



## Language at the Dawn of Humanity

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A paper presented at the 51<sup>st</sup> Annual Meeting of the American Society of Human Genetics in San Diego, California, in October 2001 suggests that language was in existence when *Homo sapiens* first appeared on earth 120–200,000 years ago. An abstract of the paper by Knight, Underhill, Mortensen, Lin, Louis, Ruhlen, and Mountain is on the web.<sup>1</sup>

This team studied the genetics of African groups who speak in “click” languages, formally known as members of the Khoisan language family. (Click languages incorporate up to forty-eight click sounds and other unique vocal sounds not found in most of the world’s other languages.) They then compared the genetics of the Khoisan with the linguistic separation of the languages. Reasoning that, in general, genetics and language follow each other quite closely, they expected to find that people with similar genetics would speak languages that have descended from each other, because we learn our language from our parents, who share 50% of our genes with us.<sup>2</sup>

Despite the fact that both the Hadza and !Kung use unusual consonants and clicks, many linguists believe that the languages are totally unrelated. One linguist was cited:

“Linguistically, we don’t think they’re one group, and we don’t believe they have a common ancestor,” says linguist Bonny Sands of Northern Arizona University in Flagstaff.<sup>3</sup>

And Merritt Ruhlen notes:

Two isolated languages found in East Africa not far from Lake Victoria—Sandawe and Hadza—use clicks like those in the other Khoisan languages, and have been linked by Greenberg to the rest of the Khoisan family, though they are clearly the most divergent (that is, most distinctive) members of the family. Surprisingly, since they are located quite close to each other, they show little similarity to one another.<sup>4</sup>

Since both Sandawe and Hadza use clicks and have a distantly related language, we should expect that the speakers would be genetically closer to each other than to other groups. One report says:

To determine whether click languages emerged from a common tongue, anthropological geneticists Alec Knight and Joanna Mountain and their colleagues at Stanford University analyzed cells from cheek swabs of several African populations for genetic markers on the Y chromosome, which fathers pass on to sons. The more related click speakers are, Knight reasoned, the more likely it is that click languages arose relatively recently. If click speakers are genetically

diverse, that could imply that other speakers lost their clicks after the click speakers diverged into separate populations.<sup>5</sup>

The two click-speaking groups, however, are not genetically closely related. Tests of the Y-chromosome, *Science News* reports, indicate that the !Kung, who speak Sandawe among other languages, and Hadza are as genetically far apart as any two populations on earth. With these groups having both distantly related languages and yet the most genetic separation, one must conclude that the language relationship occurred a long time ago. This, in turn, implies that the two languages they speak may have diverged at the “dawn of humanity,”<sup>6</sup> i.e., the dawn of anatomically modern humans.

Could the similarity of language be due to a more recent conquest event in which the conquered people assume the language of their masters? The fact that the Y-chromosome is indicating such vast genetic separation argues very strongly against the conquest scenario. In such scenarios, the conquerors often kill the men and take the women for wives, leaving the conqueror’s Y-chromosome in the male offspring.<sup>7</sup> If either tribe had conquered the other in more recent times, the Y-chromosomes would not show such divergence.

It is also unlikely that one of the groups learned their “click” language from the other, changing the group from nonclick- to click-language speakers. Due to the difficulty of learning click languages as adults, few outsiders ever learn these languages. It is far easier for click-language speakers to learn a nonclick language than for outsiders to learn their click language.

If the click languages diverged as long ago as this study indicates, then there would be several implications for apologetics. First, no longer could we claim that spiritual humankind was created less than 50,000 years ago with the advent of the upper Paleolithic artistic explosion, as is often claimed by Christian apologists.<sup>8</sup> Spirituality requires language and without it, there is none. It is difficult to conceive of a being which can speak but has no spirituality. If humankind were speaking as long ago as 100–200,000 years, then spirituality has nothing to do with art.

Secondly, we could no longer claim that the lack of art in Neanderthal culture indicates that they had no language or spirituality, as is often claimed.<sup>9</sup> This is because the behavior of anatomically modern humans, their material culture, the items they made, and the activities they engaged in were identical to that of the Neanderthals for the first 60,000 years of their existence. Shreve writes:

According to the “Out of Africa” hypothesis, these earliest modern humans eventually spread out to take over the territory of all other existing hominids. But, so far at least, there is no sign that these hyper-successful moderns were making fancy tools, paint-



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ing caves, or otherwise doing “modern” things. Modern behavior can no longer explain modern human form, because by all appearances modern culture didn’t even exist for another 60,000 years. Suddenly, the emergence of anatomy and culture have become delaminated in time. You might as well try to account for the origin of the wind by talking about sailboats.<sup>10</sup>

The implications are clear. If humans were speaking but behaving just as the Neanderthals were, how can we claim that the lack of modern behavior among the early Neanderthals means that they could not speak? This data makes such a claim a non-sequitur.

Thirdly, if humans were speaking 100–200,000 years ago and yet possessed the same technology as hominids existing at 250,000 or even 400,000 years ago, how could we be sure that these earlier hominids did not speak? Indeed, some of the activities carried out by these ancient peoples convince some anthropologists that speech was a prerequisite. One such activity, which occurred as long ago as 800,000 years ago, concerns the building of a boat to cross the ocean. Archaeologists who have studied the technology required for *Homo erectus* to reach the island of Flores in Indonesia wrote of the need for language:

The presence of hominids on Flores in the Early Pleistocene therefore provides the oldest inferred date for human maritime technology anywhere in the world. Elsewhere, dates for such capabilities are much more recent. These findings indicate that the intelligence and technological capabilities of *H. erectus* may have been seriously underestimated. An accumulating body of evidence from elsewhere supports this conclusion (e.g., Thieme 1997).

The complex logistic organization needed for people to build water-craft capable of transporting a biologically and socially viable group across significant water barriers, also implies that people had language. Previously the organizational and linguistic capacity required for sea voyaging was thought to be the prerogative of modern humans and to have only appeared in the late Pleistocene. It now seems that humans had this capacity 840,000 years ago.<sup>11</sup>

Over the years, anthropology continuously has pushed back the date for the appearance of language and this will continue. The existence of language is of immense importance to apologetics, as God taught Adam to speak. Data like the above must be incorporated into any future apologetics. \*

### Notes

<sup>1</sup>[www.faseb.org/genetics/ashg01/f24.htm](http://www.faseb.org/genetics/ashg01/f24.htm)

<sup>2</sup>L. Luca Cavalli-Sforza, Paoli Menozzi and Alberto Piazza, *The History and Geography of Human Genes* (Princeton: Princeton University Press, 1994), 301.

<sup>3</sup>[www.academicpress.com/insight/10222001/graphb.htm](http://www.academicpress.com/insight/10222001/graphb.htm)

<sup>4</sup>Merritt Ruhlen, *The Origin of Language* (New York: John Wiley and Sons, 1994), 141.

<sup>5</sup>[www.academicpress.com/insight/10222001/graphb.htm](http://www.academicpress.com/insight/10222001/graphb.htm)

<sup>6</sup>John Travis, “DNA Hints at Origin of All Language,” *Science News* (Oct 27, 2001): 269.

<sup>7</sup>In the Ahnishinahbaejibway tribe, 99% of the men have European Y-chromosomes. See Milford Wolpoff and Rachael Caspari, *Race and Human Evolution* (New York: Simon and Schuster, 1997), 363–4.

<sup>8</sup>Hugh Ross, “The Broken Tie That Binds,” *Faith & Faith* 10:3, Third Quarter (1996): 6.

<sup>9</sup>David L. Wilcox, “Adam, Where Are You? Changing Paradigms in Paleoanthropology,” *Perspectives on Science and Christian Faith* 48 (June 1996): 93.

<sup>10</sup>James R. Shreeve, *The Neanderthal Enigma* (New York: William Morrow and Co., 1995), 11.

<sup>11</sup>M. J. Morwood, et al., “Archaeological and Palaeontological Research in Central Flores, East Indonesia: Results of Fieldwork 1997–1998,” *Antiquity* 73 (1999): 285, 286.