

# Why Culture Is Not The Only Tool For Defining Homo Sapiens In Relation To Other Hominins



*Deborah Barsky*

04-12-2004 ~ *We need a broad comparative lens to produce useful explanations and narratives of our origins across time.*

While the circumstances that led to the emergence of anatomically modern humans (AMH) remain a topic of debate, the species-centric idea that modern humans inevitably came to dominate the world because they were culturally and behaviorally superior to other hominins is still largely accepted. The global spread of *Homo sapiens* was often hypothesized to have taken place as a [rapid takeover](#) linked mainly to two factors: technological supremacy and unmatched complex symbolic communication. These factors combined to define the concept of “modern behavior” that was initially allocated exclusively to *H. sapiens*.

Up until the 1990s, and even into the early 21st century, many assumed that the demographic success experienced by *H. sapiens* was consequential to these two distinctive attributes. As a result, humans “behaving in a modern way” experienced unprecedented demographic success, spreading [out of their African homeland](#) and “[colonizing](#)” Europe and Asia. Following this, interpopulation contacts multiplied, operating as a stimulus for a cumulative culture that climaxed in the impressive technological and artistic feats, which defined the European Upper Paleolithic. Establishing a link between [increased population density and greater innovation](#) offered an explanation for how *H. sapiens* replaced the Neandertals in Eurasia and achieved superiority to become the [last survivor](#)

## [of the genus \*Homo\*.](#)

The exodus of modern humans from Africa was often depicted by a map of the Old World showing an arrow pointing northward out of the African continent and then splitting into two smaller arrows: one directed toward the west, into Europe, and the other toward the east, into Asia. As the story goes, AMHs continued their progression thanks to their advanced technological and cerebral capacities (and their presumed thirst for exploration), eventually reaching the Americas by way of land bridges exposed toward the end of the last major glacial event, sometime after 20,000 years ago. Curiosity and innovation were put forward as the faculties that would eventually allow them to master seafaring, and to occupy even the most isolated territories of Oceania.

It was proposed that early modern humans took the most likely land route out of Africa through the Levantine corridor, eventually encountering and “replacing” the Neandertal peoples that had been thriving in these lands over many millennia. There has been much debate about the dating of this event and whether it took place in multiple phases (or waves) or as a single episode. The timing of the incursion of *H. sapiens* into Western Europe was estimated at around 40,000 years ago; a period roughly concurrent with the [disappearance of the Neandertal peoples](#).

This scenario also matched the [chrono-cultural sequence for the European Upper Paleolithic](#) as that was defined since the late 19th century from eponymous French archeological sites, namely: *Aurignacian* (from Aurignac), *Gravettian* (from La Gravette), *Solutrean* (from Solutré), and *Magdalenian* (from la Madeleine). Taking advantage of the stratigraphic sequences provided by these key sites that contained rich artifact records, prehistorians chronicled and defined the typological features that still serve to distinguish each of the Upper Paleolithic cultures. Progressively acknowledged as a reality attributed to modern humans, this evolutionary sequencing was extrapolated over much of Eurasia, where it fits more or less snugly with the archeological realities of each region.

Each of these cultural complexes denotes a geographically and chronologically constrained cultural unit that is formally defined by a specific set of artifacts (tools, structures, art, etc.). In turn, these remnants provide us with information about the behaviors and lifestyles of the peoples that made and used them. The Aurignacian cultural complex that appeared approximately 40,000 years ago

(presumably in Eastern Europe) heralded the beginning of the Upper Paleolithic period that ended with the disappearance of the last Magdalenian peoples some 30,000 years later—at the beginning of the interglacial phase marking the onset of the (actual) [Holocene epoch](#).

The conditions under which the transition from the Middle to the Upper Paleolithic took place in Eurasia remains a topic of hot debate. Some argue that the chronological situation and features of [Châtelperronian](#) toolkits identified in parts of France and Spain and the [Uluzzian](#) culture in Italy, should be considered intermediate between the Middle and Upper Paleolithic, while for others, it remains unclear whether Neandertals or modern humans were the authors of these assemblages. This is not unusual, since the thresholds separating the most significant phases marking cultural change in the nearly 3 million-year-long Paleolithic record are mostly invisible in the archeological register, where time has masked the subtleties of their nature, making them seem to appear abruptly.

The idea of a “[Human Revolution](#)” was introduced mainly from sites in South Africa, where a rich body of evidence revealed that the set of modern behaviors associated with *H. sapiens* was significantly older than the European Upper Paleolithic record. Coincident with the reign of the Neandertals in Eurasia and close to the period of the [emergence of \*H. sapiens\* in Africa](#) proposed subsequently, these remarkable finds comprise [evidence indicating advanced technological proficiency and symbolic behaviors](#), including finely fashioned stone points, specialized bone tools, as well as art, ochre, and shell beads. With some of the finds dating from more than [150,000 to around 70,000 years ago](#), these [Middle Stone Age \(MSA\)](#) discoveries were thought to provide the basis for the prevalence of our species on the world stage.

Today, new discoveries are rewriting the story of our ancestors. According to a 2017 Nature article, finds from the [Jebel Irhoud](#) site in Morocco, which are more than 300,000 years old, have pushed back the date for the emergence of our species by more than 100,000 years. Meanwhile, discoveries in Israel ([Misliya](#)) and Greece ([Apidima](#)) now suggest that members of the *H. sapiens* clade reached Eurasia far earlier than previously believed.

One major consequence of this “early arrival,” for example, is a far longer cohabitation period between AMHs and Neandertals than previously suspected. But there is more. Over a period spanning less than a quarter of a century, [at](#)

[least six new species of \*Homo\*](#) dating to a timeframe that now overlaps with our own species, have been added to the human family tree. That *H. sapiens* had physical contact with some of them, like the [Denisovans](#) and the [Neandertals](#) present in Eurasia, has now been confirmed thanks to [advances made in genetic studies](#).

Moreover, a wide body of evidence now shows that Neandertal peoples were cognitively advanced and possessed highly developed technological know-how and symbolic behaviors—once believed to be attributes exclusive to modern humans. The evidence ranges from [art](#) to [corporal decoration](#), with [advanced hunting capacities](#), also suggesting that Neandertals had an aptitude for complex language. In combination, these findings are important factors that are forcing us to rethink the cultural development processes for the Middle and the Upper Paleolithic.

Neandertal toolkits are ascribed to the [Mousterian](#) cultural complex (from the Le Moustier site, France), characterized by [stone flakes knapped from cores](#) that were often managed using specific techniques referred to as Levallois. This eponymous denomination (from Levallois-Perret, France) refers to a complex series of gestures used to knap a piece of stone (usually flint) to produce flakes with predetermined shapes and sizes. Contrastingly, modern human toolkits are generally classified as being “blade-based” because they consist of long, thin flakes knapped from carefully prepared cores to produce blades that provide greater raw material economy and efficiency. Throughout the Upper Paleolithic and into the Mesolithic, these blade industries included very small tools (microlithic) that were often combined with other materials to form composite tools.

This scheme, however, reflects the dominance of the Western European vision of prehistoric cultural evolution and does not always fit well with the archeological reality. For instance, [a recent study](#) shows that innovation in stone cutting-edge productivity was not a rapid and sweeping revolution that helped modern humans spread over Eurasia, but rather it occurred later, progressing in tandem with blade size reduction. Another case in point are the blade-based Middle Paleolithic toolkits of the [Amudian](#) culture, recognized to have been made by Neandertals, and also [Levallois products associated with the newly coined \*Nesher Ramla Homo\*](#), in the Levant. Moreover, flakes produced using Levallois core preparation techniques ascribed to the [Acheulian](#) techno-complex have been [documented in](#)

## [the North African Lower Paleolithic.](#)

So what kinds of tools were the early *H. sapiens* from Jebel Irhoud making 300,000 years ago? Or the modern humans found at Apidima in Greece, nearly 200,000 years ago? What about the other hominins ranging over Eurasia prior to and during the arrival of *H. sapiens*?

In fact, these archaic humans are associated with a range of technologies and behaviors that suggest a far more complex cultural framework than previously assumed. This annuls the hypothesis that modern humans replaced the Neandertals (and other hominin forms) thanks to the technological superiority of their blade-based industries and calls for a revision of how we perceive the role of culture in defining our own species in relation to other hominins.

These exciting finds have not only enlarged the human family but have also revealed complex patterns of migration and social interchange practiced by our ancestors. Just as these exchanges involved interbreeding and assimilation, culture was also shared and transferred among different hominin groups, effacing the usefulness of restrictive cultural labeling for defining *H. sapiens* and our cousin species.

These revisions to the archeological record tell us that the similarities and differences we observe in prehistoric cultures are not necessarily a yardstick for measuring the superiority of one human group over another.

*By Deborah Barsky*

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