

EDITORIAL

AXIOMS

For those of us who do science, it is sometimes distressing to realize that our work ultimately rests upon one or more unprovable assumptions. One would like to present a package of ideas that is based on totally testable concepts. Unfortunately, the major theories in science are founded on untestable axioms that arise from common-sense interpretations of observation and experience. Newton's First Law (read axiom) of Motion is intuitive and not provable. When an object moves from its path of motion, no one ever suspects that it did so without cause. Unfortunately there is no way that one could ever prove that deviations in the path of motion could not happen spontaneously and without cause, but experience and common sense say it will not. Geometry has its axioms, as do the sciences which do not rely on other disciplines for their basic premises.

Axioms are useful because they describe the world about us in very broad terms. But one must ever be aware that basic axioms may not always define Truth. In Euclidian geometry, parallel lines never join no matter how far they are extended, but in non-Euclidian geometry they may. Does this mean that Euclidian geometry has no functional significance and contains no truth? Obviously not. However, one should be cautious about building intellectual towers (and making pronouncements therefrom) on axioms intended for other structures.

Axioms in the biological sciences seem harder to come by than those in the physical or mathematical sciences, because living systems are a combination of a large number of physical and chemical processes. The cell theory, which proposes that all cells come from other cells, is an example. The statement is based on experience in the natural world, and is intuitive and not provable. Still it may have value in predicting the results of future experiments.

It should also be pointed out that the more limited the data on which the axiom is based, the more limited will be the axiom's usefulness. In addition, an axiom cannot predict phenomena in areas wider than the data base from which it was formed.

Unfortunately, a basic problem with axioms exists. Axioms can be tautologies, i.e., they may be circular in their reasoning. For example: lines in a plane that do not meet are parallel, and parallel lines in a plane don't meet. Most scientists recoil from tautologies, because they are considered to be self-fulfilling predictions. Karl Popper implied that if there is a tautology in a scientific menu, predictions cannot be falsified and therefore the work cannot be science.

Charles Darwin presented to the world a statement that would say (in simple words) only the fittest would survive. For a while, Popper criticized

this statement as untestable and suggested that the general theory of evolution was unscientific. But what Darwin presented was not a truth to be tested, but a self-evident axiom. The fittest *do* survive. What else would you call those who live? This axiom or Darwin's Law has value because experiments derived from the concept have provided useful descriptions of Nature.

For a Christian creationist, "survival of the fittest" does not accurately describe Nature and existence, especially with respect to human experience. The creationist rebels when concepts he holds most dear, i.e., freedom of choice, love as expressed in family relations, fidelity, self-sacrifice, and creativity, are all defined in a context of survival — all predetermined by one's genetic composition and acted upon by an environment. The weak often do survive at the expense of the more fit — "Greater love has no man than this, that a man lay down his life for his friends" (John 15:13, RSV). From this perspective survival of the fittest is not an evident truth. Something more than Darwin's Law is needed for a good foundation in creationist science.

But here lies the dilemma. Because an axiom does not totally describe the observed, must it be abandoned? If survival of the fittest applies to most plants and animals but does not fully apply to man, has it no value? It is my opinion that the present conflict between the creationist and evolutionist is due to each holding different fundamental axioms. Is there a resolution to the dilemma as to which system is better suited to provide the best postulates and experiments? The evolutionist limits his base for axiom building to the natural laws that surround him. The creationist develops what he considers better axioms by including both natural laws and experiences derived from human and divine relationships. He believes that truth about the world also can come from sources as yet unexplainable by known natural laws. Since creationists use this wider base of data to develop their models of the natural world, they are accused of being non-scientific. This is true if science is defined as studying phenomena using only natural laws. But if science is the pursuit of Truth, then the creationist does better science because he has more information with which to solve problems. Because of this wider area from which creationist axioms are formed, the experiments done and the predictions made will be different from that of the evolutionist. It would seem that the broader the data base from which axioms are taken, the firmer is the foundation for intellectual towers that are subsequently built.

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