

## How Evolution Works and the Implications for Faith in God

The word evolution can take on many meanings: 1) Evolution as natural history: the world is old, and that the living organisms that populate it have changed over time, 2) Evolution as a mechanism: e.g. the processes of variation and natural selection by which organisms can change over time, and 3) Evolution as a worldview: a way of seeing the world and extracting meaning from it. I will argue that much of the discomfort Christians feel towards evolution fundamentally arises from 3) the use and abuse of evolution as a world view. As a scientist who works on evolutionary theory, I will discuss how we might think about 2) the mechanisms of evolution, and what implications, if any, this has for belief in God.

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### BACKGROUND:

Many barriers to the acceptance of Evolution by evangelical Christians arise from popular misconceptions about the nature of science and its relationship to God's action in our world. These misconceptions mirror those held by the general public (and are regularly exploited by the new atheists).

For example, difficulties result from conflating “mechanism” and “meaning”. Thus claims that the biological complexity around us arose through regular physical processes often smell like deism or even atheism to the average person in our pews. A second set of issues clusters around popular views of natural theology where the waters are further muddled by the misuse of value-laden metaphoric language (e.g. “random” and “selfish gene”) to describe biological evolution. Finally, difficulties also arise from questions of authority: Who can a Christian trust to judge the reliability and implications of new scientific findings?

### I) INTRODUCTION

#### a. My Research

## II) EVOLUTION : It is important not to conflate the following:

### 1) Evolution as Natural History

- the earth is old (+/- 4.5 Billion years)
- more complex life forms followed from simpler life forms

### 2) Evolution as a mechanism for the emergence of biological complexity

- generated by mutations and natural selection
- (note: most Christians agree that God created this mechanism)

### 3) Evolution as a “big picture” worldview (scientism)

- George Gaylord Simpson:

*"Man is the result of a purposeless and materialistic process that did not have him in mind. He was not planned. He is a state of matter, a form of life, a sort of animal, and a species of the Order Primates, akin nearly or remotely to all of life and indeed to all that is material."*

- Richard Dawkins:

*"Darwin made it possible to be an intellectually fulfilled atheist."*

## III) SCIENCE AND MIRACLES:

### A) Newton, Leibniz and the Planets

B) Miracles are not just “wonders” (teras) for us to marvel at, but signs (semion) or works of power (dunamis).

1) The scientific method will have success in describing the “customs of the creator”, that is, the regular ways that God interacts with and sustains the world.

2) God can also interact in less customary ways and do miracles, but since we do not have full access to the divine mind, we cannot know or control all the conditions, nor repeat them. Thus by definition they fall outside of the remit of science. You could almost say that the Bible teaches that miracles are unscientific (although of course science could measure their consequences).

#### **IV)SCIENTIFIC METHOD AND TAPESTRY ARGUMENTS:**

##### **A) Tapestry arguments in Physics and Biology**

“To them [Biologists], experimental evidence, fallible as it might be, provided a far surer avenue to truth than did mathematical reasoning. .... Their implicit assumption seemed to be: How could one know one’s assumptions were correct? Where, in a purely deductive argument, was there room for the surprises that nature might offer, for mechanisms that might depart altogether from those imagined in our initial assumptions? Indeed for some biologists, the gap between empirical and logical necessity loomed so large as to make the latter seem effectively irrelevant. (Evelyn Fox Keller, in “Making Sense of Life: Explaining Biological Development with Models, Metaphors, and Machines, HUP, (2002))

##### **B) Tapestry arguments and the age of the earth**

##### **C) Tapestry arguments for evolution type 2)**

#### **V) METAPHORS AND EVOLUTION:**

##### **A) Random or Stochastic?**

B) Genes as blueprints or as networks of switches?

C) Clay or Lego blocks?

D) Selfish genes, or control on many levels?

E) Evolution as a tinkerer, or as an engineer?

F) Contingency or inevitable outcomes?

## **VI) SCIENCE, SCIENTISTS AND THE CHURCH**

## **VII) IMPLICATIONS OF EVOLUTION FOR FAITH IN GOD**

A) Implications of Evolution type 3

B) Implications of Evolution type 2

C) Implications for Evolution type 1

-----**RESOURCES:**-----

Some of the points are made in an essay on biologos.org:

<http://biologos.org/blog/series/addressing-christian-concerns-about-the-implications-of-biologos-science>

for more see <http://biologos.org/blog/author/louis-ard>

Other short essays on this topic that are good places to start:

**Tim Keller:**

<http://biologos.org/blog/series/creation-evolution-laypeople-series>

**Denis Alexander:**

<http://biologos.org/blog/series/models-for-relating-adam-and-eve-with-contemporary-anthropology>

**Denis Venema**

<http://biologos.org/blog/series/evolution-basics>

**Ted Davis**

<http://biologos.org/blog/series/science-and-the-bible-theistic-evolution-series>

<http://biologos.org/blog/series/science-and-the-bible-intelligent-design>

<http://biologos.org/blog/series/science-and-the-bible-concordism>

<http://biologos.org/blog/series/science-and-the-bible-scientific-creationism>

<http://biologos.org/blog/series/science-and-the-bible-wrapping-it-up>

**FOR (MUCH MUCH) MORE SEE:**

[www.biologos.org](http://www.biologos.org)

[www.faraday-institute.org](http://www.faraday-institute.org)

[www.cis.org](http://www.cis.org)

**INTRO BOOKS BY EVANGELICAL AUTHORS:**

- “Can we read Genesis Today?” by Ernest Lucas
- “Seven days that Divide the World”, by John Lennox
- “The Bible, Rocks and Time”, by Davis A Young
- “Creation or Evolution: Do we have to chose?” by Denis Alexander

- “The Language of God” by Francis Collins
- “Coming to peace with Science” by Darrel Falk
- “Origins: A Reformed Look at Creation, Design, and Evolution”, by Deborah and Loren Haarsma
- “The Fine Tuned Universe” Alister McGrath