

What is Science?



An Attempt at a Definition

Conforming hypotheses to data

- (1) Looking at data
- (2) Making a hypothesis
- (3) Collecting more data
- (4) Testing hypothesis against data
- (5) Refining hypothesis
- (6) Return to (3)

- How distinguished from scholarship in other academic fields?
 - History
 - Economics
 - Theology
- The main difference will be the kind of data examined, and the sort of explanation being offered.

Goals and Methods:

- What is its Goal?
 - Just a device for organizing observations?
 - Trying to understand reality?
- Is it a Public Endeavor?
 - Can it be shared by people with different worldviews?
 - Or will they have their own brand of science?

What is Science?

One suggested definition:

- Science is an attempt to explain nature
 - By conforming the explanation to the data
 - Without supernatural causes allowed
- This is science as commonly practiced today.
- Notice this is worldview-dependent.
 - If there is no supernatural, it will converge with reality.
 - It the supernatural exists, it won't converge.

Another suggested definition:

- Science is an attempt to explain nature:
 - By conforming the explanation to the data
 - Not limiting the character of the explanation
 - But making inference to the best explanation
- This will tend to converge on reality, even if reality corresponds to a different worldview than originally anticipated.

What is Science?

Distinguished from History, Philosophy, Theology

- Kind of Data:
 - Natural phenomena, as opposed to social, political, religious
- Sort of Explanation:
 - How things work
 - What nature is like
 - The history of nature

What Should We Ex Nature to Be Like?



Worldview-Dependent Expectation

Abstracts of Powerpoint Talks

Atheistic Expectation

"The cosmos is all that is,

or ever was,

or ever will be."

Carl Sagan, Cosmos



Atheistic Expectation

- If the cosmos is all that is, or ever was ...
- Then:
 - Everything is nature.
 - There can be no supernatural causes.
- Therefore:
 - We seek only natural causes.
 - Supernatural causes are fictional.
 - Whatever the data looks like, the cause must be natural.

Atheistic Expectation

"We take the side of science in spite of the patent absurdity of some of its constructs ... in spite of the tolerance of the scientific community for unsubstantiated just-so stories, because we have a prior commitment, a commitment to materialism. It is not that the methods and institutions somehow compel us to accept a material explanation of the phenomenal world, but, on the contrary, that we are forced by our *a priori* adherence to material causes to create an apparatus of investigation and a set of concepts that produce material explanations, no matter how counterintuitive, no matter how mystifying to the uninitiated. Moreover, that materialism is absolute, for we cannot allow a Divine Foot in the door."

Richard Lewontin, NY Review of Books (9 Jan 97)

"In the beginning, God created the heavens and the earth." – Moses

"When I consider your heavens, the work of your fingers, the moon and the stars, which you have set in place, what is man that you are mindful of him, the son of man, that you care for him?" – David

"The heavens declare the glory of God, the skies proclaim the work of his hands." – David

Theistic Expectation

- If the cosmos is not all that is, or ever was ...
- Then:
 - Nature is not everything.
 - There are supernatural causes.
- Therefore:
 - We are open to both natural & supernatural causes.
 - But we are limited in investigating supernatural causes.
 - So we let the character of the data influence our decisions on the kind of causes.

Some Clarification

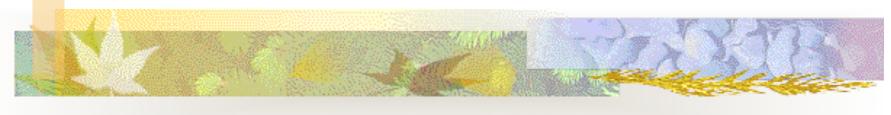
- It does not follow that we must plug a supernatural explanation into every gap.
- We will probably use natural explanation as the default.
- We need some criteria on when we opt for a supernatural explanation.

Distinction between:

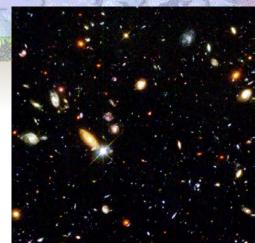
- Providence
 - God's oversight of nature, His usual action
 - Probably by means of natural law
- Miracle
 - God's unusual intervention into nature
 - Characterized in the Bible as:
 - Powerful, amazing, significant, wondrous

- Sufficiently powerful, amazing, significant, wondrous that natural causation seems insufficient.
- Therefore supernatural causation is a better inference.
- How powerful, etc.?
 - Michael Behe, Darwin's Black Box
 - William Dembski, *The Design Inference*

Some Candidates for Supernatural Causation



A Few Suggestions



- Evidence for a finite universe
 - Apparently there is something beyond.
- Evidence for a universe with a beginning
 - Something apparently caused it to be.
- Evidence for a "fine-tuned" universe
 - The cause of the universe seems to have the characteristics of mind.

Planetary Astronomy

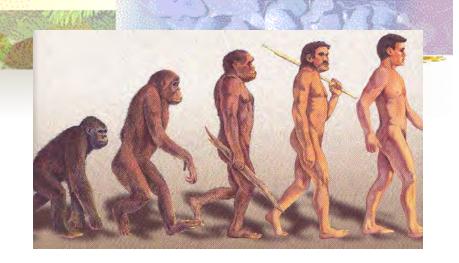
The rarity of "earth-like" planets

- Obviously depends on meaning of "earth-like."
- Should not get hung up on trivia.
- Should pay attention to features that are necessary & striking.
- But there are enough of these that it would be astonishing to have even one earth-like planet in our universe.

Biology

- The origin of life
 - Seems far beyond chance
- "Fine-tuning" in living things
 - See Michael Denton, Nature's Destiny
- The shape of the fossil record
 - Not what Darwinism predicts
- The presence of "irreducible complexity"
 - See Michael Behe, *Darwin's Black Box*

Anthropology



- The gap between humans and other known animals
- The problem of consciousness
- The problem of self-initiation
- The workability of logic
- The problem of conscience

In a Theistic Universe

- Theists should be on the lookout for markers pointing to God in & behind the phenomena.
- Because of the reductionism of secular science, we should not expect those practicing such science to be looking for this.
- We should particularly be on the lookout for phenomena in our disciplines that are resisting naturalistic explanation.

Not the End, but the Beginning



Go Do It!