

Analogic Logic v. Science: Browning's "Caliban Upon Setebos" and Darwinian Evolution

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Analogic Argument Form

- ❑ Analogical Argument relies on a claimed likeness between two distinct things.
- ❑ Victorian Crisis of Faith
- ❑ William Paley's Argument for God's Existence by design.
 - ❑ Claim One: The universe is a complex system like a watch.
 - ❑ Claim Two: You wouldn't think a watch came about by accident.
 - ❑ Conclusion 1: Something so complicated must have been created by someone.
 - ❑ Conclusion 2: The universe is a lot more complicated, so it must have been created by a being who is a lot more intelligent than a watchmaker.
- ❑ For Paley, the **inference from observation** of the intricate design of the universe to the conclusion of a universe-maker who constructed and designed its use seemed inevitable.
- ❑ Darwin: "analogy may be a deceitful guide" (1543).

Caliban's Argument

- ❑ Caliban's *a priori* inference: Setebos is like Caliban.
- ❑ Frame: Hiding from Setebos--is it possible? (lines 1-23, 284-295)
- ❑ Setebos didn't make the stars--so he's not omnipotent. (lines 24-30)
- ❑ Setebos created Caliban's world because he was "ill at ease" (lines 31-43)
 - ❑ Setebos is spiteful, and made what he couldn't be (lines 55-65).
 - ❑ Setebos is like Caliban in this (lines 75-97)
 - ❑ Not cruel, simply indifferent: choice determines power (lines 100-108, 216-240)
- ❑ Morality of Setebos (lines 109-126)
 - ❑ Moral economy with His creation (lines 179-187)
- ❑ The Quiet created Setebos (lines 127-141, 170-178, 241-262)
 - ❑ A struggle for supremacy could happen (lines 263-283)

Law of Natural Selection

- ❑ **Five Misconceptions about Evolution**
- ❑ **What we observe is "produced by laws acting around us"** (1545).
 - ❑ For example: "attraction of gravity" is a law (p. 1541)
- ❑ **Natural selection is the preservation of favorable, beneficial characteristics in the population and the elimination of unfavorable characteristics.**
 - ❑ Law 1: Growth occurs with reproduction.
 - ❑ Law 2: Inheritance of traits occurs.
 - ❑ Law 3: Variability of inheritance results from indirect & direct action of life's conditions.
 - ❑ Law 4: Divergence of character occurs over long periods of time.
 - ❑ Law 5: Ill-adapted forms become extinct.
- ❑ **Natural Selection is entirely dependent on chance.**

Darwin's Theory

- Darwin relies on, and trusts, the scientific method (1546).
 - No discrepancies between his theory & available observation
 - Darwin's limits: psychology (1544) and assumption of progress (1549).
- All life, biologically considered, takes the form of a struggle to exist and to produce the greatest number of offspring.
 - Observable phenomena: "distribution, rarity, abundance, extinction, and variation." (1539)
 - "the whole economy of nature" reveals a "struggle for existence"
 - "Malthus applied with manifold force" (1540)
- This struggle for existence culls out organisms less well adapted to any particular ecology, allowing those better adapted to flourish--a process called Natural Selection.
 - Observable facts: Bees, mice, cats, flowers--back to bees. (1541)
 - Hypothesis: what we see is the result of a long history of "all striving to increase, all feeding on each other, or on the trees, their seeds and seedlings, or on the other plants."

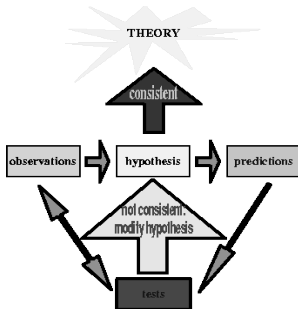
Natural Selection and the "modification of species"

- Natural selection, development, and evolution require enormously long periods of time, so long that everyday experience provides us with no ability to interpret such histories. (1542)
 - FACT: "unity of design" is not an explanation at all; it's simply a re-statement of fact (1542).
 - Sexual Selection: consider the Cardinal (1547)
 - For that matter consider this.
- Divergence of character occurs over long period of time. (1542)
 - Geologic record is not a "well-filled museum" (1544)
 - Don't "overrate accuracy of organic change as a measure of time"
 - Traits are not, as Lamarck thought, inheritable in one or two lifetimes.
 - Observed phenomenon: "chain of affinities" (1543, 1546-1547)



□ Genetic variations ultimately producing increased survivability are random.
 □ Variations are not caused by Creator's design (as religion argues). The "design" we see is fact, not an explanation.
 □ Variations are caused by any intentional action, nor duplicated in a single generation. (Lamarck's argument)

Scientific Method



- Observe some aspect of the universe.
- Invent a tentative description, called a hypothesis, one consistent with what you observed.
 - Observable phenomena can increase.
- Use the hypothesis to make predictions.
- Test those predictions by experiments or further observations and modify the hypothesis in the light of your results.
- Repeat steps 3 and 4 until there are no discrepancies between theory and experiment and/or observation.
- When consistency is obtained the hypothesis becomes a theory and provides a coherent set of propositions which explain a class of phenomena.
- A theory is a framework within which observations are explained and predictions made.