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Until now, humans were thought to have a unique version of FOXP2, the only gene shown to play a role in language. People who are missing a copy have difficulty with speaking and language comprehension.

But two Neanderthals who died 43,000 years ago had the same kind of FOXP2 as people alive today, researchers reported Thursday in Current Biology.

<http://www.latimes.com/la-sci-neanderthals20oct20.0.7642357.story?coll=la-home-center>

From the Los Angeles Times

Did Neanderthals natter?

The human forebears had a key language gene, researchers report.

By Karen Kaplan

Los Angeles Times Staff Writer

October 20, 2007

Neanderthals probably had the gift of gab, according to a new study examining a key language gene in the extinct species.

Until now, humans were thought to have a unique version of FOXP2, the only gene shown to play a role in language. People who are missing a copy have difficulty with speaking and language comprehension.

The version of the gene in chimpanzees, our closest living relatives, is different from that of humans in two places.

But two Neanderthals who died 43,000 years ago had the same kind of FOXP2 as people alive today, researchers reported Thursday in Current Biology.

"There is no reason to think that Neanderthals would not have had the ability for language," said geneticist Johannes Krause of the Max

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Planck Institute for Evolutionary Anthropology in Leipzig, Germany, who led the study.

The researchers were able to extract the gene from two Neanderthal bones recovered from a cave in northern Spain. The bones were exceptionally well-preserved, probably because the two Neanderthals had been cannibalized, Krause said.

Most of the bones found at the site "show cut marks, and almost all long bones are broken to extract the bone marrow," he said. "The defleshing might minimize the decay of the bones and their endogenous DNA."

Skeptics said the bones might have been contaminated with human DNA during the retrieval and testing process, which would explain why the version of FOXP2 was identical to that of people.

The researchers took several precautions to prevent contamination from affecting the results. The bones were excavated under sterile conditions and sent to clean rooms, where sediment was removed.

Once the DNA was extracted, the scientists compared it with DNA from a 38,000-year-old Neanderthal discovered in Croatia and found it matched. They also looked at sections of DNA that are known to differ between Neanderthals and humans and found that they weren't the same.

Molly Przeworski, a geneticist at the University of Chicago who wasn't involved in the study, said the results could be a sign of interbreeding between humans and Neanderthals. If genes were flowing between the two species, advantageous ones like FOXP2 would be the most likely to spread from humans to Neanderthals, she said.

Considering that Neanderthals had a sophisticated culture that included burial rituals and possibly art, music and jewelry, the idea that they could speak is not too farfetched, said Gilean McVean, a professor of statistical genetics at Oxford University who was not involved in the study.

Even some more ancient hominids probably had language, he said.

"I can't imagine Homo erectus being as advanced in tool use, hunting and global dispersal" without the use of language, he said.

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