

# Retrofit or predictive modeling? A critique of Concordism

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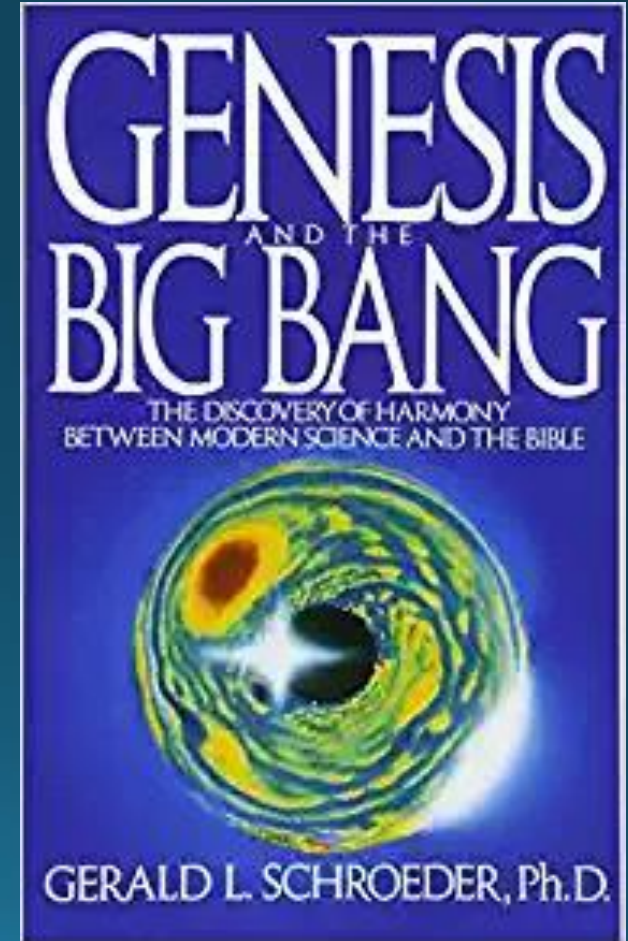
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# Concordism

- Scripture as the Word of God contains scientific truths.
- The scientific layer of those passages can affirm the validity of Scripture.
- My position: The Bible is not a science textbook!

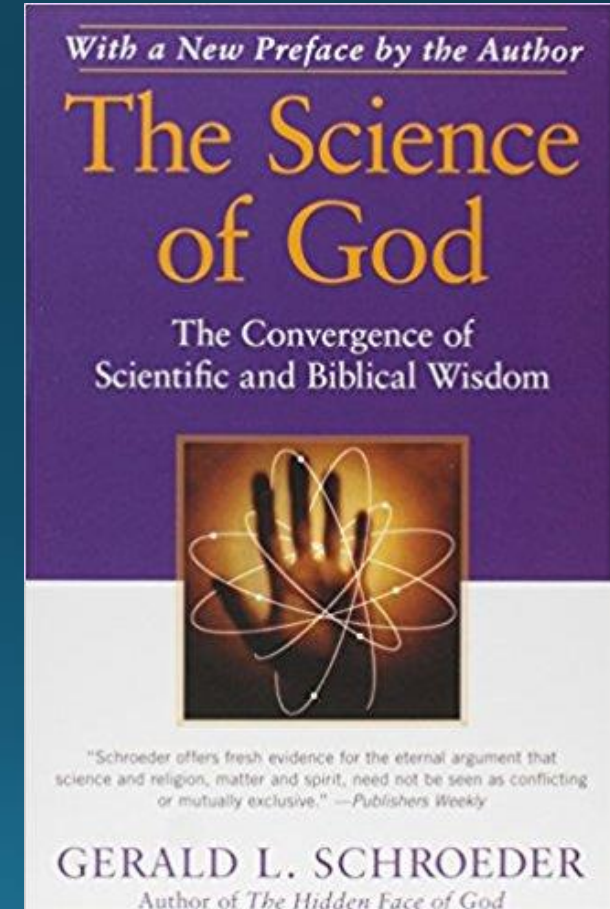
# Harmonizing 6-day creation and science

- Jewish physicist Gerald Schroeder
- It is entirely possible for God to create the world in six days.
- *Psalms* 90: 4 says, “A thousand years in your (God) sight are like a day that passes.”



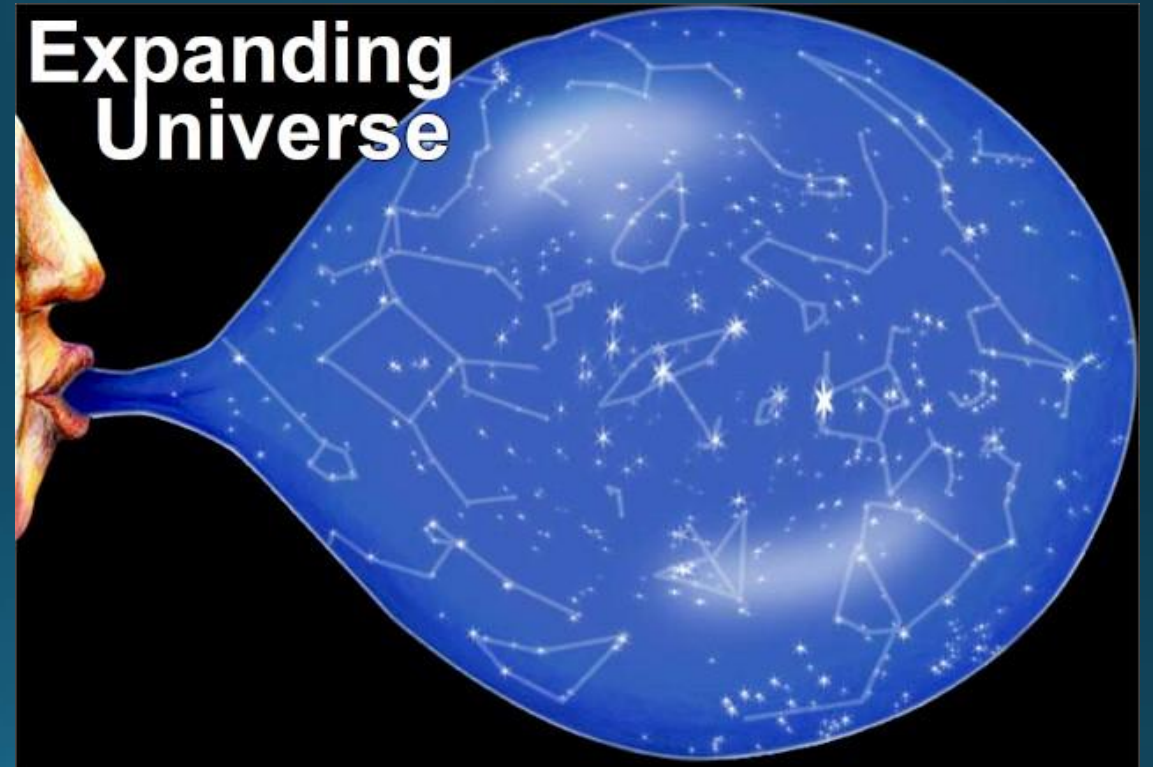
# Harmonizing 6-day creation and science

- *Genesis 1* describes God's time but from Adam forward, we experience human time.
- The 15-billion years in science and the six days in Genesis are the two sides of the same coin.



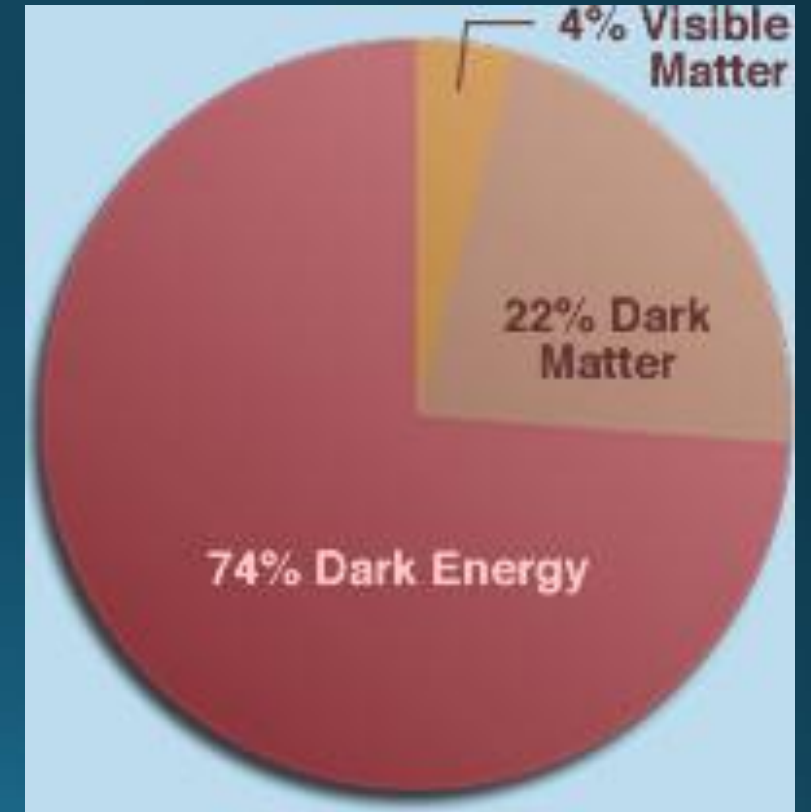
# Big Bang and expanding universe

- *Job 9:8*, “He (God) alone stretches out the heavens and treads on the waves of the sea.”
- This implies an ongoing expansion.



# Dark matter and dark energy

- Job 38:19: “What is the way to the abode of light? And where does darkness reside?”
- This implies dark matter and dark energy
- 74% of the Universe is occupied by dark energy whereas dark matter makes up about 22% of the universe.
- Dark matter is an invisible matter that does not emit light or energy while dark energy is a property of space.





# Dark matter and dark energy

- After the big bang, the universe keeps expanding in all directions.
- In the past scientists thought that this expansion would eventually cease due to diminishing energy.
- Studies of distant supernovae revealed that today the speed of expansion is getting faster and faster, due to the dark energy continuing to fuel the expansion.



# Fallacy of apophenia

- Did the Bible really foretell the discovery of dark matter and dark energy?
- A psychological tendency to attribute meaning to perceived connections between unrelated matters.
- People can easily find some evidence to confirm their preconceived hypothesis: Confirmation bias.



# George Lemaître

- None of those scientists ever said that their research was inspired by the *Book of Job*.
- Belgian priest George Lemaître proposed what became known as the big bang theory in 1927.
- Lemaître was opposed to Pope Pius XII's proclamation that the theory of cosmic expansion could scientifically validate Catholicism.
- He asserted that there was neither a connection nor a contradiction between the big bang theory and Catholicism



# Edwin Hubble

- The big bang theory is supported by Edwin Hubble's discovery of the **Red Shift** phenomenon in 1929.
- Hubble was raised as a Christian, but as he grew up he became skeptical of his faith and eventually distanced himself from religion.



# Allan Sandage

- After Edwin Hubble died in 1953 his student Allan Sandage continued Hubble's research.
- A year later Sandage revised the estimate of the **Hubble constant**.
- Although Allan Sandage was a born-again Christian, he explicitly stated that his religious conversion did not occur because of reasoning or intellectual inquiry. Rather, he acted on the will to believe.



# Arno Penzias

- In 1964 the big bang theory is further verified by Arno Penzias and Robert Wilson's discovery of **cosmic microwave background radiation**.
- Arno Penzias is a Jew. But he explicitly rejected the connection between his discovery and the Old Testament.
- He admitted that he didn't experience any tie between his spiritual progress and his scientific research.



# Arno Penzias

- 'I have no problem with scientists saying that there is no God. But for them to say, "This is God," annoys me. It is blasphemy. It annoys me because they're misusing the word, which is at the very least disrespectful. They haven't got a clue what God is.'



# Vera Rubin

- Jewish scientist Vera Rubin played a key role in discovering dark matter.
- In 1996, when Rubin was interviewed by the Catholic EWTN network, she said: "In my own life, my science and my religion are separate. I'm Jewish, and so religion to me is a kind of moral code and a kind of history. I try to do my science in a moral way, and, I believe that, ideally, science should be looked upon as something that helps us understand our role in the universe."





# Alan Guth

- Alan Guth is credited as one of the scientists who advocated the theory of dark energy.
- He declared that he saw no evidence of design in the universe and thus invoking a designer would not help advance science at all.



# After the fact!

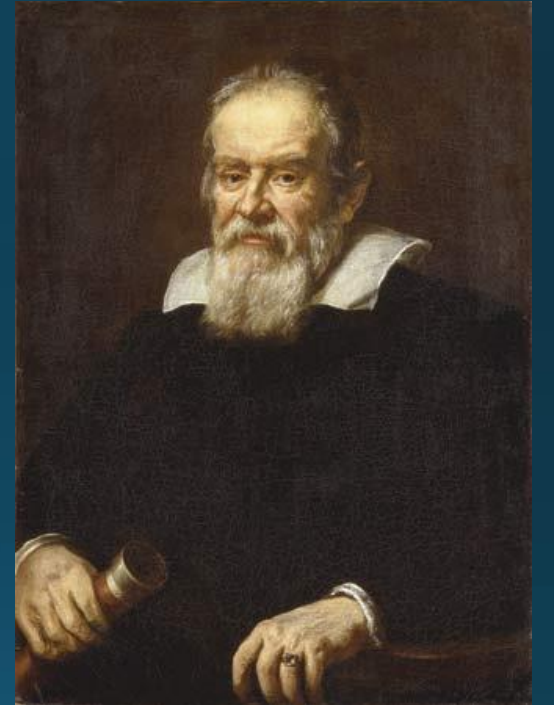
- We can easily find some verses in the Bible that seem to be compatible with modern scientific concepts.
- This type of **retrofit** has no predictive power at all.
- It is not the case that scientists predicted cosmic expansion, dark matter, and dark energy based on their Biblical knowledge. Rather, Christian apologists claimed the credit **after the fact**.

# How about counter-examples?

- In the *Book of Job* there are verses that appear to contradict with modern science.
- *Job* 38: 4, "Where were you when I (God) laid the earth's foundation?"
- Atheists quoted this verse to accuse the Bible of supporting the notion of an unmoved earth.

# How about counter-examples?

- *Psalms* 104: 5, “He [God] set the earth on its foundations, so that it should never be moved”
- It was quoted as evidence to support the notion that the earth is a stationary planet.
- During the 16<sup>th</sup> and 17<sup>th</sup> centuries when Copernicus and Galileo introduced the heliocentric model of the universe, both Catholics and Protestants rejected this idea.
- In their view the geocentric model, which regarded earth as the immobile center of the universe, seemed to be in alignment with the Bible.

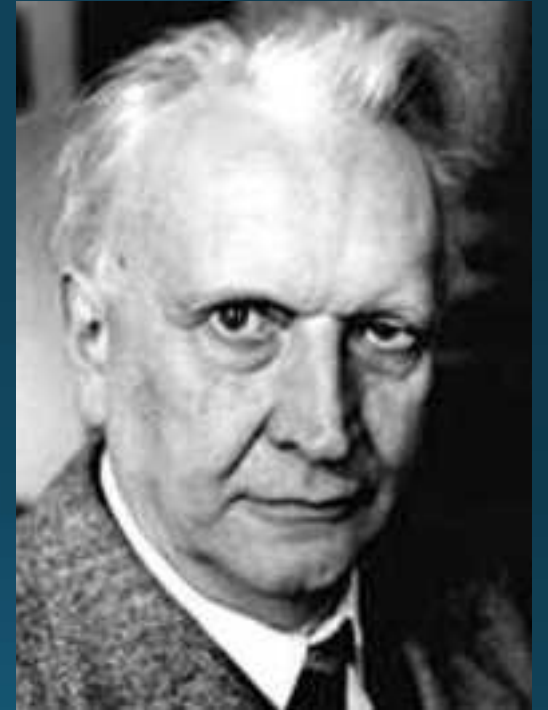


# John Lenox's defense

- British mathematician
- “God the Creator has built certain very real stabilities into the planetary system that will guarantee its existence so long as is necessary to fulfill his purposes. Science has been able to show us that the earth is stable in its orbit over long periods of time, thanks in part to the obedience of gravity to an inverse square law, to the presence of the moon, which stabilizes the tilt of earth's axis, and to the existence of the planet Jupiter, which helps keep the other planets in the same orbital plane.”

# Acid test

- No matter whether the earth is immovable or orbiting around the sun, those Bible verses are still considered compatible with science.
- Karl Popper: If a theory can never be falsified, then it has no scientific merit.
- Retrospectively fitting scientific data into Bible verses is easy. The acid test of concordism is whether today Christian scientists can develop a scientific theory based on the Bible, and have the theory be verified with empirical data in the future as well.





# Could make things worse

- Attempting to defend Christianity by mapping Bible verses and scientific concepts would make matters worse.
- Skeptics and atheists could use these examples to portray Christians as opposed to science.

# Michael Ruse

- Philosopher and critic of religion
- “Christians have long been in the business of interpreting things allegorically, and the point is that in both Big bang story and the *Genesis* story we have a beginning. The problem, rather is that if the science changes or is modified, then you may well find that you have committed to something that is not religion-friendly. In this case, if pre-Big bang stories gain traction, you are worse off than before.”



# Dead end?

- What if there were no dark matter or dark energy?
- What would happen if someday scientific data support the cosmogony that the universe has no definite beginning; rather, our existing universe is one of many worlds in unceasing cycles of cosmic expansion and contraction (like Hindu or Buddhist cosmology)?
- Christian apologists might cite other Bible verses or re-interpret the verses that previously supported the outdated cosmogony in order to accommodate the new theory.
- This “mapping” approach would lead to a dead end.