ph.D. Physical Chemistry	Baylor University
Stephen J. Cheesman	Ph.D. Geophysics	University of Toronto
Mike Forward	Ph.D. Applied Mathematics (Chaos Theory)	Imperial College, University of London (UK)
Lowell D. White	Industrial Hygiene Specialist (Ph.D. Epidemiology)	University of New Mexico
Brian Landrum	Associate Professor of Mechanical & Aerospace Engineering	University of Alabama, Huntsville
David Chambers	Physicist	Lawrence Livermore National Laboratory
Michael T. Goodrich	Professor of Computer Science	University of California, Irvine
Timothy E. McDevitt	Ph.D. Mechanical Engineering	Pennsylvania State University
Arien R. Severson	Professor of Anatomy and Cell Biology	University of Minnesota Medical School, Duluth
Winston Ewert	Ph.D. Electrical and Computer Engineering	Baylor University
Mohamed Mahmoud Shohayeb	Professor of Microbiology and Molecular Biology	Tanta University
Young Chang	Professor of Mechanical Engineering Technology	Oklahoma State University
Alan K. Walker	Ph.D. Plant Breeding and Cytogenetics	Iowa State University
Jurgis Šuba	Ph.D. in Biology, Zoology	University of Latvia
Gerald R. Chester	Ph.D. Physics	University of Texas, Austin
Abdul Hadi Aldmairi	Ph.D. Organic Synthesis	Cardiff University
Eungchun Cho	Ph.D. Mathematics	Rutgers University
Paul Madtes, Jr.	Professor and Chair of Biology	Mount Vernon Nazarene University
Curtis M. Beechan	Ph.D. Organic Chemistry	Stanford University
Ola Hössjer	Professor of Mathematical Statistics	Stockholm University
David Rodda	Ph.D. Quantitative Genetics	University of Guelph (Canada)
Ivan E.B. Saraiva	Assistant Professor of Medicine	University of Kentucky
Nicholas J. Fuller	Ph.D. Microbiology	University of Warwick
Umberto Cerruti	Professor of Computational Algebra	University of Turin
T. Timothy Chen	Ph.D. Statistics	University of Chicago
Sarah M. Williams	Ph.D. Environmental Engineering (emphasis in microbiology)	Stanford University
Donald Clark	Ph.D. Physical Biochemistry	Louisiana State University
John Frederick Zino	Ph.D. Nuclear Engineering	Georgia Institute of Technology
Shing-Yan Chiu	Professor of Physiology	University of Wisconsin, Madison
Todd A. Anderson	Ph.D. Computer Science	University of Kentucky
John Cimballa	Professor of Mechanical Engineering	Pennsylvania State University
Chris Swanson	Tutor (Ph.D. Physics, University of Oregon)	Gutenberg College
Kieran Clements	Assistant Professor, Natural Sciences	Tocoo Falls College
John K. Herdlotz	Ph.D. Physical Chemistry	Rice University
Jan Chatham	Ph.D. Neurophysiology	University of North Texas
George A. Gates	Emeritus Professor of Otolaryngology-Head and Neck Surgery	University of Washington
John Cogdell	Professor of Electrical & Computer Engineering	University of Texas, Austin
David R. Beaucauge	Ph.D. Mathematics	State University of New York at Stony Brook
Leon Combs	Professor & Chair, Chemistry & Biochemistry	Kennesaw State University
Laraba P. Kendig	Ph.D. Materials Science & Engineering	University of Michigan
Nicholas Comninellis	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, Pharmaceutics & Biomedical Science	University of Georgia

Charles N. Verheyden	Professor of Surgery	Texas A&M College of Medicine
Melody Davis	Ph.D. Chemistry	Princeton University
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. Boomgaarden	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
Michael Delp	Professor of Physiology	Texas A&M University
Keith F. Conner	Ph.D. Electrical Engineering	Clemson University
David DeWitt	Chair, Department of Biology & Chemistry	Liberty University
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
David Prentice	Professor, Department of Life Sciences	Indiana State University
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
Jeanne Drisko	Clinical Assistant Professor of Alternative Medicine	University of Kansas, School of Medicine
Robert Eckel	Professor of Medicine, Physiology & Biophysics	University of Colorado Health Sciences Center
Seth Edwards	Associate Professor of Geology	University of Texas, El Paso
Eduard F. Schmitter	Ph.D. Astronomy	University of Wisconsin
Lee Eimers	Professor of Physics & Mathematics	Cedarville University
William J. Hedden	Ph.D. Geology	Missouri University of Science & Technology
Daniel Ely	Professor, Biology	University of Akron
Pattie Pun	Professor of Biology	Wheaton College
Thomas English	Adjunct Professor of Physics & Engineering	Palomar College
Rosalind Picard	Sc.D. Electrical Engineering & Computer Science	Massachusetts Institute of Technology
Danielle Dalafave	Associate Professor of Physics	The College of New Jersey
Richard Erdlao	Ph.D. Structural Geology	University of Texas (Austin)
Michael C. Reynolds	Assistant Professor of Mechanical Engineering	University of Arkansas-Fort Smith
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
Margaret Flowers	Fellow	American College of Nutrition
Étienne Windisch	Professor of Biology	Wells College
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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
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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
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Andrew Fong	Ph.D. Chemistry	Indiana University
John Garth	Ph.D. Physics	University of Illinois, Champaign-Urbana
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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. Ballet	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
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Richard Gunasekera	Ph.D. Biochemical Genetics	Baylor University
Jennifer M. Cohen	Ph.D. Mathematical Physics	New Mexico Institute of Mining and Technology
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Dan Hale	Professor of Animal Science	Texas A&M University
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George W. Benthien	Ph.D. Mathematics	Carnegie Mellon University
James Harman	Associate Chair, Dept. of Chemistry & Biochemistry	Texas Tech University
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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 Arion	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
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Joe Watkins	Military Professor, Department of Mechanical Engineering	United States Military Academy
Barton Houseman	Emeritus Professor of Chemistry	Goucher College
Mark Pritt	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 Ioe	Principle Research Scientist, Nuclear & Radiological Engineering	Georgia Institute of Technology
Malcolm W. MacArthur	Ph.D. Molecular Biophysics	University of London (UK)
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 Jelsma	Ph.D. Biochemistry	McMaster University (Canada)
George C. Wells	Professor of Computer Science	Rhodes University (South Africa)
Fred Johnson	Ph.D. Pathology	Vanderbilt University
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
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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
James O. Dritt	Ph.D. Civil Engineering & Environmental Science	University of Oklahoma
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
Ken Ludema	Emeritus Professor of Mechanical Engineering	Fulbright Scholar
Jed Macosko	Ph.D. Chemistry	University of Michigan
Nigel Surridge	Ph.D. Electrochemistry & Photochemistry	University of California, Berkeley
Christopher Macosko	Ph.D. Chemical Engineering	University of North Carolina, Chapel Hill
David Keller	Associate Professor of Chemistry	Princeton University
Allen Magnuson	Ph.D. Theoretical & Applied Mechanics	University of New Mexico
Amy Ward	Ph.D. Mathematics	University of New Hampshire
Donald Mahan	Professor of Animal Nutrition	Clemson University
Shane A. Kasten	Post-Doctoral Fellow (Ph.D. Biochemistry, Kansas State University)	Ohio State University
Robert Marks	Distinguished Professor, Electrical & Computer Engineering	Virginia Commonwealth University
Chi-Deu Chang	Ph.D. Medicinal Chemistry	Baylor University
Jesus Ambriz	Professor of Medicine	State University of New York, Buffalo
Julie Marshall	Ph.D. Chemistry	Autonomous University of Guadalajara (Mexico)
Jay L. Wile	Ph.D. Nuclear Chemistry	Texas Tech University
Manfredo Pansa	Ph.D. Computer Science	University of Rochester
David McClellan	Assistant Professor of Family & Community Medicine	University of Turin (Italy)
Evgeny Shirokov	Faculty Lecturer (Nuclear and Particle Physics)	Texas A&M University College of Medicine
Charles E. Hunt	Professor of Electrical & Computer Engineering, Professor of Design	Moscow State University (Russia)
Andy McIntosh	Also, Visiting Professor of Physics	University of California, Davis
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)
Tom McMullen	Assistant Professor, Dept. of Chemical Engineering & Biotechnology	Lacrosse University
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Kenneth Demarest	Professor of Electrical Engineering	University of Kansas
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
Shawn Wright	Ph.D. Crop Science	North Carolina State University
Douglas Keil	Ph.D. Plasma Physics	University of Wisconsin, Madison
Dave Finnegan	Staff Member (Ph.D. Chemistry, University of Maryland)	Los Alamos National Laboratory
Michael Kelleher	Ph.D. Biophysical Chemistry	University of Ibadan (Nigeria)
Christine B. Beaucage	Ph.D. Mathematics	State University of New York at Stony Brook
Rebecca Keller	Research Professor, Department of Chemistry	University of New Mexico
Gerald E. Hoyer	Retired Forrest Scientist (Ph.D. Silviculture, University of Washington)	Washington State Department of Natural Resources
Michael Kent	Ph.D. Materials Science	University of Minnesota
Richard Kinch	Ph.D. Computer Science	Cornell University
Irfan Yilmaz	Professor of Biology (Ph.D. Systematic Zoology)	Dokuz Eylul University (Turkey)
Bretta King	Assistant Professor of Chemistry	Spelman College
Mauricio Alcocer	Director of Graduate Studies (Ph.D. Plant Science, University of Idaho)	Autonomous University of Guadalajara (Mexico)
R. Barry King	Prof. of Environmental Safety & Health	Albuquerque Technical Vocational Institute
Hiroshi Ishii	M.D., Ph.D. Behavioral Neurology	Tohoku University (Japan)
Michael Kinnaird	Ph.D. Organic Chemistry	University of North Carolina, Chapel Hill
Lasse Uotila	M.D., Ph.D. Medicinal Biochemistry	University of Helsinki (Finland)
Donald Kobe	Professor of Physics	University of North Texas, Denton
Martin Emery	Ph.D. Chemistry	University of Southampton (UK)
Charles Koons	Ph.D. Organic Chemistry	University of Minnesota
Miguel A. Rodriguez	Undergraduate Lab. Coordinator for Biochemistry	University of Ottawa (Canada)
Carl Koval	Full Professor, Chemistry & Biochemistry	University of Colorado, Boulder
Magda Narciso Leite	Professor, College of Pharmacy & Biochemistry	Universidade Federal de Juiz de Fora (Brazil)
Bruce Krogh	Professor of Electrical & Computer Engineering	Carnegie Mellon University
Tetsuichi Takagi	Senior Research Scientist	Geological Survey of Japan
William Notz	Professor of Statistics	Ohio State University
Don Ranney	Emeritus Professor of Anatomy and Kinesiology	University of Waterloo (Canada)
Wesley Nyborg	Emeritus Professor of Physics	University of Vermont
Peter William Holyland	Ph.D. Geology	University of Queensland (Australia)
Paul Kuld	Associate Professor of Biological Science	Biola University
Larry B. Rainey	Principal Space Systems Engineer	Missile Defense Agency
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Nancy L. Swanson	Ph.D. Physics	Florida State University
Martin LaBar	Ph.D. Genetics & Zoology	University of Wisconsin, Madison
William B. Hart	Assistant Professor of Mathematics	University of Illinois at Urbana-Champaign
Teresa Larranaga	Ph.D. Pharmacology	University of New Mexico
Yuri Zharkov	Post-Doctoral Research Fellow (Ph.D. Zoology)	Simon Fraser University (Canada)
Ronald Larson	Professor and Chair of Chemical Engineering	University of Michigan
Wolfgang Hutter	Ph.D. Chemistry	University of Ulm (Germany)
Robert Latimer	Ph.D. Chemistry	University of Kansas, Lawrence
Robert J. Graham	Ph.D. Chemical Engineering	Iowa State University
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David G. Durrett	Ph.D. Chemistry	Louisiana State University
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Tony Mega	Ph.D. Biochemistry	Purdue University
Carl Poppe	Ph.D. Physics	University of Wisconsin
Keith P. Birch	Ph.D. Atmospheric Physics	University of Southampton (UK)
James Menart	Associate Professor of Mechanical Engineering	Wright State University
Theodor Liss	Ph.D. Chemistry	Massachusetts Institute of Technology
James Keesling	Professor of Mathematics	University of Florida
Brian Miller	Ph.D. Physics	Duke University
Christopher D. Beiling	Associate Professor of Physics	The University of Hong Kong (China)
Art Nitz	Ph.D. Anatomy & Neurobiology	University of Kentucky
Thomas Milner	Associate Professor of Biomedical Engineering	University of Texas, Austin
David Ness	Ph.D. Anthropology	Temple University
Christian W. Puritz	Ph.D. Mathematics	University of Glasgow (UK)
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Paul Missel	Ph.D. Physics	Massachusetts Institute of Technology
Jeffrey Sabburg	Ph.D. Physics	Queensland University of Technology (Australia)
Dónal O'Mathúna	Ph.D. Pharmacognosy	Ohio State University
Steve D. Figard	Ph.D. Biochemistry	Florida State University
Lennart Möller	Professor, Center for Nutrition & Toxicology	Karolinska Institute (Sweden)
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David Monson	Ph.D. Analytical Chemistry	Indiana University
James T. Fowler	Ph.D. Mathematics	University of Durham (UK)
Hugh Nutley*	Professor Emeritus of Physics & Engineering	Seattle Pacific University
Terry Morrison	Ph.D. Chemistry	Syracuse University
Bijan Nemati	Ph.D. High Energy Physics	University of Washington
William Russell Belding	Ph.D. Mathematics	University of Notre Dame
Bridget Ingham	Ph.D. Physics	Victoria University of Wellington (New Zealand)
Paul Nesselroade	Professor of Psychology and Department Chair	Asbury University
Kevin L. Kendig	Ph.D. Materials Science & Engineering	University of Michigan
Marco Bernardes	Professor & Chair, Department of Mechanical Engineering	Federal Center of Tech. Ed., Minas Gerais (Brazil)
Robert Newman	Ph.D. Astrophysics	Cornell University
Angus Menuge	Ph.D. Philosophy of Psychology	University of Wisconsin-Madison
Khawar Sohail Siddiqui	Senior Research Associate (Protein Chemistry)	University of New South Wales (Australia)
Janet Parker	Professor of Medical Physiology	Texas A&M University, Health Science Center
Scott Northrup	Chair and Professor of Chemistry	Tennessee Tech University
John Omdahl*	Professor of Biochemistry & Molecular Biology	University of New Mexico
Matthew A. Jenks	Professor of Horticultural Science	Purdue University
Fazale Rana	Ph.D. Chemistry	Ohio University
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Bruce L. Gordon	Ph.D. Philosophy of Physics	Northwestern University
Lawrence Overzet	Professor of Engineering & Computer Science	University of Texas, Dallas

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Siddarth Pandey	Assistant Professor of Chemistry	New Mexico Institute of Mining and Technology
Bruce Holman, III	Ph.D. Organic Chemistry	Northwestern University
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A. Clyde Hill	Ph.D. Soil Chemistry	Rutgers University
Aric D. Blumer	Ph.D. Computer Engineering	Virginia Tech
Stephen C. Meyer	Ph.D. Philosophy of Science	Cambridge University (UK)
William Purcell	Ph.D. Physical Chemistry	Princeton University
Paul Randolph	Ph.D. Mathematical Statistics	University of Minnesota
Christopher Morbey	Astronomer (Ret.)	Herzberg Institute of Astrophysics, National Research Council of Canada
Stephen C. Tentarelli	Ph.D. Mechanical Engineering	Lehigh University
David Reed	Ph.D. Entomology	University of California, Riverside
Charles D. Johnson	Ph.D. Chemistry	University of Minnesota
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David Rogstad	Ph.D. Physics	California Institute of Technology
Mark Shlapobersky	Ph.D. Virology	Bar-Ilan University (Israel)
Arthur John Jones	Ph.D. Zoology & Comparative Physiology	Birmingham University (UK)
Patricia Reiff	Director, Rice Space Institute	Rice University
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Andrew Steckley	Ph.D. Civil Engineering	University of Western Ontario (Canada)
Terry Rickard	Ph.D. Engineering Physics	University of California, San Diego
Arlen W. Siert	Ph.D. Environmental Health	Colorado State University
Mubashir Hanif	Ph.D. Plant Biology	University of Helsinki (Finland)
Eliot Roberts	Ph.D. Soil Chemistry	Rutgers University
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Liang Hong	Associate Professor, Dept. of Dental Public Health & Behavioral Science	University of Missouri, Kansas City
Daniel Romo	Professor of Chemistry	Texas A&M University
David Sabatini	Professor Civil Engineering & Environmental Science	University of Oklahoma
Richard Buggs	DPhil Plant Ecology & Evolution	Oxford University (UK)
Etienne Y. Vernaz	Professor & Director of Research Director	CEA (French Atomic Energy Agency) (France)
Theodore Saito	Ph.D. Physics	Pennsylvania State University
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Thomas Saleska	Professor of Biology	Concordia University
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Harold Toups	Ph.D. Chemical Engineering	Louisiana State University
Raúl Orlando López	Ph.D. Atmospheric Science	Colorado State University
Beverly W. Miller	Ph.D. Biology	Carnegie Mellon University
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Gayle Livingston Birchfield	Ph.D. Biology	University of Missouri, Columbia
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James Gilchrist	Ph.D. Physics	University of Texas, Austin
Stuart C. Burgess	Professor of Design & Nature, Dept. of Mechanical Engineering	Bristol University (UK)
Charles W. Bell	Professor Emeritus of Biological Sciences	San Jose State University
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Andrew Schmitz	Ph.D. Inorganic Chemistry	University of Iowa
Anne E. Vravick	Ph.D. Environmental Toxicology	University of Wisconsin, Madison
Granville Sewell	Professor of Mathematics	University of Texas, El Paso
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Mark C. Biedebach	Professor Emeritus of Physiology	California State University, Long Beach
Gregory Shearer	Ph.D. Physiology	University of California, Davis
Douglas Nelson Rose	Research Physiologist	United States Army
David Shormann	Ph.D. Limnology	Texas A&M University
Paul Lorenzini	Ph.D. Nuclear Engineering	Oregon State University
Mark Apkarian	Ph.D. Exercise Physiology	University of New Mexico
Dale Spence	Emeritus Professor of Kinesiology	Rice University
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		Stephen F. Austin State University

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\*= Deceased since signing statement.

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William Soo Hoo	Ph.D. in Biochemistry	University of Illinois, Champaign-Urbana
David L. MacQuarrie	Ph.D. in Evaluation, Measurement and Research	Western Michigan University
Mustafa McPherson	Ph.D. in Agronomy	Mississippi State 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 ..."*

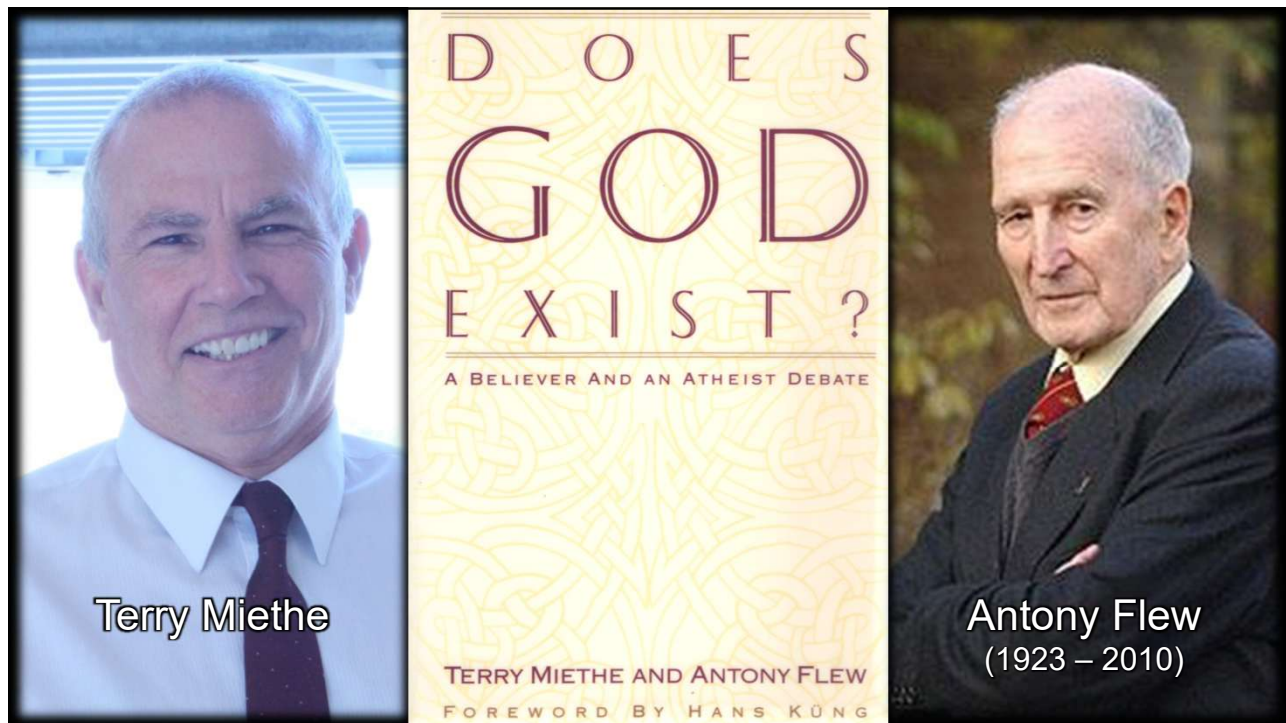
*Challenging evolution is on par with believing in a flat Earth.*

*"Darwinian evolution is a well-established theory. "*

*Challenging evolution is on par with challenging the Moon landing.*

*"There is no question . . ."*

are unwarranted.



Terry Miethe

Antony Flew  
(1923 – 2010)

