

More Comments on Special Creation

Despite the fact that my letter, like most others, will probably be buried in an avalanche of protests to the article "A Challenge to Neo-Darwinism" (Duane T. Gish, 1970: *American Biology Teacher* 32: 495-497), I feel I must raise another small voice.

I find the article simply appalling both in its naïveté and its complete negation of anything that one could call objective scientific thought. It is admittedly easy to find great gaps in the basic record; it is phenomenal that it is as good as it is. To use the gaps as a refutation of evolutionary theory is trying to make something out of nothing—hardly a scientific point of view. It would seem that Gish has forgotten that the province of science is evidence, not wild speculation over gaps in the evidence.

There is essentially overwhelming evidence for evolution. Darwin himself (a fundamentalist) simply had to devise his theory of natural selection on the evidence in spite of his background. It is intellectually irresponsible to try and destroy a concept for which there is so much evidence, simply because it is incomplete and must inevitably remain so, because the vast majority of forms that have at one time or another existed on this planet have almost certainly been destroyed without leaving a trace.

As Gish notes, Goldschmidt's "monster" theory was discarded by science, as it should have been, since there was absolutely no evidence for it. Science must also discard special creation as a viable theory, since there is *absolutely no evidence* for it, either. Creation is not the province of science, and I trust no one will ever have the temerity to try to make it so. How can one present a balanced view of creation as an alternative to evolutionary theory, as Gish pleads, when the only "evidence" cited for special creation is the inevitable gaps in the evidence as shown by the geologic record?

Gish cites a number of rather petty supports for the "special creation" theory, such as the Creation Research Society, of Ann Arbor, Michigan. Just what the hell is the Creation Research Society going to search for—the magic wand with which the Creator created? Or perhaps they might develop an incantation that would induce the Creator to do his stuff in Cobo Hall or the University of Michigan football stadium. Unless I miss my guess, they are simply going to spew forth additional emotional arguments patterned after those of Gish.

I find Eden's mathematical arguments no better. He is apparently disturbed that calculations tend to show that the literal interpretation of randomness in the mathematical sense indicates that two to three billion years is simply not long enough to account for the changes that have occurred in life forms. In the first place, he and his colleagues must have made a large number of assumptions concerning mutation rates, etc., which could hardly add to the validity of the computations (the old problem of the enthymeme). In the second place, as mathematicians

know, the only true randomness lies in the abstract mathematical theory, and this randomness is immediately destroyed upon application. Even with cards, steel balls, etc., it is virtually impossible to demonstrate true randomness. In point of fact, mathematicians complain endlessly that scientists—particularly biologists, psychologists, educators—abuse the concept of probability in their own interests (admittedly, often with good reason). Why then do mathematicians seize on the idea of randomness to make a point about evolution? Life is obviously not random, even if one hypothesizes that the first "living thing" might have been produced by a somewhat randomized process.

C. P. McGill is quoted as finding "no evidence that mutations have contributed to evolution"; that all mutations are harmful. This judgment he makes apparently after a long career as a nongeneticist—hardly an argument against evolutionary theory. I think it makes his remarks about on a par with those of the nonphysicist who decides that the nuclear physicist doesn't know what he's talking about. How does he define harmful? Is the loss of wings to flies on small islands harmful or advantageous, for example?

I don't believe that biochemist Gish, like so many champions of special creation, has any clear idea of just what he is against, or for that matter what he means by special creation. The theory of evolution (call it hypothesis if you will—it is only an exercise in semantics anyway) is by its very nature a vast and somewhat vague concept. It is not testable as we all would like theories to be. It encompasses so much that any specific statements made about it are open to criticism or ridicule. It is notable that special creationists and fundamentalist groups often make asinine interpretations of evolutionary theory themselves purely to have something to throw stones at, or out of abysmal ignorance of what a Mayr, a Huxley, or a Darwin is trying to say. A classic example of such idiocy is the old misinterpretation that "man is descended from monkeys."

I find it somewhat ironic that *American Biology Teacher* would act as the "Devil's Advocate" (I assume Gish is a special creationist)—especially when one considers that such advocacy smacks of considering creation the work of the devil. I also consider the publishing of such weakly documented material in favor of a concept that simply has absolutely no scientific basis, and most important, is not in the province of science at all, in a science-teaching journal, to be insupportable—at least without an accompanying article pointing out more eloquently and with more authority than I some of the many inadequacies and discrepancies I have adumbrated above.

[Duane Gish—not *ABT*—was the advocate. The column is regularly open to contributors holding unorthodox views, which are presented without comment by us.—*Ed.*]

In a world in which survival probably depends ultimately on science (I assume Gish agrees; or he wouldn't be working on hypersensitivity drugs for Upjohn) any encouragement to the emotional fundamentalists, astrologers, necromancers, *et al.*, particularly by articles in scientific journals, I consider to be unwarranted and dangerous. The voice of reason is so very small anyway, as indicated by the rise of astrology, witchery, flying saucer sightings and the like, that commonsense attacks on the complex problem confronting us appear daily to be more difficult to mount. The "evidence" Gish cites has been used *ad nauseam* and also generally *ad ignorantum* to attack evolutionary theory by many groups. It is not the attack on evolution per se that is dangerous; it is the assault on reasonableness and evidence and probability by sometimes cunning arguments based almost purely on emotion and possibility. It is almost impossible to get the layman to realize that science deals with probability, not possibility. Anything is possible: on the basis of the evidence there is just as much likelihood for the existence of Mary Poppins and the Wicked Witch of the East as there is for special creation. In addition, speaking of a balanced view of special creation *vs.* evolution, there are huge areas in this country—in the South generally, Texas, California, and much of Illinois, for example—where raising a voice strongly in defense of evolutionary theory is tantamount to asking for one's resignation at the same time.

I am beginning to believe that biochemists have a fey touch, perhaps due to the inhalation of too many organic solvents. In addition to Gish's espousal of special creation, I know of a prominent biochemist at Argonne National Laboratory who is also of the same mind and a University of Chicago biochemist who spends his summers chasing the Loch Ness monster. This is limited evidence, I will agree, for "feyness" but considerably more than any detractor can find in favor of special creation. After all, it is hardly reasonable to consider that the absence of, or gaps in, the evidence for one point of view becomes, by some sleight-of-hand, evidence for an opposing point of view.

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• The following letters refer to a critique of the Gish article by William V. Mayer, of the University of Colorado, in letters to the editor, January issue, pp. 50-51.

Neither creationist nor evolutionist is adequately impartial nor adequately concise. But William V. Mayer analyzed the creationists' arguments so poorly that some refutation is sorely needed.

His first argument was that the creationist scientist ignores the fact of mutation. The refutation: Mutations are freely admitted. *Drosophila melanogaster*

is the classic example. But the fruit fly remains the fruit fly through thousands of mutations and millions of generations. Therefore the evolutionist is forced to apply his imagination, which is correct, as he is endowed with one; and in so doing he extrapolates, saying these myriad mutations and variations lead one to believe in transmutation—that from an original, primordial simple set of one-celled life forms, acted upon by unknown environmental forces in unknown ways in the dim past, spontaneous development into new and more complex life forms occurred. Hence a progression from one-celled simplicity and nonintelligence to complexity and rationality is inferred from mutational data. Argumentative extensions of accumulated mutational data that imply that one life form eventually gives rise to an entirely different life form, given eons of time, is mere conjecture.

It is quite correct to hypothesize that maximum changes in form occurred, because we see minimal variations in present studies, but it is quite incorrect to insist on the acceptance of inference as fact and to force this insistence on students, colleagues, authors, editors, and the public. Mutation and transmutation should be taught as separate topics. The creationist scientist simply does not choose to be too credulous about extrapolations until better evidence of transmutation occurs. Indeed, it seems to me that the more cautious attitude is the more consistent with scientific progress. We should not claim that something happened in the dim, distant past until we know beyond all reasonable doubt that it did. If we claim that man "developed" from a single primordial life-form through a series of small changes over eons of time, we are taking an unpromising position and an authoritarian position. Who would want to taint himself and science in this manner?

My own intellect tells me that both theories are valid at this point in time. Only one verb needs changing in any given biologic statement to slant it toward evolution or creationism, thus:

Evolutionist: Darwin's finches **DEVELOPED** curved beaks to fit a variety of feeding niches.

Creationist: Each species of finch **WAS DESIGNED** with a differently shaped beak to correlate with ground-feeding or tree-crevice feeding.

The question is, did the environment force changes in design or did an intelligent designer specifically design the organisms to fit a specifically designed environment? Develop or design? No one really knows, and the evidence for either argument is exactly the same set of facts.

Mayer feels that comparative anatomy, physiologic processes, biochemistry, embryology, and genetics are ignored by the creationists. Throughout these disciplines homologies prevail as the main evidence supporting evolution. The creationist does not ignore the many disciplines, but his interpretation of the homologies differs, thus:

Evolutionist: If the chick embryo is like the embryo of man, the two must be genetically related.

Creationist: If the embryos are alike, and if one God designed all life, He used a repeating pattern—mechanisms that worked efficiently, such as meiosis and embryologic growth. Furthermore, all life-forms inhabit one planet, sharing the same earth, air, and water, and therefore utilizing these elements in the same way by design. Unknown environmental forces that result in natural selection of genetic changes that better suit organisms for survival in changing surroundings is not a flawless argument. It certainly fails to explain satisfactorily steady upward progression from simplicity to complexity. Further, it takes the tool intellect to study life and its functions. It follows that it took intelligence to design it, manufacture it, and set it in motion.

Develop or design? What is the truth? Did environmental stimuli alone press organisms toward greater complexity as eons rolled by? Or was complexity achieved under the aegis of direct, intelligent design and manufacture? I do not know, epistemologically speaking; and if I do not know, neither does any other human being.

As to the fossil record, one cannot do breeding experiments on rocks. One can only extrapolate. The history of earth's life-forms, preserved in rocks, is not neatly pigeonholed, but, indeed, is a highly fractured, compressed, upheaved, folded, shifted, iced-over, weathered-over, erased partial record, subject to a variety of interpretations. Hailing an extinct species as a genetic precursor of a present species on the basis of homologies is extrapolated fancy, not experimental breeding evidence. Nor is extrapolating the origin of life from proteinoids experimental evidence. It remains extrapolation until the proteinoids develop DNA and physiologic complexity and rationality.

An irony in all this fuss amuses me. Environment created man and man is destroying environment, his creator. What an odd agreement with biblical literature, that man seeks to destroy his creator.

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As a fundamentalist and a biology teacher I was surprised to learn that William V. Mayer thinks he understands my position. Mayer involves me when he uses such expressions as "all of the antievolutionist polemics" and "antievolutionists seem always . . ." and when he makes such statements as "Antievolutionists never consider all of the evidence" and "The favorite theme of the attack . . . is not what the fossil record does show . . ." and "Still another gambit of the fundamentalists is to present no evidence or data of their own." So, to set the record straight, I would like to clarify my position as Mayer thinks he presents it.

First, I deny that I always ignore the simple, irrefutable fact that mutations occur in populations.

What I do not do is make the extrapolation Mayer makes to project mutations into the "material of evolution." Fruit flies have undergone "paper pounds" of mutations (my classes are producing *Drosophila* in many forms at this writing) but remain fruit flies. I stand guilty of failing to make, even ignoring to make, the evolutionary extrapolation on mutations.

Second, no man can claim that he has considered all of the evidence. I do, however, disclaim that I attend only to those parts that fit my interpretation best. I must seek constantly to account for all of the facts brought to my attention. If I were only interested in the creationist position I would not read *American Biology Teacher*. If Mayer attended my classes he would not find that "comparative anatomy, physiology, biochemistry, embryology, genetics, and the experimental aspects of evolution (including laboratory-produced mutations) are conveniently ignored." I expose these arguments along with their extrapolations and alternatives—welcoming all facts and dissent from my position. If a person in my classes holds evolutionary views, he may present all of his facts and opinions. I will go out of my way to give him a hearing. I use all evolutionary texts—Smallwood's in Biology I and Kimball's in Biology II. I teach in a public high school. I spend time on what the fossil record does show—such as the catastrophic nature of the fossil record and human tracks in the Cretaceous beds with dinosaur tracks near Glen Rose, Texas. If Mayer wants to see this positive evidence at Glen Rose, I would be glad to show him. This is part of the evidence that he says I don't present.

In Mayer's last paragraph he displays his own convictions on the conflict between his "religion and science" and views a close association as ridiculous. Within his context he is correct. I just don't happen to share his type of "religion." To me the important thing is what is true. I am a member of the Creation Research Society; if a correct view of the fundamentalist position among men of science is to be understood, reading the CRS quarterly would be a step in the right direction.

About all Mayer's analysis of the fundamentalist position can do is show what some fundamentalists probably not involved in the sciences might believe. I would do evolution theory a great injustice if I asked men not involved in the sciences, but who hold to the evolutionary position, for their point of view and then rebut only this.

I welcome any correspondence on these matters.

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The Educational-Voucher Plan

I was rather astonished that you, a member of the educational establishment, should castigate the prestigious NEA for its panic-button outcry against