The Overlooked Science of Genealogical Ancestry

S. Joshua Swamidass

Do we all descend from a single couple? Most are convinced that the genetic and archeological sciences answer with an unequivocal “no.” It appears that our ancestors share common ancestors with the great apes and arise as a large population, never dipping in size to a single couple. Without contradicting the findings of genetic science, genealogical science gives a different answer to the question. It is likely that there have been many individuals, and potentially couples, across the globe who are each individually genealogical ancestors of all those alive when recorded history began. These ancestors stretch from our distant past to very recently in our history. Consistent with the genetic and archeological evidence, therefore, it is possible that God could have chosen, or specially created, one of these couples for a special role. No argument is offered here that such a historical couple is what the text of Genesis teaches; however, if the text intends a particular couple in the recent past, such a couple could be among the ancestors from whom all those alive today descend.

It seems such a simple question, but it carries a great deal of subtlety and complexity: Do all humans descend from a single couple?

Genetic science appears to answer with a “no.” From genetic data, the population size of our ancestors at different times is estimated. It appears that population sizes never dipped to a single couple in the last several hundred thousand years, during the time in which Homo sapiens arises. This conclusion is robust, based on several independent signals: our ancestors arose as a large population, not as a single couple.

It is a subtle and consequential error, however, to think that these findings demonstrate that there are no individual couples from whom we all descend. For the “no” to be correct, we must have inserted into the original question a genetic notion of ancestry. This insertion of “genetic” into the question neglects a key scientific fact: genealogical ancestry is not genetic ancestry. Genealogical ancestry traces the reproductive origins of individuals, while genetic ancestry traces the origin of stretches of DNA. A question about “descent” can be a question about genealogies, and genealogical questions should be answered with genealogical science.

Furthermore, the term “human” is imprecise when referring to those in the distant past. Certainly, all members of the species Homo sapiens alive right now are human. In the ancient past, however, the term is ambiguous in both science and theology. For example, there are parallel intracamp debates amongst scientists, theistic evolutionists, and young earth creationists about whether Neanderthals and Homo erectus are “human.” Genetically, different species of the Homo genus might be less different from one another than subspecies of chimpanzees. There is also
Read full text (log-in required)

Register to subscribe to PSCF or to join ASA