Early modern humans

The earliest representatives of people anatomically similar to living humans evolved from more archaic humans approximately 100,000 years ago. The process by which they emerged from and eventually replaced those late archaic humans remains unclear. It is likely that they evolved locally from such predecessors in northeastern Africa. Over the succeeding 50,000 years, their range expanded and contracted with changing global climatic cycles to include at times the Mediterranean Near East and portions of northern Africa. Early modern humans and their biology and way of life, therefore, initially had little advantage over late archaic humans. See also: Neandertals

Subsequently, starting around 50,000 years ago, the descendants of these earliest modern humans were able to expand their geographical range. They spread into regions occupied by geographical groups of late archaic humans, in some cases admixing with those local populations and in other regions displacing them. The spread of early modern humans appears to have taken place initially across northern Africa to Morocco and southward through eastern Africa to southern Africa. At the same time, prior to 40,000 years ago, they appear to have spread eastward across southern Asia, through Indonesia, and across open water into greater Australia. Between 40,000 and 30,000 years ago, these early modern humans dispersed northward across Eurasia from the Mediterranean to the Pacific, and westward across Europe, reaching the Atlantic peripheries of Europe as late as 30,000 years ago. The last of these groups, the early modern humans of western Europe, were previously referred to as the Cro−Magnon people, after the site in France where their remains were first discovered in 1868.

This scenario for the emergence and spread of modern humans is based on evidence from the human fossil record (documenting the earliest modern humans in different regions), living human genetic diversity (similarities among humans, indicating a generally recent shared ancestry), and recent human anatomical diversity (requiring considerable time to become established). Taken together, these lines of evidence highlight the complex and geographically variable nature of this evolutionary period, the emergence of modern humans.

Early modern humans were biologically the same as modern peoples and would blend in with living peoples. They differed from living people primarily in their tendency to have a rugged, athletic build. This is evident in the prominent muscle attachments and the structural reinforcements of the limb bones. Given their mobile hunting and gathering existence, their legs and feet were especially strongly built. In addition, they had slightly larger teeth than those of recent humans, providing greater resistance to the abrasion of eating and cooking without utensils.

These populations were generally tall, males being 175−180 cm (5 ft 10 in.) and females 160−165 cm (5 ft 4 in.) on average. From about 20,000 years ago until the twentieth century, few human populations achieved such large statures. As a result of these tall bodies and muscularity, their brains were relatively large, averaging about 1500 cm^3 (90 $in.^3$) as opposed to averages of about 1350 cm^3 (80 $in.^3$) common for recent humans. Yet, when their brain sizes are scaled against estimated body weights, their brains were relatively the same size as those of living humans.

Early modern humans were successful hunters and gatherers, occupying most of the inhabitable regions of the Old World. Although frequently portrayed as big game hunters, they lived by hunting small to medium−size animals, especially antelopes, deer, goats, and occasional horses and cattle, and by gathering wild plants, fish, and shellfish for food. They were sufficiently successful that the levels of biological stress from famine or injury, as indicated by the lesions on their skeletons and teeth, are among the lowest known for any prehistoric human group.

Their effectiveness as hunters and gatherers was due in part to their technology. They developed elaborate stone tool technologies, producing long blades that became blanks for tools with replaceable cutting edges and points. This advance was made possible by the use of bone, antler, and wood for carefully made hafts and handles for the sharp stone edges. They were also the first to fire clay into ceramics, and they wove carrying bags with a variety of techniques. Yet, their ability to live effectively as hunters and gatherers depended upon their extensive knowledge of the environment, so that they could harvest wild game and plants rather than seek them opportunistically. This knowledge was communicated through the first elaborate symbolic systems known, which consisted of a variety of geometric notational systems and the first representational art. They were also the first humans to commonly wear jewelry, and hence to modify their personal social images, suggesting more complex social roles than were previously known.

Although these behavioral advances are associated with early modern humans, most of them appear only after about 50,000 years ago and hence are associated with the dispersal of modern humans. What behavioral advances, if any, were

associated with the earliest modern humans remains unclear. However, their fossil remains suggest that even they were less stressed and more efficient as hunter−gatherers than their archaic predecessors and contemporaries. See also: Fossil human

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Bibliography

- M. H. Nitecki and D. V. Nitecki (eds.), *Origins of Anatomically Modern Humans*, Plenum, 1994
- C. Stringer and C. Gamble, *In Search of the Neanderthals*, Thames & Hudson, 1993
- J. Svoboda, V. Loek, and E. Vlek, *Hunters between East and West*, Plenum, 1996
- M. H. Wolpoff, *Human Evolution*, McGraw−Hill, 1996