



Some Problems for Theistic Evolution

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Some Problems for Theistic Evolution

- What is Theistic Evolution?
- Some Scientific Problems
- Some Theological Problems

What is Theistic Evolution?

- Keith Stewart Thomson's Definitions of Evolution
- Theistic Evolution in the ASA Creation Statement
- Two Alternative Proposals for a Definition

Pattern: Change over Time

- ☞ “A general sense of change over time”
 - Change admitted by all but a few Greek philosophers
- ☞ Coupled with “a parallel set of data for changes in the earth itself”
 - Parts company with young-earth creation
 - But not with old-earth creation
- ☞ Thomson sees this as:
 - “The most solidly based fact of evolution”
 - But no “statement/inference about process”

Process: Descent through Common Ancestry

- ☞ “Organisms are related by descent through common ancestry.”
 - All agree this is true for **some** organisms.
 - Not even all atheistic evolutionists think this true for **all** organisms.
- ☞ So no need for this to be required for theistic evolution.
- ☞ Most OECs hold to multiple origins, but need not do so.

Mechanism: Natural Selection

- ☞ A model involving “random variation & differential survival”
- ☞ Here TE and OEC part company.
- ☞ But not so simple:
 - Nearly all theistic models have **some** natural selection.
 - Real divide is whether this is **sole** mechanism to explain diversity.
 - And what do we mean by “random”?

ASA Creation Statement

- General statement on which all agree.
- Special statements characterizing various views.
 - Young-earth creation (YEC)
 - Old-earth creation (OEC)
 - Theistic evolution (TE)
- Here we look at the statement on TE.

ASA Statement on TE

☛ Theological Statements

- Areas of agreement
- Areas of diversity

☛ Scientific Statements

Theological Areas of Agreement

- God is free to act in creation in any way consistent with His character. The nature of the physical universe and of God's interaction is a consequence of God's free choice.
- Evolutionary processes are not antithetical to God's creative action. Furthermore, nothing in scripture provides a theological basis for rejecting the descent of all living beings from a common ancestor, including humans.

Theological Areas of Agreement

- An evolutionary view of the history of life provides a positive, productive context for understanding God's relationship to creation, and our role as His image bearers. It also provides a fruitful context for considering the meaning and implications of Christology and the cross.
- Christians should rejoice and praise God for each new revelation of the history and character of the creation, for each new discovery that fills previous gaps in our scientific understanding.

Theological Areas of Diversity

- ☞ How does God direct the creation to His desired ends? Various models for God's action have been proposed, of which some follow. These are not mutually exclusive, so individuals may hold more than one.
 - God is actively directing ALL natural processes ALL the time so that all physical events are specifically willed by Him.
 - God gave, and continues to give, being to a creation gifted with all the capabilities to bring forth all the forms, processes, and events willed by Him.
 - Creation responds to God's will as our bodies respond to ours. However, God's being is not embodied in creation but is transcendent over it.
 - God acts to determine the inherent indeterminacies of physical events, at the micro level of quantum phenomena and at the macro level of chaotic systems...

Theological Areas of Diversity

- ☛ To what extent has God granted freedom to His creatures? Various suggestions have been proposed:
 - God has chosen to limit His direct control over some aspects of creation to give His creatures genuine freedom.
 - God allows for a certain level of genuine indeterminacy in creation such that specific outcomes are not predetermined. At the same time, He remains sovereign and the fulfillment of His will is assured.
 - All physical events are predetermined and preknown by God.

Scientific Statements

- An ancient and dynamically changing Earth and universe is supported by overwhelming evidence from geology, physics, astronomy, and cosmology.
- The common descent of all living things is well-supported by diverse lines of evidence in geology, paleontology, biology, and genetics.
- Biological evolution has great explanatory power and has proven effective in generating new and testable hypotheses in a wide range of scientific disciplines including historical geology, paleontology, ecology, biogeography, developmental biology, biochemistry, and genetics.
- New discoveries and new models are progressively closing many previous gaps in our knowledge and understanding of evolutionary history and mechanisms...

Comments on Theological Statements

- ☞ Special creationists agree on the first and fourth of these.
- ☞ Some agree on the first half of the second also.
- ☞ Where TE's diverge among themselves:
 - Only the fully-gifted model is likely to be testable.
 - On freedom, these are basically the Arminian, Openness, and Calvinistic views.

Comments on Scientific Statements

- ☞ 1st is acceptable to OEC's.
- ☞ 2nd opts for common descent.
- ☞ 3rd is neither necessary nor sufficient to make the TE view true.
- ☞ 4th deals with filling gaps (on which more later).



Two Alternative Definitions of Theistic Evolution

Proposal 1

- Theistic evolution is a view of origins in which God used providential means such as mutation & natural selection as **the prime or only** means for producing the diversity of living things on earth.
- Special creation is a view of origins in which God used miraculous intervention as **the prime or only** means for producing the diversity of living things on earth.

Proposal 1

Extreme
Theistic
Evolution

Moderate
Theistic
Evolution

Moderate
Special
Creation

Extreme
Special
Creation

Proposal 2

- Theistic evolution is a view of origins in which God used providential means such as mutation & natural selection as **a** means for producing the diversity of living things on earth.
- Special creation is a view of origins in which God used miraculous intervention as **a** means for producing the diversity of living things on earth.

Proposal 2

Pure
Theistic
Evolution

Mixed Theistic Evolution
& Special Creation

Pure
Special
Creation

Scientific Problems for Theistic Evolution

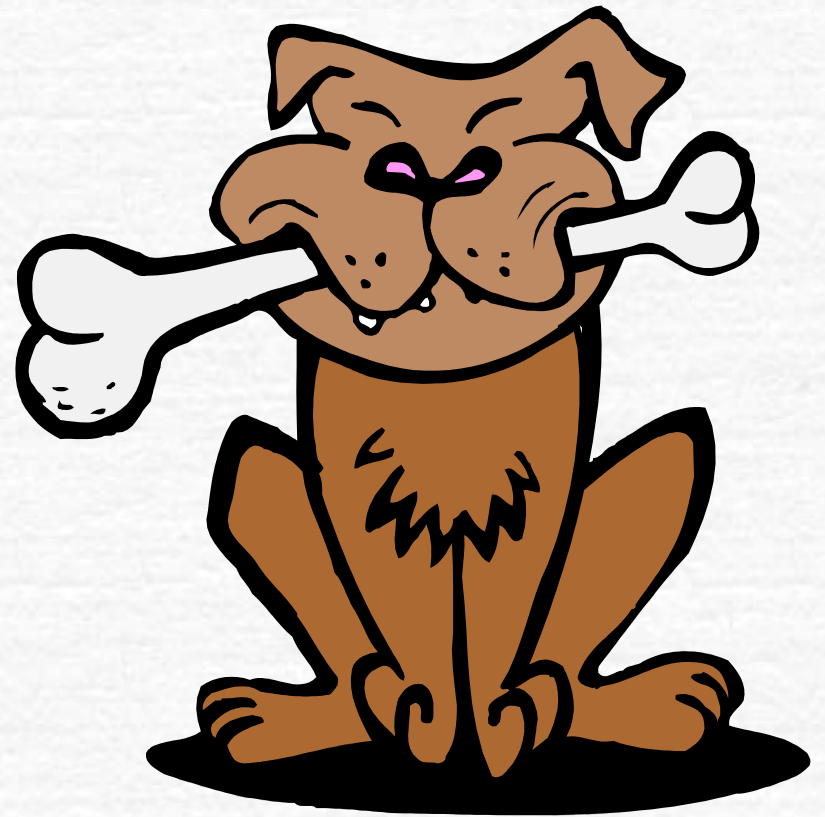
- Transitional Fossils
- Irreducible Complexity
- Shape of the Fossil Record
- Natural Law & Mediation

Transitional Fossils

- The number of fossils that can reasonably be considered transitional is small.
- This is quite surprising if the steps taken in evolving from one form to another (rather different) form are small steps.

Biological Classification System

- Kingdom: Animals
- Phylum: Chordates
- Subphylum: Vertebrates
- Class: Mammals
- Order: Carnivores
- Family: Canidae
- Genus: Canus
- Species: familiaris



Transitional Fossils

- Darwin was aware of the problem.
- He suggested that the fossil record is very fragmentary.
- There is some sense in which this is true, but there are some 1/4 billion fossils in museum collections.
- How detailed a picture could one make with 1/4 billion pixels?

Pictures & Pixels



6700 pixels

190,460 pixels



Fossil Record & Small Populations

- The rarity of transitions in the fossil record was apparently one of the reasons driving a move to the Neo-Darwinian view.
 - Instead of all living things evolving significantly,
 - Have major changes take place in small, isolated groups.
 - These will leave few transitional fossils.

Small Populations

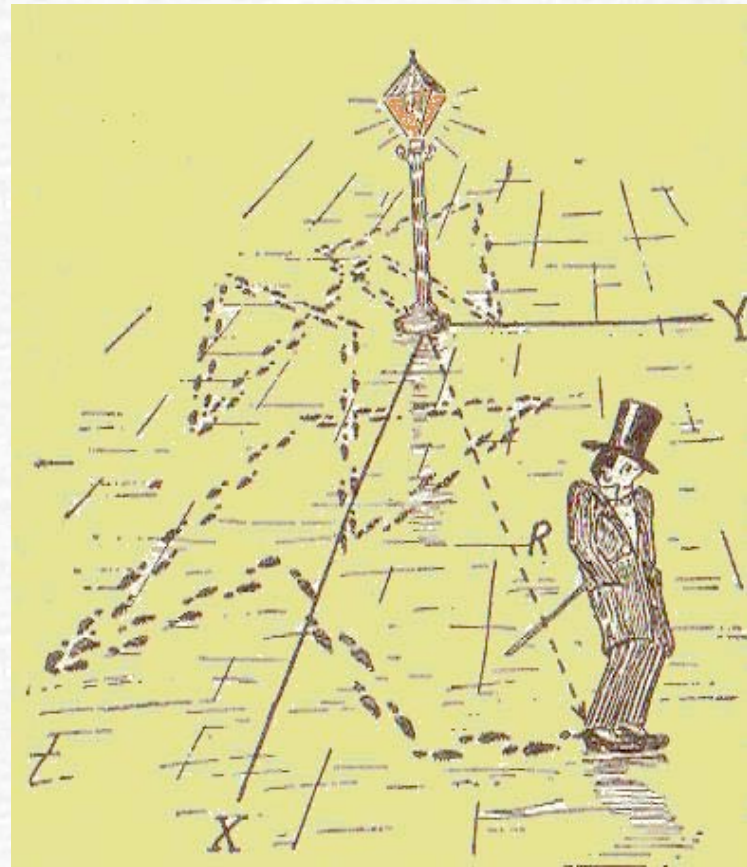
- The argument is that fluke changes can come to dominate a small group more easily than a large one.
- This is true. Consider the relative chances of throwing 60% heads in 10 tosses of a coin versus 100.

Small Populations

- This works fine for single mutations, but fails when multiple mutations are needed.
- For multiple mutations, the chance of finding them in a large population is much greater than in a small one.
- Alternatively, the small population must grow large before the next mutation is likely.
- In either case, there will be a large population to leave transitional fossils.

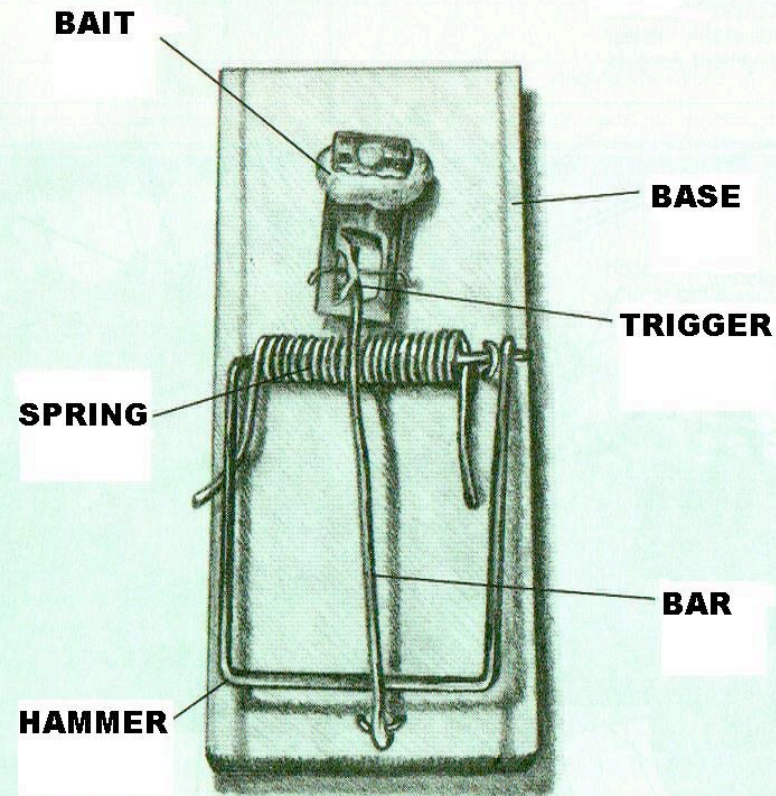
Random Walk

- If transitions not guided, many more steps are needed to cross a given gap.
- The distance traveled is equal to the average step times the square root of the number of steps taken.



Irreducible Complexity

- Complexity – lots of parts
- Irreducible complexity – each part is needed for mechanism to have any function.
- Example: mouse trap
 - Bait is optional
 - Other parts necessary



Irreducible Complexity

- Rotary motor of flagellum of bacteria
- Complex chemical processes:
 - Vision
 - Blood clotting
- Transport inside cell

