

# CAN WE BELIEVE IN GOD IN AN AGE OF SCIENCE?



With **Peter S. Williams**  
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# 3KL110 Christian view of life and science in an apologetic perspective

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3KL110 (2021–2022)

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**Places:** Kristiansand

**Study year:** 2021–2022

**Language of instruction:** Norwegian

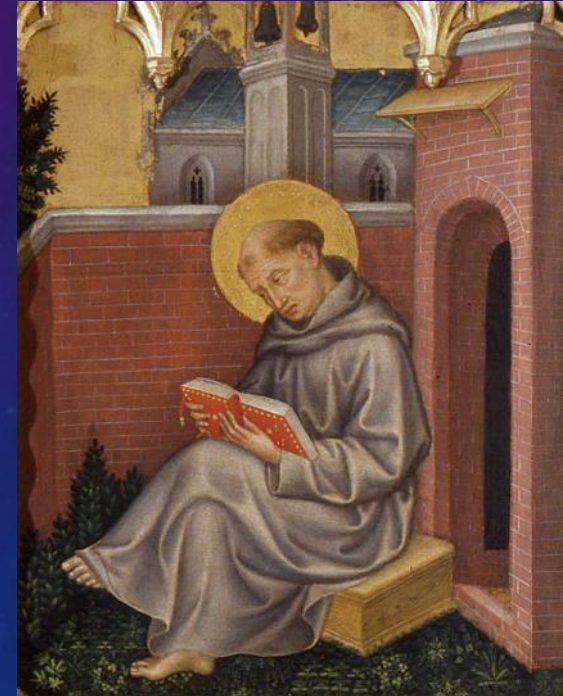
**Credits:** 10 credits

# INTRODUCTION

- Looking mainly at **theism** in the context of our **'scientific' spiritual culture**
- A consideration of how **science** offers both challenges and opportunities to the theological **spiritual discipline** of **Christian apologetics**
  - As we get started, we need to introduce some key concepts...

# THEOLOGIAN & PHILOSOPHER THOMAS AQUINAS (1225-1274)

- Thomas Aquinas pictured theology as **'the queen of the sciences'** who was assisted by **'her handmaiden philosophy'**
- The Latin word *'scientia'* meant 'knowledge'
- The study of nature we now call **'science'** was called **'natural philosophy'** (i.e. philosophy about the natural world)
- A rough definition of **philosophy** is **'the wise pursuit of true answers to significant questions through the practice of good intellectual habits'**





# WHAT IS SCIENCE?



Philosopher of Science **John Lennox**:  
‘there is no one agreed scientific method, though certain elements crop up regularly in attempts to describe what “scientific” activity involves: hypothesis, experiment, data, evidence, modified theory, prediction, explanation, and so on. But precise definition is elusive.’ – *God’s Undertaker*. Lion, 2009, 32

# 'NATURAL SCIENCE' IS:

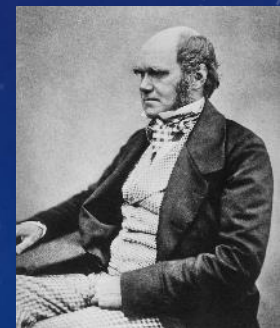
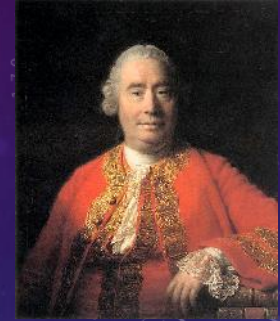
A fallible first-order discipline wherein humans seek to understand, explain and/or predict as much as they can about physical reality, especially by paying attention to how empirical experience can confirm or undermine such truth-claims





# SCIENCE IN THE 'MODERN' SENSE

- Enlightenment philosopher **David Hume** made a flawed but influential argument against the possibility and/or believability of miracles
- Nineteenth century empiricist philosopher **Auguste Compt** 'insisted that science properly practiced could make no reference to divine action to explain any events or phenomena' – Meyer, op cit, 53
- In his take on the theory of evolution, **Charles Darwin** followed in Compt's footsteps, assuming that any explanation framed in terms of divine creation was '**not a scientific explanation**' – *The Origin of Species*. Signet, 2003, 414
  - The *definitional* exclusion of irreducibly mental activity from science, a rule known as 'methodological naturalism', remains influential, though it is less popular today than it was in the nineteenth and twentieth centuries





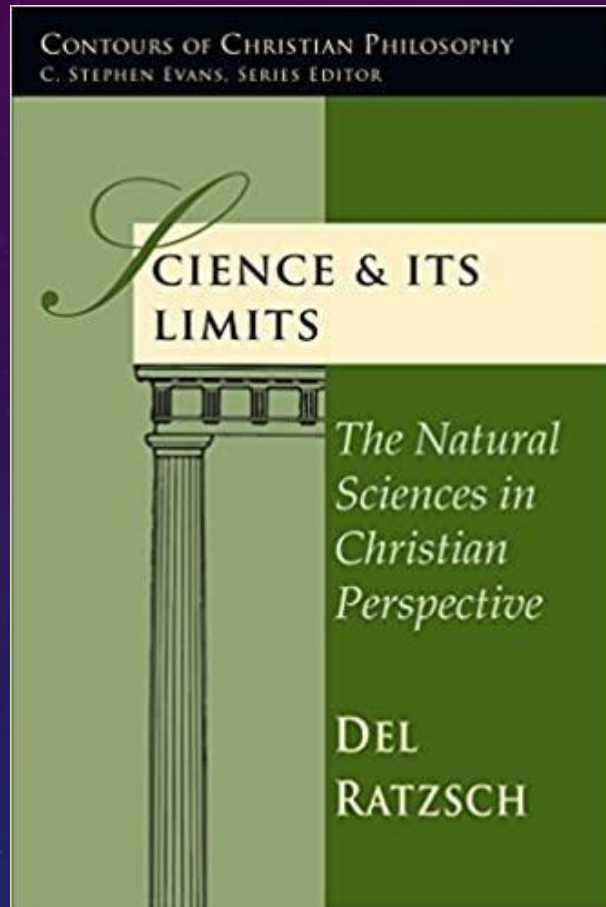
# ATHEIST PHILOSOPHER MARY MIDGLEY:



‘Physical science... is not a separate, supreme champion outclassing history or philosophy. It has no private line to reality.’

- *Are You An Illusion?* Acumen, 2014, 6

# PHILOSOPHER OF SCIENCE DEL RATZSCH:



‘science cannot validate either scientific method itself or the presuppositions of that method... Those who claim either that science is competent for dealing with all matters or that science is the only legitimate method for dealing with any matter are seriously confused.’

– *Science & Its Limits*. Apollos, 2000, 93

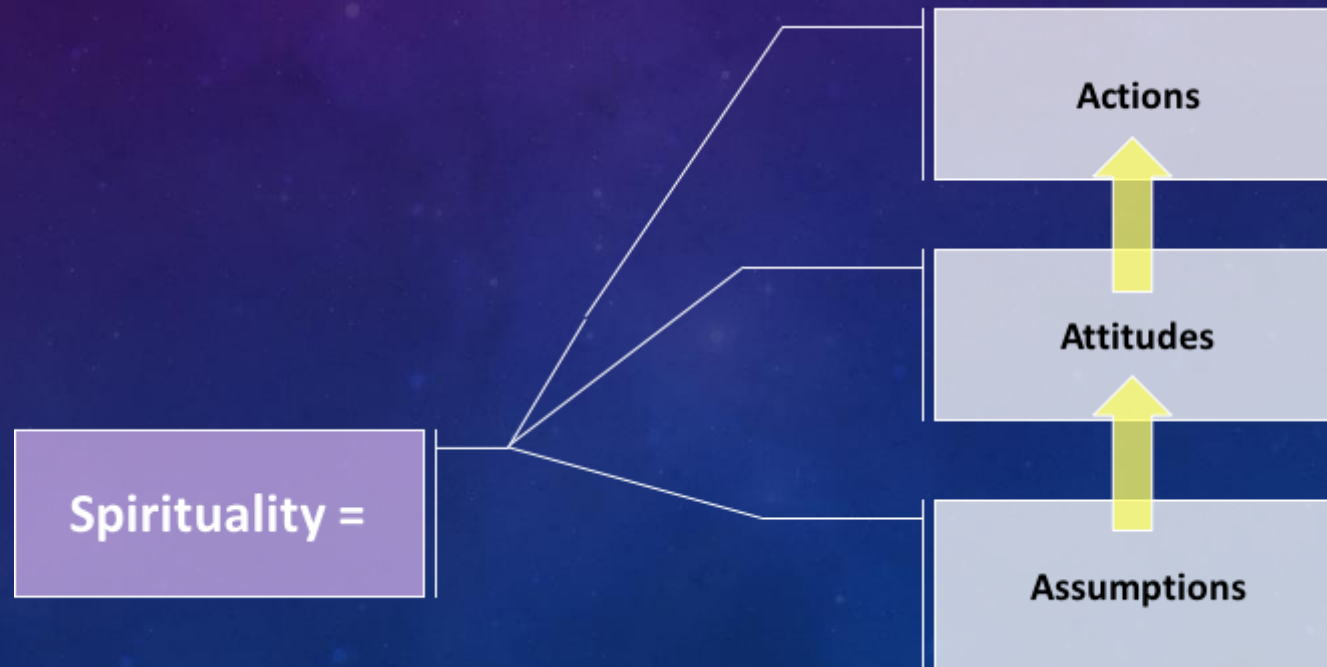
# SCIENCE IS ONLY PART OF THE PICTURE:

- There are second order philosophical questions about science and the significance of scientific ideas
- Scientists have philosophical disagreements that can't be settled on scientific grounds but which affect how they do science
- However detailed and accurate our scientific descriptions of physical realities become, such descriptions can't explain *why physical reality has the fundamental structure it has* or *why any physical reality described by that structure exists at all*
- Science makes metaphysical assumptions and raises metaphysical questions that require metaphysical answers



# SPIRITUALITY, WORLDVIEWS & CULTURE

- Everyone has a way of life, a spirituality, that includes a **worldview**
- A spirituality is made up of **worldview assumptions** (the ideas about reality that one believes and/or acts upon), combined with **attitudes** that lead to **actions**





Jesus' taught that virtuous spirituality involves loving God:



**‘with all your heart...  
and with all your mind,  
and with all your strength’**

(Mark 12:30, cf. Deuteronomy 6:5)

i.e. have a holistic love (respectful obedience) of God that isn't torn between gods

# CULTURE

- A 'culture' is **a corporate spirituality** - i.e., a set of shared assumptions, attitudes, and ways of acting – **together with its artistic traditions**
- The word 'art' comes from the Latin '**ars**', meaning 'art, craft, science, skill or technique', and overlaps with the Latin term '**scientia**', meaning 'knowledge, skill'
- In Medieval Universities a 'Master of Arts' degree included the study of *astronomy*!
- A culture may thus be, or include, **a scientific culture**

# TWO BASIC ELEMENTS OF A WORLDVIEW

- **What is real?** (Ontology – assumptions *about reality*, i.e. what sort of things exist?)
- **How do we know anything?** (Epistemology – assumptions *about knowledge*)



For example:

- **Coffee exists**
  - Known via introspection of physical senses
- **Pleasure in drinking coffee exists**
  - Known via introspection of self



# REALITY ACCORDING TO **NATURALISM & MATERIALISM**

- **Naturalism** says reality is *an uncreated, purposeless, valueless, causally closed, non-intentional system*
- **Materialism** adds that reality is *a merely physical system*
  - Hence atheist philosopher **Alex Rosenberg** asserts that:  
**'Physics is causally closed and causally complete'** - An Atheist's Guide to Reality, 25



# DOES REALITY FIT INTO THE MATERIALISTIC BOX?

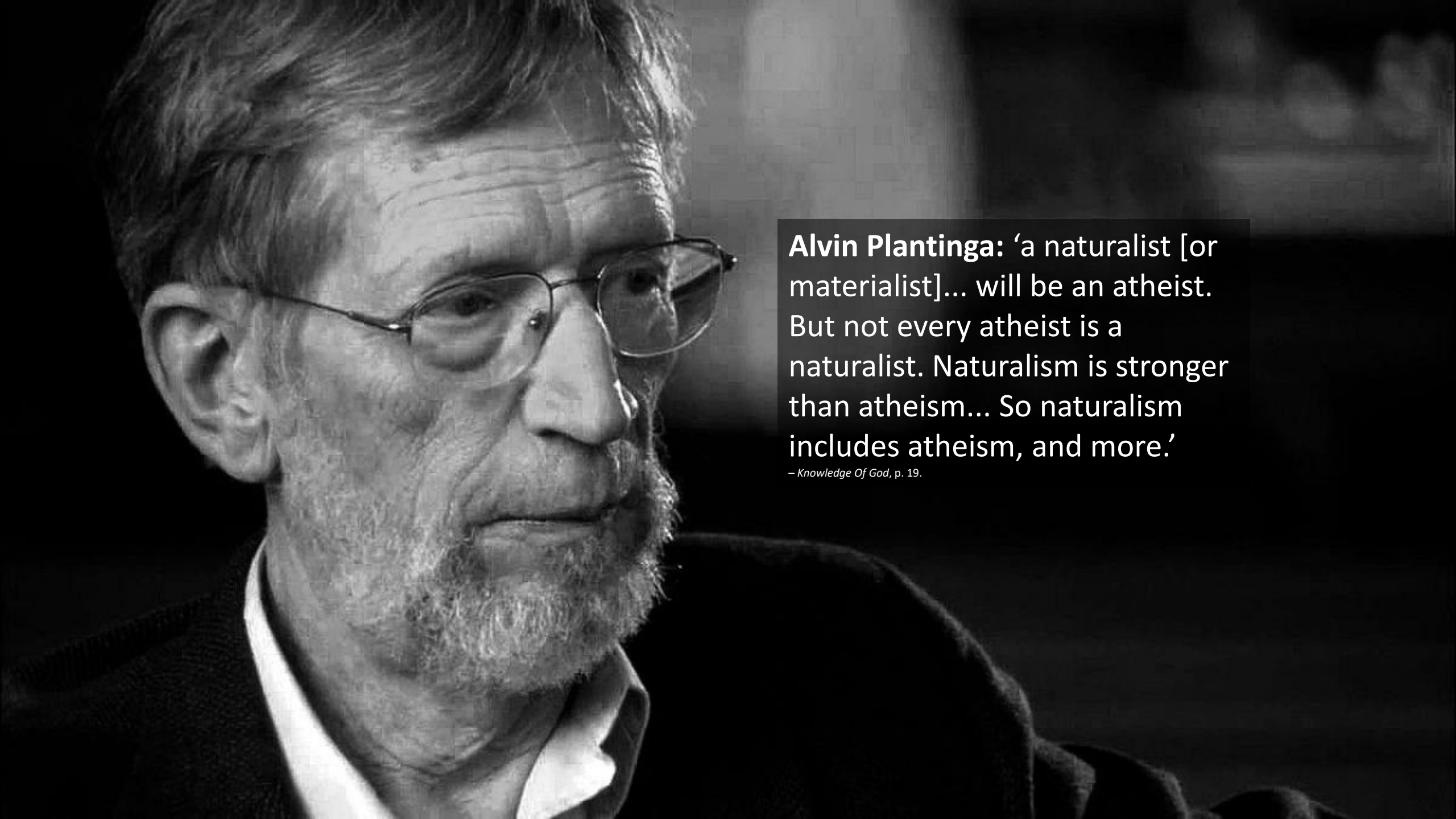
Reality



For example:

- **'Coffee exists'**
  - Known via *introspection* of physical senses
- **'Pleasure in drinking coffee exists'**
  - Known via *introspection* of self

Reality  
according to  
*Materialism*

A black and white portrait of Alvin Plantinga, an older man with glasses and a beard, looking slightly to the right. The background is dark and out of focus.

**Alvin Plantinga:** 'a naturalist [or materialist]... will be an atheist. But not every atheist is a naturalist. Naturalism is stronger than atheism... So naturalism includes atheism, and more.'

*– Knowledge Of God, p. 19.*

Atheism, from Greek *atheos*, from *a* meaning 'without' + *theos* meaning 'god'

God is *not* among the things an atheist believes are real

**Cambridge Dictionary** defines an atheist as '**someone who believes that God does not exist**'

Some atheists define atheism as 'a lack of belief in god', but a) this makes cats into atheists and b) fails to distinguish between atheism and agnosticism

**Atheist Kai Nielson: 'Atheism:** in general, the critique and denial of metaphysical beliefs in God or spiritual beings. As such, it is usually distinguished from theism, which affirms the reality of the divine and often seeks to demonstrate its existence. Atheism is also distinguished from agnosticism, which leaves open the question whether there is a god or not, professing to find the questions unanswered or unanswerable.' – Encyclopedia Britannica

### THE DAWKINS' SCALE

#### 1. STRONG THEIST:

I do not question the existence of God, I know he exists.

#### 2. DE-FACTO THEIST:

I cannot know for certain but I strongly believe in God.

#### 3. WEAK THEIST:

I am very uncertain, but I am inclined to believe in God.

#### 4. PURE AGNOSTIC:

God's existence and non-existence are exactly equiprobable.

#### 5. WEAK ATHEIST:

I do not know whether God exists but I'm inclined to be skeptical.

#### 6. DE-FACTO ATHEIST:

I cannot know for certain but I think God is very improbable.

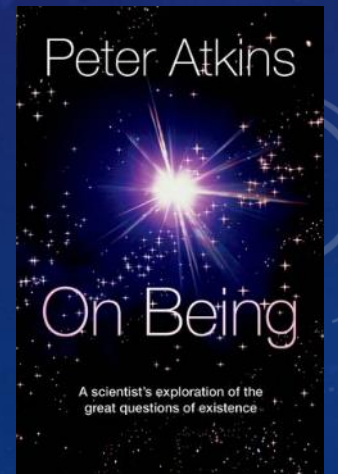
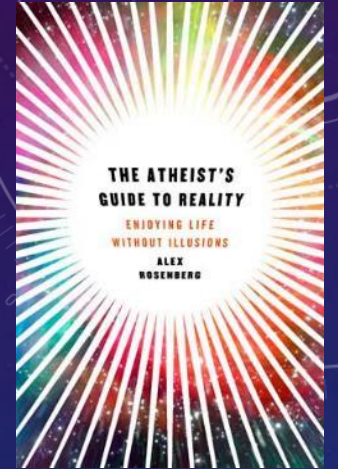
#### 7. STRONG ATHEIST:

I am 100% sure that there is no God.



# HOW WE KNOW ACCORDING TO **SCIENTISM**

- Atheist **Alex Rosenberg**: 'Being scientific just means treating science as our exclusive guide to reality... we trust science as the only way to acquire knowledge.' – *An Atheists' Guide to Reality*, 8 & 20.
- Atheist **Peter Atkins**: 'I stand by my claim that the scientific method is the only means of discovering the nature of reality... the only way of acquiring reliable knowledge.' – *On Being*, xiii.





The **scientific** demand that *every rational belief must be justified by scientific, empirical evidence* is self-contradictory because:

- a) It can't be justified by scientific, empirical evidence
- b) It entails an infinite regress that can't be satisfied

It's also open to obvious counter-examples (e.g. metaphysical, moral and aesthetic knowledge)



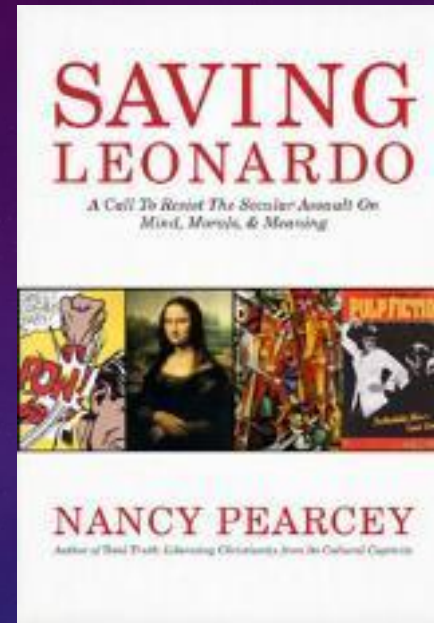
Scientific Knowledge

For example:

- **Coffee exists**
- **Pleasure in drinking coffee exists**
- **Enjoying coffee is good**
- **This is a beautiful cup**

# NANCY PEARCEY:

‘The strict separation of facts from values [whether it is justified by naturalism/materialism or scientism] is *the* key to unlocking the history of the modern Western mind... people have always known that there is a distinction between *is* and *ought*... between descriptive statements and normative statements. In earlier ages, however, people thought both types of statement dealt with questions of truth. If you made a moral statement about what someone *ought* to do, it was either true or false.’ – *Saving Leonardo* (B & H, 2010), p. 25, 27.



## Values (Meaning/Purpose)

Private, subjective, relative,  
*invented by humans*

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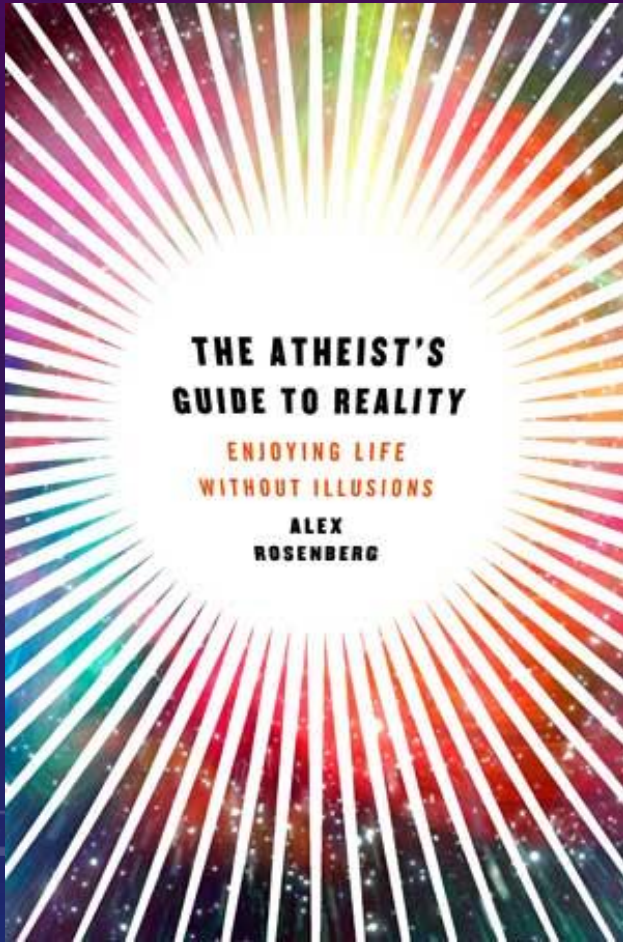
## Facts

Public, objective, universal,  
*discovered by naturalistic science*



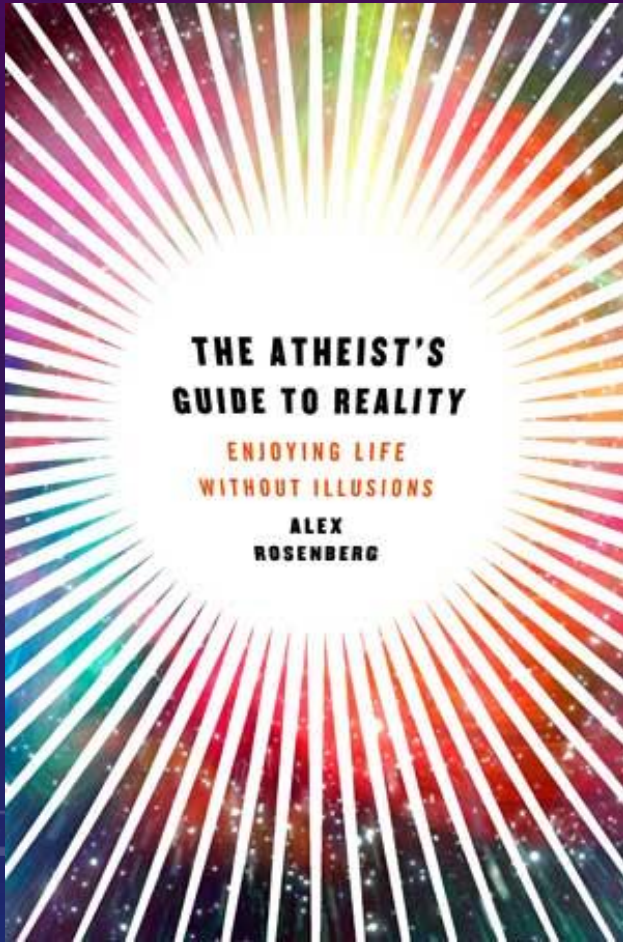
# ALEX ROSENBERG'S **WORLDVIEW**:

Materialism + Scientism + Fact-Value Divide



'Is there a God? No. What is the nature of reality? What physics says it is. What is the purpose of the universe? There is none. What is the meaning of life? Ditto. Why am I here? Just dumb luck... Is there a soul? Is it immortal? Are you kidding? Is there free will? Not a chance. What happens when we die? Everything pretty much goes on as before, except us. What is the difference between right and wrong, good and bad? There is no moral difference between them...'

# ALEX ROSENBERG'S **WORLDVIEW...** & **SPIRITUALITY:**



‘individual human life is meaningless, without purpose, and without ultimate moral value... **We need to face the fact that nihilism is true.**’ –p. 19 & 95.

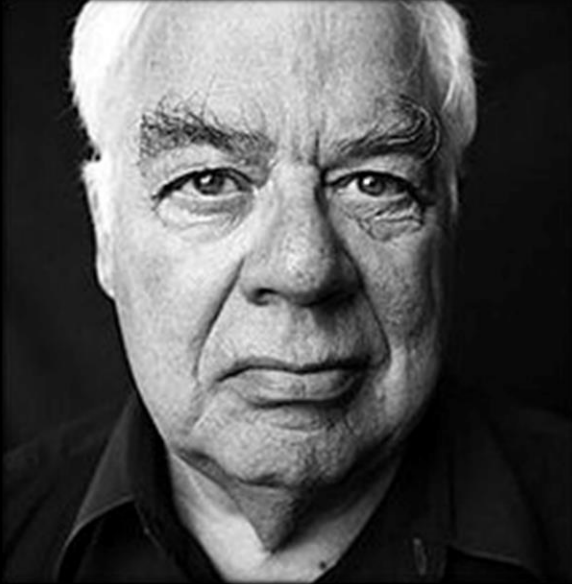
‘Creating purpose in a world that can’t have any is like trying to build a perpetual motion machine after you have discovered that nature has ruled them out.’ –p. 279.

‘if this seems hard to take... there’s always Prozac.’ –p. 19.

‘what should we scientific folks do when overcome by *Weltschmerz* (world-weariness)? Take two of whatever neuro-pharmacology prescribes.’ –p. 282.



# RICHARD RORTY (1931-2007):



Said we should: 'try to get to the point where we no longer worship anything, where we treat everything – our language, our conscience, our community – as products of time and chance.'

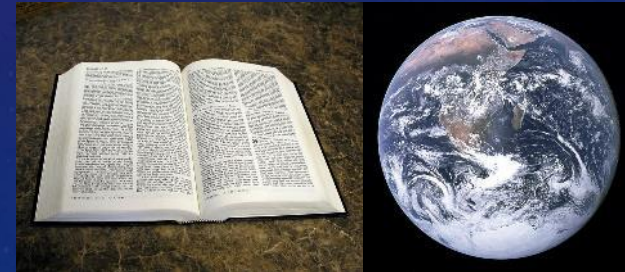
– 'The Contingency of Language', *London Review of Books*, vol 8. 17<sup>th</sup> April 1986, 6.

# CHRISTIAN THEOLOGY

**Alister McGrath** defines Christian theology as:  
'an attempt to make sense of the foundational resources of Christianity in the light of what each age regards as first-rate methods.'

- *Christian Theology: An Introduction*. Blackwell, 2001, 120

- Theology is a fallible discipline wherein humans seek a comprehensive Christian worldview that takes into account both the book of 'special revelation' and the book of 'general revelation'



# CHRISTIAN APOLOGETICS

- *As a sub-discipline of theology, Christian apologetics is:*  
*the art and science of helping people to be persuaded that a Christ-centred spirituality is a beautiful, good and reasonable/true life commitment*

**PETER S. WILLIAMS**  
*Foreword by Paul Copan*

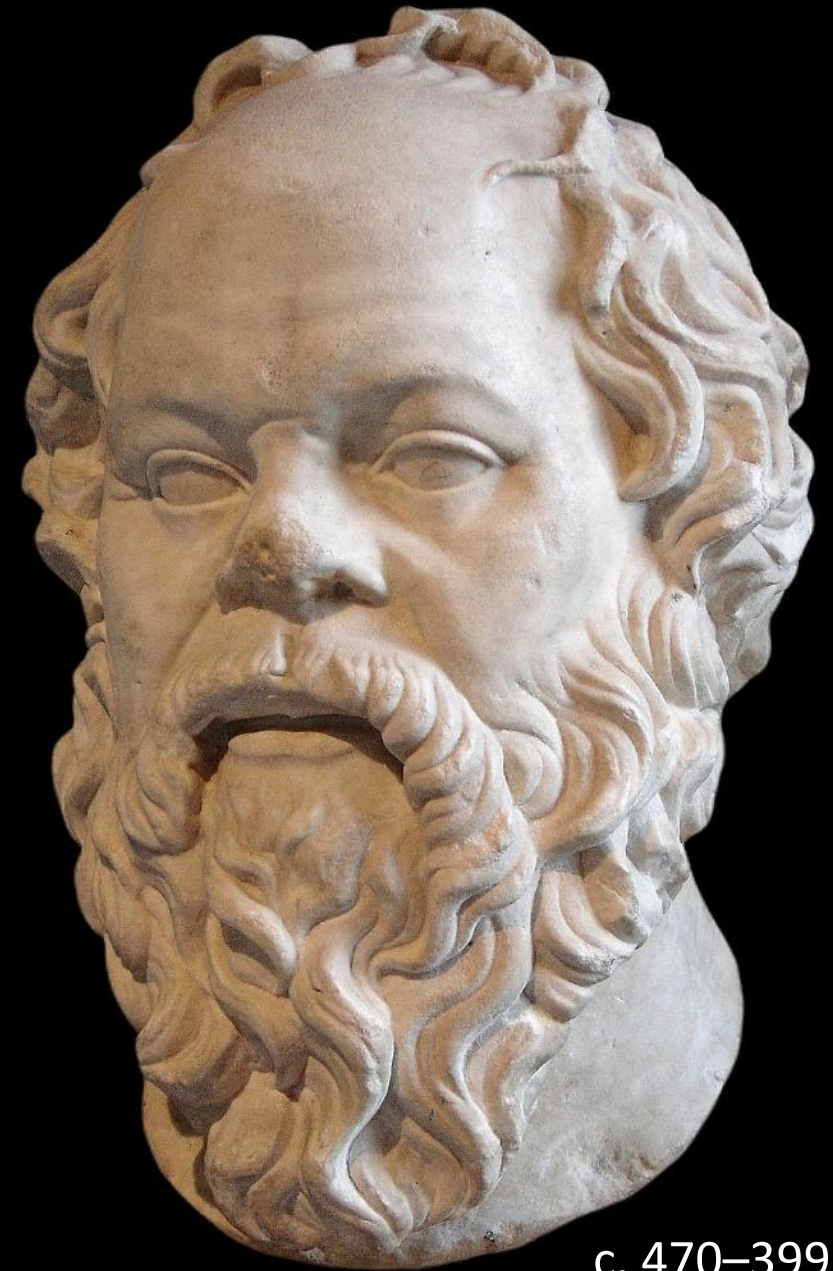
## **APOLOGETICS IN 3D**

**ESSAYS ON  
APOLOGETICS AND  
SPIRITUALITY**





To re-contextualize an image from the pagan philosopher **Socrates**, the Christian apologist is a spiritual '**midwife**', helping people deliver as strong and healthy a spiritual response to Jesus as they can muster (Plato, *Theaetetus*, 150a)



c. 470–399 BC

Thinking about 'Science' offers apologetics both challenges and opportunities:

- **Naturalism/Materialism** restricts people's understanding of the reality studied by the sciences
- **Scientism** restricts people's understanding of knowledge to the empirical methods of naturalistic science
- **Science** can support premises in philosophical arguments for (or against) the existence of God

## THE WAY AHEAD:

- Debunking the 'Conflict Thesis'
- Cosmology & God (The Big Bang & Fine Tuning)
- Design in the Context of Evolution (Darwinism & Intelligent Design)
- Apologetic Preaching for Spiritual Formation in a Scientific Culture

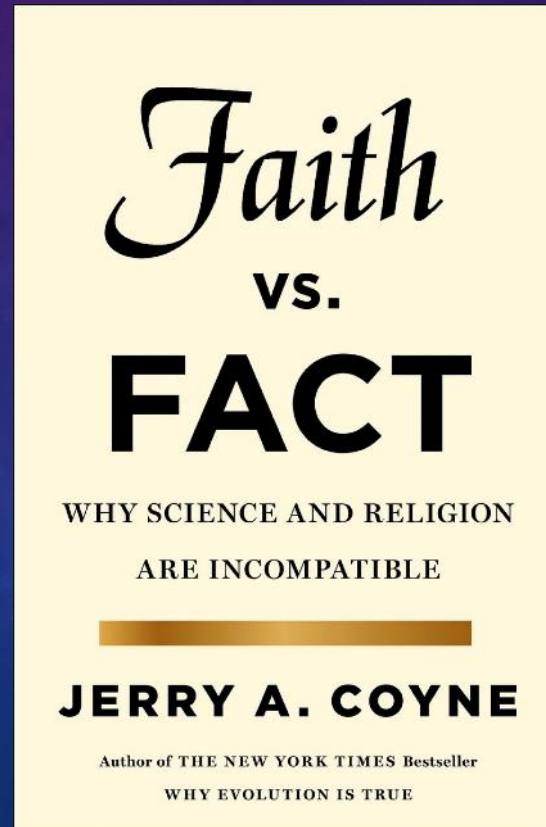


# DEBUNKING THE 'CONFLICT THESIS'



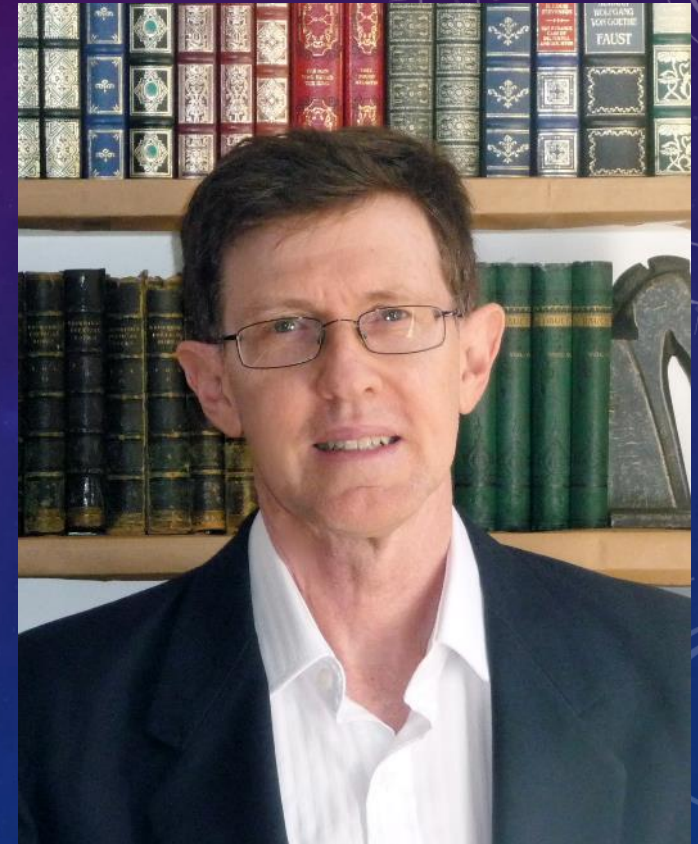
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The 'Conflict Thesis' states that when science and theology have overlapping interests, science is - at least more often than not - in an incompatible conflict with theology, wherein *science is right and theology is wrong*



## Historian of Science **Peter Harrison:**

‘Advocates of the Conflict Thesis hold that there has been a perennial conflict between science and religion, and that such conflict is inevitable. The thesis found its definitive formulation in the... nineteenth century... And despite powerful criticism by historians, is still commonly encountered in contemporary debates about science and religion... [T]he current consensus among historians is that the history of science-religion relations is too complex to fit into any simple pattern of unremitting conflict... The conflict thesis... Is conceptually simplistic and at odds with the historical evidence.’ – R.J. Berry ed., *The Lion Handbook Of Science & Christianity* (Lion, 2012), 60-61





Salisbury Cathedral



**Vishal Mangalwadi:**

‘The scientific perspective flowered in Europe as an outworking of medieval biblical theology nurtured by the Church... the Bible created and underpinned the scientific outlook.’ – *The Book That Made Your World* (Thomas Nelson, 2011), 223-224.

Most ancient cultures had worldviews that were *not* conducive to science

For example:

According to **pantheistic** worldviews, the natural world is an illusion

According to Greek **polytheism**, the natural world is governed by unreliable finite gods who are often at odds with one another, and who ultimately trace their origins to primeval chaos





# A BRIEF HISTORY OF SCIENCE

Philosopher of science **Stephen C. Meyer** recounts how ancient ‘Greek philosophers thought that nature reflected an underlying order [but] assumed that they could deduce how nature ought to behave from first principles based upon only superficial observations of natural phenomena or without observing nature at all’

– *The Return of the God Hypothesis*. HarperOne, 2021, 22





# A BRIEF HISTORY OF SCIENCE

**Meyer** explains that ‘modern science was specifically inspired by the conviction that the universe is the product of a rational mind who... designed the human mind to understand it’

– ibid, 24



**Alvin Plantinga:** 'Modern science arose within the bosom of Christian theism; it is a shining example of the powers of reason with which God has created us; it is a spectacular display of the image of God in us human beings. So Christians are committed to taking science and the deliverances of contemporary science with the utmost seriousness.'

- 'Evolution and Design', James K. Beilby (ed.), *For Faith and Clarity* (Baker, 2006), p. 212.





# SALISBURY CATHEDRAL CLOCK

Dating from c. 1386,  
it's thought to be the  
oldest working clock  
in the world.





# SOCIOLOGIST OF SCIENCE STEVE FULLER:

‘While I cannot honestly say that I believe in a divine personal creator, no plausible alternative has yet been offered to justify the pursuit of science as a search for the ultimate systematic understanding of reality... atheism as a positive doctrine has done precious little for science.’

– *Dissent Over Descent*. Icon, 2008, 9



# SOCIOLOGIST OF SCIENCE STEVE FULLER:

‘science... makes sense only if there is an overall design to nature that we are especially well-equipped to fathom, even though most of it has little bearing on our day-to-day animal survival. Humanity’s creation in the image of God... provides the clearest historical rationale for the rather specialised expenditure of effort associated with science.’ – *Dissent Over Descent*. Icon, 2008, 70



# PHILOSOPHICAL ASSUMPTIONS OF SCIENCE WARRANTED BY THEISM

- The natural world exhibits a rational order
- The human mind is, to a fair degree, able to understand the rational order displayed by the natural world
- Human cognitive and sensory faculties are generally reliable
- The rational order displayed by the natural world cannot necessarily be deduced from first principles, so observation and experiment are useful
- There are knowable objective values (truth, goodness, beauty)
- The natural world isn't an illusion, or divine
- The natural world isn't governed by multiple competing and/or capricious gods



TWO MAJOR SOURCES OF APPARENT CONFLICT:

1) Bad Readings of Scripture

2) Bad Philosophies of Science

TWO MAJOR SOURCES OF APPARENT CONFLICT:

1) **Bad Readings of Scripture**

2) **Bad Philosophies of Science**

# ST. AUGUSTINE:



‘In matters that are so obscure and far beyond our vision, we may find in Holy Scripture passages which can be interpreted in very different ways without prejudice to the faith we have received. In such cases, we should not rush in headlong and so firmly take our stand on one side that, if further progress in the search for truth justly undermines this position, we too fall with it’ - *The Literal Meaning of Genesis*, 408, vol. 1, 41



TWO MAJOR SOURCES OF APPARENT CONFLICT:

1) Bad Readings of Scripture

2) **Bad Philosophies of Science**

# BAD PHILOSOPHIES OF SCIENCE

- Verificationism
- Scientism
- Naturalism
- Methodological Naturalism

# BAD PHILOSOPHIES OF SCIENCE

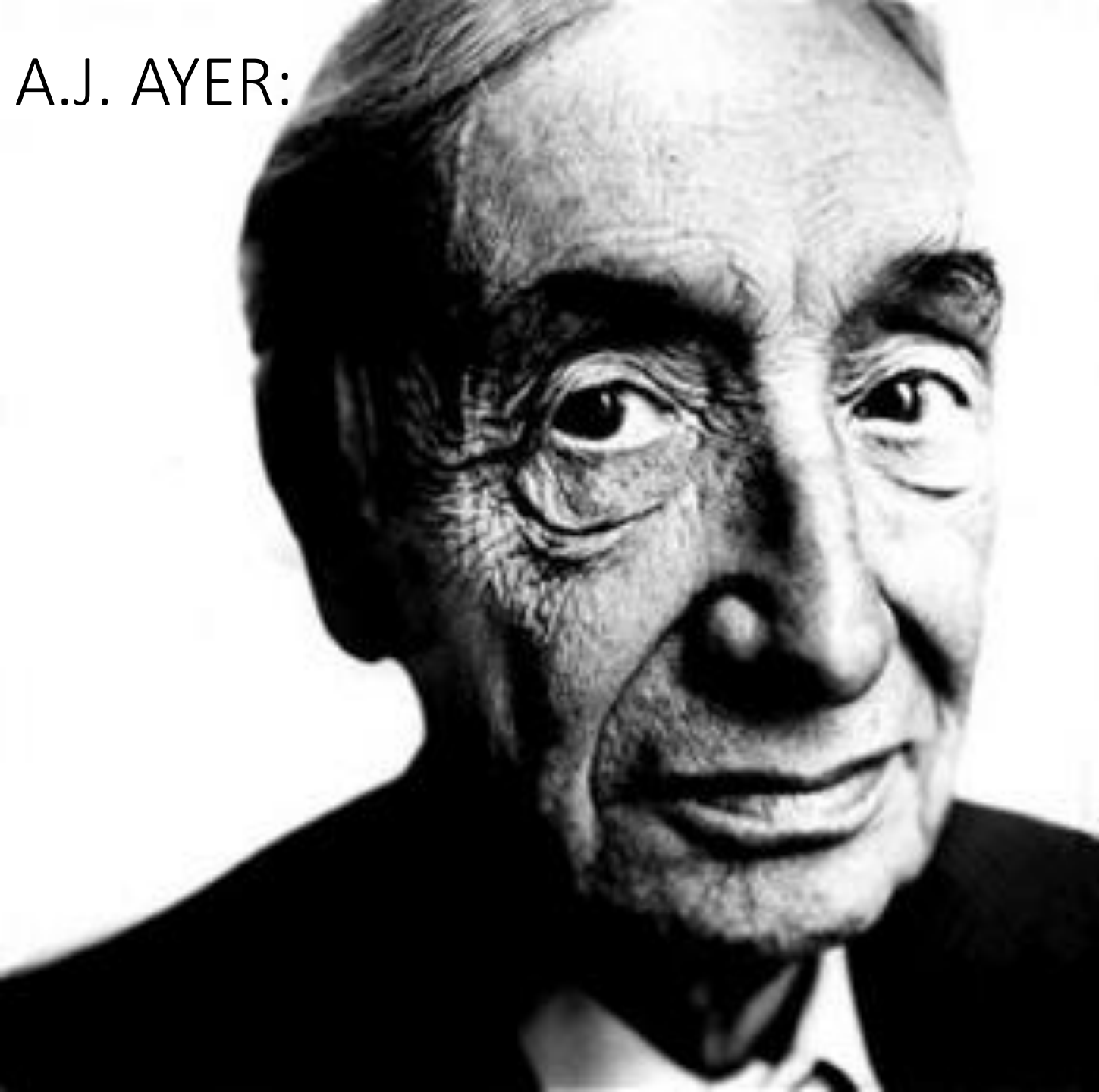
- **Verificationism**
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# VERIFICATIONISM

- According to the 'verification principle' advanced by the 'logical positivist' movement in the 1930's, the meaning of any statement that's not true by definition (e.g. a square has four sides) depends on its ability to be *empirically verified* (at least in principle)
- i.e. 'Coffee exist' is a meaningful statement because you can (at least in principle) *verify* this (by seeing, touching, smelling and tasting coffee); but 'God exists' is a *meaningless* statement because you can't (supposedly) *verify* God's existence

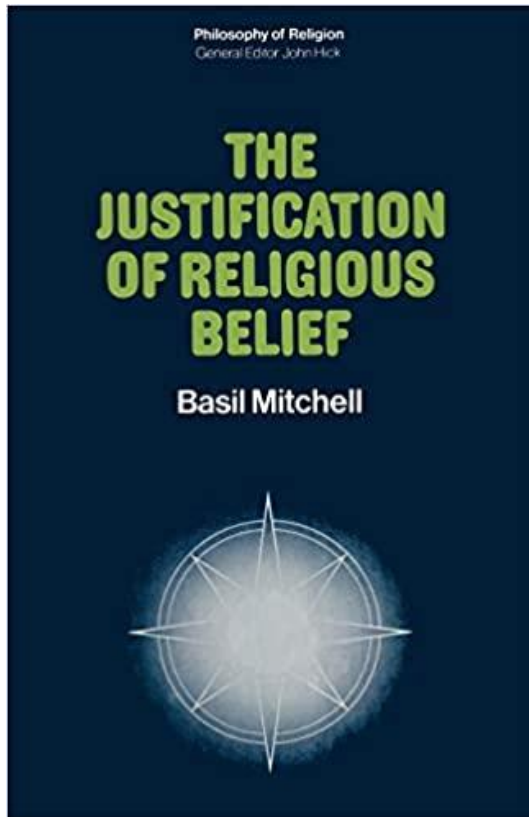
A.J. AYER:



“God” is a metaphysical term. And if “God” is a metaphysical term, then it cannot even be probable that a god exists. For to say that “God exists” is to make a metaphysical utterance which cannot be either true or false... If a putative proposition fails to satisfy [the verification] principle, and is not a tautology, then... it is metaphysical, and... being metaphysical, it is neither true nor false but literally senseless.’

- *Language, Truth and Logic*. 1936, 115

Although one cannot *directly* verify God's existence, several arguments for theism can be framed using the same sort of *indirect* verification used in science:



**Basil Mitchell:** ‘the Logical Positivist movement started as an attempt to make a clear demarcation between science and common sense on the one hand, and metaphysics and theology on the other. But work in the philosophy of science convinced people that what the Logical Positivists had said about science was not true, and, by the time the philosophers of science had developed and amplified their accounts of how rationality works in science, people discovered that similar accounts applied equally well to the areas which they had previously sought to exclude, namely theology and metaphysics.’

– ‘Reflections on C.S. Lewis, Apologetics, and the Moral Tradition: Basil Mitchell in Conversation with Andrew Walker’, 19



# PROBLEMS WITH VERIFICATIONISM

- Verificationism didn't shoulder the burden of proof needed to overturn atheist philosopher **Kai Nielson's** common-sense observation that **'Most claims that people make are not scientific; yet they can, for all that, be true or false.'** – 'Naturalistic Explanations of Theistic Belief'
- Verificationism *contradicted itself*: the **'verification principle'** is neither true by definition, nor something that can be empirically verified!
- Even **A.J. Ayer** rejected verificationism in the end!

## WILLIAM LANE CRAIG:

‘The collapse of verificationism during the second half of the twentieth century was undoubtedly the most important philosophical event of the century. Its demise brought about a resurgence of metaphysics, along with other traditional problems of philosophy that had been hitherto suppressed. Accompanying this resurgence has come something new and altogether unanticipated: a renaissance in Christian philosophy.’ – ‘Theism Defended’



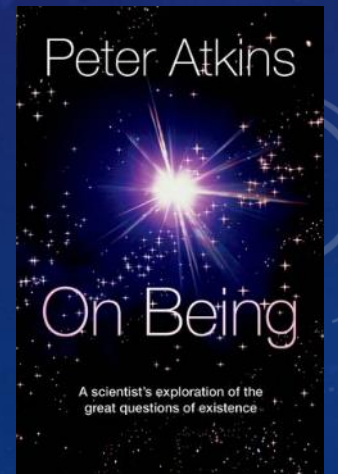
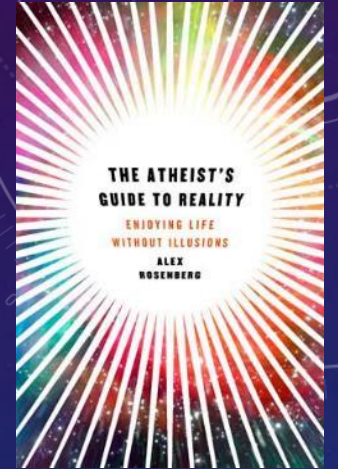
# BAD PHILOSOPHIES OF SCIENCE

- Verificationism
- **Scientism**
- Naturalism
- Methodological Naturalism



# HOW WE KNOW ACCORDING TO **SCIENTISM**

- Atheist **Alex Rosenberg**: 'Being scientific just means treating science as our exclusive guide to reality... we trust science as the only way to acquire knowledge.' – *An Atheists' Guide to Reality*, 8 & 20
- Atheist **Peter Atkins**: 'I stand by my claim that the scientific method is the only means of discovering the nature of reality... the only way of acquiring reliable knowledge.' – *On Being*, xiii



# PROBLEMS WITH SCIENTISM

- ‘Scientism’ applies verificationism to *epistemology* rather than *meaning*, setting up ‘science’ as the only reliable - or perhaps the most reliable - pathway to rational belief and knowledge
- Like verificationism, ‘scientism’ assumes the existence of a firm distinction or ‘line of demarcation’ between science and philosophy, in order to reject philosophy as a way of knowing and exclude metaphysics from science
- However, as philosopher **Francis J. Beckwith** reports: ‘**The overwhelming consensus in philosophy of science is that demarcation criteria are doomed to failure...**’ - *Law, Darwinism, And Public Education*, 96
- In other words, ‘science’ is and always has been ‘natural philosophy’, and trying to demarcate and separate ‘science’ from ‘philosophy’ leads to problems for science...

The **scientific** demand that *every rational belief must be justified by scientific, empirical evidence* is self-contradictory because:

- a) It can't be justified by scientific, empirical evidence
- b) It entails an infinite regress that can't be satisfied

It's also open to obvious counter-examples (e.g. metaphysical, moral and aesthetic knowledge)



Scientific Knowledge

For example:

- **Coffee exists**
- **Pleasure in drinking coffee exists**
- **Enjoying coffee is good**
- **This is a beautiful cup**



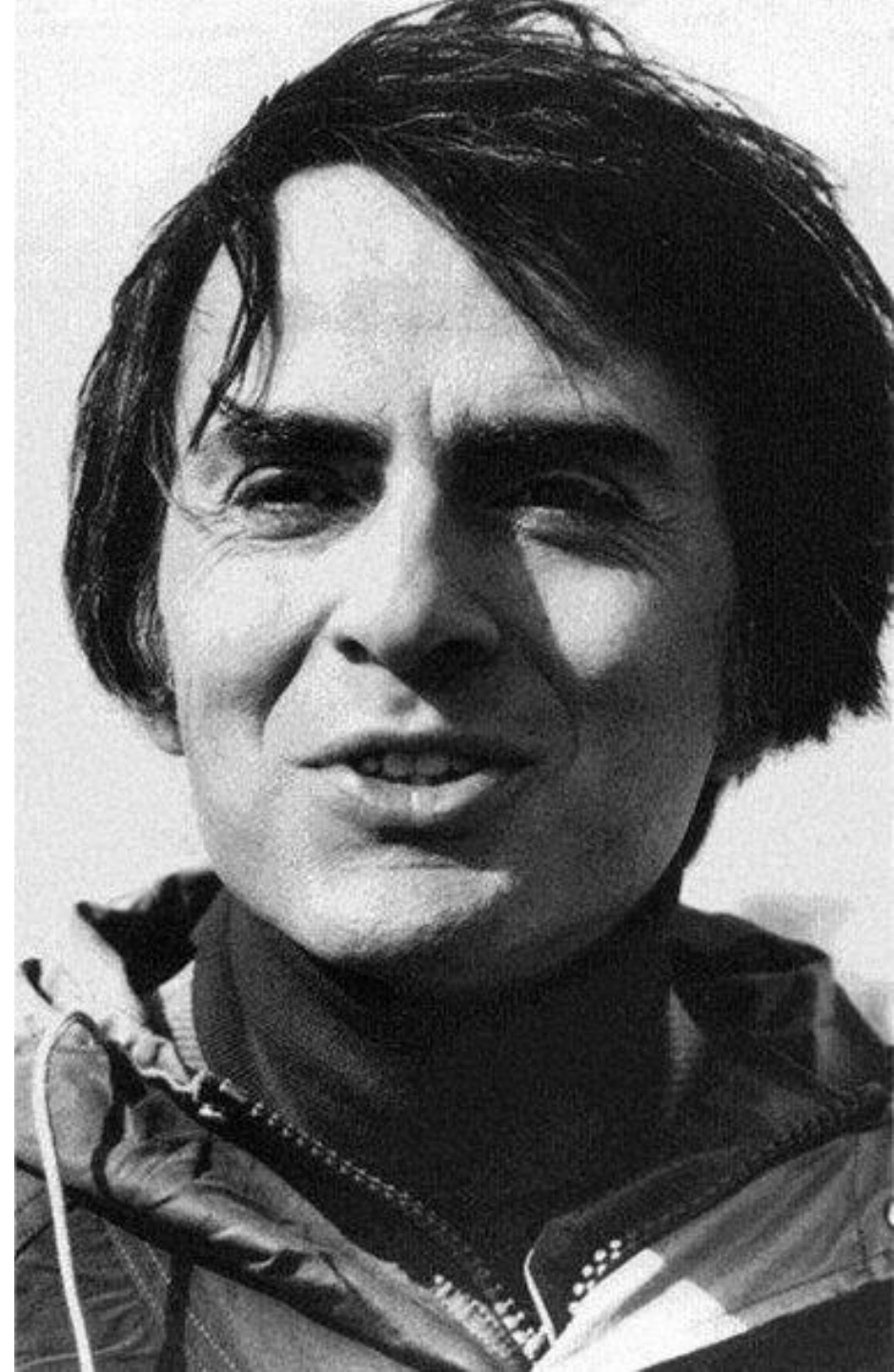
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# SCIENTIFIC NATURALISM

Astronomer **Carl Sagan:**

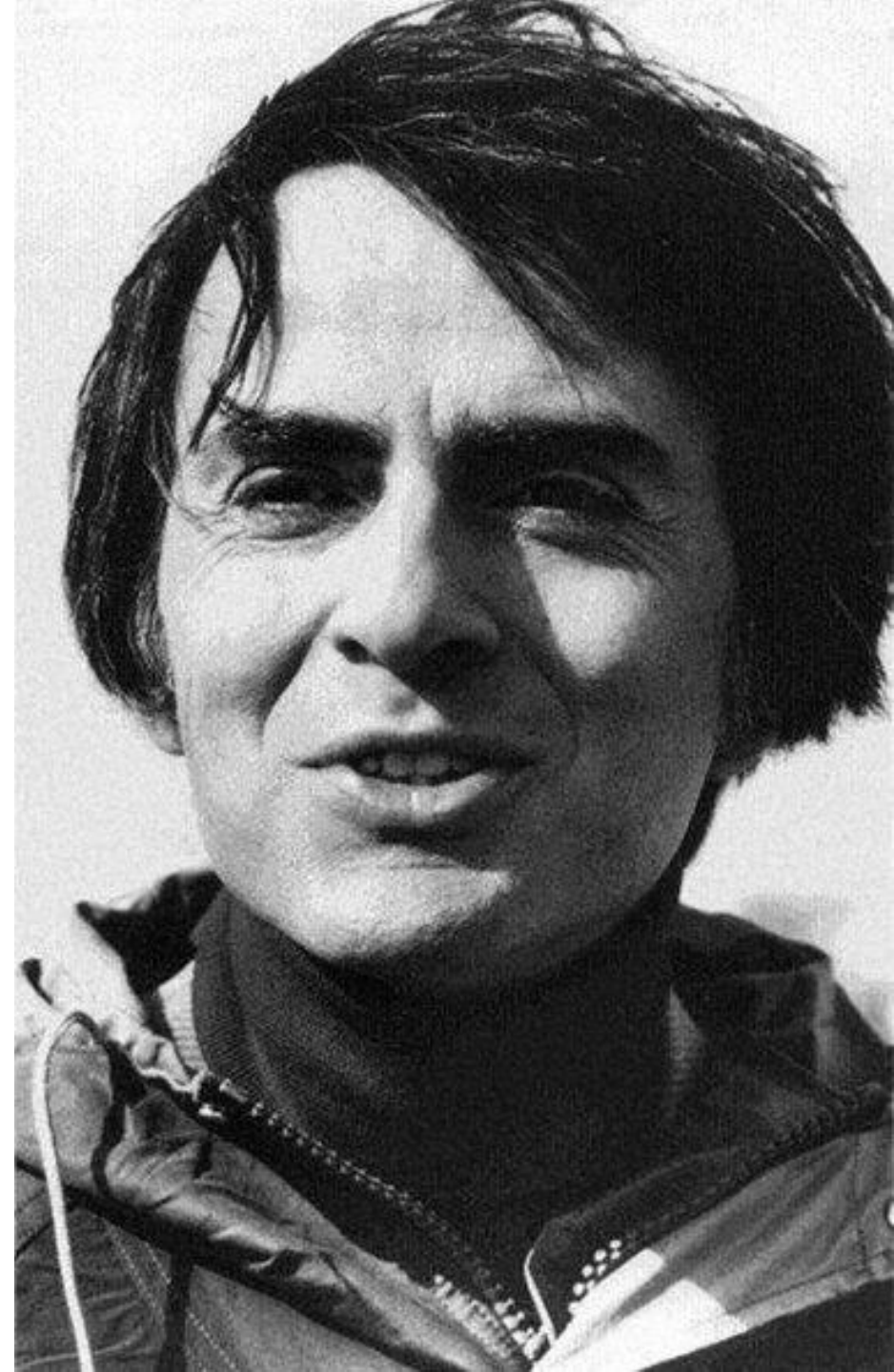
‘The cosmos is all there  
every was, is, or shall be.’ - *Cosmos*



# SCIENTIFIC NATURALISM

Astronomer **Carl Sagan**:  
'The cosmos is all there  
every was, is, or shall be.' - *Cosmos*

This is a statement of **naturalism** by a scientist,  
but we should bear in mind the fact that  
*naturalism is a metaphysical position*





# PROBLEMS WITH SCIENTIFIC NATURALISM

- Science is *not* an inherently naturalistic enterprise (as shown by its Christian origins)
- A scientific description or explanation that doesn't mention God does not thereby *deny* God's existence or *contradict* theism
- Any explanation of empirical data X in terms of a material reality Y always leaves *open philosophical questions* such as 'Why does Y exist?' and 'Is the existence of Y intended or unintended?'

# BAD PHILOSOPHIES OF SCIENCE

- Verificationism
- Scientism
- Naturalism
- **Methodological Naturalism**

# METHODOLOGICAL NATURALISM

The U.S. based *National Academy of Science*:

**‘The statements of science must invoke only natural things and processes.’**

– *Teaching about Evolution and the Nature of Science*. National Academy Press, 1998, 2



# METHODOLOGICAL NATURALISM

The U.S. based *National Academy of Science*:

**‘The statements of science must invoke only natural things and processes.’**

– *Teaching about Evolution and the Nature of Science*. National Academy Press, 1998, 2

- In other words, although science doesn't *deny* the existence of anything supernatural, it must never *mention* anything supernatural

# METHODOLOGICAL NATURALISM

The U.S. based *National Academy of Science*:

‘The statements of science must invoke only natural things and processes.’

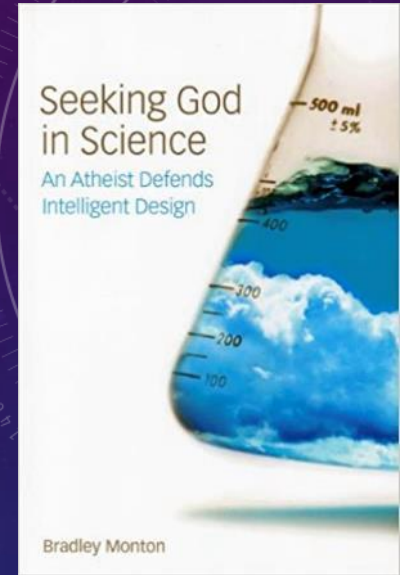
– *Teaching about Evolution and the Nature of Science*. National Academy Press, 1998, 2

- In other words, although science doesn't *deny* the existence of anything supernatural, it must never *mention* anything supernatural
- **Why?**
- **Is this a good rule to adopt?**

# REJECTING METHODOLOGICAL NATURALISM

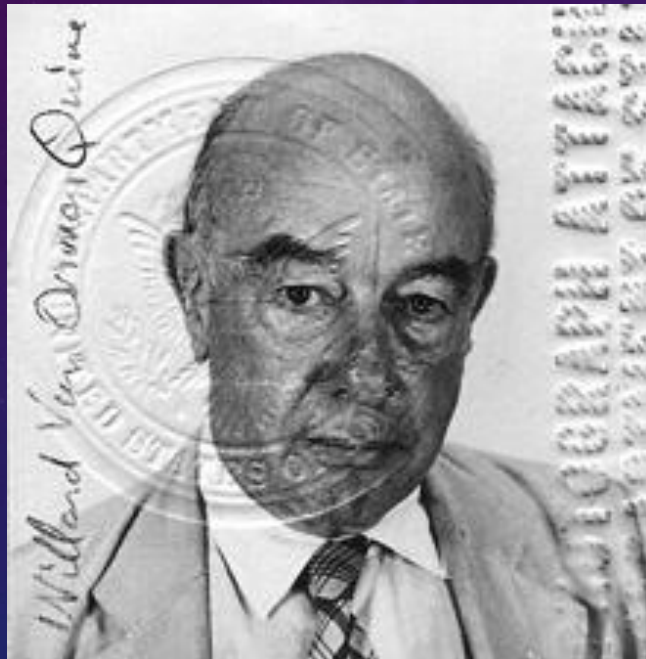
Atheist philosopher of science **Bradley Monton**:

‘If science really is permanently committed to methodological naturalism, it follows that the aim of science is not generating true theories. Instead, the aim of science would be something like: generating the best theories that can be formulated subject to the restriction that the theories are naturalistic... science is better off without being shackled by methodological naturalism..’



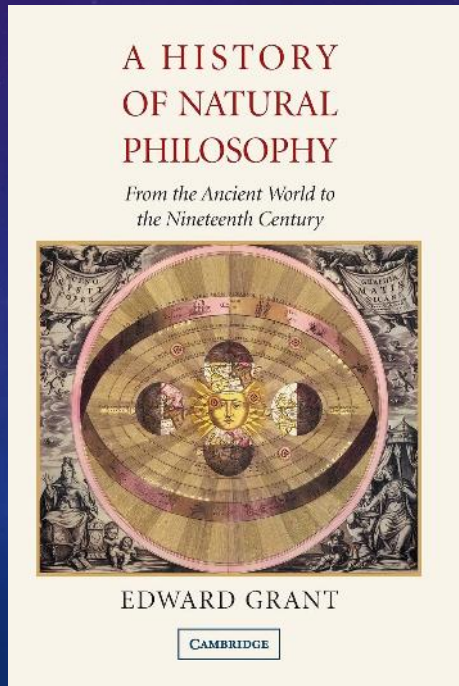
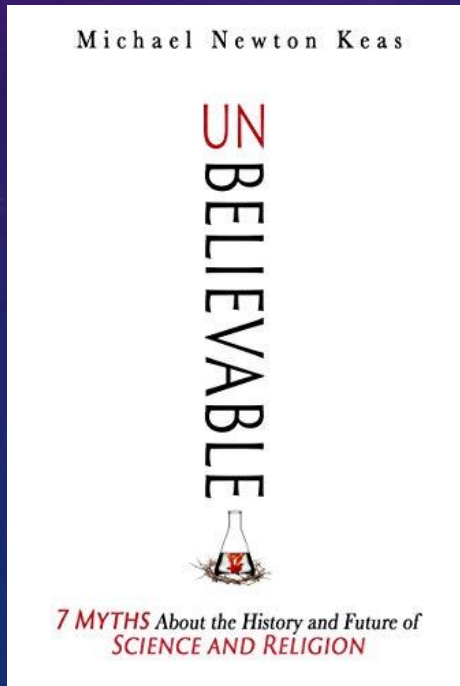
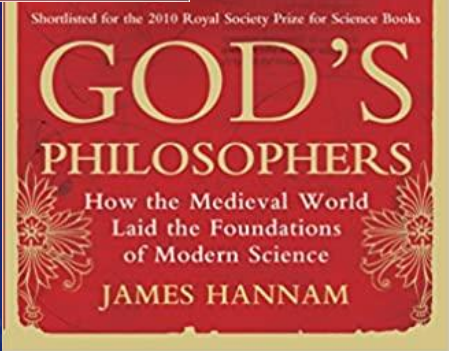
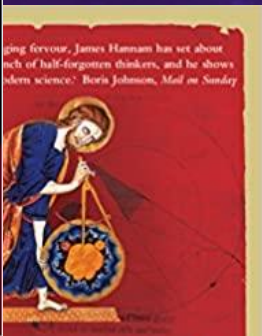
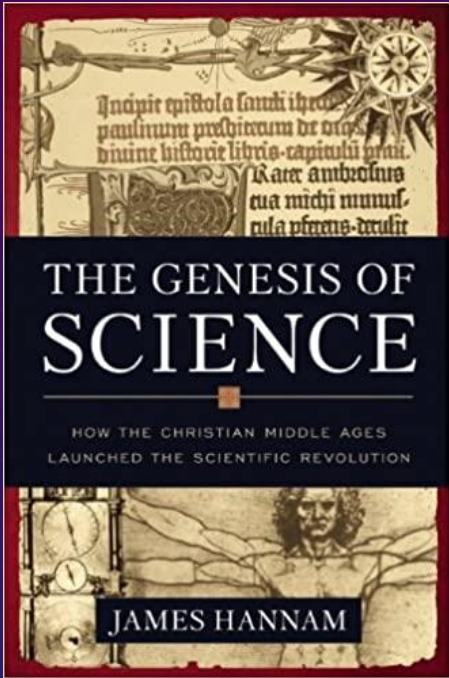
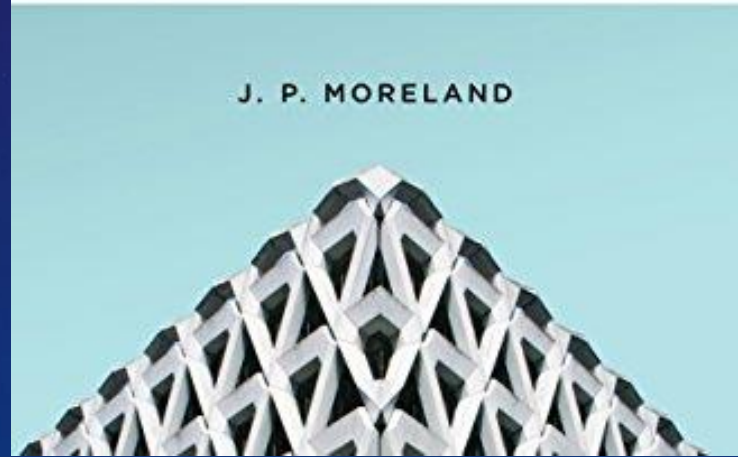
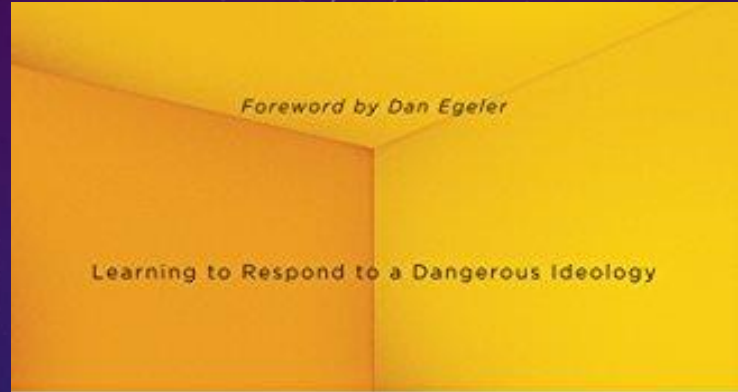
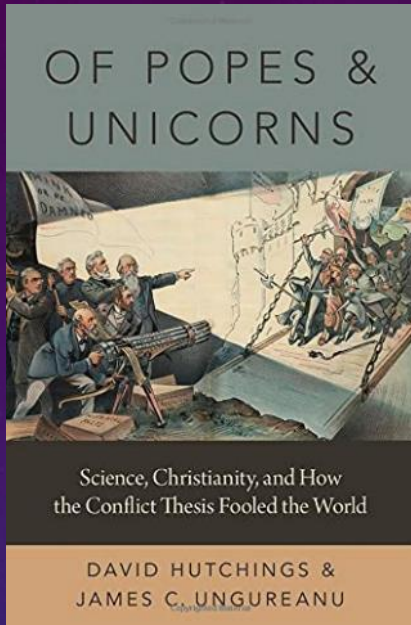
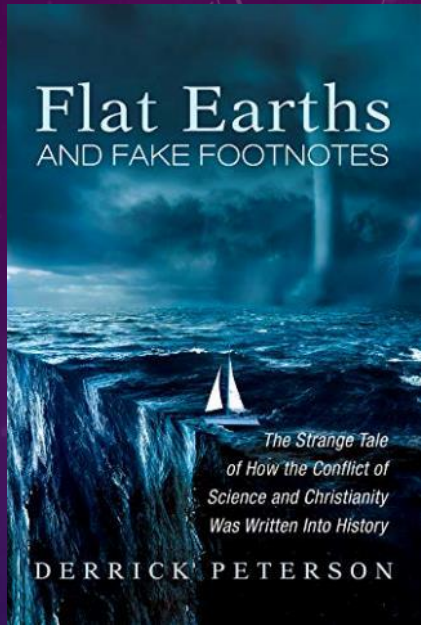


# ATHEIST PHILOSOPHER WILLARD V. QUINE:



‘If I saw indirect explanatory benefit in positing... spirits, a Creator, I would joyfully accord them scientific status too, on a par with such avowedly scientific posits as quarks and black holes.’

- ‘Naturalism; or, Living within One’s Means’ *Dialectica* 49 (1995), 252



# COSMOLOGY & GOD

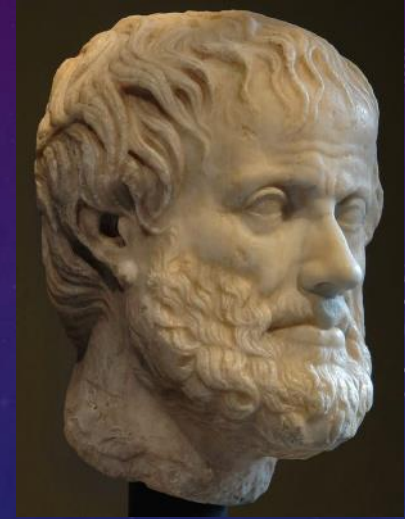


With **Peter S. Williams**  
[www.peterswilliams.com](http://www.peterswilliams.com)



# PHILOSOPHICAL COSMOLOGY

- Ancient Greek philosophers such as **Aristotle** thought the universe was infinitely old and thus had no beginning
- During late antiquity and the medieval period, many theistic thinkers broke with this tradition on theological and philosophical grounds
- For example, the twelfth-century medieval Muslim philosopher **Al-Ghazali** argued that the idea of actual infinities entailed various absurdities, such that the past must be finite and the universe must therefore have had a beginning



# PHILOSOPHICAL COSMOLOGY

- **Al-Ghazali** made the finitude of the past a premise in an argument for God known today as the **Kalam** cosmological argument, writing that:

‘Every being which begins has a cause for its beginning; now the world is a being which begins; therefore, it possesses a cause for its beginning.’

- Jonathan McLatchie, ‘A Beginner’s Guide to the Kalam Cosmological Argument’ [www.solas-cpc.org/a-beginners-guide-to-the-kalam-cosmological-argument/](http://www.solas-cpc.org/a-beginners-guide-to-the-kalam-cosmological-argument/)



# PHILOSOPHICAL COSMOLOGY

- Belief in a universe with no beginning became fashionable again in the 18<sup>th</sup> century, due in part to the influence of German philosopher **Immanuel Kant**

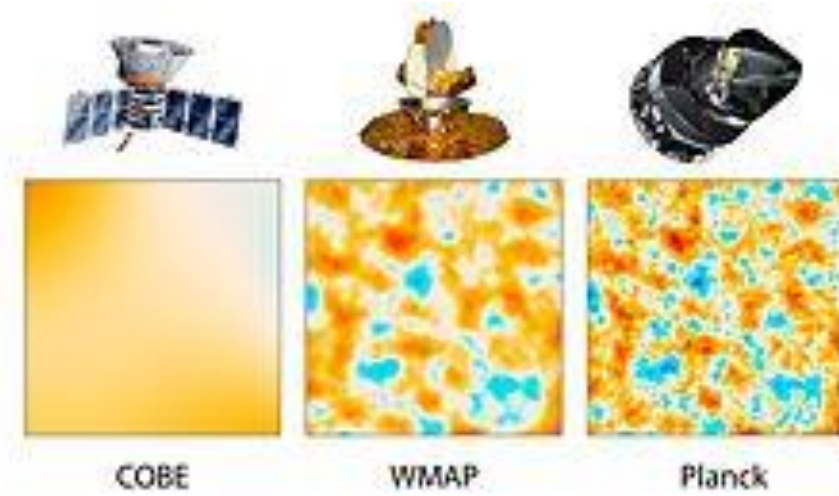
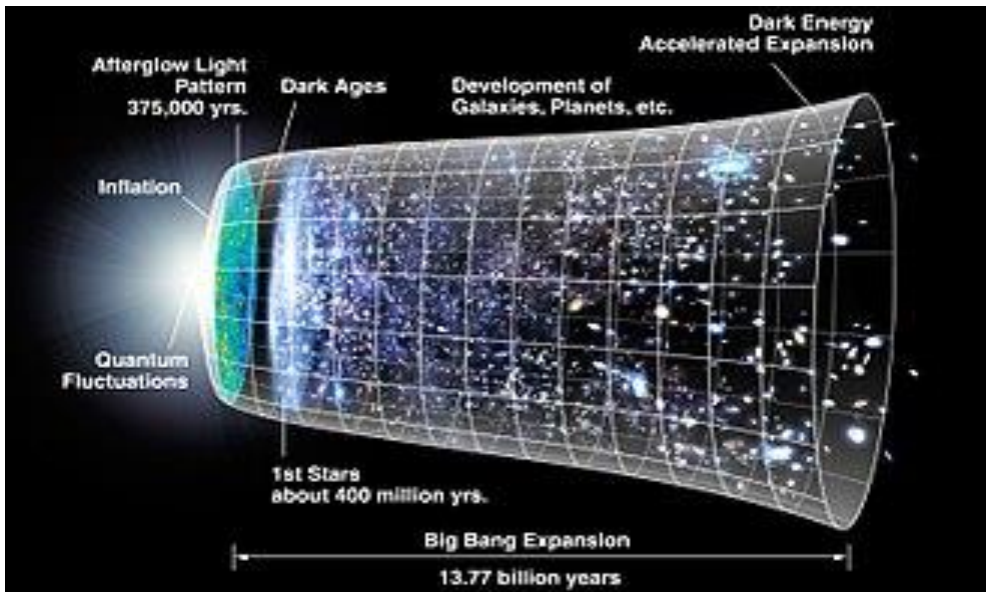


- As philosopher of science **Stephen C. Meyer** observes: 'Few physicists or astronomers at the beginning of the twentieth century doubted the infinite age of the universe...' - *The Return of the God Hypothesis*. HarperOne,



# SCIENTIFIC COSMOLOGY

- In 1927 Belgian cosmologist (and Catholic priest) **George Lemaitre** combined Einstein's theory of gravity with the observation of a Doppler shift in the light from distant galaxies to formulate what would come to be known as the 'big bang' theory of the origins of the universe
- Big bang cosmology has developed over time, but the basic picture of a universe with a beginning a finite time ago has been the scientific consensus since the 1965 discovery of the cosmic background radiation left over from the 'big bang'



CMB results from COBE (1992), WMAP (2003) and Planck (2013)

# SCIENTIFIC COSMOLOGY

To quote from *New Scientist*:

‘The big bang is now part of the furniture of modern cosmology... It now seems certain that the universe did have a beginning. Without an escape clause, physicists and philosophers must finally answer a problem that has been nagging at them for the best part of 50 years: how do you get a universe, complete with the laws of physics, out of nothing.’

- ‘In the beginning’, *New Scientist*, 14<sup>th</sup> January 2012, 3

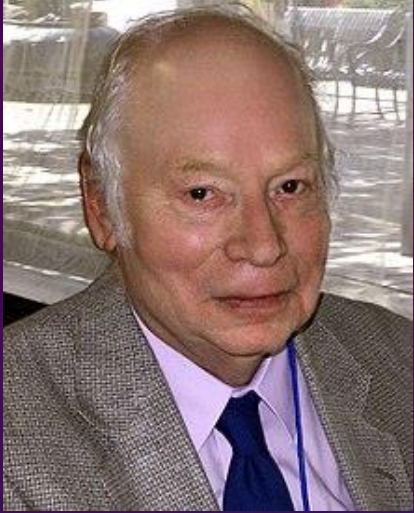
- Big Bang cosmology ‘describes the evolution of the universe from a hot, dense state, but it does not say anything about what brought the universe into existence.’ - Marcus Chown, ‘In The Beginning’, *New Scientist*, 1 December, 2012, 33

- ‘Big Bang’ cosmology offers *a description* of the cosmic past as finite, *not an explanation* of that finite cosmic past

- Atheist philosopher of science **Bradley Monton**:

‘if the universe had a beginning, then that lends support to... the *kalam cosmological argument*.’ – *Seeking God in Science*. Broadview, 2009, 21





## Atheist Nobel laureate in Physics **Steven Weinberg**:

‘The Big Bang theory is as certain as anything in science. I suppose nothing in science is ever mathematically certain like two plus two equals four, but it is the kind of certainty that simply makes it not worthwhile considering alternatives.’ – *Exploring The God Question: Big Bang*

## Atheist Cosmologist **Alexander Vilenkin**:

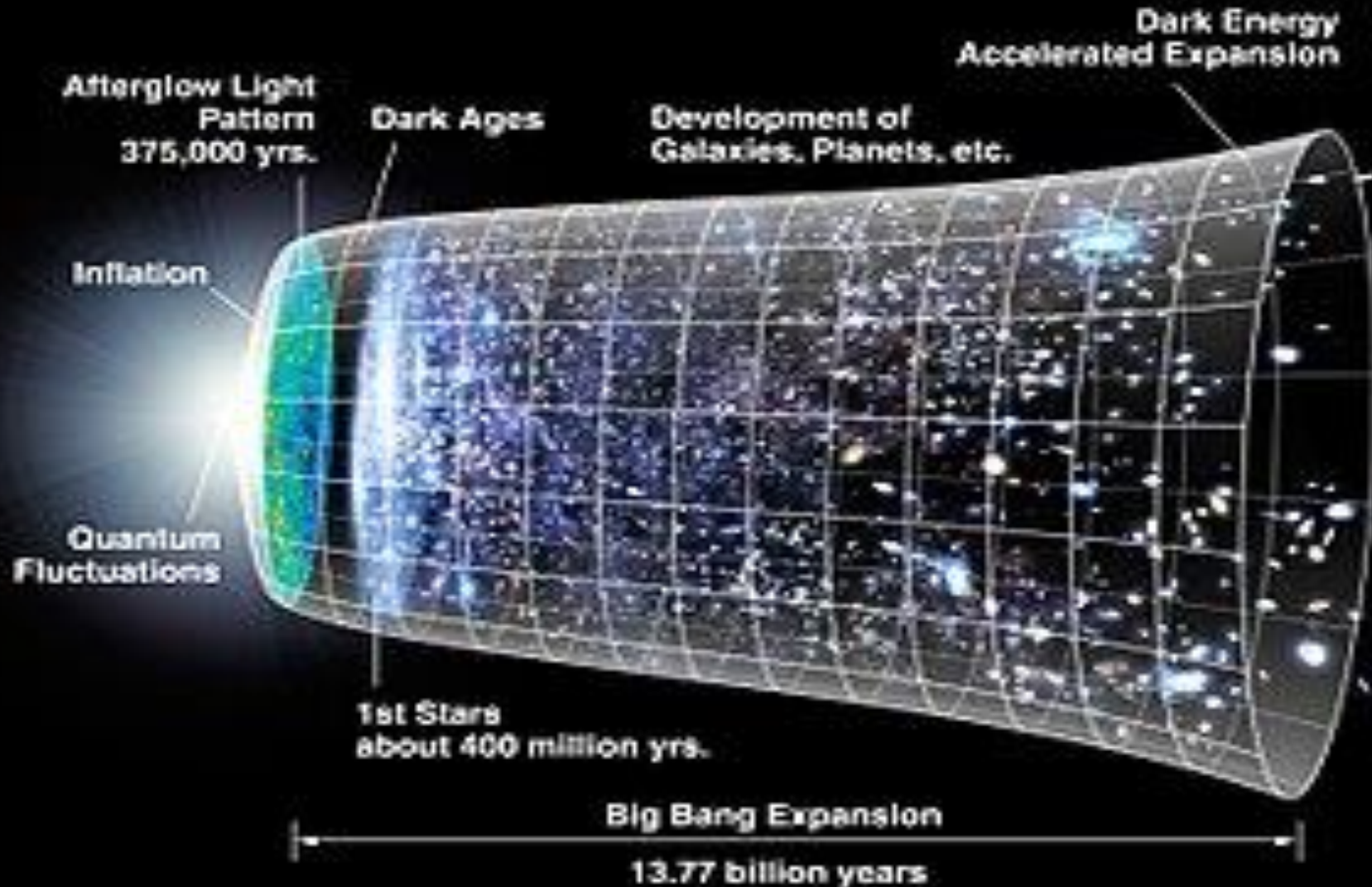
‘All the evidence we have says that the universe had a beginning.’ – quoted by Lisa Grossman, ‘Death of the eternal cosmos’, *New Scientist*, 14<sup>th</sup> January 2012, 7

‘The answer to the question, “Did the Universe have a beginning?” is, “it probably did.” We have no viable models of an eternal universe.’ – ‘The Beginning of the Universe’ in *The Kalam Cosmological Argument: Volume Two* (Bloomsbury Academic, 2018), 155



## A Kalam Argument: Stage One

**Premise 1)** There was probably a first physical event



## A Kalam Argument: Stage One

Premise 1) There was probably a first physical event

**Premise 2)** Every physical event has at least one cause outside of itself





## AN ARGUMENT FOR PREMISE 2

- 1) Anything contingent/dependent has at least one cause outside of itself
- 2) Physical events are contingent/dependent
- 3) Therefore, every physical event has at least one cause outside of itself

## A Kalam Argument: Stage One

Premise 1) There was probably a first physical event

Premise 2) Every physical event has at least one cause outside of itself

**Conclusion)** Therefore, there was probably a first physical event with at least one cause outside of itself

## A Kalam Argument: Stage Two

Premise 1) There was probably a first physical event

Premise 2) Every physical event has at least one cause outside of itself

Premise 3) Therefore, there was probably a first physical event with at least one cause outside of itself

**Premise 4)** Any first physical event must have a non-physical cause



## A Kalam Argument: Stage Two

Premise 1) There was probably a first physical event

Premise 2) Every physical event has at least one cause outside of itself

Premise 3) Therefore, there was probably a first physical event with at least one cause outside of itself

Premise 4) Any first physical event must have a non-physical cause

**Conclusion)** *Therefore, there was probably a first physical event with a non-physical cause*



Suppose I ask you to loan me a book and you say:

'I don't have a copy right now, but I'll ask my friend to lend me his copy and then I'll lend it to you.'

Suppose your friend says the same thing to you, and so on

Two things are clear

First, if the process of asking to borrow the book goes on *ad infinitum*, I'll never get the book

Second, if I get the book, the process that led to me getting it can't have gone on *ad infinitum*

Somewhere down the line of requests to borrow the book, someone *had* the book *without having to borrow it*



Likewise, argues philosopher **Richard Purtill**, consider any *contingent* or *dependent* reality (such as any physical event, including any *first* physical event):

‘the same two principles apply. If the process of everything getting its existence from something else went on to infinity, then the thing in question would never [have] existence. And if the thing has... existence then the process hasn’t gone on to infinity. There was something that had existence without having to receive it from something else...’

- Purtill quoted by Charles Taliaferro, *Contemporary Philosophy of Religion*. Blackwells, 2001, 358-359



So, as philosopher **Dallas Willard** argued:

‘the dependent character of all physical states, together with the completeness of the series of dependencies underlying the existence of any given physical state, logically implies **at least one self-existent, and therefore nonphysical, state of being.**’

- ‘The Three-Stage Argument for the Existence of God’ in *Contemporary Perspectives on Religious Epistemology* ed. Douglas Geivett & Brendan Sweetman; Oxford University Press, 1992



# PART OF THE PUZZLE OF EXISTENCE...

A **'self-existent [i.e. independent], and therefore nonphysical, state of being'** that caused the existence of the physical universe is a good slice of what theists mean by 'God'

# FINE TUNING

- Beginning with atheist astrophysicist **Fred Hoyle's** 1953 prediction of a finely tuned resonance state in the carbon 12 atomic nucleus (later verified and known as the Hoyle state), scientists have come to recognize that the existence of life, and most especially of what philosopher **Robin Collins** calls **'embodied conscious agents (ECAs)'** like ourselves (that is, observers able to **'significantly interact with each other'** and to **'develop scientific technology and discover the universe'**) depends upon a staggering degree of cosmic (and more local, planetary) **'fine tuning'** - Robin Collins, "Modern Cosmology and

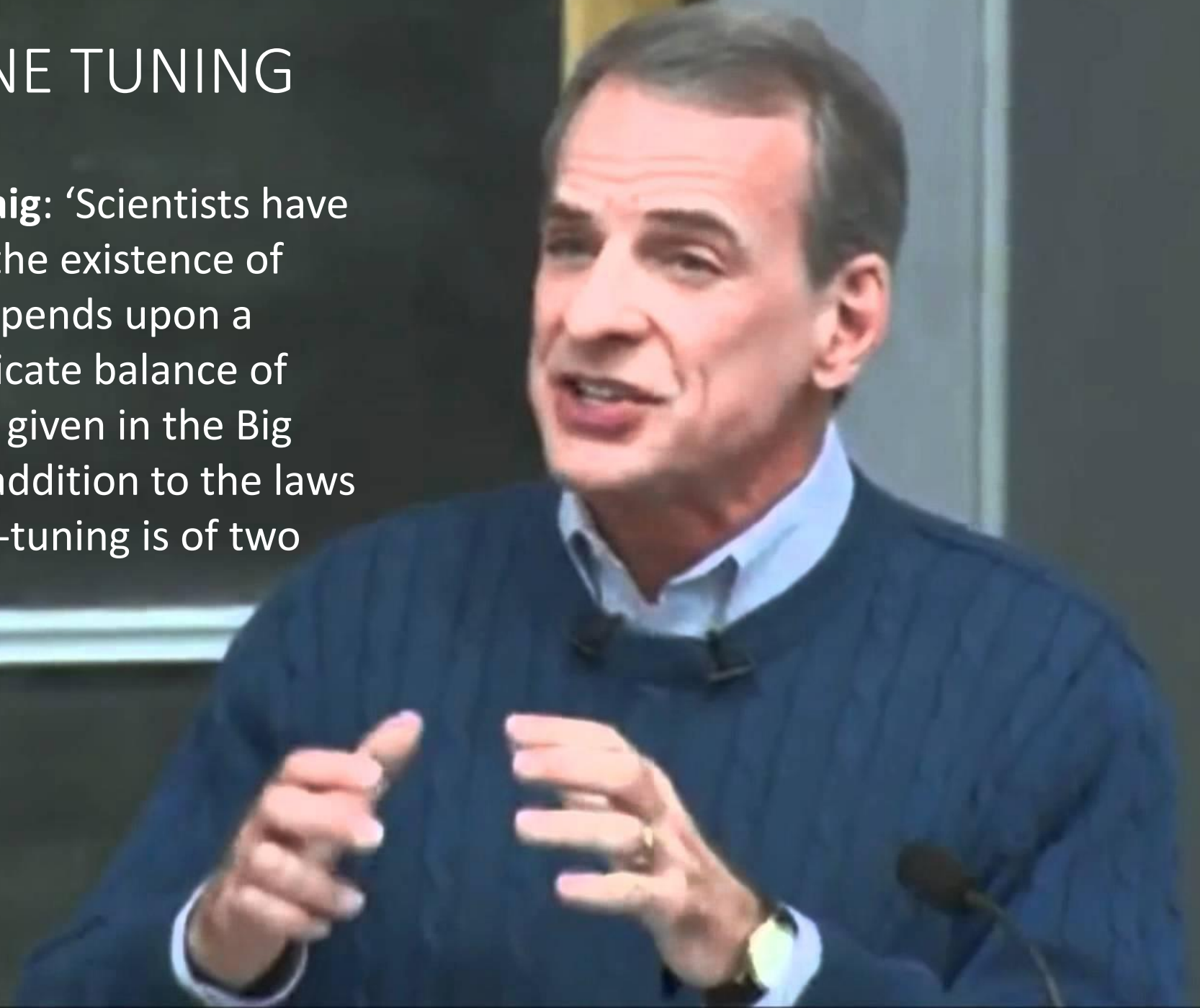
Anthropic Fine-tuning: Three Approaches" in *George Lemaitre: Life, Science and Legacy* (Rodney D. Holder and Simon Mitton ed.'s. Springer, 2013), 173-191 (See: Rodney D. Holder, *Ramified Natural Theology in Science and Religion*, 56; Denton, *Nature's Destiny*; Gonzalez and Richards, *The Privileged Planet*; Ward and Brownlee, *Rare Earth*; Waltham, *Lucky Planet*)



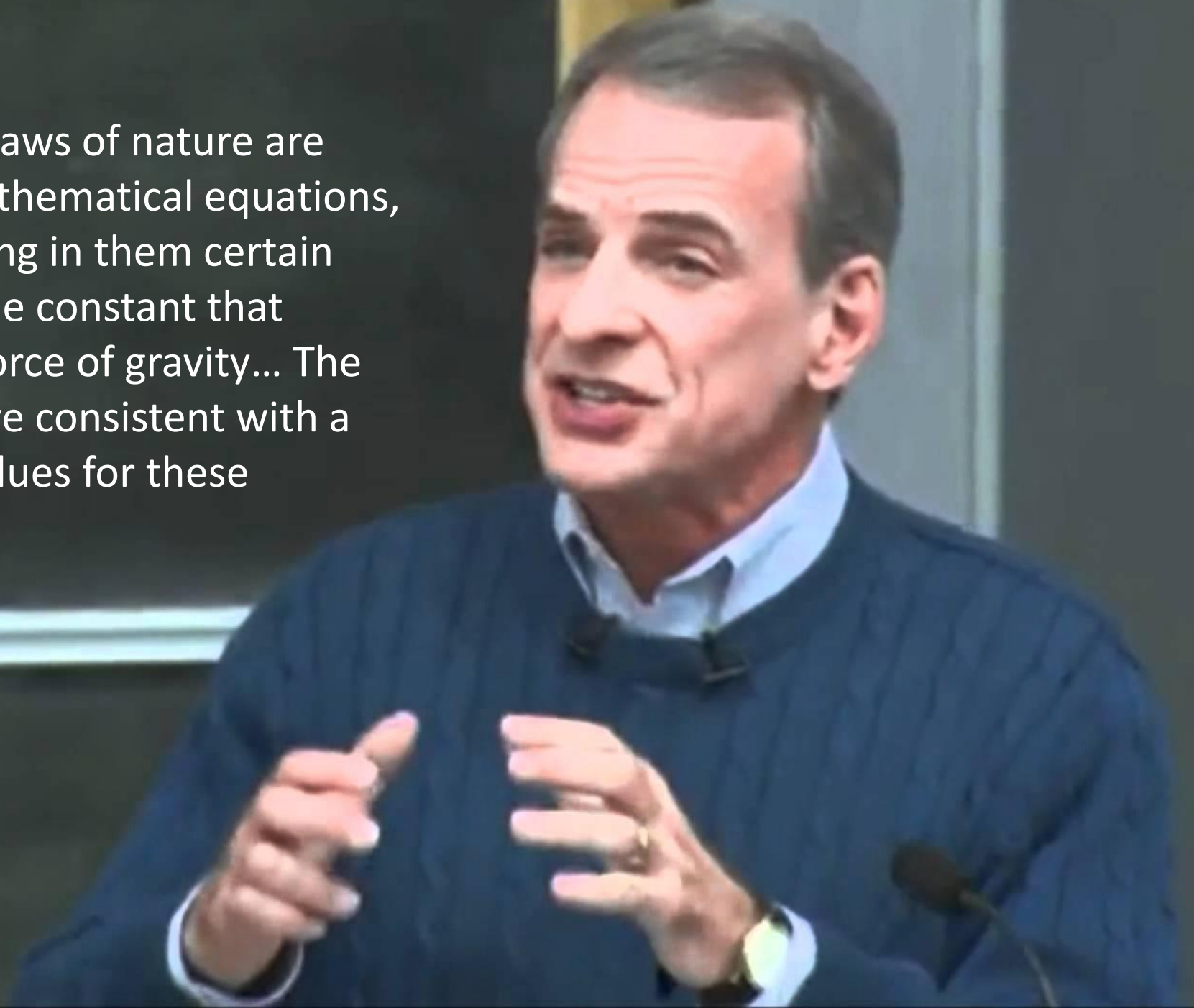


# COSMIC FINE TUNING

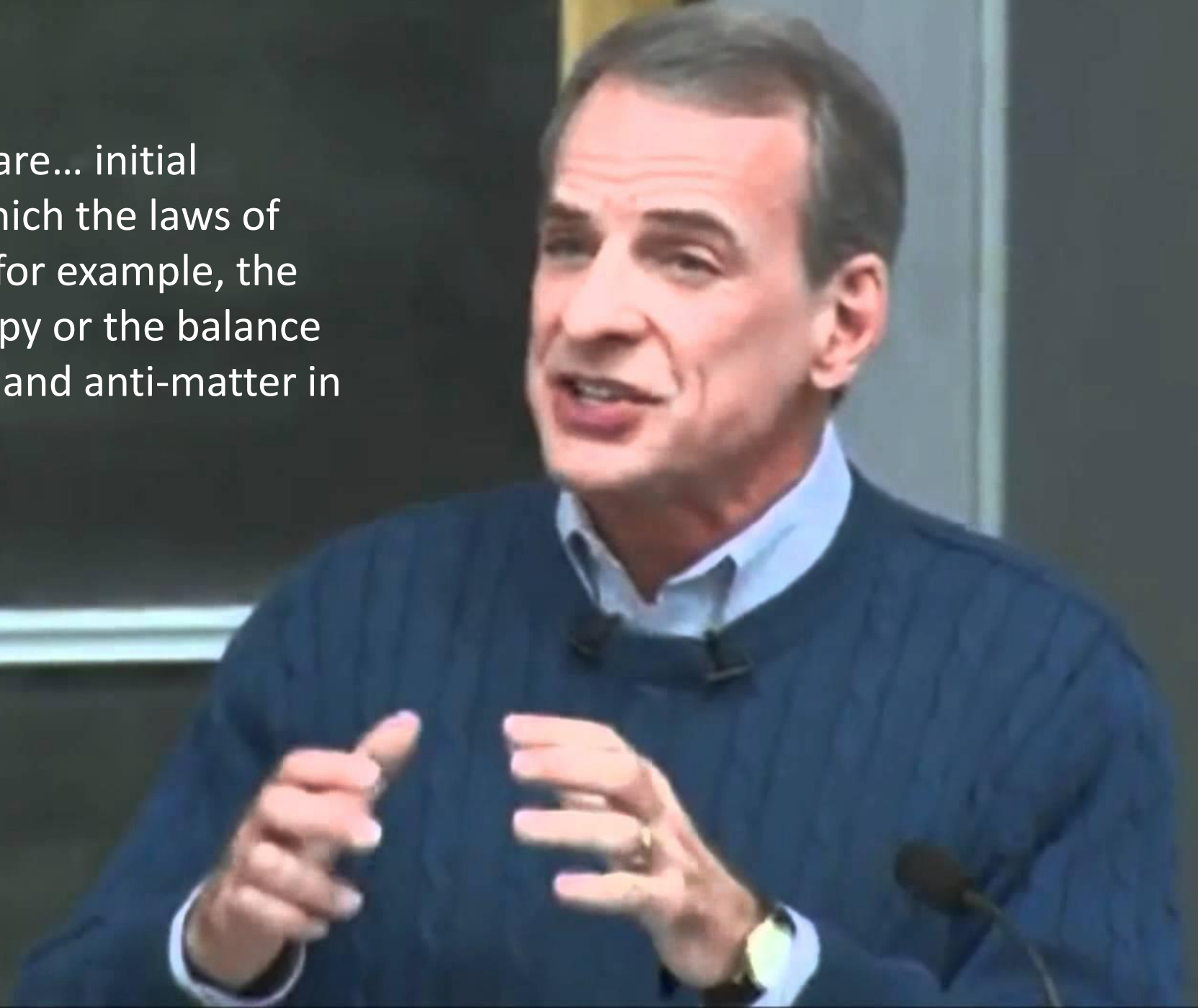
**William Lane Craig:** 'Scientists have discovered that the existence of intelligent life depends upon a complex and delicate balance of initial conditions given in the Big Bang itself... [In addition to the laws themselves] fine-tuning is of two sorts.'



'First, when the laws of nature are expressed as mathematical equations, you find appearing in them certain constants, like the constant that represents the force of gravity... The laws of nature are consistent with a wide range of values for these constants.'

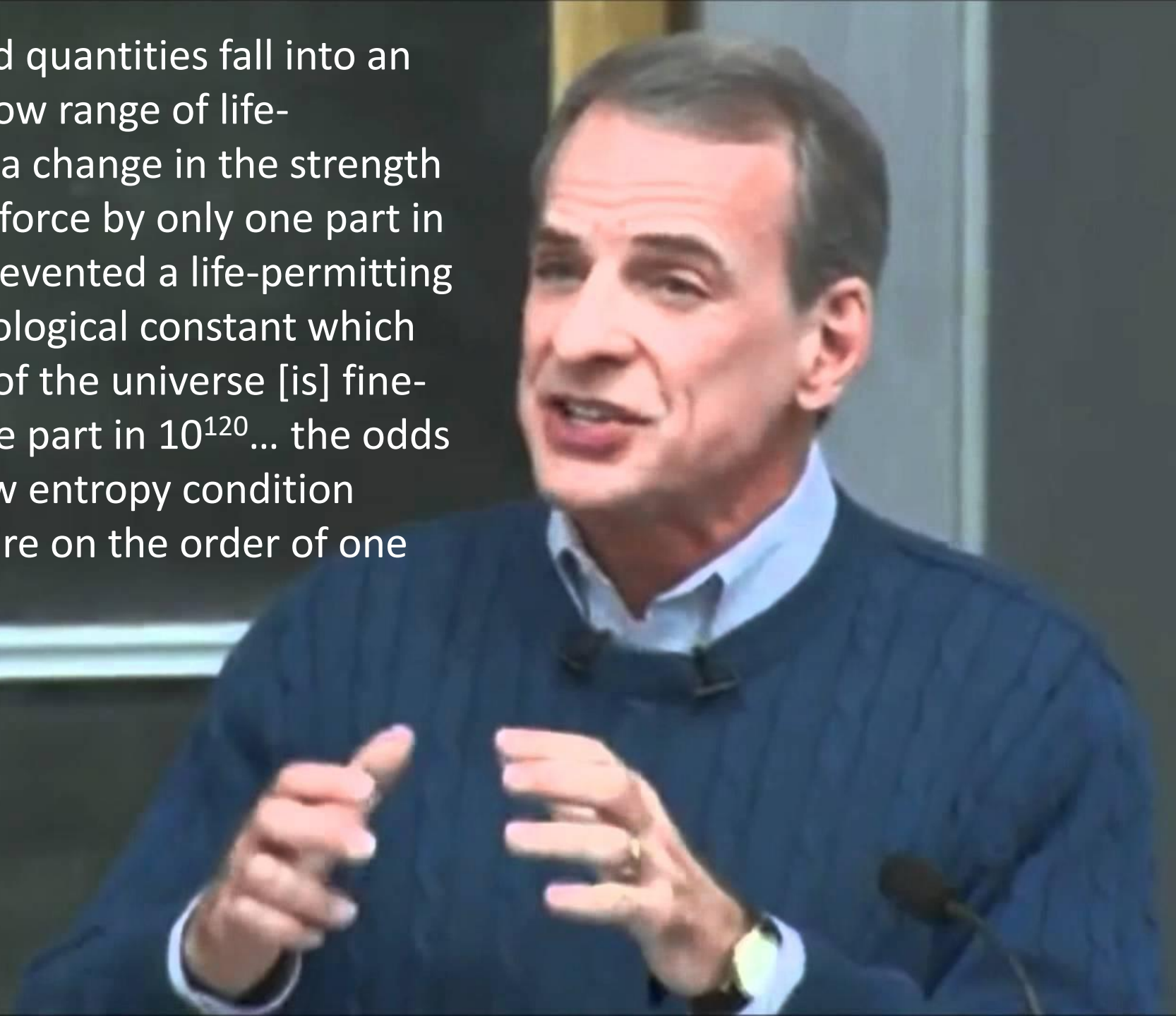


‘Second... there are... initial conditions on which the laws of nature operate, for example, the amount of entropy or the balance between matter and anti-matter in the universe.’

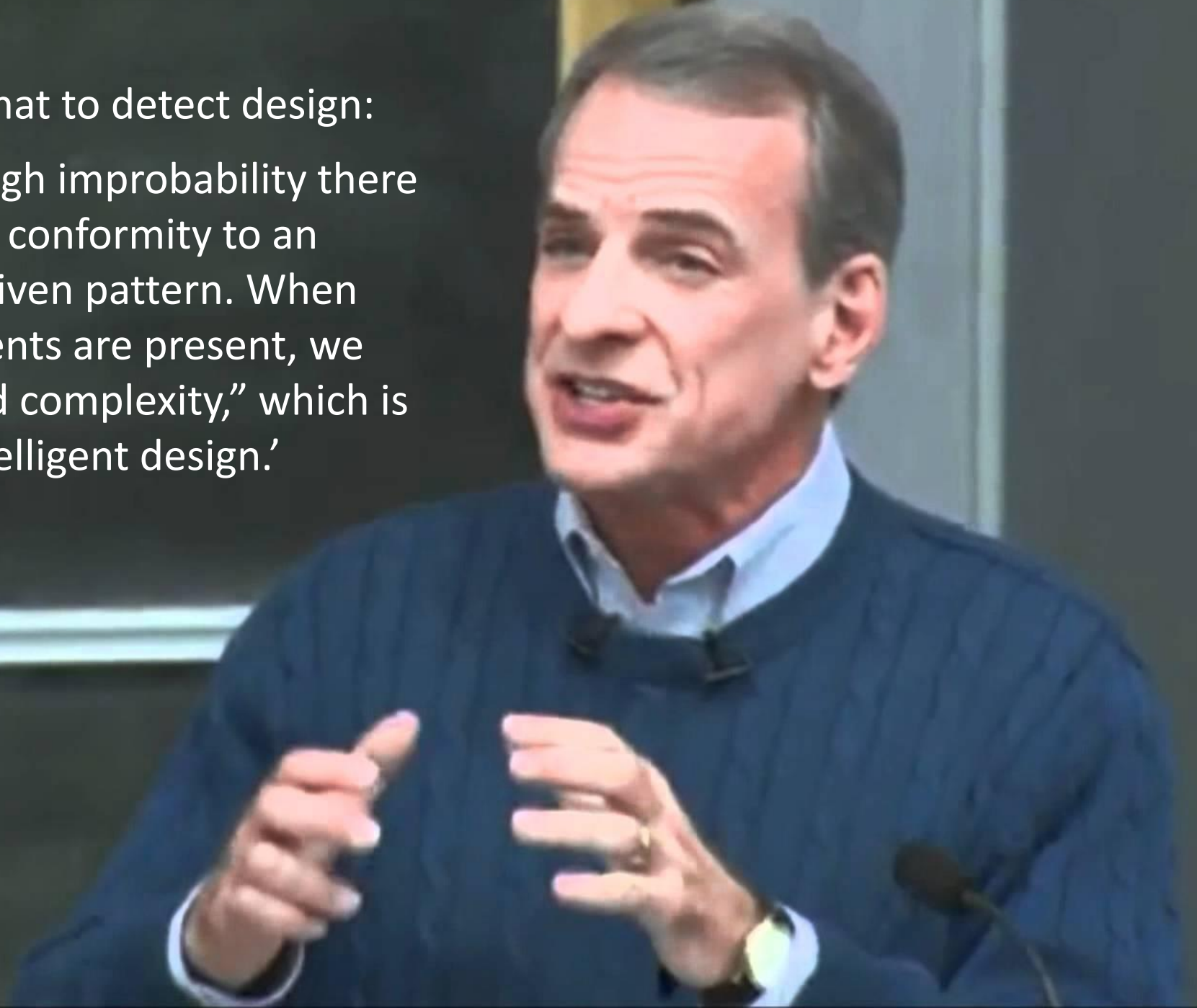




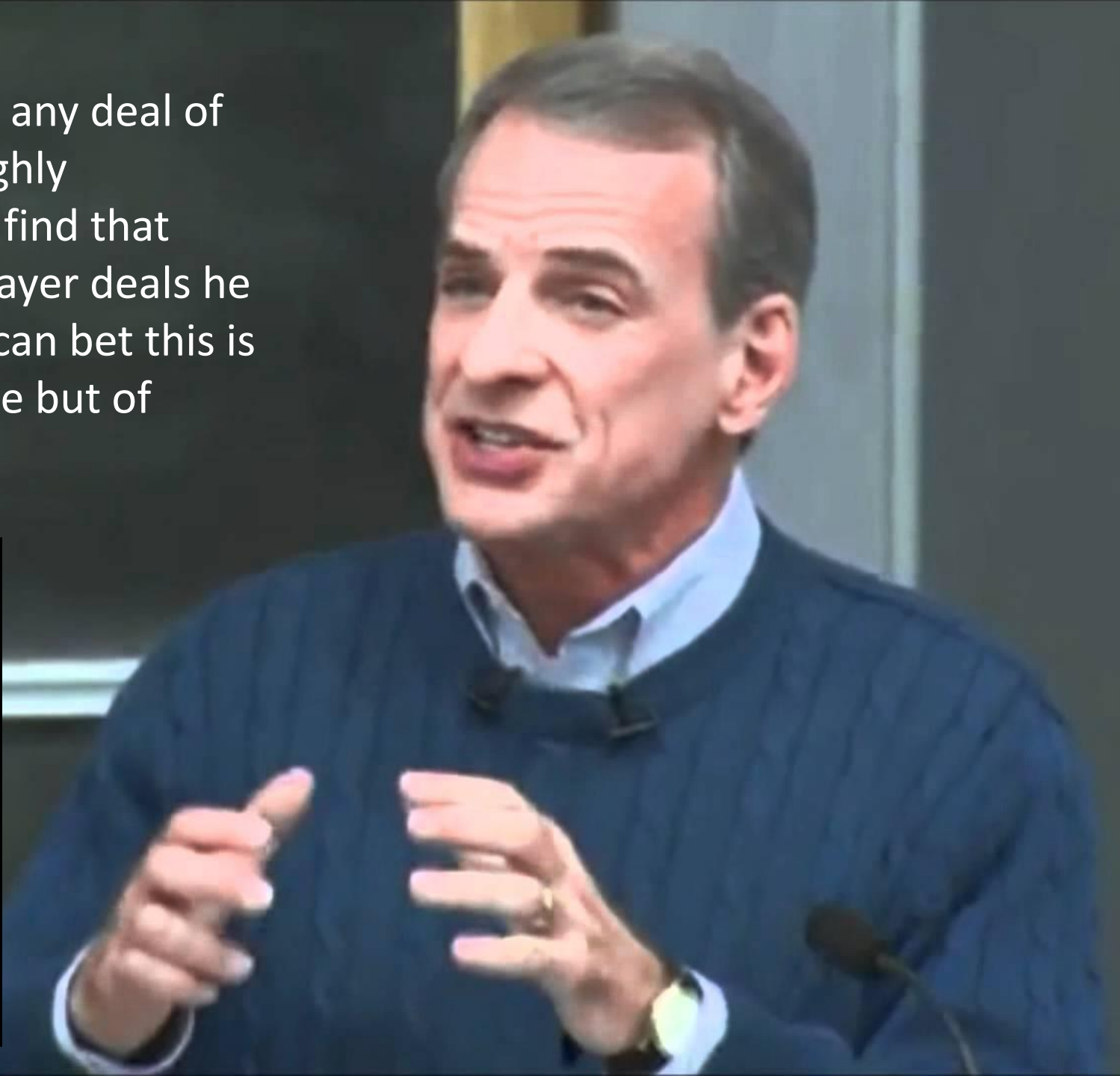
‘these constants and quantities fall into an extraordinarily narrow range of life-permitting values... a change in the strength of the atomic weak force by only one part in  $10^{100}$  would have prevented a life-permitting universe. The cosmological constant which drives the inflation of the universe [is] fine-tuned to around one part in  $10^{120}$ ... the odds of the Big Bang’s low entropy condition existing by chance are on the order of one out of  $10^{10^{123}}$ .’



Craig observes that to detect design:  
'in addition to high improbability there also needs to be conformity to an independently given pattern. When these two elements are present, we have... "specified complexity," which is the tip-off to intelligent design.'



‘Thus, in a poker game any deal of cards is equally and highly improbable, but if you find that every time a certain player deals he gets all four aces, you can bet this is not the result of chance but of design.’





**Espen Løkhammer:**

'[Cosmologist Luke] Barnes has calculated, using conservative numbers, the combined odds... that a life-permitting universe should exist on naturalism is less than **one part out of  $10^{136}$** . It is difficult to exaggerate how unlikely **this is.**' - <https://mfopen.mf.no/mf-xmlui/bitstream/handle/11250/2825311/1007%20L%C3%B8khammer%2C%20Espen.pdf?sequence=1&isAllowed=y>

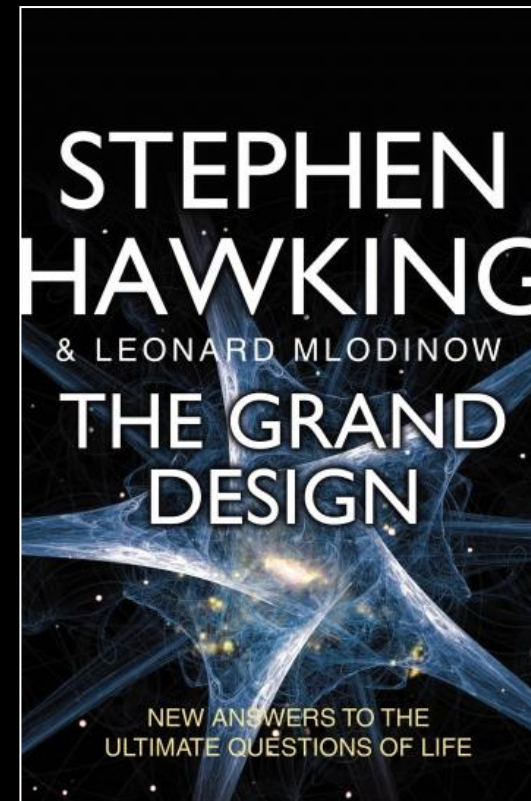


'physicist **Lee Smolin** has calculated that the odds of life-compatible numbers coming up by chance is **1 in  $10^{229}$** .' - [www.scientificamerican.com/article/our-](http://www.scientificamerican.com/article/our-improbable-existence-is-no-evidence-for-a-multiverse/)

[improbable-existence-is-no-evidence-for-a-multiverse/](http://www.scientificamerican.com/article/our-improbable-existence-is-no-evidence-for-a-multiverse/)



‘the initial state of the universe had to be set up in a **very special and highly improbable way.**’ <sup>(130)</sup>



1) The 'fine tuning' of the universe exhibits '**specified complexity**'



'the initial state of the universe had to be set up in a **very special and highly improbable way.**'

2) Things exhibiting '**specified complexity**' are probably designed

3) Therefore, the 'fine tuning' of the universe was probably designed



1) The 'fine tuning' of the universe exhibits **'specified complexity'**

The 'Many Universes' objection denies premise 1 by hypothesizing the existence of an infinite, or at least a very large 'multiverse' of differently tuned universes

2) Things exhibiting **'specified complexity'** are probably designed

3) Therefore, the 'fine tuning' of the universe was probably designed



# THE MULTIVERSE OBJECTION

**Atheist Richard Dawkins suggests:**

‘there are billions of universes having different laws and constants... we could only find ourselves in one of the minority of universes whose laws and constants happen to be propitious to [i.e. to allow] our evolution.’



# EIGHT PROBLEMS WITH THE MULTIVERSE HYPOTHESIS:

- 1) Speculative
- 2) Complex
- 3) Empirically unverified/unverifiable
- 4) Ad hoc
- 5) Insufficient to explain away the data
- 6) Question Begging
- 7) Undermines science
- 8) Strongly disconfirmed by evidence

Most of these objections apply 'in spades' to an actually infinite multiverse, and there are additional objections to an actually infinite multiverse!

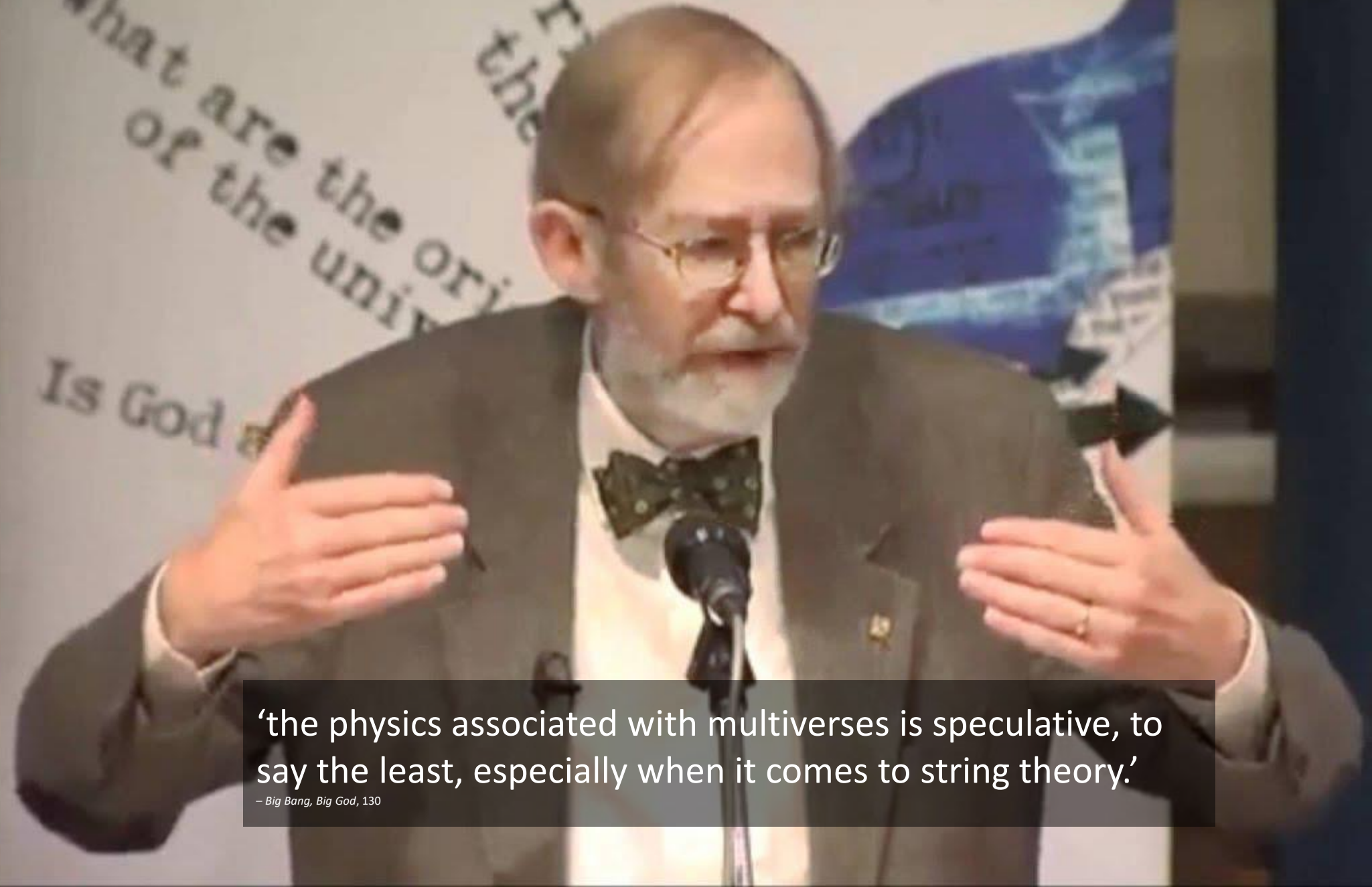




1) SPECULATIVE



# ASTROPHYSICIST RODNEY HOLDER:



‘the physics associated with multiverses is speculative, to say the least, especially when it comes to string theory.’

– *Big Bang, Big God*, 130

2) COMPLEX







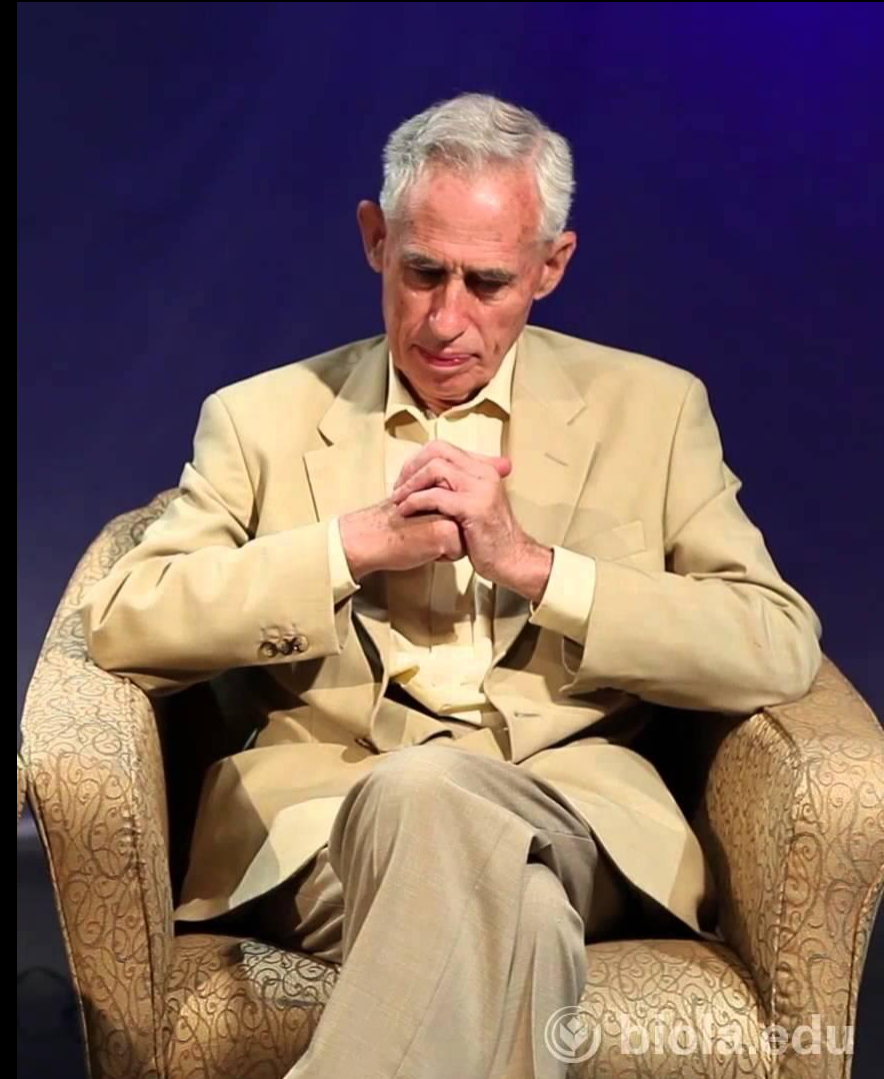
You'd need *lots* of *differently tuned* universes to improve the odds of having a single life permitting universe

That's a lot of complexity to posit just to avoid  
common sense

**Richard Swinburne:**

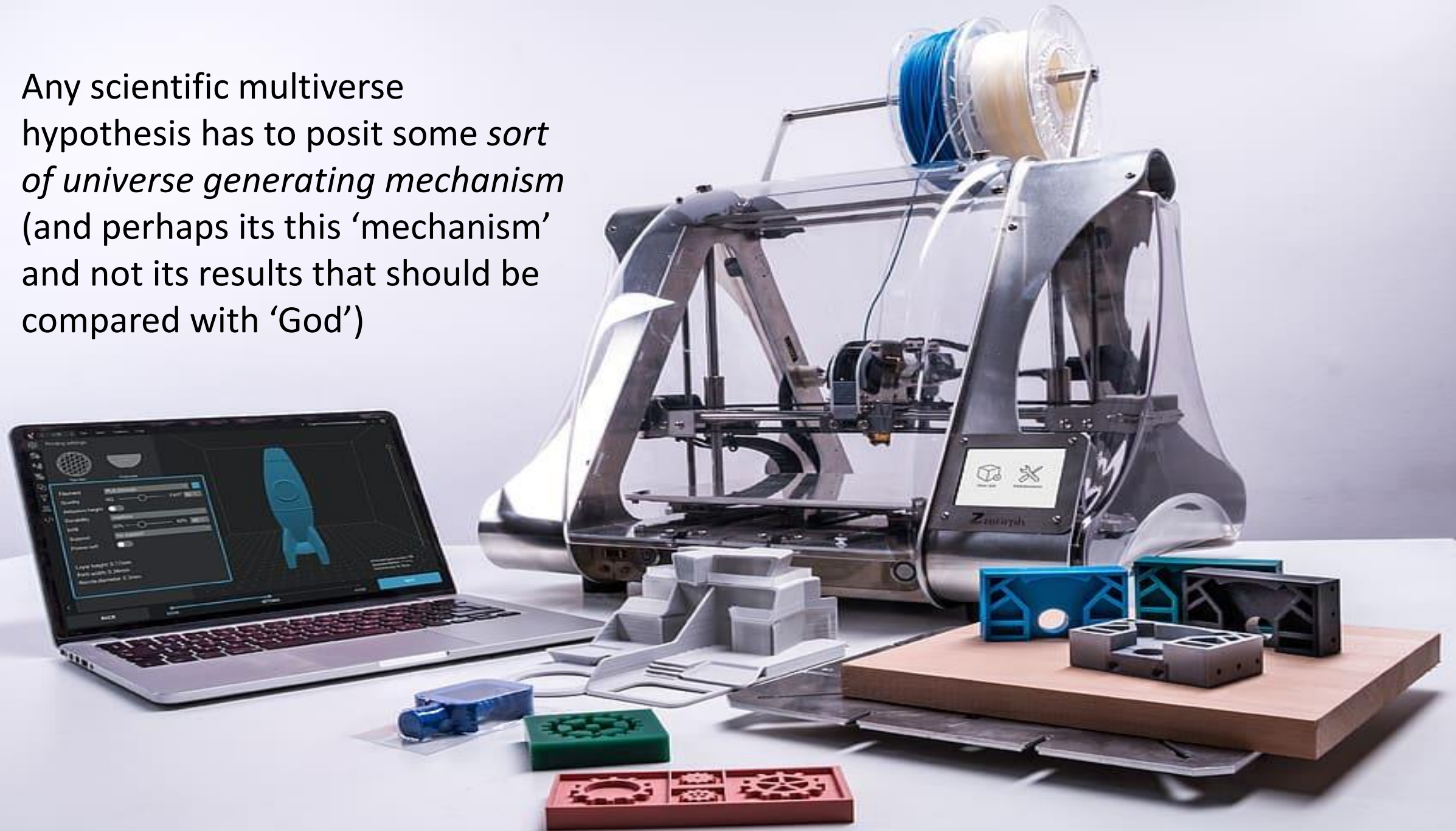
'To postulate a trillion-trillion other universes, rather than one God, in order to explain the orderliness of our universe, seems the height of irrationality.'

- *Is There A God?* (OUP), 68





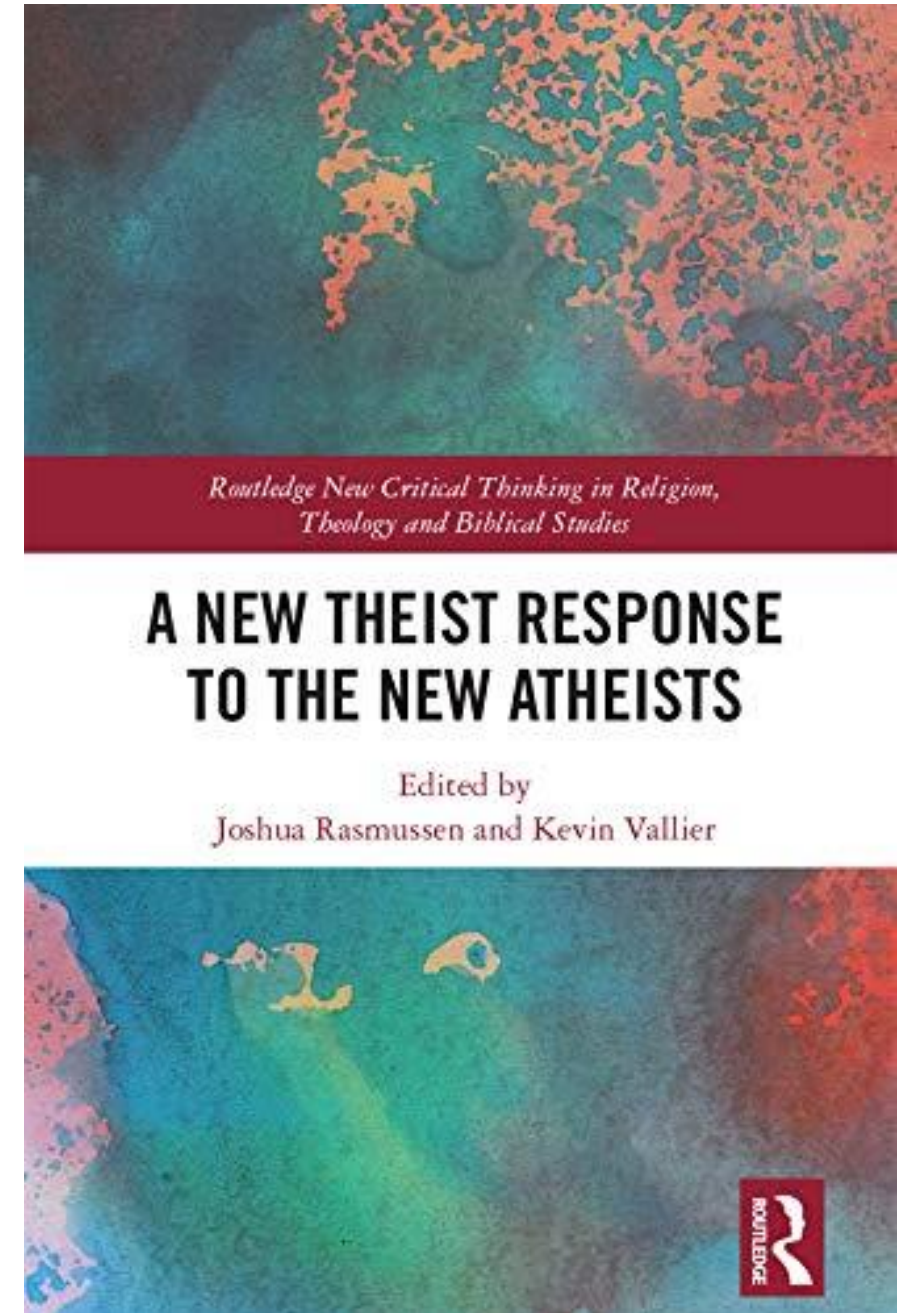
Any scientific multiverse hypothesis has to posit some *sort of universe generating mechanism* (and perhaps its this ‘mechanism’ and not its results that should be compared with ‘God’)





# LOGAN PAUL GAGE:

- ‘Simplicity is a secondary virtue, not an automatic trump card. More complex theories should not automatically be discounted...’
- ‘Even if there is something of a “discount” on new tokens of old kinds, it isn’t a blank check: one new kind would be more than offset by infinitely many new tokens of old kinds...’
- Argues that: ‘theism is simpler than naturalism in terms of the number of fundamental entities postulated’ – ‘Is the God Hypothesis Improbable? A Response to Dawkins’ in *A New Theist Response to the New Atheists* (Routledge New Critical Thinking in Religion, Theology and Biblical Studies, 2020)



3) EMPIRICALLY UNVERIFIED &  
UNVERIFIABLE





**Adam Frank,**

Professor of Astrophysics at the University of Rochester [*Big Think*, February 2022]:

**‘There is no empirically grounded scientific reason to believe there is such a thing as a Multiverse of parallel realities.’** - <https://bigthink.com/13-8/multiverse-no-evidence/>



Cosmologist **George Ellis** says the 'existence of multiverses is neither established nor scientifically establishable.'

- 'Multiverses: Description, Uniqueness, Testing' in Carr, ed. *Universe or Multiverse?*, 187-409



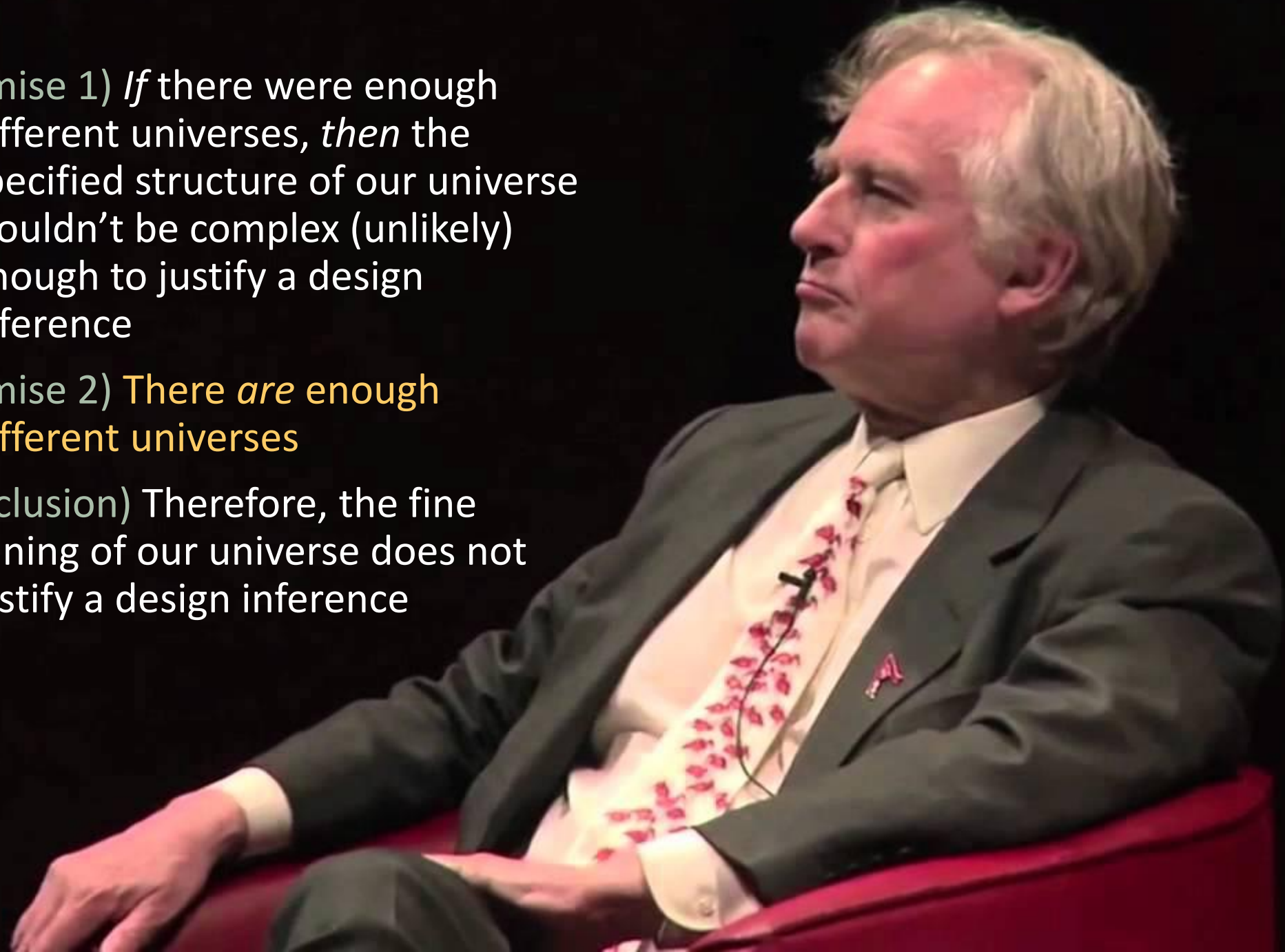
4) *AD HOC*

A close-up photograph of a human hand, palm facing up, holding a glowing, multi-colored galaxy. The galaxy has a bright yellow and orange core with blue and purple spiral arms. The background is a dark, starry space.

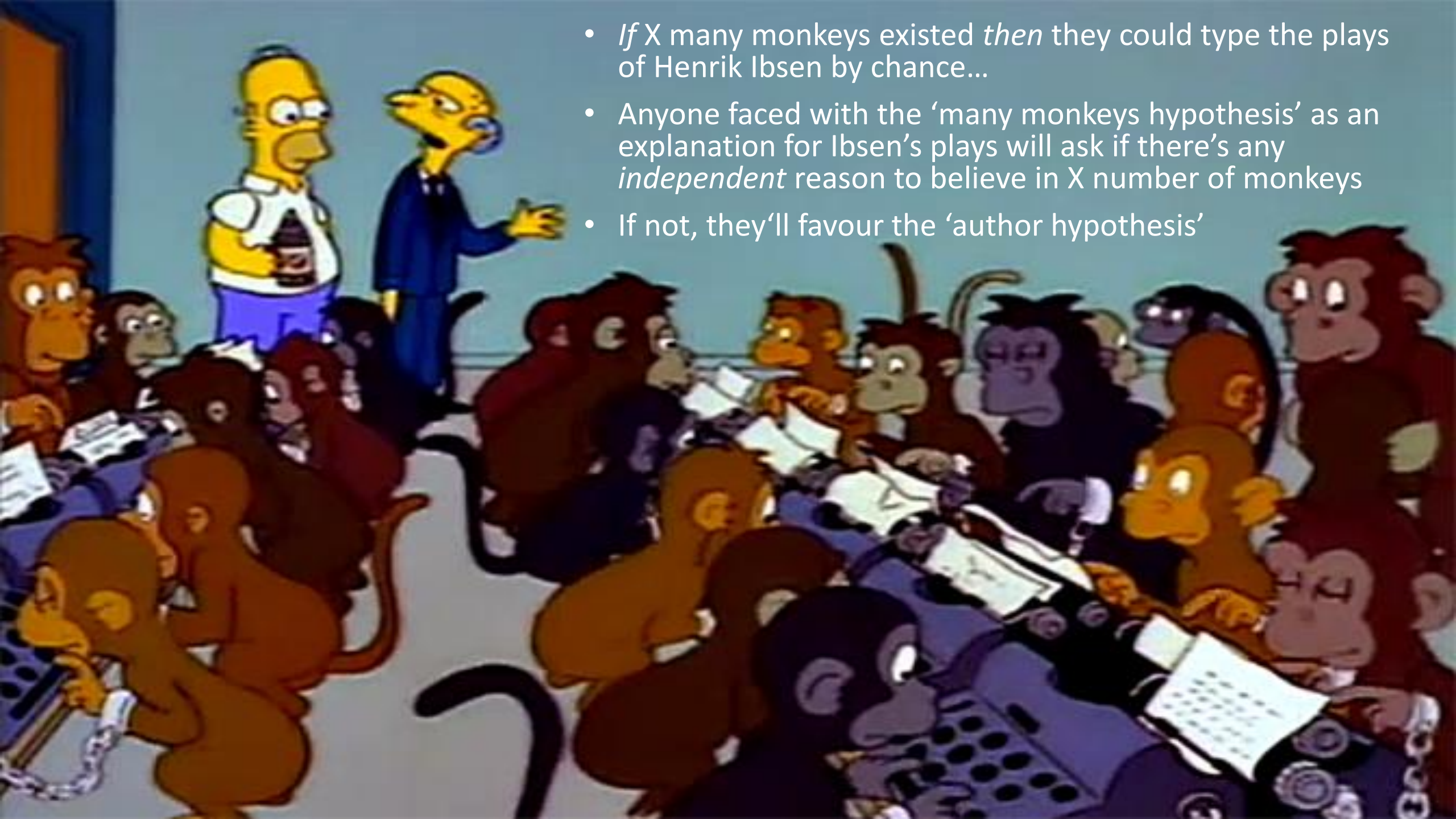
Premise 1) *If* there were enough different universes, *then* the specified structure of our universe wouldn't be complex (unlikely) enough to justify a design inference

Premise 2) *There are* enough different universes

Conclusion) Therefore, the fine tuning of our universe does not justify a design inference







- *If X many monkeys existed then they could type the plays of Henrik Ibsen by chance...*
- Anyone faced with the 'many monkeys hypothesis' as an explanation for Ibsen's plays will ask if there's any *independent* reason to believe in X number of monkeys
- If not, they'll favour the 'author hypothesis'



# THEORETICAL PHYSICIST BRIAN GREENE:

**'people should be skeptical of  
multiverse theories because there  
is no evidence supporting their  
existence'**

– Tia Ghose, 'Stranger Things: How realistic are  
Parallel Worlds?' *LiveScience*, August 2016



5) INSUFFICIENT TO EXPLAIN AWAY THE DATA





Even if a multiverse did exist, what guarantees it would be *big enough and varied enough* to explain away the high degree of fine tuning seen in our universe?!

## BRUCE L. GORDON:

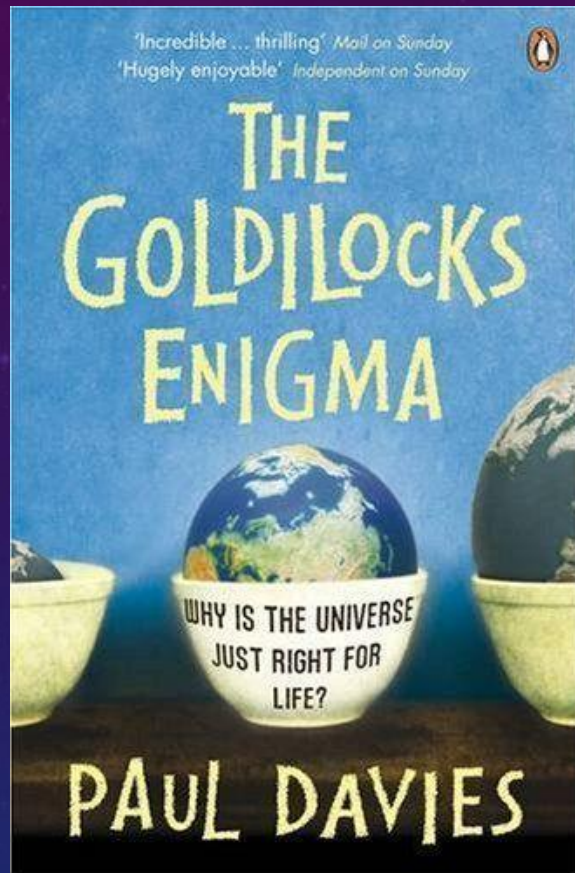
‘there are [many] independent constants and factors that are fine-tuned to a high degree of precision... The cumulative effect of all these fine tunings significantly erodes the probabilistic resources of the [string] landscape.’ – ‘Balloons on a string’



## 6) QUESTION BEGGING



# AGNOSTIC PAUL DAVIES:



‘[Multiverse theories] merely shift the problem up a level from universe to multiverse... there has to be a [*finely tuned*] universe-generating mechanism... the multiverse theory [cannot] provide a complete and final explanation of why the universe is fit for life...’

- *The Goldilocks Enigma: Why is the universe just right for life?* (Penguin, 2007), 231-232 & 237.



# 7) UNDERMINES THE PRACTICE OF SCIENCE



# THEORETICAL PHYSICIST BRIAN GREENE:

'The danger, if the multiverse idea takes root, is that researchers may too quickly give up the search for underlying explanations. When faced with seemingly inexplicable observations, researchers may invoke the framework of the multiverse prematurely – proclaiming some phenomenon or other to merely reflect conditions in our own bubble universe and thereby failing to discover the deeper understanding that awaits us.'

– 'The Multiverse' in Brockman ed. *What's Your Dangerous Idea?*, 120-121

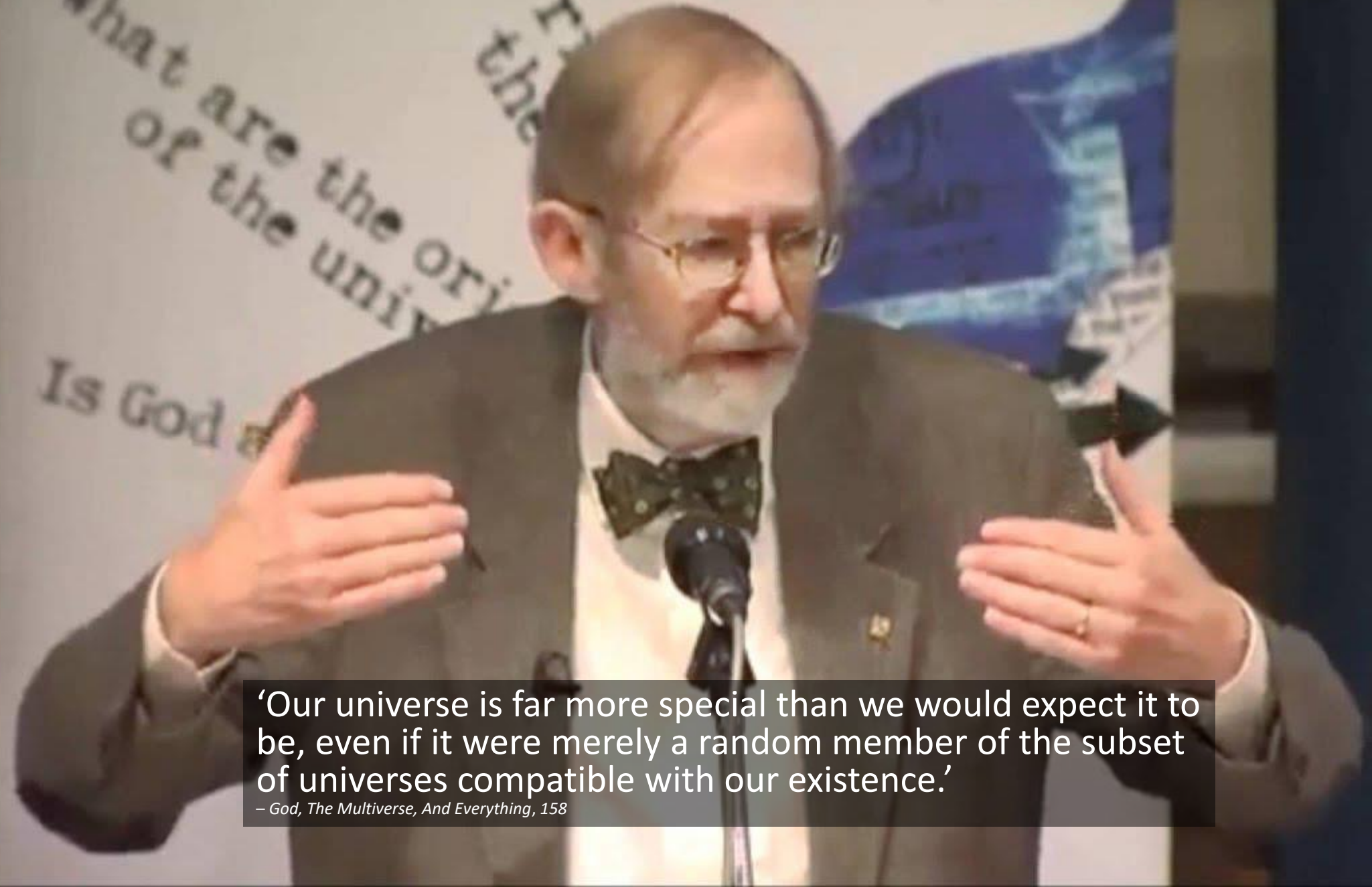


8) DISCONFIRMED





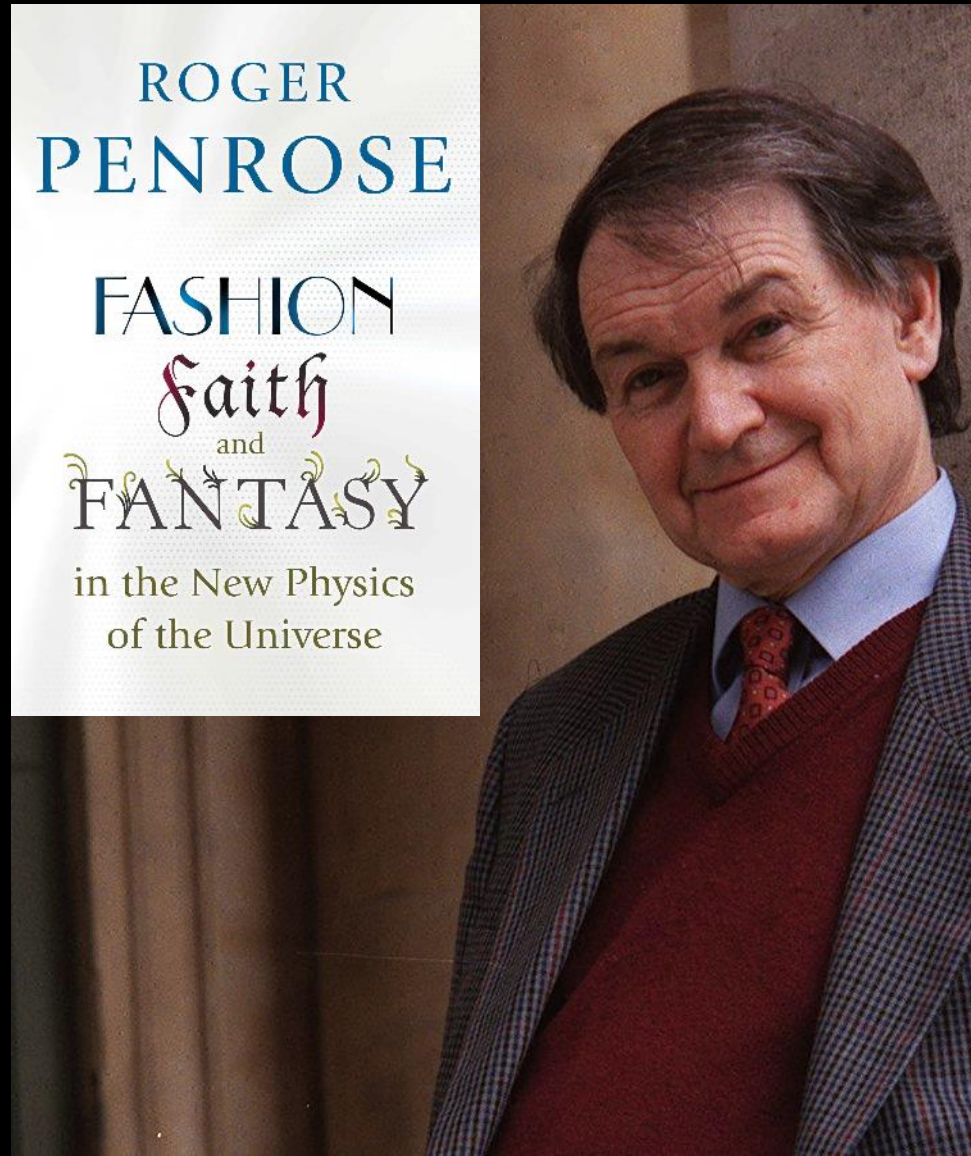
# ASTROPHYSICIST RODNEY HOLDER:



'Our universe is far more special than we would expect it to be, even if it were merely a random member of the subset of universes compatible with our existence.'

– *God, The Multiverse, And Everything*, 158

# ATHEIST ROGER PENROSE:



‘consider how ridiculously cheaper (in the sense of improbabilities) it would be simply to produce, by mere random collisions of particles, the entire solar system with all its life ready-made, or even just a few conscious [Boltzmann] brains... So the problem is: why did we not come about *this* way, rather than from an absurdly less probable...  $1.4 \times 10^{10}$  tedious years of evolution? It seems to me that this conundrum simply points to... the incorrectness of the bubble-universe idea.’ – 327-328



# THEORETICAL ASTROPHYSICIST & COSMOLOGIST LUKE BARNES:

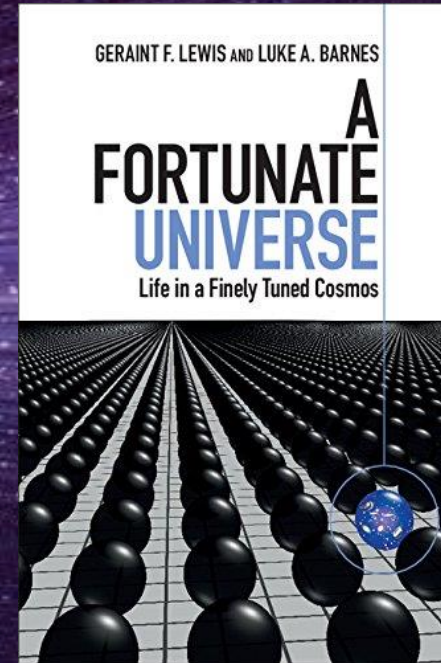


'[Boltzmann brains] do not need [much] fine-tuning, because they form by means of freak [quantum] fluctuations... If small regions of order are more likely than large regions, then Boltzmann brains are vastly more common than observers in large, low entropy universes like ours. If only very special [*ad hoc* and implausible] multiverses avoid this problem, then the multiverse itself is fine-tuned [and thus question begging].'

- <https://inference-review.com/article/good-god>



# THEORETICAL ASTROPHYSICIST & COSMOLOGIST LUKE BARNES:



**'The problem is not that we might be Boltzmann brains,  
the problem is that we aren't.'** – *A Fortunate Universe*, 317




- The danger that the multiverse hypothesis undermines science may be mitigated by the assumption that we are generic members of the multiverse, but this assumption underwrites the problem of observational disconfirmation
- Hence the 'Undermines Science' & 'Observational Disconfirmation' problems form the horns of a dilemma for the multiverse hypothesis



1) The 'fine tuning' of the universe exhibits **'specified complexity'**

2) Things exhibiting **'specified complexity'** are probably designed

3) Therefore, the 'fine tuning' of the universe was probably designed



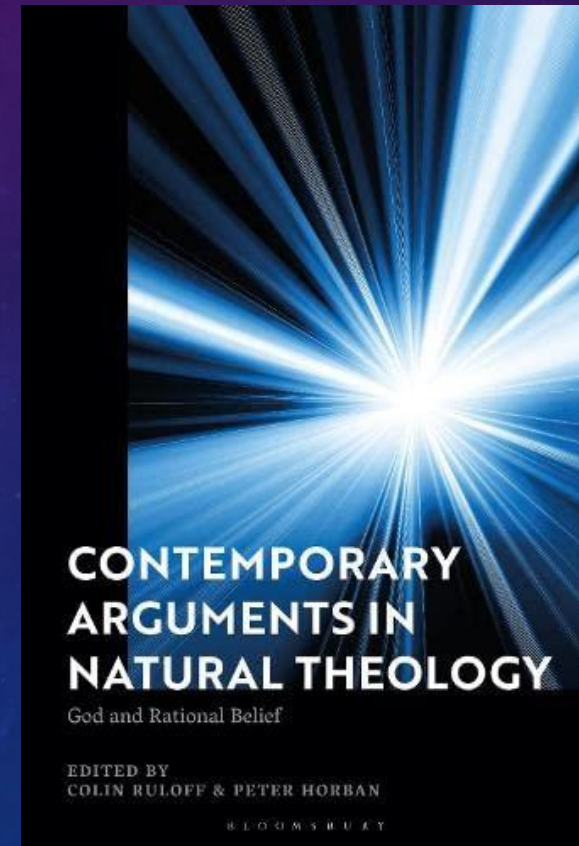
In light of the cumulative case against it, the 'Many Universes' objection does *not* constitute a sound defeater to premise 1 of the cosmic fine tuning argument

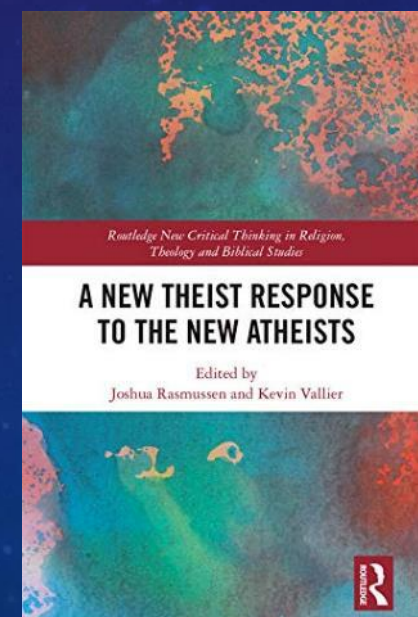
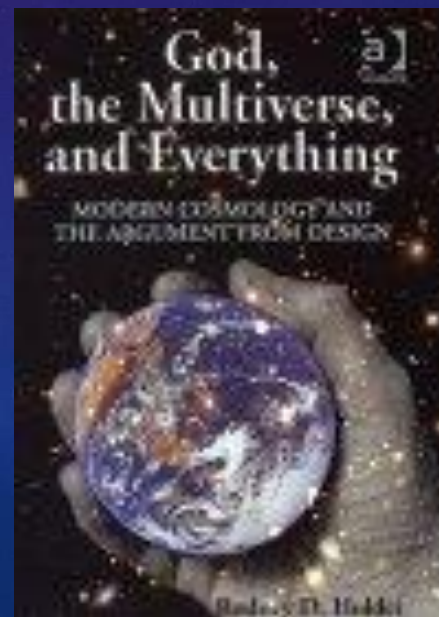
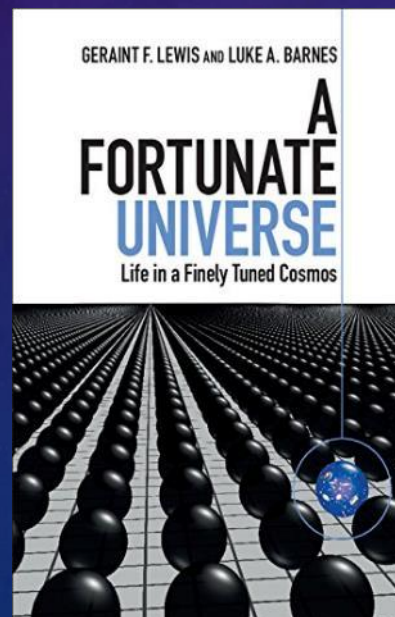
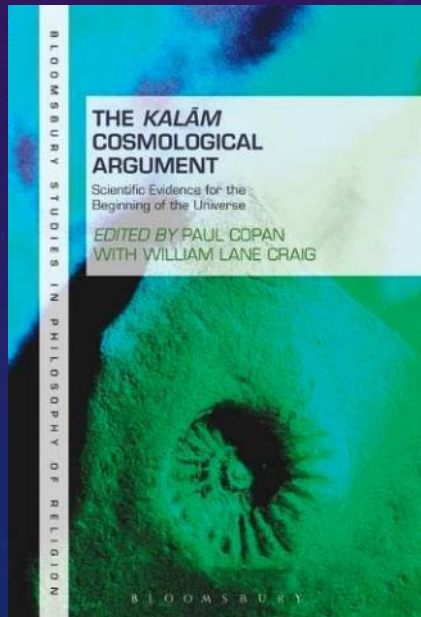
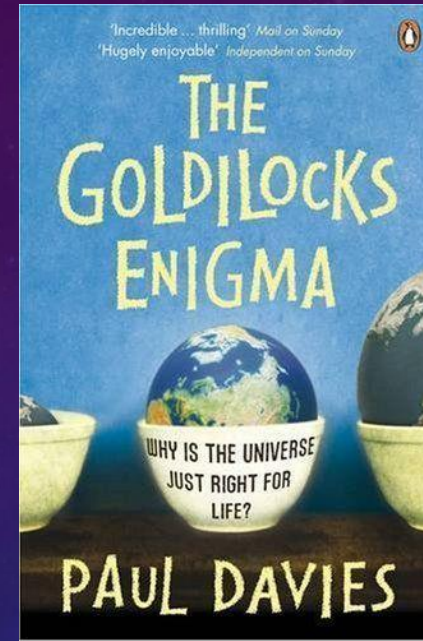
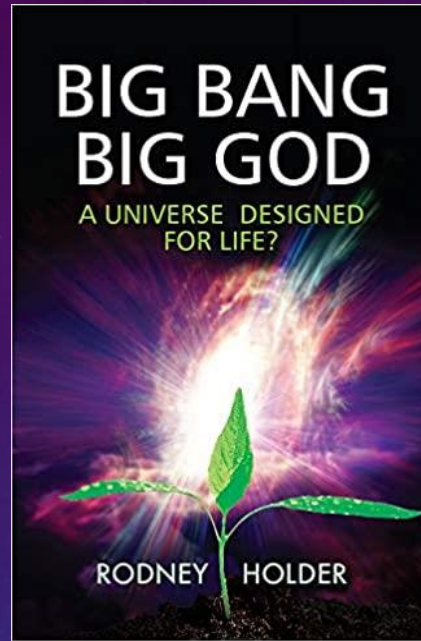
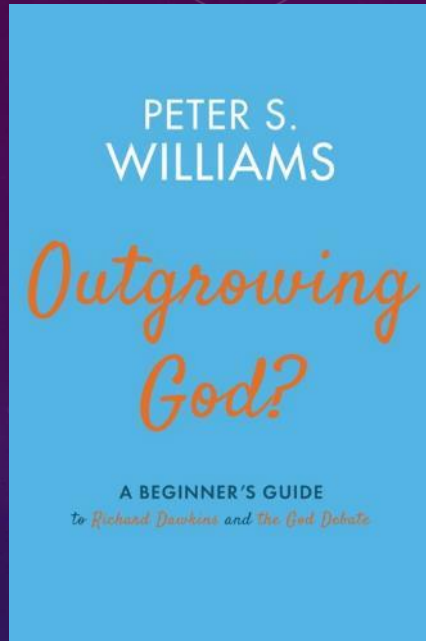
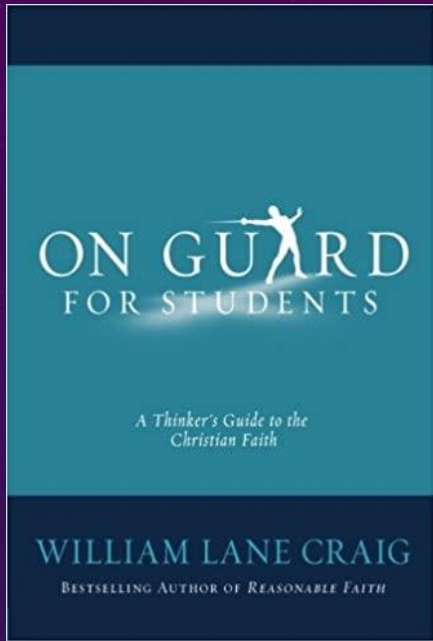


MOREOVER, EVEN IF WE GRANT A MULTIVERSE...

Philosopher **Michael Rota**:

‘our evidence supports a designer whether or not we’re in a multiverse because a theistic multiverse is a possibility, and a theistic multiverse would likely contain a higher proportion of life-permitting universes than would an atheistic multiverse... Thus our relevant evidence is... more to be expected on a theistic multiverse hypothesis than on an atheistic multiverse hypothesis.’





# DESIGN IN THE CONTEXT OF EVOLUTION – PART ONE



With **Peter S. Williams**  
[www.peterswilliams.com](http://www.peterswilliams.com)



## Doctrine before Models

It's important to keep in mind the distinction between the *doctrine* of creation and different *models* of creation that Christians hold because they have different interpretations of scripture and of the relevant scientific evidence

Philosopher **Alvin Plantinga** frames the issue like this:

‘Starting from [the doctrine of creation] we recognize that there are many ways in which God could have created the living things he has in fact created: how, in fact, did he do it? ... Did it all happen just by way of the working of the laws of physics, or was there further divine activity...? ...we must look at the evidence and consider the **probabilities as best we can.**’ - ‘Evolution, Neutrality, and Antecedent Probability: A Reply to Van Till and McMullen’,

*Christian Scholar's Review* 21:1 (September 1991), 80–109

[www.calvin.edu/academic/philosophy/virtual\\_library/articles/plantinga\\_alvin/evolution\\_neutrality\\_and\\_antecedent\\_probability.pdf](http://www.calvin.edu/academic/philosophy/virtual_library/articles/plantinga_alvin/evolution_neutrality_and_antecedent_probability.pdf)



# The Grand Evolutionary Story

‘The Grand Evolutionary Story’ (or ‘Darwinism’) is not merely a scientific theory (one purporting to explain the origins and diversification of life on Earth over millions of years due to natural processes)

Rather, *it is the naturalistic ‘creation myth’*

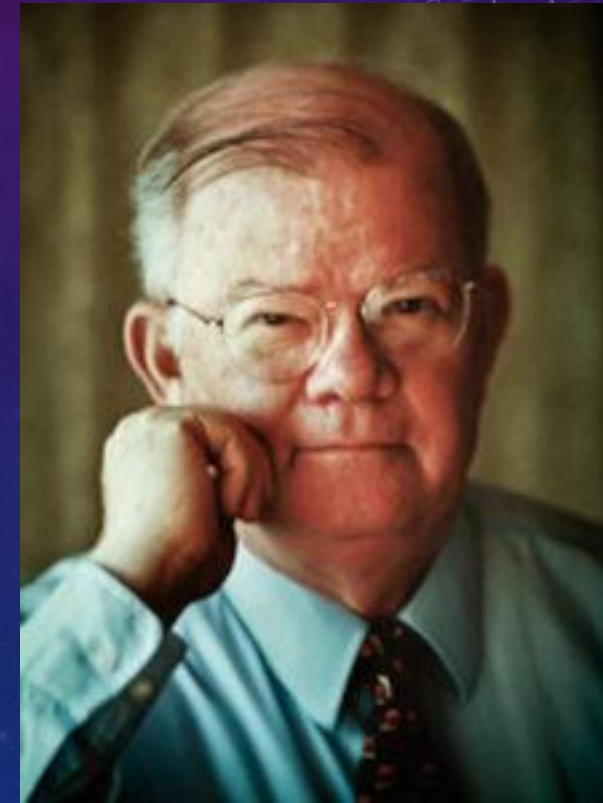


# The Grand Evolutionary Story

As **Philip E. Johnson** observed:

‘Darwinism is the answer to a specific question that grows out of philosophical naturalism... How must creation have occurred if we assume that God had nothing to do with it?’ - ‘What Is Darwinism?’,

*Objection Sustained*. IVP, 1998, 33



# The Grand Evolutionary Story

Geneticist **Richard Lewontin**:

‘It is not that the methods... of science somehow compel us to accept a material explanation of the... world, but, on the contrary, that we are forced by our... adherence to material causes to create... a set of concepts that produce material explanations, no matter how counterintuitive, no matter how mystifying. Moreover, that materialism is absolute, *for we cannot allow a Divine foot in the door*’.

- ‘Billions and Billions of Demons’, *New York Review of Books*, 9 January 1997, my italics

# The Grand Evolutionary Story

- *The Ancient Earth Hypothesis*
- *The Progress Thesis*
- *The Common Ancestry Hypothesis*
- *The Universal Common Ancestry Hypothesis*
- *The Neo-Darwinian [i.e. Blind Watchmaker] Hypothesis*
- *The Naturalistic Origins Hypothesis*



# The Grand Evolutionary Story

- *The Ancient Earth Hypothesis*

The Earth is about 4.5 billion years old

# The Grand Evolutionary Story

- *The Progress Thesis*

Living things (gradually) increased in complexity over time

# The Grand Evolutionary Story

- *The Common Ancestry Hypothesis*

Contemporary organisms are all descended from simpler ancestral organisms



# The Grand Evolutionary Story

- *The Universal Common Ancestry Hypothesis*

All living things are descended from one original primordial organism

# The Grand Evolutionary Story

- *The Neo-Darwinian [i.e. Blind Watchmaker] Hypothesis*

Evolution happens through natural processes requiring no divine or other non-material, teleological guidance

This philosophical thesis motivates the scientific theory that mutation and selection – and perhaps other similarly undirected mechanisms – are sufficient to explain the appearance of design in biology

The neo-Darwinian ‘modern evolutionary synthesis’ combines Darwin’s theory of adaptation by natural selection with the science of genetics

# The Grand Evolutionary Story

- *The Neo-Darwinian [i.e. Blind Watchmaker] Hypothesis*

There is a discussion between adherents of the 'Modern Synthesis' and advocates of an 'Extended Evolutionary Synthesis' who advocate one or more supplementary explanations of evolution framed in terms of an unguided, unplanned process of physical chance and/or necessity

However, Neo-Darwinism remains the cornerstone of modern evolutionary theory



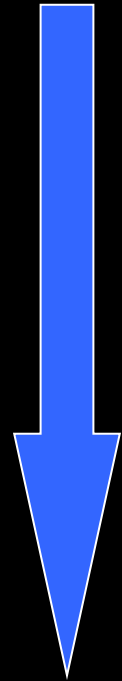
# The Grand Evolutionary Story

- **The *Naturalistic Origins Hypothesis***

Life arose from non-life by an unplanned and unguided physical process

# The Grand Evolutionary Story

Most  
Probable



Least  
Probable

- *The Ancient Earth Hypothesis*
- *The Progress Thesis*
- *The Common Ancestry Hypothesis*
- *The Universal Common Ancestry Hypothesis*
- *The Neo-Darwinian [i.e. Blind Watchmaker] Hypothesis*
- *The Naturalistic Origins Hypothesis*

I have described these hypotheses in what many informed scholars would consider a descending order of plausibility

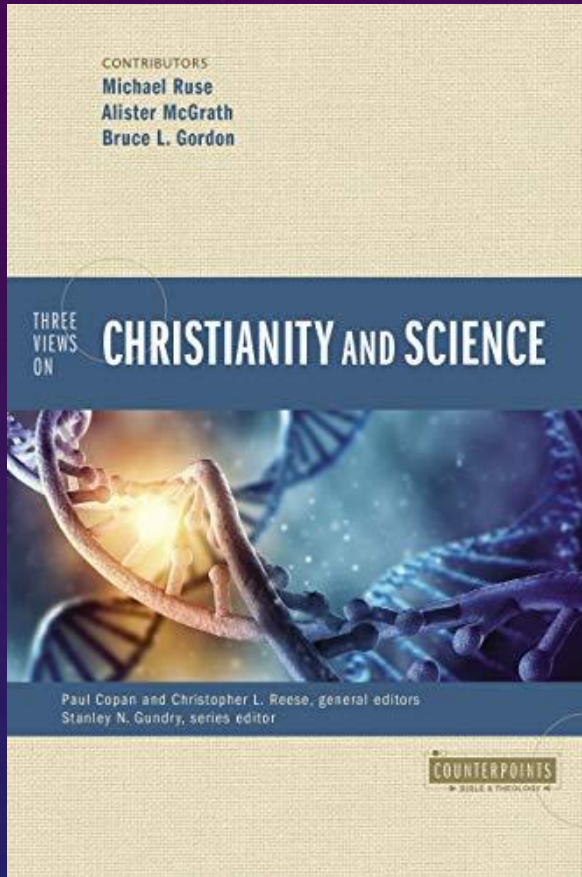
**Alvin Plantinga:** 'There is excellent evidence for an ancient earth... There is less evidence, but still good evidence in the fossil record for the Progress Thesis, the claim that there were bacteria before fish, fish before reptiles, reptiles before mammals, and mice before men... the Naturalistic Origins Thesis... seems to me to be for the most part mere arrogant bluster; given our present state of knowledge, I believe it is vastly less probable, on our present evidence, than is its denial.'

- 'When Faith and Reason Clash' [www.asa3.org/ASA/dialogues/Faith-reason/CRS9-](http://www.asa3.org/ASA/dialogues/Faith-reason/CRS9-91Plantinga1.html)

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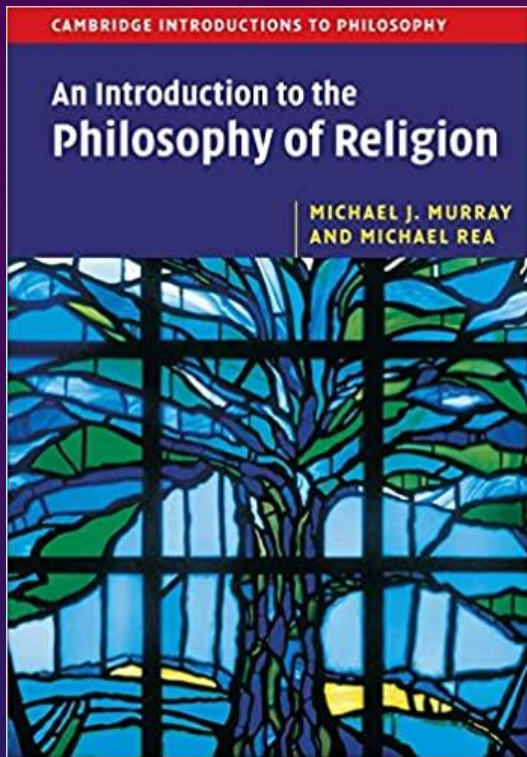




## Christopher L. Reese:

‘We must be cautious about equating our interpretations of Scripture with Scripture itself, and our interpretations of nature with nature as it truly is. Thus, when we encounter apparent contradictions between the two... we should strive to ensure we are understanding and interpreting each accurately. In some cases we may need to revisit our understanding of Scripture, and in other cases we may need to verify that we’re grasping the facts about the natural world accurately and interpreting those facts properly.’ – *Three Views*

*On Christianity And Science* (Zondervan, 2021), 13



## Philosophers **Michael J. Murray** and **Michael Rea**:

‘for the religious believer, the conflicts between science and religion will involve balancing evidence against evidence: the empirical evidence favouring scientific claims against the revelatory evidence favouring theological claims. The Christian critic of evolution might... conclude that the... evidence for an ancient earth seems quite strong, while the evidence for the naturalistic origin of life is, in fact, virtually non-existent. This then needs to be balanced against the evidence of revelation. How clear is it that the Bible teaches that the earth is young, or that God directly intervened in the cosmos to bring about life?’ - *Introduction to*

*Philosophy of Religion*, 211



# ROOM FOR DOUBTING MODELS OF CREATION

- Philosopher **J.P. Moreland**: ‘there are sufficient problems in interpreting Genesis 1 and 2 to warrant caution in dogmatically holding that only one understanding is allowable by the text.’ - *Scaling the Secular City* (Baker, 1987), 214
- Theologian **David Winter**: ‘The phrase “The Bible says...” begs a lot of questions... What *does* the Bible say? To whom is it saying it? What is the context, background and literary form of the passage in question? Is it to be taken literally, or figuratively, or allegorically?’ - *But This I Can Believe* (Hodder & Stoughton, 1980), 112



# ROOM FOR DOUBTING DARWINISM

- The Grand Evolutionary Story contains *philosophical* commitments that derive from a naturalistic worldview
- These *philosophical* commitments can be replaced with other philosophical commitments, interpreting the same scientific data within a different worldview (a theist might say that 'life arose from non-life by a *guided* physical process')
- It is *possible* to interpret the evolutionary story (philosophically) and the biblical story (theologically) so they contradict each other; and it is *possible* to use this contradiction to argue against either the truth of evolution, or the infallibility of scripture
- It's also *possible* to interpret the evolutionary story (philosophically) and the biblical story (theologically) in ways that make them compatible

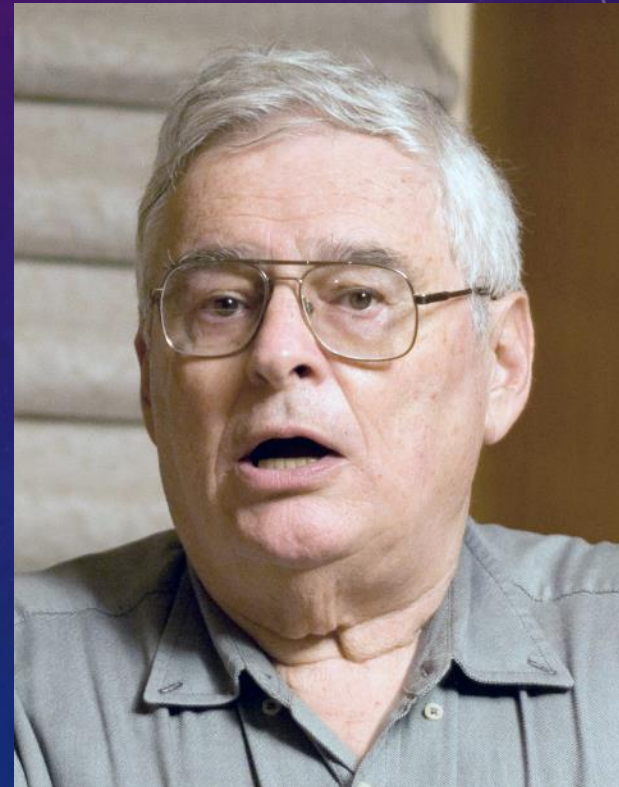
# ROOM FOR DOUBTING DARWINISM

- It's possible to doubt *some* elements of The Grand Evolutionary Story without doubting *every* element
- Such doubts can be rationally motivated by *theological*, *philosophical* and/or *scientific* reasons
- For example, some atheists deny *universal* common ancestry, whilst still accepting common ancestry, *on scientific grounds*
- Again, some atheists deny the sufficiency of the modern evolutionary synthesis *on scientific grounds*, without denying the blind watchmaker thesis

# ATHEIST PHILOSOPHER JERRY FODOR:

‘phylogeny [common descent] could be true even if the adaptationism isn’t... the classical Darwinist account of evolution as primarily driven by natural selection is in trouble on both conceptual and empirical grounds... an appreciable number of perfectly reasonable biologists are coming to think that the theory of natural selection can no longer be taken for granted...’

- ‘Why Pigs Don’t Have Wings’, *London Review of Books*, 18th October 2007 [www.lrb.co.uk/v29/n20/fodo01\\_.html](http://www.lrb.co.uk/v29/n20/fodo01_.html)





# ATHEIST PHILOSOPHER THOMAS NAGEL:



‘the dominant scientific consensus... faces problems of probability that I believe are not taken seriously enough, both with respect to the evolution of life forms through accidental mutation and natural selection and with respect to the formation from dead matter of physical systems capable of such evolution. The more we learn about the intricacy of the genetic code and its control of the chemical processes of life, the harder those problems seem...’

– *Mind & Cosmos*, 9-10



# DESIGN IN THE CONTEXT OF EVOLUTION – PART TWO



With **Peter S. Williams**  
[www.peterswilliams.com](http://www.peterswilliams.com)



## INTELLIGENT DESIGN THEORY

Philosopher **Stephen C. Meyer**:  
'the theory of intelligent design holds that there are tell-tale features of living systems and the universe that are best explained by an intelligent cause. The theory does not challenge the idea of evolution defined as change over time, or even common ancestry, but it does dispute Darwin's idea that the cause of biological change is wholly blind and undirected.'

– 'Not by Chance' *National Post of Canada* (2005)



# THREE CORE CLAIMS OF INTELLIGENT DESIGN THEORY

- 1) *Empirical evidence passes*
- 2) *reliable design detection criteria*
- 3) to warrant a *scientific inference* to 'intelligent design'  
as the best explanation of the evidence

# THREE CORE CLAIMS OF INTELLIGENT DESIGN THEORY

- 1) *Empirical evidence* passes
- 2) *reliable design detection criteria*
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as the best explanation of the evidence

Many atheists (e.g. Richard Dawkins, Bradley Monton, Victor J. Stenger) accept that ID is a scientific theory



## Thomas Nagel:

‘a purely semantic classification of a hypothesis or its denial as belonging or not to science is of limited interest to someone who wants to know whether the hypothesis is true or false.’

– ‘Public Education and Intelligent Design’, 195

If Intelligent Design is true, it would be implausible not to call it science...

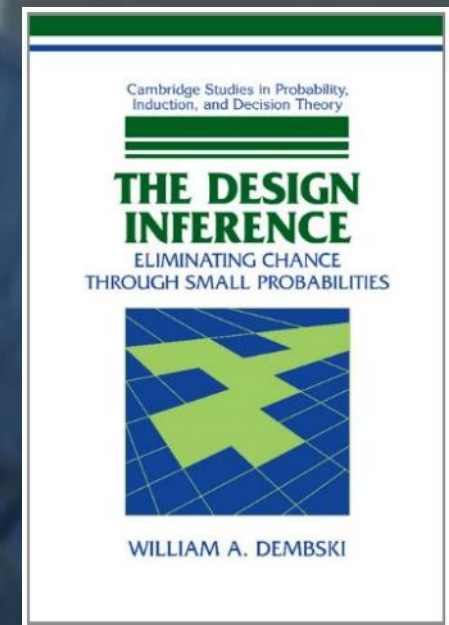
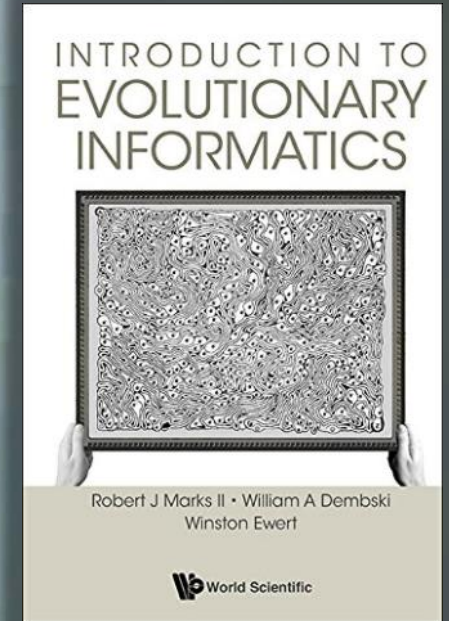
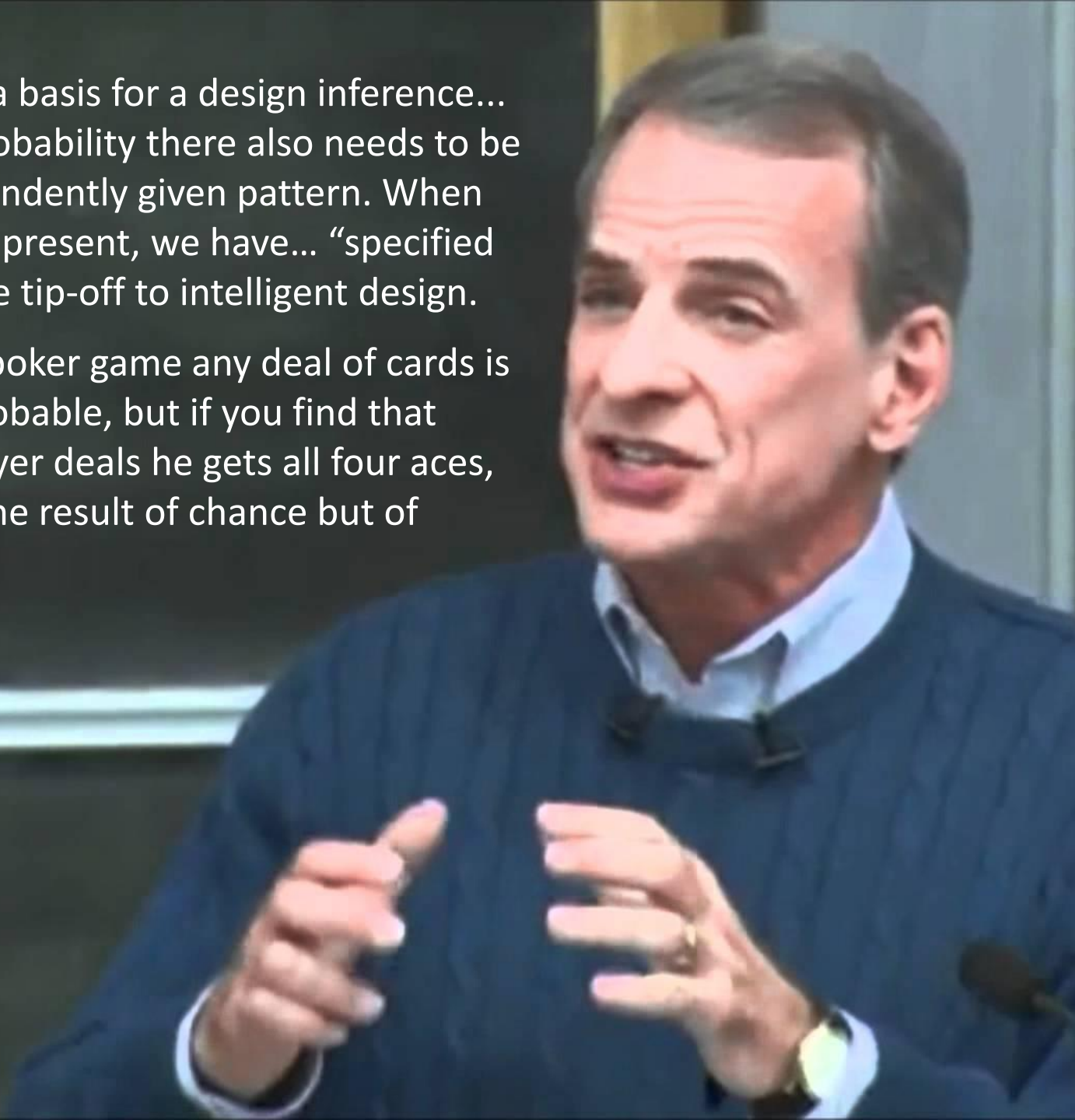


# THREE CORE CLAIMS OF INTELLIGENT DESIGN THEORY

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**William Lane Craig:** ‘as a basis for a design inference... in addition to high improbability there also needs to be conformity to an independently given pattern. When these two elements are present, we have... “specified complexity,” which is the tip-off to intelligent design.

Thus, for example, in a poker game any deal of cards is equally and highly improbable, but if you find that every time a certain player deals he gets all four aces, you can bet this is not the result of chance but of design.’





## RICHARD DAWKINS IN *FREE INQUIRY*:

“specified complexity” takes care of the sensible point that... in the unique disposition of its parts a pile of detached watch parts tossed in a box is... as improbable as a fully functioning, genuinely complicated watch. What is specified about a watch is that it is improbable in the specific direction of telling the time...’ - OP-ED, *Free Inquiry*, October/November 2004, Vol. 24 No. 6, 11-12



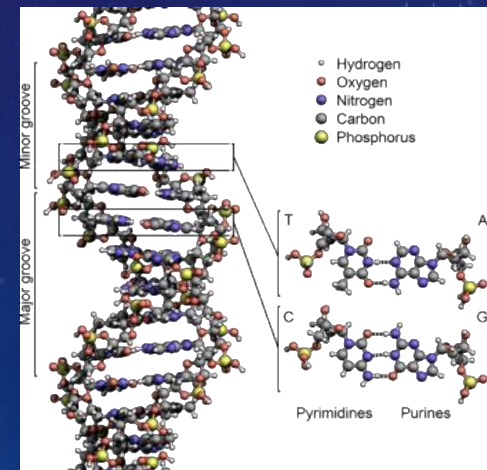
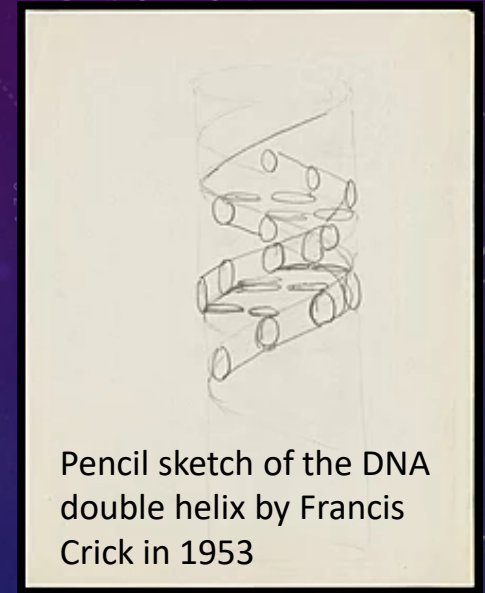


# THREE CORE CLAIMS OF INTELLIGENT DESIGN THEORY

- 1) *Empirical evidence* passes
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# LIFE REQUIRES INFORMATION

- In 1953, **Francis Crick** and **James Watson** announced their discovery of the three-dimensional, double helical structure of DNA
- In 1958, **Crick** theorized that ‘the sequence specificity of amino acids in proteins derives from a prior specificity of arrangement in the nucleotide bases on the DNA molecule’, which ‘functioned just like alphabetic letters in an English text or binary digits in software or a machine code.’ - Meyer, *Signature in the Cell*, 100 & 101
- Experiments in the 1960s established that the sequential arrangement of amino-acids that determine the folding and thus the function of proteins is indeed encoded within the rungs of the twisting DNA ladder
- Since the 1960s, it has therefore been apparent that, as origin-of-life researcher **Bernd-Olaf Küppers** observed: ‘**The problem of the origin of life is clearly basically equivalent to the problem of the origin of information.**’ - *Information and the Origin of Life*, 170-172



# ATHEIST RICHARD DAWKINS:



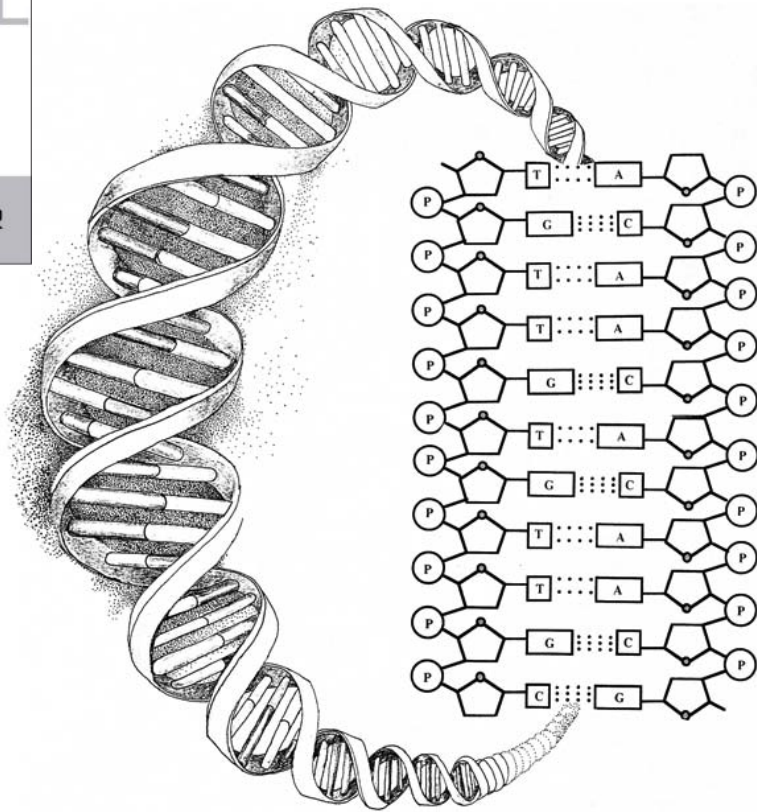
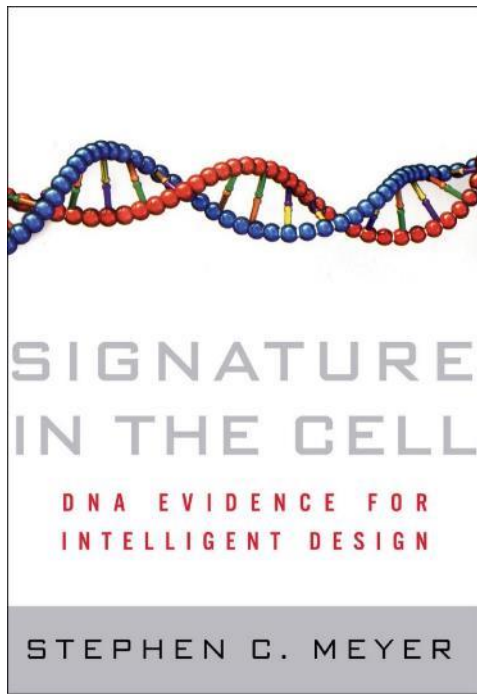
‘at the bottom of my garden is a large willow tree, and it is pumping downy seeds into the air [containing] DNA whose coded characters spell out specific instructions for building willow trees... It is raining instructions out there; it’s raining programs... That is not a metaphor, it is the plain truth.’

- ‘Genes Aren’t Us’, *A Devil’s Chaplain*, 105





Starting with Hungarian-British scientist-philosopher **Michael Polanyi's** 1967 paper 'Life Transcending Physics and Chemistry', the scientific recognition that information lies at the root and heart of biology has formed the basis for increasingly sophisticated arguments against reductive explanations of life in terms of chance and/or physical necessity, and for the need to incorporate an appeal to intelligence into any causally adequate explanation of organic life

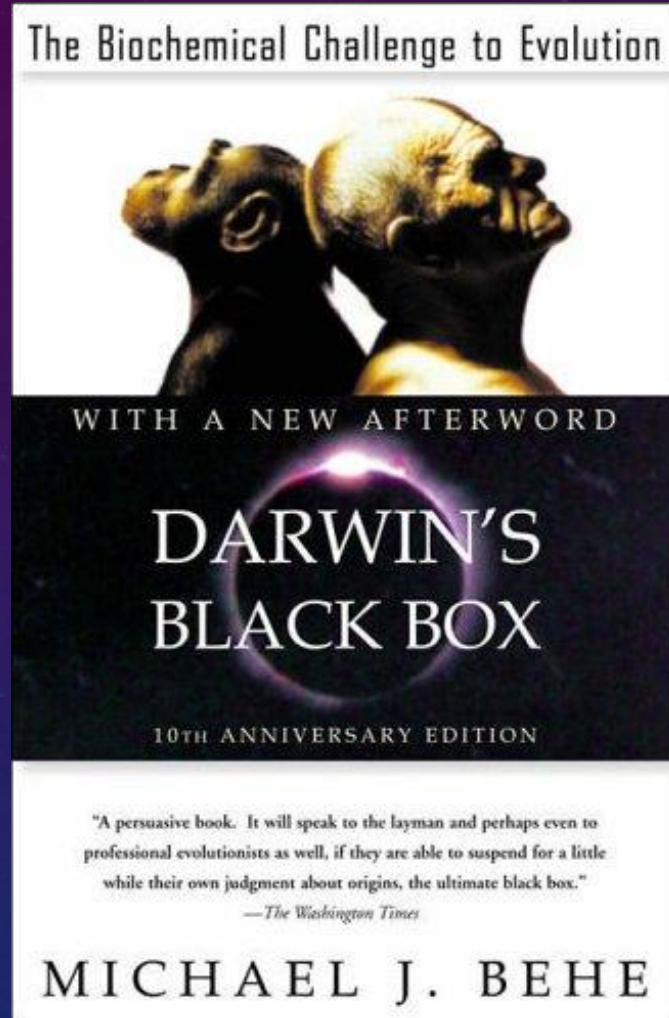


## STEPHEN C. MEYER:

‘There is simply too much information in the cell to be explained by chance alone. The information in DNA (and RNA) has also been shown to defy explanation by forces of chemical necessity. Saying otherwise would be like saying a headline arose as the result of chemical attraction between ink and paper... DNA functions like a software program. We know from experience that software comes from programmers.’

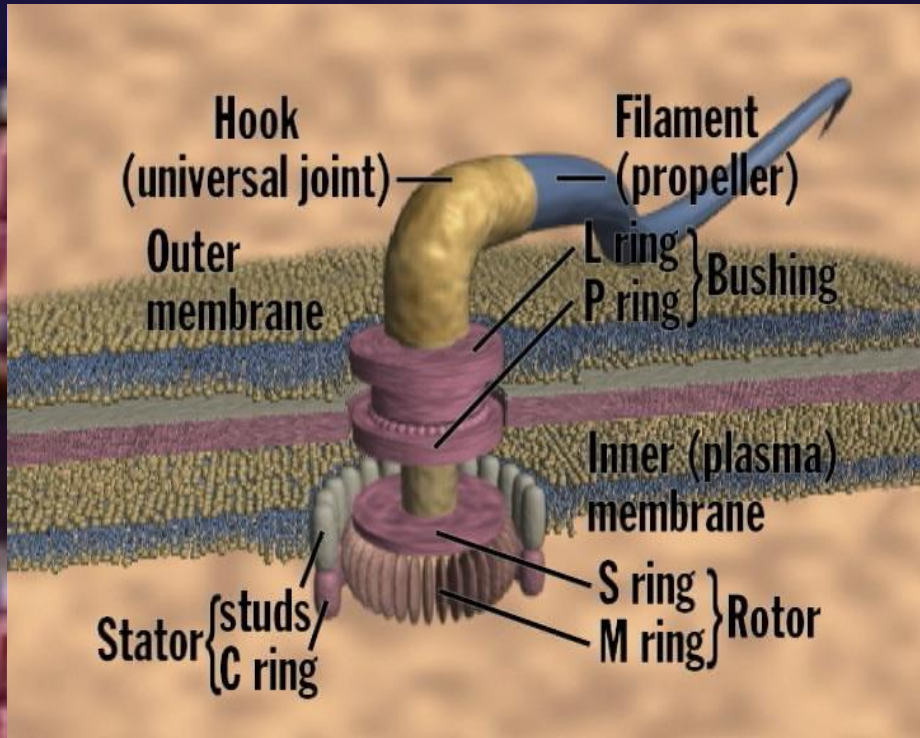
– ‘Intelligent design is not creationism’, *The Daily Telegraph* (2005)

# IRREDUCIBLE SPECIFIED COMPLEXITY



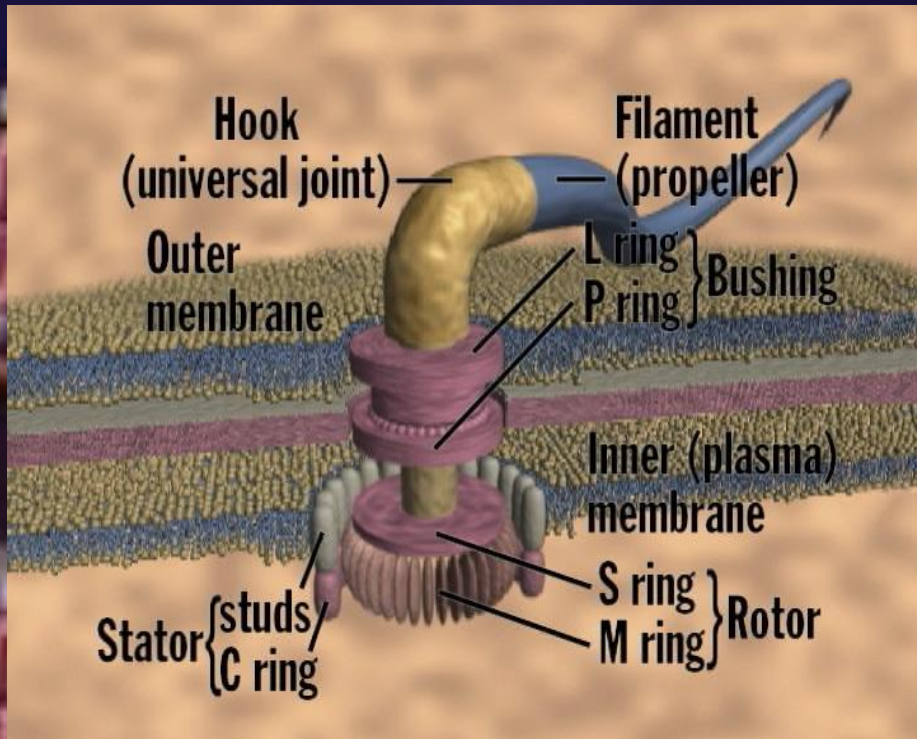
**Michael J. Behe:** 'By irreducibly complex I mean a single system composed of several well-matched, interacting parts that contribute to basic function, wherein the removal of any one of the parts causes the system to effectively cease functioning.'





An IC system *can't evolve directly* by slight, successive modifications, because a direct precursor that's missing a part is by definition non-functional

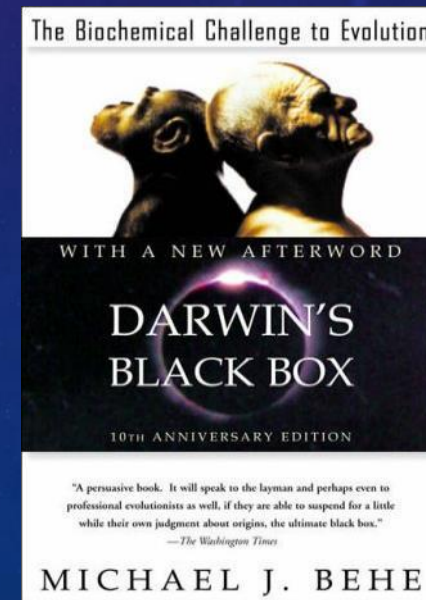
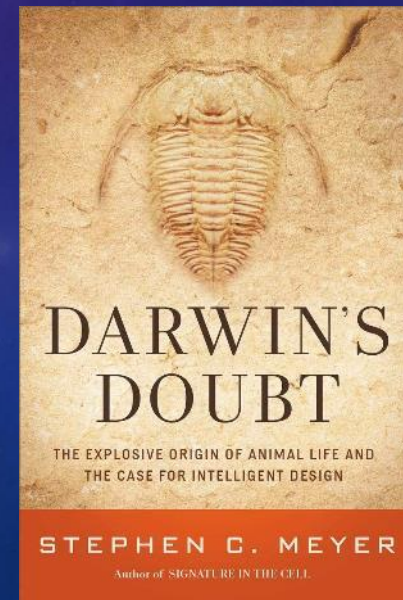
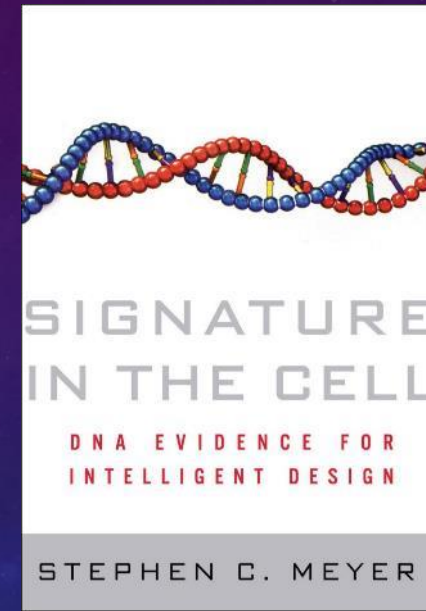
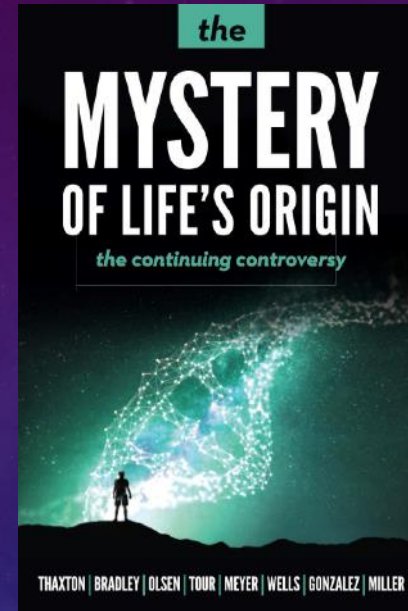




An IC system is *very unlikely to evolve indirectly*:  
**‘As the complexity of an interacting system increases...  
the likelihood of such an indirect route drops...’**



- 1) Things exhibiting 'specified complexity' are best explained as the product of intelligent design (intelligence is the only known cause of such information)
- 2) Life exhibits 'specified complexity' (in the large amounts of functional information at the origin of life, in the origination of animal body plans, etc.)
- 3) Therefore, the best explanation of life includes an appeal to intelligent design





# The biological design argument for theism from specified complexity:

1) Things exhibiting 'specified complexity' are best explained as the product of intelligent design

2) Life exhibits 'specified complexity'

3) Therefore, the best explanation of life includes an appeal to intelligent design

4) **The best explanation of premise 3 is theistic** (e.g. theism avoids infinite regress & comports with other evidence)

5) Therefore, **the best explanation of life is theistic**

'Science' i.e.  
'Natural Philosophy'

Metaphysics

