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HUMAN NATURE

Return of the Neanderthals

If we can resurrect them through fossil DNA, should we?

By William Saletan

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Here's the next question in the evolution debate: We know roughly how the sequence of life ran forward in time. What about running it backward? How would you feel about rewinding human evolution to a species that's almost like us, but not quite?

Last week in *Nature*, scientists reported major progress in sequencing the genome of [woolly mammoths](#). They reconstructed it from two fossilized hair samples. One was 20,000 years old; the other was [65,000](#) years old. Now, according to Nicholas Wade of the *New York Times*, biologists are discussing "how to modify the DNA in an elephant's egg so that after each round of changes it would progressively resemble the DNA in a mammoth egg. The final-stage egg could then be brought to term in an elephant mother."

Cool, huh? But that's not the half of it. Wade notes:

The full genome of the Neanderthal, an ancient human species probably driven to extinction by the first modern humans that entered Europe some 45,000 years ago, is expected to be recovered shortly. If the mammoth can be resurrected, the same would be technically possible for Neanderthals.

In fact, Wade points out, there are [good reasons](#) to re-create a Neanderthal: "No one knows if Neanderthals could speak. A living one would answer that question and many others."

Whoa there, says Richard Doerflinger of the U.S. Conference of Catholic Bishops: "Catholic teaching opposes all human cloning, and all production of human beings in the laboratory, so I do not see how any of this could be ethically acceptable in humans." Wade [concedes](#) that "there would be several ethical issues in modifying modern human DNA to that of another human species."

Note the qualifiers: *modern* human DNA. *Another* human species. As this uncomfortable reality of the past becomes a future prospect—transitional creatures between human and nonhuman—the "human dignity" framework starts to look a bit shaky. George Church, a leading geneticist, [suggests](#) (in Wade's paraphrase) that scientists could "modify not a human genome but that of the chimpanzee," bringing it "close enough to that of Neanderthals, [with] the embryo brought to term in a chimpanzee." No human clones or products involved. At least, no "[modern](#)" humans. This leaves the question of whether we're entitled to mess around in the lab with "[another human species](#)." But it's hard to see how the bishops and other religious critics of biotechnology can plunge into this area, having drawn a [tight moral line](#) around our species.

Every serious scientist knows that we and other animals evolved from the same ancestors. The real question today is whether to put our DNA and theirs back together. Until now, that

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question has been raised in the form of [human-animal hybrids](#) made in labs for research. You can argue that these are somehow wrong because they're newfangled and artificial. But what can you say about Neanderthals? They were made by nature, not industry. In fact, we're the industrial villains who apparently wiped them out. They're as natural as we are.

If we do this Church's way, I don't see how conservatives can object. They didn't object [last year](#) when scientists announced the [cloning of rhesus macaque embryos](#). That, too, was the creation of [nonhuman primate life](#). Follow the human lineage three branches beyond the primate order, and the rhesus macaques are [still with us](#). Follow the human line two more branches, and the [chimps](#) are still with us. One more branch, and you're down to us and the [Neanderthals](#). If it's OK to clone a macaque and a chimp, it's pretty hard to explain why, at that last fork in the road, you're forbidden to clone a Neanderthal.

Is the idea repugnant? Absolutely. But that's not because we'd be defacing humanity. It's because we'd be looking at it.

*William Saletan is **Slate's** national correspondent and author of [Bearing Right: How Conservatives Won the Abortion War](#).*

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