Letters

A Response to David Siemens, Jr.

In a letter to the editor (*PSCF* 47: 284, December 1995), Siemens interprets my views on theistic evolution (*PSCF* 47: 112-122, June 1995) as limitations on God's omniscience and God's omnipotence. This interpretation is clearly incorrect. My views do not limit God in what he could or could not do. Siemens paraphrases my views as: "Their God has to tinker repeatedly and directly with the developmental sequence in order to produce a working universe: I choose my words carefully, and I never suggest that God is tinkering. As noted in my article in the *Christian Scholar's Review* (XXIV, 414-458, 1995), biblical scholar John Stek has this to say regarding the biblical use of the term, *bara'* or create: "... it is silent as to the utilization of preexistent materials *or the time ... or the means involved.* In biblical language, *bara'* affirms of some existent reality *only that God conceived, willed and effected it.*" My proposed theory of theistic evolution, a design theory, is clearly in accord with that interpretation. God could choose to bring about his creation in whatever manner and in whatever time he chose.

Some of Siemens' statements indicate a lack of understanding of modern biochemistry and molecular biology. He uses these statements to suggest that modern science is closing all of the gaps on our scientific knowledge; that events that were considered to fall in the realm of the miraculous are now fully explained. He states: "I recall when it was claimed that a protein (enzyme) was absolutely necessary to process hereditary material. Now I read of self-catalyzed RNA reactions." If by "process," Siemens means formation of functional RNA and DNA by cells, proteins (enzymes) are still absolutely necessary. Even in laboratory syntheses of RNA and DNA, protein enzymes (polymerases especially) are extensively utilized. Also, there was never any stipulation that all catalysis had to be brought about by proteins (enzymes). Hydrogen ions, metal ions, etc., have for many years been known to catalyze reactions; RNA had simply not been known to be capable of catalysis. Cech and others found that certain RNA sequences of defined structure could catalyze a limited number of reactions. They function as nucleotidyl transferases, nucleases and in some cases, esterases. This has led some to propose a hypothetical RNA world, in which all reactions were catalyzed by RNA. In a paper that is in press ("The RNA World: a Critique," in *Origins Research*), this writer has examined the evidence and the presuppositions that are required if one chooses to accept that hypothesis. In summary, present evidence provided little support for the RNA World hypothesis. It does not have any substantial hard evidence as a foundation.

In regard to protein folding, it is true that some proteins do fold naturally in functional three-dimensional structures. However, many proteins do not fold naturally and require other proteins (chaperonins) to fold into their functional state. A whole new field has developed involving the characterization and functioning of the unique chaperonin proteins.

Siemens notes that: "the list could be extended tremendously, with more and more gaps closed as research continues." My experience as a research scientist is that for every question that is answered, there are two or more new questions that appear. (Note that I do not really like the term, "gaps.") In regard to the "God of the gaps" question raised by Siemens, I have dealt with that topic in my *PSCF* paper and will not expand on my previous treatment. Scientific research continues to show the increasing complexity of all living organisms, rather than providing final answers or simply filling gaps.

Siemens makes the following statement about the chance synthesis of cytochrome c (probability of 2×10^{-65}): "I suspect that there are reasonable ways to recalculate the probability, and that the apparent difficulty of synthesis will be reduced as new discoveries are made." Since Yockey's original paper in 1977 in the *Journal of Theoretical Biology*, a number of modifications in specific amino acids in the cytochrome c molecule have been made. In large measure, these have confirmed that data used by Yockey in his original calculations. If Siemens wishes to challenge the data, I suggest that he do it on the basis of the evidence, not a mere suspicion.

I am a biochemist and a molecular biologist and I have chosen to formulate my theory on the basis of the evidence from those fields. I am not a philosopher, theologian, or a cosmologist, but I believe there are others who can deal with ramifications of my theory as they affect those fields. Van Till speaks of God's governance (see my *PSCF* paper) as an expression of God's sovereignty. Siemens considers that "God is active in providence." These terms, governance and providence, are considered appropriate to theologians and Christian philosophers. However, at the molecular level, the terms are quite nebulous, and I find it difficult to determine their meaning as applied to the molecular biology of living organisms. My phrasing, "a continuing provision of genetic information" is actually only a slight extension of Van Till's use of the term "governance." Van Till indicates: "... every one of these processes and every connective pathway in the possibility space of viable creatures is a mindfully designed provision from a Creator possessing unfathomable intelligence." Van Till speaks of the Creator's "designed provision," I have proposed how the "designed provision" may have been effected by the Creator.

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