

The New York Times Reprints

This copy is for your personal, noncommercial use only. You can order presentation-ready copies for distribution to your colleagues, clients or customers [here](#) or use the "Reprints" tool that appears next to any article. Visit www.nytreprints.com for samples and additional information. [Order a reprint of this article now.](#)

PRINTER-FRIENDLY FORMAT
SPONSORED BY



May 11, 2010

Our Inner Neanderthal

If things had gone differently, this editorial might have been written by a Neanderthal contemplating the discovery that a small but significant portion of his or her DNA was derived from ancestral humans, who lost out in the struggle for survival some 30,000 years ago. Things went the other way, and this editorial is being written by a human musing on [the recent discovery](#) that 1 percent to 4 percent of our human DNA is derived from Neanderthals.

That does not sound like a very large percentage. But it is the clearest evidence so far that some interbreeding occurred between humans and Neanderthals. [The research](#), led by a team from the Max Planck Institute for Evolutionary Anthropology and published last week in *Science*, is also evidence of how much skill scientists have gained in obtaining and decoding DNA samples from ancient bones.

The team compared genome sequences from three Neanderthals — dating from roughly 38,000 to 44,000 years ago — to sequences from five present-day humans from various parts of the world. In addition to the likelihood of interbreeding, the research shows that Neanderthals are closer to humans of European and Asian origin than they are to humans of African origin.

Neanderthal fossils have been found only in Europe and western Asia. Yet the similarity to Chinese and Papuan genomic sequences is just as close, even though no Neanderthal fossils have been found there. It suggests that one possible location for the mixing of Neanderthals and ancestral non-African humans is the Middle East, where they may have overlapped for more than 50,000 years. Humans have always told tales of their ancestry. New scientific techniques are giving us a more complex story to tell.

