

1 Understanding Science

- Module: Science
- Lesson 24

2 Some Questions for Today

- What is science?
- Why discuss science in a class on Christian apologetics?
- Can a non-scientist intelligently speak about questions of science?
- Is science a good or bad thing?
- Is the Christian faith anti-science?

3 Talking About Science in an Apologetics Class?

- Misunderstandings about science and the bible, and about the history of both science and of Christianity, as well as their interrelationship, are the source of common objections used by many to challenge the Christian faith.
- Can a non-scientist intelligently assess and critique the deliverances of science and scientists?
- Keep in mind two key elements of the scientific endeavor:
 - The discovery and presentation of facts (the data).
 - The assessment or interpretation of what those facts mean.

4 Talking About Science in an Apologetics Class?

- Laymen (non-scientists) are not left without any ability to understand and assess the deliverances of science or the claims which scientists make.
 - Laymen can be well versed in scientific matters.
 - Laymen have access to the knowledge and writings of well-trained and/or well-regarded scientists.

5 Talking About Science in an Apologetics Class?

- Laymen can often assess whether the facts (data) are—
 - sufficient to support a given interpretation or conclusion.
 - being accurately or honestly reported.
 - whether relevant facts are being overlooked or discounted.
- Laymen can critique the reasoning, assumptions, opinions, and underlying philosophical assumptions of scientists.
 - Laymen should be particularly alert to times when scientists intentionally or inadvertently assert their authority as scientists to express views which lie beyond the realm of science.

6 Talking About Science in an Apologetics Class?

- Richard Weaver (1910–1963), professor of English, historian, political philosopher, in *Visions of Order*.

- “Indeed, the layman must not presume to question the facts assembled by qualified scientists (although what constitutes a fact is itself sometimes debatable). Nevertheless, we need to look at the matter from greater perspective and remember that no science exists purely in the form of a collection of facts. The sciences are these facts plus structures of reasoning that are built upon them. The facts we are bound to receive if they come from sources that have given satisfactory evidence of their objectivity. But the reasoning that is done on the basis of them is open to the inquiry of every man who has a rational faculty.”

7 Talking About Science in an Apologetics Class?

- Weaver, (cont.)

“...This is merely saying that the layman has the right to ask about the connection between the factual evidence and the conclusion when that connection is not apparent to him. He has the right to ask philosophical questions about the way the facts have been handled and even about whether all of the relevant facts have been taken into consideration.”

8 The Challenge of Defining Science

- Different kinds of science
 - Observational science (how things work)
 - Historical science (how things came to be)
- A definition of science must be broad enough to include all that is science, but specific enough to be useful.
 - For example—Michael Ruse, philosopher of science, has offered the following, inadequate, definition. See if you can identify why this definition is inadequate:
 - “Science deals only with the natural, the repeatable, that which is governed by law.”
- How science is defined is important because the definition is used to establish the limits of what is considered to be scientific enquiry and knowledge.

9 My Definition:

- Science is the systematic study of the physical and natural world, employing an array of accepted tools such as reason, observation, hypothesis, experimentation, measurement, data, evidence, prediction, induction, inference to the best explanation (abduction), etc. in order to understand the laws and explanations of the natural world.

10 The Foundations of Science

- Science (as we know it) was once a sub-category of philosophical enquiry and was called natural philosophy.
- Science cannot be conducted without certain philosophical presuppositions or a prioris. (see handout)
- Each of these assumptions—

- Cannot be proven by a scientific process.
- Has been challenged philosophically.
- Is accepted a priori, without scientific proof or justification.

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12 **The Limits of Science**

- Science can speak authoritatively within the scope of its definition—the material, natural, physical world.
- Science cannot speak authoritatively of anything beyond its scope. For example, science cannot tell us—
 - Whether or not anything exists beyond the material, natural, physical world.
 - What the non-material, if there is such, is like.
 - It cannot even describe or define itself. (It cannot lift itself up by its own bootstraps, so to speak.)

13 **Scientism: The Pseudo Science**

- Scientism: The belief that science is the sole source of knowledge about reality. There is no reality that does not lie within the domain of science. All else is mere conjecture and/or irrational.
- Two types of scientism:
 - Strong—There are no truths or knowledge apart from the deliverances of science.
 - Weak—There may be other truths/knowledge, but science is the most valuable, serious, authoritative. Every other intellectual activity is inferior to science and founded upon it.
- David Berlinski's critique of scientism:

"...science as the single system of belief in which rational men and women might place their faith. ...And like any militant church, this one places a familiar demand before all others: Thou shalt have no other God's before me."

14 **Scientism's Fatal Flaws**

- Scientism confuses propositions about science for propositions of science.
 - (e.g. The statement that science exhausts the entire scope of reality is a statement about science, but it is not itself, nor can it ever be, a statement proved by science.)
- The Achilles' Heel of scientism:
 - Strong scientism is self-refuting. It claims to know, scientifically, that there is nothing that can be known outside the category of science. Hence, it claims to know what it claims cannot be known.

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16 **Scientism's Fatal Flaws**

- The Achilles' Heel of scientism (cont.):

- Weak scientism faces the weakest link problem: If science is founded on philosophical assumptions, it cannot be any more authoritative than the philosophy upon which it rests. (Hence philosophy is a more authoritative form of knowledge than is the science which weak scientism claims to be the most authoritative.)

17 **Scientism's Fatal Flaws**

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19 **The Supposed War: Christianity vs. Science**

- The Enlightenment Myth About Christianity and Science:
 - Christianity historically has supposedly typically suppressed and opposed science.
 - Supposedly the fall of Rome and the rise of Christendom threw Western civilization into a thousand years of "dark ages."

20 **The Supposed War: Christianity vs. Science**

- The Truth about Christianity and scientific progress.
 - With a few notable exceptions, Christianity supported and encouraged scientific discovery, and all early universities were founded and supported by the church.
 - Christianity, as a worldview is the reason science, as we know it today, was born. It came to exist in the Christian world, and nowhere else, specifically because the Christian worldview made science both possible and desirable. (See handout.)
 - There never was a "dark ages." The medieval era, prior to the Renaissance, was a period of exciting intellectual, scientific, and technological advancement.
 - The long line of scientists and philosophers leading up to the discoveries of the sixteenth and seventeenth centuries were mostly priests or monks—even bishops and cardinals.

21 **The 52 Great Scientists of the Sixteenth and Seventeenth Centuries**

22 **The Bible and Science**

- Faith vs. Reason?
 - This is a false dichotomy, as we noted in our lessons in epistemology.
 - The many Christians practicing in the fields of science, past and present, show there is no inherent conflict between religious faith and science.

23 **A Biblical Basis for Science**

- Man made in the image of God (Imago Dei).
 - God as knower.

- Man also as knower.
- The Bible reveals that this is an orderly world.
 - Order out of chaos is one of the striking features of the creation narrative.
 - Such order is necessary for scientific enquiry and discovery.

24 **A Biblical Basis for Science**

- The Creation Mandate to rule and subdue (Gen. 1:26, 28) the natural world implies the need to understand that world.
- The Bible talks about the first primitive scientific endeavors.
 - Plant husbandry is commanded. (Gen. 2:15)
 - The first example of taxonomy—Adam. (Gen. 2:19, 20)

25 **Where the Conflict Really Lies (with thanks to Alvin Plantinga)**

- Regarding Christianity and Science:
 - There is a superficial conflict.
 - There is deep concord.
- Regarding Naturalism and Darwinian Evolution:
 - There is superficial concord.
 - There is deep conflict.
- Plantinga argues (as do non-Theists such as Nietzsche, Thomas Nagel, and others) that, given naturalism and evolution, we have no reason to trust our cognitive processes, since they are the product of blind, unguided mutations and natural selection. Hence, if both naturalism and evolution are true, we should not trust our mental processes when they tell us that naturalism and evolution are true.

26 **Naturalism's Borrowed Capital**

- A consistent naturalism precludes the idea of the possibility of doing science.
- Naturalism's pursuit of science is operating on the borrowed capital of the theistic assumption of the reliability of our cognitive resources and the orderliness of nature.
- One might expect that, in the long run, naturalism will eventually erode the culture's love and pursuit of science.

27 **Christianity and Science in History**

- Modern science was born in the Christian West, and only in the Christian West. (By "modern" we mean empirical science that utilizes theories, experimentation, and empirical data.)
- Supposed examples of conflict between science and Christianity often cited by skeptics:
 - Copernicus (1473-1543)
 - Bruno (1548-1600)

- Galileo (1564-1642)
- Darwinian Evolution
- We will explore each of these in future lessons.

28  **Next Week:**

- The Origin of the Cosmos