

but not to have been the biological progenitor of the entire human race since our species, *Homo sapiens*, is known from the fossil record to have been living 200,000 years ago. As evidenced by both Genesis and archeological discovery, Adam lived around 5000 to 4000 BC in southern Mesopotamia, present-day Iraq, near the confluence of the four rivers of Eden.

The Bible links Christ with Adam biologically through its genealogies and theologically in Romans, and therefore a historical Adam is important in preserving the integrity of Scripture. While not the first human, Adam was the first in God's covenant line leading to Christ, and began the era of individual accountability. The knowledge of God for all humanity started with the Adamic covenant. It was through one man, Adam, that sin was imputed to the human race, just as grace is dispensationally given by God to followers of Christ.

The rationale for "Historical Adam" and the foundation for this belief are based fully upon the integrity of Scripture, the history of the ancient Near East as recorded in Sumerian and Akkadian literature, and upon related archaeological evidence. We have a movement. All we need are more members. Join at [www.HistoricalAdam.org](http://www.HistoricalAdam.org).

## Notes

<sup>1</sup>Dick Fischer, "In Search of the Historical Adam: Part 1," *PSCF* 45, no. 4 (1993): 241-51; —, "In Search of the Historical Adam: Part 2," *PSCF* 46, no. 1 (1994): 47-57.

<sup>2</sup>Richard James Fischer, *Historical Genesis: From Adam to Abraham* (New York: University Press of America, 2008).

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## Cultural Development and Adam

A series of cultural events, initiated in approximately 5000 BCE, might shed some light on the creation of Adam. Evolution theory holds that modern man has evolved over millions of years. The Bible teaches that Adam was the first [modern] man created on the sixth day in the likeness of God.<sup>1</sup> This appears to be a conflict. Cultural development may be helpful in resolving this conflict.

Historian Will Durant describes five categories of artifacts that reflect cultural development: language, government, religion, engineering, and architecture. Using these five categories, he describes the first nineteen significant cultural achievements, all of which occurred between 5000 and 3000 BCE.<sup>2</sup>

At about four million years ago in the evolutionary process, *Australopithecus aferensis* had the same body plan as modern man, but was somewhat smaller with a proportionate brain size. Modern man has a larger brain, particularly the neocortex, where calculations, comparisons, judgments, and planning take place.<sup>3</sup> Without networks, the brain is more likely to provide a linear output (e.g., danger in; flee or fight out). On the other hand, neural networks can produce an iterative response to stimuli with an output based on learning, experience, culture, and judgments.<sup>4</sup> The neocortex contains several billion nerve cells which are highly networked by branching.

It seems reasonable that the cultural achievements of modern man are facilitated by this neural network. Of course, we know very little about the function of the brain of *A. aferensis*, or to what degree it was networked, but without question modern man is more culturally sophisticated.

The cited 2,000-year window of cultural expansion represents only 0.05% of the period from four million years ago to the present. Thus, the question is raised as to what could have generated this almost explosive cultural expansion around 5000 BCE. How did the brain change?

In 1986 Rita Levi-Montalcini and Stanley Cohen received the Nobel Prize for the discovery and study of the Nerve Growth Factor (NGF).<sup>5</sup> NGF results from cleavage of a relatively simple peptide of 307 amino acid residues located on the proximal arm of human chromosome one. They showed that NGF was critical to the generation of neural networks within hours, while neuronal cells failed to survive unless NGF was added daily to the culture medium. Specific life molecules such as a protein take a long time to evolve. However, for every such molecule derived from a precursor, there would be a very short period when the final side group (using hydrogen, oxygen, nitrogen, etc.) is put into place. One moment this new side group is absent, the next moment it is present, and the new molecule can begin its work. In the case of Adam, the final side group may have been put in place in his nuclear genome, or into an existing molecule to allow his brain's neural branching to proceed. Thus, a final step allowing for the production of NGF could have been very fast. If the cultural explosion took place early in the hypothesized time frame, that is, around 5000 BCE, then this timing is relatively consistent with the often-criticized creation date of 4004 BCE.

## Notes

<sup>1</sup>Gen. 1:27, Gen. 2:7, Gen. 5:1.

<sup>2</sup>Will Durant, *The Story of Civilization*, vol. 1, *Our Oriental Heritage* (New York: Simon and Schuster, 1954). Events are described on pp. 98-329.

<sup>3</sup>Dean Hamer and Peter Copeland, *Living With Our Genes* (New York: Doubleday, 1998), 16.

<sup>4</sup>Francis Crick, *The Astonishing Hypothesis* (New York: Scribner and Sons, 1994). Chapter 13 deals entirely with neural networks.

<sup>5</sup>Rita Levi-Montalcini, "The Nerve Growth Factor 35 Years Later," *Science*, 237 (1987): 1154-62. Paper presented at the Nobel Award Conference in Stockholm.

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