Two types of biological evolution

Lateral Evolution

- "The inherent complexity in a creature manifests itself in the descendents as a result of environmental factors"
- is achieved when $C(D) \leq C(A)$ (complexity of descendent is no greater than complexity of ancestor)
- has been observed in living systems
- is consistent with all known laws of science
- is consistent with the fossil record
- is consistent with Christian theism and Biblical revelation
- has been, to some degree at least, simulated by computer programs
- requires the mechanisms of genetic mutation / recombination and natural selection, which are well-understood
- presupposes the existence of self-reproducing creatures
- **can legitimately be considered a theory, or perhaps a law**

Upward Evolution

- "The ancestry of all existing living organisms can be traced, via purely natural causes, to a single-celled organism, and eventually to non-living matter"
- requires $C(D) > C(A)$ (complexity of descendent is greater than complexity of ancestor)
- has never been observed in living systems
- has never been simulated on a computer
- is not supported by the fossil record
- violates well-known laws of science:
  - The second law of thermodynamics
  - Mendel's laws of genetics
  - Virchow's *Omnis cellula e cellula* ("all cells come from preexisting cells")
  - Pasteur's Law of Biogenesis, *Omne vivum ex vivo* ("all life is from life")
- violates the repeated observation that natural systems do not generate complex specified information
- requires a mechanism that has never been explicitly proposed (thus the transitions remain a mystery: non-life → single independent self-reproducing cell → interdependent, muti-celled, anatomically symmetric, sexually reproducing creatures → intelligent, morally conscious, creative creatures)
- is based upon the philosophy of naturalism, which cannot account for
  - persistence of identity
  - free will / moral responsibility
  - universal code of ethics
  - laws of logic / mathematics
  - origin of information and language
- **can at best be considered a conjecture, or hypothesis**