

Ancient Engraving Strengthens Case for Sophisticated Neandertals

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[Kate Wong](#) September 3, 2014



Engraving found in Gorham's Cave in Gibraltar dates to more than 39,000 years ago and is thought to have been made by a Neandertal. Image: Courtesy of Stewart Finlayson

One of the longest-running, most fervent debates in the history of [human evolution](#) research concerns the [cognitive abilities of the Neandertals](#). Were they the slow-witted creatures of popular imagination or did an intellect like that of modern humans lurk behind that heavy brow? I think it's safe to say that these days most paleoanthropologists have abandoned the idea that the Neandertals were complete dolts, and the debate has shifted to the question of whether they were just fairly smart or whether they shared our special brand of genius. A new discovery lends support to the latter notion.

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Researchers working in Gibraltar have found what they say is the first known example of an [abstract pattern engraved by a Neandertal](#). The cross-hatched design was carved into the bedrock of a seaside shelter known as [Gorham's Cave](#). Analysis of the engraving, which covers an

area of around 300 square centimeters, indicates that the artist made each of the 13 lines in the image by running a pointed stone tool over the weathered surface of the rock repeatedly in the same direction. An estimated total of 188 to 317 strokes were required to complete the design—too many for it to be unintentional scratching. Neither did the marks resemble those produced experimentally when the researchers cut fresh pig skin with a stone blade on the same kind of rock surface.

Archaeologists consider art and other types of symbolic expression to be key elements of modern behavior, and good indicators that whoever made the symbols had language. Over the years, hints of Neandertal symbolism in the form of [jewelry](#) and other decorative items have emerged at a number of sites across Europe. But some skeptics have credited them to early modern humans, arguing either that their belongings got mixed in with the Neandertal remains or that Neandertals copied or acquired symbolic stuff from moderns. The age of the Gibraltar engraving is therefore critical. Because the bedrock at Gorham's Cave lies under a layer of Neandertal-made stone tools dated to 39,000 years ago, the engraving is believed to be older than those artifacts. Modern humans had not yet made it to Gibraltar by 39,000 years ago, so Neanderthals appear to have made the design in the absence of modern influence.

The engraving, which calls to mind a hashtag or tic-tac-toe board, may lack the aesthetic appeal of the spectacular cave paintings and engravings created by early modern humans at sites such as Chauvet and Lascaux in France, but it nevertheless attests to a cognitive ability that many scholars have ascribed to moderns alone. And, in fact, some of the oldest evidence for abstract thinking in modern humans—including [77,000-year-old engraved ochre plaques](#) and [60,000-year-old engraved ostrich eggshell fragments](#) from South Africa—bears simple geometric designs, too. What makes such designs so important, modest though they may appear, is that they are thought to encode information. In the

case of the Neandertal hashtag, the researchers who described it observe that it marks a spot within a habitation area in a cave. "This engraving represents a deliberate design conceived to be seen by its Neandertal maker and, considering its size and location, by others in the cave as well," they conclude.

I'm quite sure that this finding will not end the debate over Neandertal smarts. Critics will question the age, the identity of the artist, the intent behind the pattern. Some will argue that even if it is a Neandertal artwork, it is a one-off event—the work of a single, freakishly brilliant individual—not representative of the broader Neandertal population. Archaeologists will need to find many more examples to persuade the skeptics. If it does turn out that Neandertals were our intellectual equals, however, that revelation will only deepen the [mystery of why they went extinct](#): many scientists have surmised that modern humans were able to beat out the Neandertals and other human species as a result of their superior cognitive abilities.

Clive Finlayson of the Gibraltar Museum and his colleagues describe the Gorham's Cave engraving in a paper published online September 1 by the *Proceedings of the National Academy of Sciences USA*. For more on symbolic thought in Neandertals and early modern humans, check out the links below.

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