

EVOLUTION VS. IDEOLOGY

Bad Arguments for Intelligent Design

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Bad arguments for intelligent design are multiplying rapidly. A recent column by Jeff Marino printed in my local paper (DULUTH NEWS TRIBUNE, 19 March 2005) offers a prime example. It may be worth discussing, since I am confident that pieces like this are appearing all around the country. Jeff defines "science" as restricted to what can be observed and subjected to experiment by means of repeatable units within a three-dimensional world. If God ("the intelligent designer") is unobservable or outside of our three-dimensional world, the God hypothesis cannot qualify as scientific. But God is both. So his own definition disqualifies his own hypothesis as science.

Science is not restricted to observables, but it must be possible to derive specific consequences from hypotheses that can be subjected to observation, measurement, or experiment. The basic flaw, therefore, is not that God is unobservable but that the God hypothesis has no observable, measurable, or experimental consequences for us to test. It cannot qualify as scientific. Marino also insists that evolution violates natural laws. The examples he offers are mistaken or wrong but nonetheless instructive and worth mention.

Marino's first example he calls "the law of cause and effect", namely: that every effect must have a cause. Calling this a law does not make it one, however, and this is simply a definitional truth. An event only qualifies as "an effect" because it has "a cause". In this context, he then asks, "Where did the original matter and energy come from?" Notice this is a question about cosmology, not evolution. It is rooted in the widely held religious belief that the world as a whole had to have a beginning in time.

Indeed, most of us tend to take for granted that the origin of the universe had to be unique and irrepeatable. The presumption that the universe had to have a beginning in time, however, turns out to be indefensible on logical and physical grounds. The sequence of positive and negative integers from zero up and zero down illustrates a numerical sequence that has no beginning and no end. So the idea of a sequence having no beginning and no end is at least logically possible. A temporally-infinite world is not contradictory.

It also appears physically possible. On "steady state" models, the universe has always existed and always will exist with a globally uniform but locally varied distribution of matter and energy. On "big bang" models, the universe began with an explosion creating photons and neutrinos from electrons and protons, but cooled sufficiently for electrons to join nuclei and form atoms of hydrogen and helium, which condensed to form the galaxies and stars and eventually Earth.

If the universe will continue to expand until there is a completely homogenous distribution of matter and energy, it ends with "a whimper". Depending upon its exact mass, however, it may reach a point at which the influence of gravity takes over, contracting matter and energy back together in a "big crunch". In that case, we could be in one cycle of endless cycles of big bang/expansion/ contraction/big crunch, where

there is no first and no last historical world. In this case, too, there is no need for God as the "first cause" because there isn't one.

Detectable effects of the big bang include the recession of distant galaxies and a weak radio static that fills the universe, which have been found by astronomical observation. An analysis of the early stages of the big bang are the subject of a very accessible book by Stephen Weinberg, *THE FIRST THREE MINUTES* (1977). The author would be awarded the Nobel Prize in 1979. While we do not have direct access to the big bang, its occurrence can be tested based on its effects.

Marino calls his second example "the law of biogenesis", which states that life only comes from life. But this is no more a natural law than the first. Indeed, it exemplifies the classic fallacy known as begging the question, in which you simply assume as a premise what must be established on independent grounds. Scientists are actively investigating the conditions specific to the origin of life on Earth as it cooled, including water vapor and carbonic gases. Retroviruses may hold the key. The mystery is unresolved, but science is making progress.

Anyone with an elementary familiarity with the history of science knows that it proceeds by a process of successive approximation, advancing hypotheses and theories that account for the available evidence but which may require revision as more evidence becomes available. There are always gaps in what we know about the world around us. But the key point remains. Appeals to an unknowable source using unspecified means does nothing to fill the gaps in our knowledge. A sense of psychological security is no substitute for an objective explanation.

Marino's third example is the second law of thermodynamics, which, he says, dictates that matter and energy go from states of higher order and complexity to states of lower. This example is a bona fide law, but he overlooks that it is a statistical law that describes the average behavior of closed systems. Closed systems do not receive energy from outside sources. If we consider the universe as a whole to be a closed system, its tend toward the dissipation of energy globally are still consistent with the emergence of greater complexity locally, which reconciles biology with physics. Systems that are reversible, moreover, such as recycling big-bang sequences, go both ways.

Quotes from famous biologists who admit our knowledge is incomplete, which he also cites, are not endorsements of intelligent design. Indeed, those who understand the role of polygenic and pleiotropic effects, where many genes influence the development of single traits and single genes influence the development of multiple traits, recognize transitions between organisms and species need not be smooth or continuous, but can exhibit striking differences and discontinuities, which could result from the alteration of as few as a single gene. No matter how many new fossils and missing links science may discover, creationists can always object that there should be more.

The most irresponsible ingredient of Marino's position, however, is his claim that evolution asserts upward progression "by chance". He acknowledges none of the eight causal mechanisms of evolution, which include genetic mutation, natural selection, sexual reproduction,

genetic drift, sexual selection, group selection, artificial selection, and genetic engineering. These mechanisms are the lawful basis for evolutionary science that make its hypotheses both explanatory and testable and, in relation to particular historical conditions, predictive as well.

When Marino summarizes his position by maintaining that evolution violates natural laws and observable scientific evidence, therefore, he is offering a conclusion unsupported by any of his arguments. His definition of "science" disqualifies his own hypothesis. His "laws" are not examples of natural laws but substitutes of his own choosing, which either beg the question or else do not affect the position he attacks. God as cause of the world as an effect explains nothing. The theory of intelligent design, alas, remains in search of an intelligent defense.

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