The background is a dark blue gradient with a starry texture. On the left side, there are several circular elements: a large scale with numbers from 160 to 260, and several smaller circles with arrows indicating rotation. On the right side, there are more circular patterns, including a large circle with an arrow and a smaller one above it.

CHRISTIAN APOLOGETICS

THE SCIENTIFIC METHOD

(A PRELUDE)

Judeo-Christian Origins of the Scientific Method (SM)

According to Meyer (2021), researchers from Cambridge University posed questions about the rise of SM in 15th and 16th century western Europe

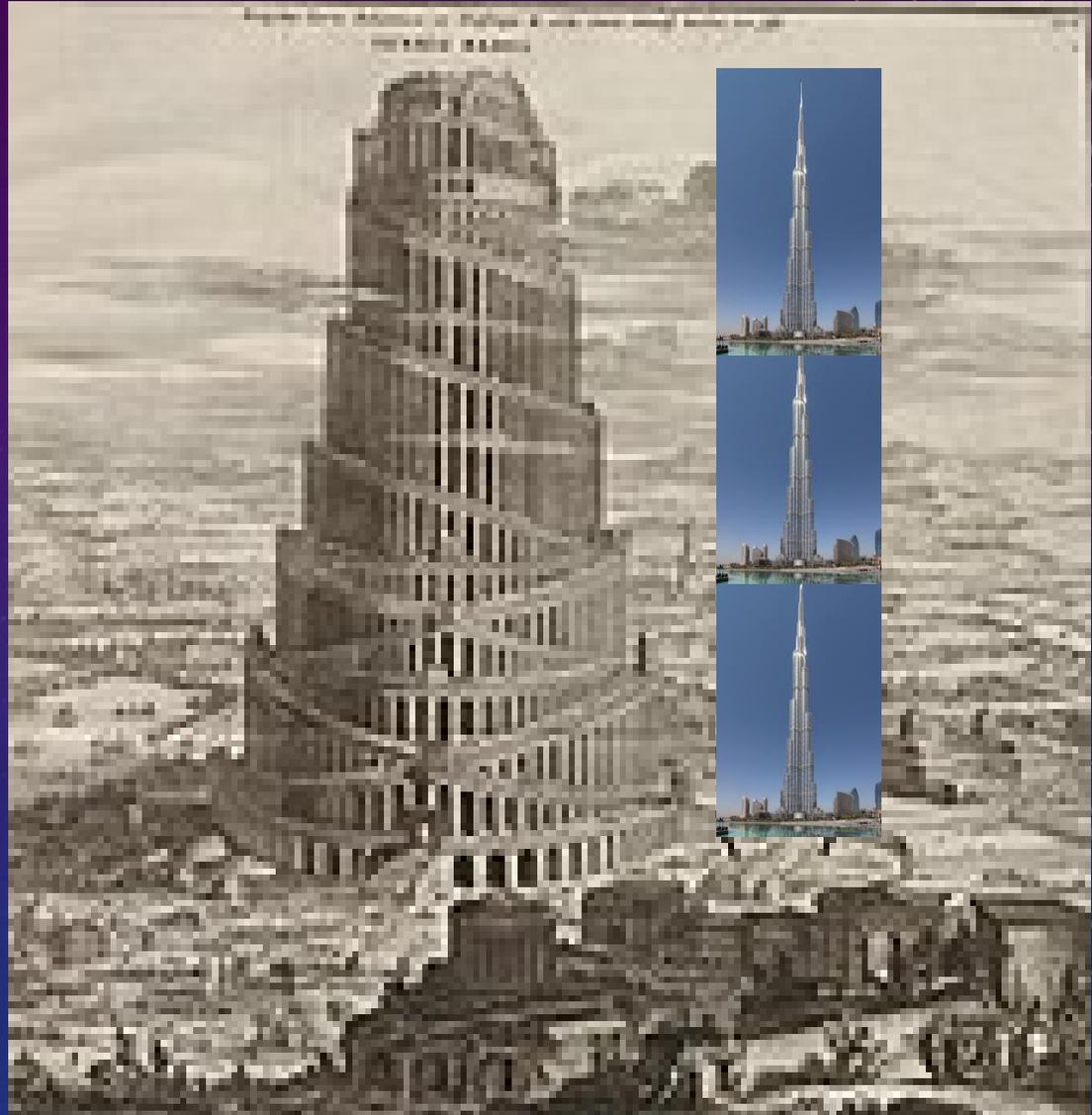
Needham and Hodgson investigated why western Europe and why at this time?

Many past civilizations, while very successful, were not able to advance scientific inquiry to an appreciable extent... Examples?

(Meyer, 2021)

Tower of Babel

The Book of Jubilees mentions the tower's height as being 5,433 cubits and 2 palms, or 2,484 m (8,150 ft) or about 1.6 miles high
Built circa 2200 BC



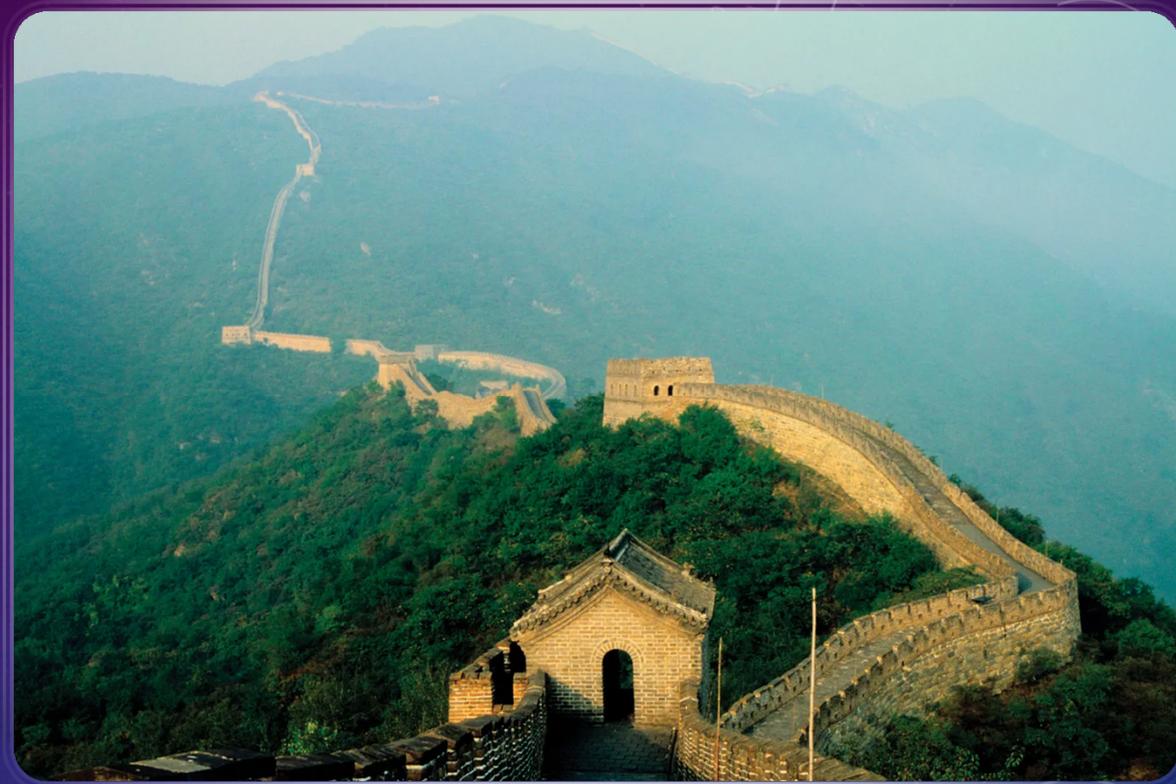
Source:

https://en.wikipedia.org/wiki/Tower_of_Babel#:~:text=The%20Book%20of%20Jubilees%20mentions,or%20roughly%201.6%20miles%20high

GREAT WALL OF CHINA

Nearly 22,200 km long
(13,170 miles)

Built over a period of
several centuries starting
around 700 BC with work
completing circa 1644 AD.



Source:

https://en.wikipedia.org/wiki/Great_Wall_of_China

Great Pyramid of Giza



Height is 146.6 m (481 ft) or 280 cubits (originally); 138.5 m (454 ft) (contemporary). Base 230.33 m (756 ft) or 440 cubits. Volume 2.6 million m³ (92 million cu ft)

Construction completion around 2570 BC

Source: https://en.wikipedia.org/wiki/Great_Pyramid_of_Giza

The background features a dark blue gradient with faint, glowing circular patterns and a scale. The scale is a semi-circular arc on the left side, with numerical markings from 160 to 260 in increments of 10. There are also several concentric circles and dashed lines with arrows, suggesting a scientific or technical theme.

CHRISTIAN APOLOGETICS

THE SCIENTIFIC METHOD

(REASONS FOR AND UNDERSTANDING THE SM)

COURSE AGENDA

In this first class, we are going to lay the groundwork for later discussions

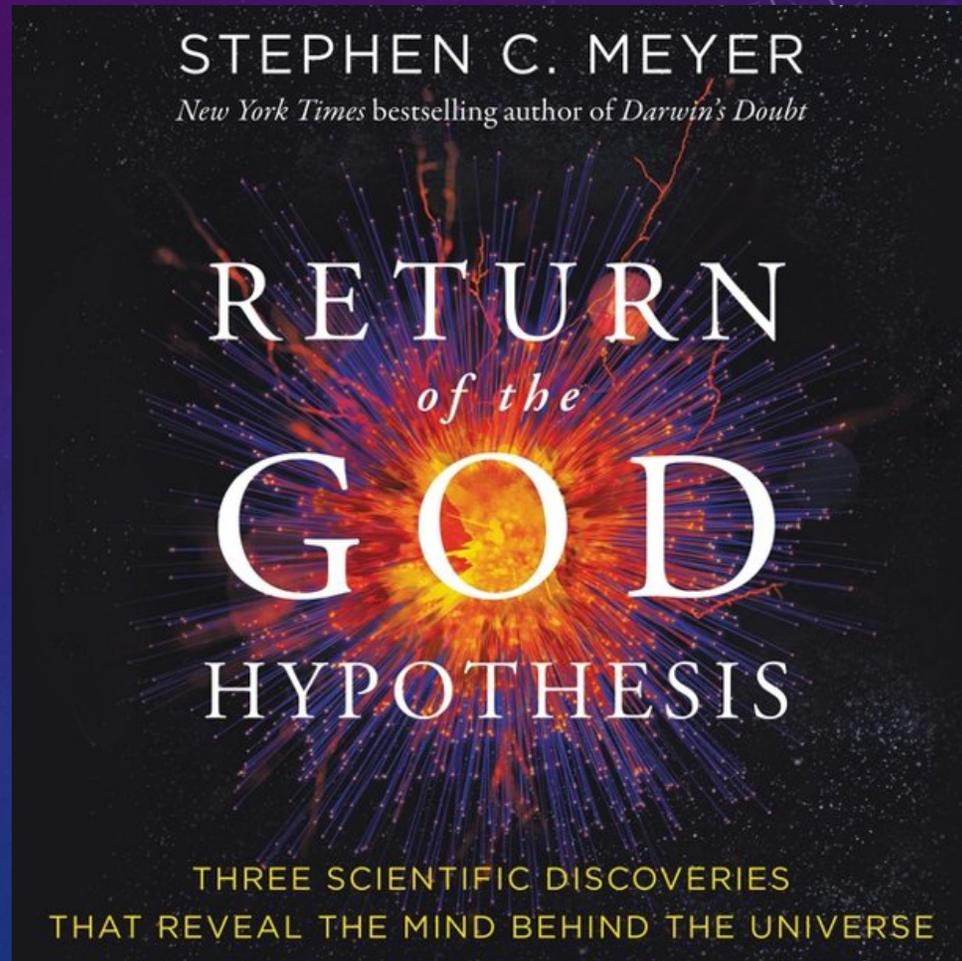
- Compatibility between the Christian Theology and Science; Theology
- **The scientific method: history, development, implementation**
- Evidence and Theory for Creation of the Universe part 1
- Evidence and Theory for Creation of the Universe part 2
- Origins of life, information theory
- Origins of life, addressing macro and chemical evolution issues
- Origins of life, the fossil record, and chronology
- Human cognition and metacognition, mysteries of consciousness

The guiding verse of the Christian Apologist... 1 Peter 3:15

... always being ready to make a defense (apologia) to everyone who asks you to give an account for the hope that is in you, yet with gentleness and reverence...

Judeo-Christian Origins of the Scientific Method (SM)

Note: much of this section is based on the book by Dr. Stephen C Meyer



Judeo-Christian Origins of the Scientific Method (SM)

According to Meyer (2021), researchers from Cambridge University posed questions about the rise of SM in 15th and 16th century western Europe

Many past civilizations, while very successful, were not able to advance scientific inquiry to an appreciable extent... Examples?

(Meyer, 2021)

Judeo-Christian Origins of the Scientific Method (SM)

Needham and Hodgson conclude that only in 15th and 16th century western Europe were the necessary “intellectual presuppositions” present.

Needham and Hodgson investigated why western Europe (there) and why at this time (then)?

So, what are these intellectual presuppositions?

(Meyer, 2021)

Judeo-Christian Origins of the Scientific Method (SM)

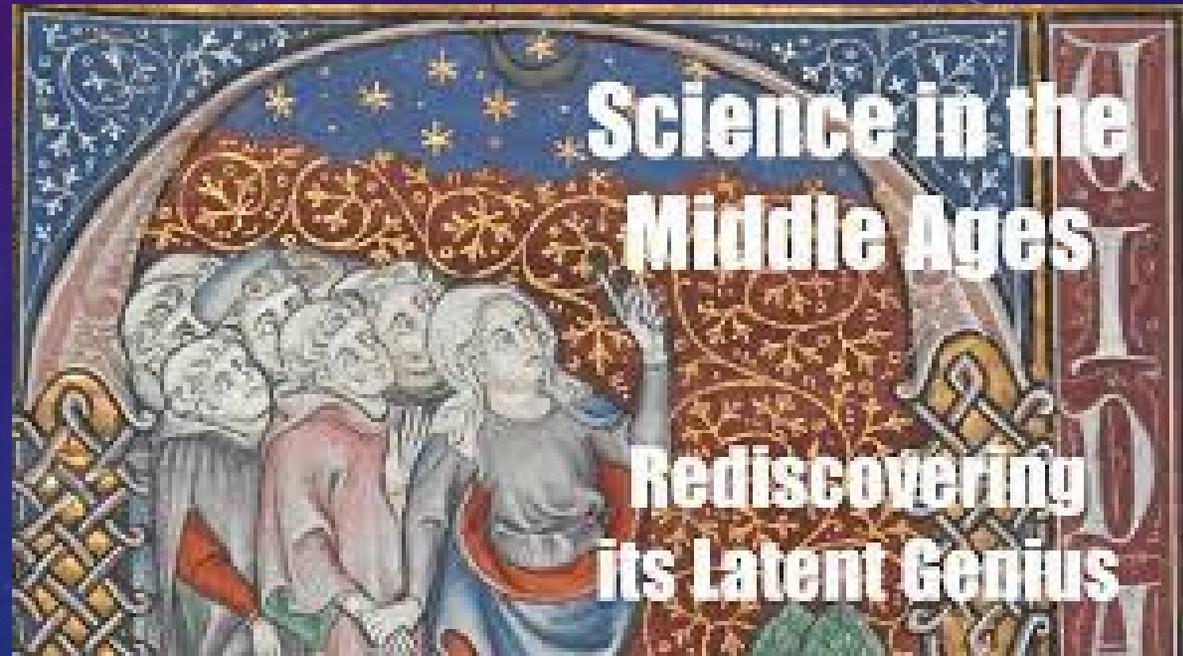
The intellectual presupposition's identified are:

Breaking with Greek thinking

The Contingency of Nature

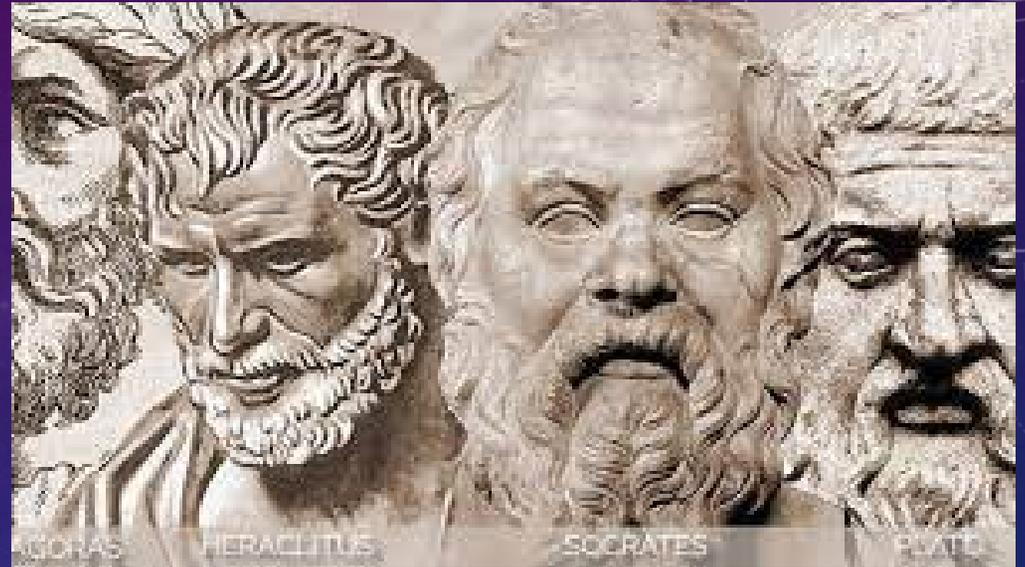
The Intelligibility of Nature

The Fallibility of Human Reasoning



(Meyer, 2021)

Judeo-Christian Origins of the Scientific Method (SM) – Breaking from Greek Assumptions



Greek assumptions about the nature of reality, while providing some observational value, ultimately impeded empirical study of nature.

(Meyer, 2021)

Judeo-Christian Origins of the Scientific Method (SM) – Breaking from Greek Assumptions

Contributions from the Greeks philosophers:

- Believed that nature reflected an underlying order
- this order is intrinsic, self-existent, requiring no mind
- believed that they could deduce how natural processes behaved from superficial observations and human reasoning alone (example the heliocentric & geocentric concepts of planetary motion)

(Meyer, 2021)

Judeo-Christian Origins of the Scientific Method (SM) – Breaking from Greek Assumptions

Often invoked Greek assumptions regarding how nature must work including:

- the universe must be eternal
- Greek gods cannot create new species
- Planetary orbits must be circular
- Greek gods cannot create empty space
- Greek gods created only one solar system

(Meyer, 2021)

Judeo-Christian Origins of the Scientific Method (SM) – The Contingency of Nature

Eventually, many came to understand through observation of nature that natural processes were unexpected and could not be predicted through human reasoning alone.

Western European natural philosophers began to move away from Greek reliance on pure reasoning alone being necessary

11th and 12th centuries, thought began to shift toward “contingent rationality” as proposed by Scottish Theologian Thomas Torrance.

While underlying order does exist in nature (Greeks) it is the product of a designing mind with a will, with deliberation, and making rational choices.

A reaffirmation of the Creation doctrine. Tempier’s 1277 decree*

(Meyer, 2021)

Judeo-Christian Origins of the Scientific Method (SM) – The Contingency of Nature

Briefly, Tempier's 1277 decree

Issued by Bishop Stephen Tempier of Paris in March of 1277, likely as a result of a papal mandate:

List of 219 condemned propositions relating to details of Aristotelian texts that were irreconcilable with the Christian worldview.

These propositions were not binding on Catholics; but served as a guide for the scholars at the University of Paris.

The decree largely dealt with the eternity, the world, and creation.

Source: <https://strangenotions.com/from-faith-came-science-the-condemnations-of-1277/>

Judeo-Christian Origins of the Scientific Method (SM) – The Contingency of Nature

The result is a change in perspective (nature is organized by a rational, deliberative mind making choices about how to order...)

There are many ways that nature could have been ordered and organized

The order of nature is **contingent** on the choices and deliberations of a rational mind

This leads to the inevitable conclusion that human beings cannot discover this order and organization of nature through superficial observation alone

As Robert Boyle (1627-1691), the father of chemistry stated it:

“it is the job of the natural philosopher to determine not what God **must** have done, but what God **actually did.**”

(Meyer, 2021)

Judeo-Christian Origins of the Scientific Method (SM) – The Intelligibility of Nature

Natural Philosophers and Theologians held an underlying assumption that both theology (the study of scripture) and science (the study of the natural world) could be comprehended by the human mind.

This assumption is grounded in both the Greek philosophical and Judeo-Christian idea that nature was an orderly group of systems and could be understood with sufficient observation and study.

Newton, Galileo, Kepler, Copernicus, Boyle, and many others believed a study of nature would reveal God's mind to some extent.

Kepler said it this way

“being created in the image of God and examining the natural laws of His creation, allows us to share in His thoughts.”

(Meyer, 2021)

Judeo-Christian Origins of the Scientific Method (SM) – The Fallibility of Human Reasoning

13th century, Oxford University Natural Philosophers and Theologians Robert Grosseteste (1175-1253) and his student Roger Bacon (1220-1292) first recognized the possibility of self-deception and fallible thinking in natural inquiry.

They were the first to develop a systematic methodology for scientific inquiry they called “resolution and composition” and

the concepts of testing they termed “Verification and Falsification” that closely resembles modern isolation of variables.

These process are the forerunners of the modern scientific method

(Meyer, 2021)

Judeo-Christian Origins of the Scientific Method (SM) – The Fallibility of Human Reasoning

13th century, Oxford University Natural Philosophers and Theologian Robert Grosseteste (1175-1253) quote



In the beginning of time, light drew out matter along with itself into a mass as great as the fabric of the world.

~ Robert Grosseteste

Judeo-Christian Origins of the Scientific Method (SM) – The Fallibility of Human Reasoning

Natural Philosophers and Theologians of the 11th - 16th centuries generally held human reasoning as a gift from God.

They also recognized the possibilities for self-deception, premature conclusions and biases leading to wrong conclusions

During and after the protestant reformation (1577-circa 1648), the doctrine of the fall influenced thinking about taking natural observations at face value

Australian historian Peter Harrison noted that natural philosopher's acknowledgement of humanity's fall and subsequent movement toward a need to “interrogate” nature using experimental methods.

Francis Bacon, William Whewell adopted this position of humanity having both capability and fallibility of human reason

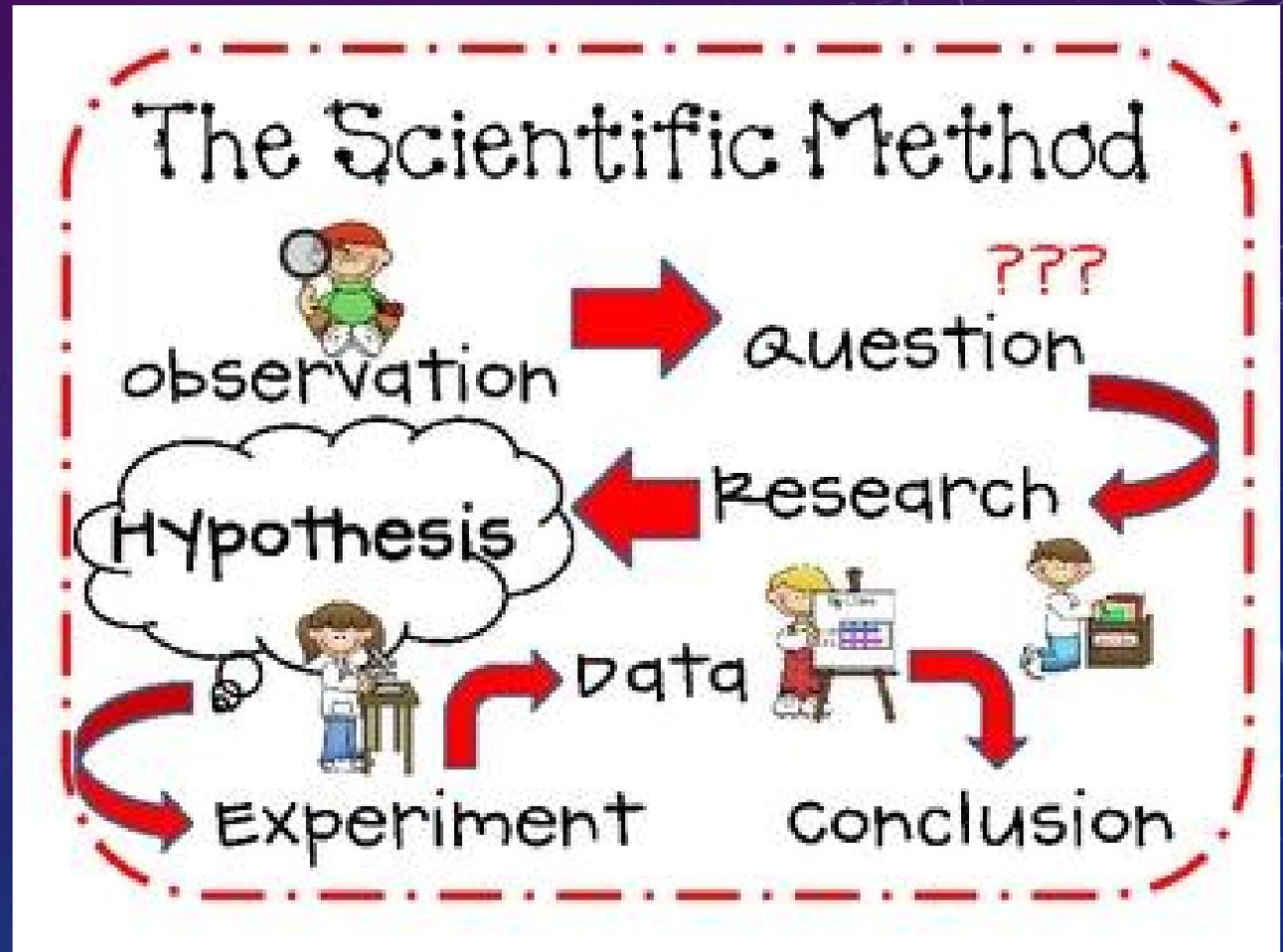
(Meyer, 2021)

The Baconian/Scientific Method

Source:

<https://pioneerinstitute.org/covid/covid-edu/eduresources/knowledge-is-power-sir-francis-bacon-and-the-scientific-method-10-resources-for-high-school-students/>

Published by Francis Bacon (1561-1626) in 1620



Judeo-Christian Origins of the Scientific Method (SM) Summary

The intellectual presuppositions identified by Needham and Hodgson in 11th - 16th century western Europe, that are necessary for a systematic and methodical process of natural inquiry are:

Breaking with Greek thinking

The Contingency of Nature

The Intelligibility of Nature

The Fallibility of Human Reasoning

The Desire to understand what God actually did (need for Truth)

These factors all contribute to the need for a formal investigative methodology into the nature of the universe

(Meyer, 2021)

The background is a gradient from dark purple at the top to dark blue at the bottom, speckled with small white dots. On the left side, there are several overlapping circular elements. A prominent one is a scale with tick marks and numbers ranging from 160 to 260. Other circles are partially visible, some with arrows indicating a clockwise direction. The overall aesthetic is technical and scientific.

CHRISTIAN APOLOGETICS

AN INTRODUCTION
(THE SCIENTIFIC METHOD)

THE SCIENTIFIC METHOD – CORRUPTED?

*“Other scientists say that the definitions of “evidence” and “proof” need an upgrade. Richard Dawid of the Munich Center for Mathematical Philosophy believes scientists could support their hypotheses, like the multiverse—without actually finding physical support. He laid out his ideas in a book called *String Theory and the Scientific Method*. Inside is a kind of rubric, called **“Non-Empirical Theory Assessment,”** that is like a science-fair judging sheet for professional physicists. If a theory fulfills three criteria, it is probably true.*

Source: <http://www.smithsonianmag.com/science-nature/can-physicists-ever-prove-multiverse-real-180958813/#Z6ekeFwgrhGRATgj.99>

- *“First, if scientists have tried, and failed, to come up with an alternative theory that explains a phenomenon adequately, that counts as evidence in favor of the original theory. “*
- *“Second, if a theory keeps seeming like a better idea the more you study it, that’s another plus.”*

DOES THE “PROOF” DEFINITION NEED TO EVOLVE?

- *“Third, if a line of thought produced a theory that evidence later supported, chances are it will again.”*

Radin Dardashti, also of the Munich Center for Mathematical Philosophy, thinks Dawid is straddling the right track. “The most basic idea undergirding all of this is that if we have a theory that seems like it works, and we have come up with nothing that works better, chances are our idea is right,” he says.

REFERENCES

Meyer, S. C. (2021). *Return of the God Hypothesis* (First ed.). New York, NY, USA: Harper Collins. Retrieved 2022

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CHRISTIAN APOLOGETICS

A WORD ON LITERARY HERMENEUTICS AND
INTERPRETATION

HERMENEUTICS-

Branch of knowledge that addresses interpretation of classical texts, including the Bible.

There are eight generally accepted rules for interpretation:

Source: <https://www.apologeticsindex.org/5846-biblical-interpretation-rules>

EIGHT RULES OF INTERPRETATION

1. **DEFINING TERMS-** Common definitions must be identified and consistently applied. The usually requires using a Hebrew/English or Greek/English lexicon.
2. **USAGE-** It must always be remembered that old Testament books are written to the Hebrews of that time, not a 21st century audience. Likewise, NT letters were written to a first century audience.
 1. It is very important not to impose modern usage and meaning
3. **CONTEXT-** All words read in a passage must be understood in context of all words before and after. Many passages will be misunderstood without contextual consideration.
4. **HISTORICAL & CULTURAL BACKGROUND-** Having an understanding of culture and historical significance in which the writings occurred and the intended audience.

EIGHT RULES OF INTERPRETATION

5. **LOGIC**- Interpretation is logical reasoning. Does the interpretation make sense? Is the interpretation consistent with other passages of scripture on the same topic? The Bible is to be interpreted applying the rules of language and grammatical syntax.
6. **PRECEDENT**- Word and phrase usage and definitions must follow precedents and not establish new meanings apart from the original.
7. **CONSISTENCY**- The parts of Scripture being interpreted must be consistent with the rest of Scripture.

EIGHT RULES OF INTERPRETATION

8. INFERENCE- An inference is a fact reasonably implied from another fact. It is a logical consequence.
 1. It derives a conclusion from a given fact or premise. It is the deduction of one proposition from another proposition.
 2. Such inferential facts or propositions are sufficiently binding when their truth is established by competent and satisfactory evidence.
 1. Competent evidence means credible, consistent, logical, and in agreement with other similar lines of evidence.
 2. Satisfactory evidence means that amount of proof which would ordinarily satisfy an unprejudiced mind beyond a reasonable doubt.

Finally, we must always remember the role of the Holy Spirit, who guides us in all truthfulness (John 14:16-18; 16:13).

EIGHT RULES OF INTERPRETATION- Summary

DEFINING TERMS– Are the terms consistent with the authors intent?

USEAGE – Who was the intended audience?

CONTEXT – places boundaries on the interpretation

HISTORICAL & CULTURAL BACKGROUND – significance of and influences on the writing

LOGIC – Is the interpretation reasonable and consistent?

PRESCEDENT – Is the interpretation consistent with previous interpretations or does it significantly depart from them?

CONSISTENCY – Is the interpretation consistent with other similar passages of scripture?

INFERENCE – are the logical extension(s) consistent with all the above? Is the interpretation credible, consistent & satisfactory?

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CHRISTIAN APOLOGETICS

END OF SECTION
(THE SCIENTIFIC METHOD)