

Statement on Evolution and Creationism

American Anthropological Association

*Adopted by the AAA Executive Board
April, 2000*

Affirmation

The Executive Board of the American Anthropological Association affirms that:

Evolution is a basic component of many aspects of anthropology (including physical anthropology, archeology, cultural anthropology, and linguistics) and is a cornerstone of modern science, being central to biology, geology, and astronomy;

The principles of evolution have been tested repeatedly and found to be valid according to scientific criteria. Evolution should be part of the pre-college curriculum; it is the best scientific explanation of human and nonhuman biology and the key to understanding the origin and development of life;

Religious views are an important part of human cultures, and deserve a place in the pre-college curriculum, provided that they are not presented dogmatically or in a proselytizing context. A comparative, anthropological study of religion would not violate the Constitutional requirement of religious neutrality in the classroom. An anthropological understanding of religion would be helpful in resolving some of the perceived conflict between creationism and evolution;

The Association respects the right of people to hold diverse religious beliefs, including those who reject evolution as matters of theology or faith. Such beliefs should not be presented as science, however;

Teachers, administrators, school board members and others involved in pre-college education are under pressure to teach creationism as science and/or eliminate or downgrade evolution, to the detriment of public scientific literacy. Many succumb to this pressure, for lack of expressed support from scientists and other community members;

Therefore anthropologists are encouraged to use their knowledge both of evolution and of human social and cultural systems to assist communities in which evolution and creationism have become contentious. Anthropologists should help the public and public officials understand that good science education requires that evolution be presented in the same manner as other well-supported scientific theories, without special qualifications or disclaimers, and that an understanding of religion and other cultural systems should be part of the education of each child.

Background Information

Anthropologists study human beings both at the present time and as they were in the past, therefore the creationism and evolution dispute is of particular interest to members of the American Anthropological Association. We are sensitive to social, cultural, religious, and political differences among citizens, and we also appreciate (and contribute to the understanding of) the long evolutionary history of our species. Anthropology's cultural, biological, linguistic, and archaeological perspectives are especially relevant for helping to understand this controversy.

Anthropologists are aware of diversity within cultures, including our own. It is empirically incorrect to describe creation and evolution controversies as simplistic dramas of fundamentalism versus atheism. Evolution is not equivalent to atheism; studies demonstrate that those who accept evolution hold a variety of religious beliefs.

Similarly, Christian creationist thought spans a range of positions, from biblical literalism to progressive creationism - and many non-Christian forms of creationism exist among the world's peoples.

In contrast to this diversity of religious views, the single general idea of biological evolution is that species share common ancestors from which they have diverged. There is much debate over the details, but descent with modification itself is no longer debated by scholars. As the National Academy of Sciences has said,

The scientific consensus around evolution is overwhelming. Those opposed to the teaching of evolution sometimes use quotations from prominent scientists out of context to claim that scientists do not support evolution. However, examination of the quotations reveals that the scientists are actually disputing some aspect of how evolution occurs, not whether evolution occurred.¹

Such debates about the mechanisms and details of evolution are a normal part of the scientific process, and gradually have led to a consensus about the history of life on Earth. The ability to alter explanations when new evidence or theory is encountered is one of the strengths of a scientific way of knowing. Religious or philosophical interpretations should be distinguished from scientific knowledge per se, to the extent that it is possible to delineate such distinctions. Science describes and explains the natural world: it does not prove or disprove beliefs about the supernatural.

The study of the evolution of humans is a scientific enterprise. Good scientific knowledge possesses these features:

1. it explains natural phenomena in terms of natural laws and processes, without reference to overt or covert supernatural causation;
2. it is empirically grounded in evidence from observations and experiments; and
3. it is subject to change as new empirical evidence arises.

Because humans are part of nature, the study of human evolution can be conducted within these parameters.

With these thoughts in mind, the following summarizes a consensus of anthropological judgments regarding human evolution:

1. The ancestors of humans extend back in time for several million years. This consensus of anthropological judgment is derived from reliable scientific methods that are well accepted in geology, paleontology and archaeology, including (a) a series of absolute dating methods based on radiometric techniques that independently affirm the dates of hominid fossils, plus (b) the stratigraphy-based principles of relative chronology, including superposition, association, and cross-dating. Together these methods constitute our best indicators of the ages of past events.
2. Human anatomy has changed over time in response to natural selection and other evolutionary processes. This consensus of anthropological judgment is derived from anatomy, paleoanthropology, paleoecology, taphonomy, paleoethnobotany, and related fields.
3. Human evolution is an on-going process. Our species remains subject to evolutionary mechanisms, including natural selection and non-Darwinian evolution. This consensus is derived from functional anatomical studies as well as discoveries in medicine and medical anthropology.
4. Humans are more closely related to primates than to other mammals, and within the primates, are more closely related to the African great apes. Our species shares some common ancestors with other primates and mammals. This consensus is derived from primatology, the fossil record, comparative anatomy, and genetics.
5. Evolutionary assumptions and methods provide persuasive explanations for the great variety of Earth's living things, including human beings. Evolutionary concepts tie together such natural phenomena as genetic diversity, environmental change, adaptation, differential reproductive success, and speciation, thereby making evolution the central organizing principle of the life sciences. This consensus of scientific opinion is derived from biology, geology, paleontology, primatology, and archaeology.

As is the case with other scholars, our goals in teaching evolution are to instruct, not to indoctrinate. Anthropologists seek to inculcate a critical understanding of how scientists and other scholars think and work, so that our students will be able to employ anthropological reasoning and methods in their own thinking and research. All students, regardless of religious belief, as a matter of scientific literacy should understand basic principles of anthropology and other sciences relevant to evolution.

References

1. 1999 Science and Creationism. National Academy Press, "Frequently Asked Questions"

Submitted April 29, 2000, by the Ad-Hoc Committee on Evolution:
