

## ASSIGNMENT 5

### Origins and Spread of Modern Humans

**W**e now take a giant stride ahead in time, from the world of the earliest humans to about 100,000 years ago, to the millennia when modern humans—ourselves—evolved and spread throughout the world. Some of the greatest controversies in world prehistory surround the origins of *Homo sapiens sapiens*—modern humans.

*In this assignment we focus not so much on the origins of modern humans, but on their spread through the world. Assignment 5 focuses on the late Ice Age and lays the foundations for the discussion of post-Ice Age societies and on the origins of farming in Assignment 6.*

In this assignment, we focus not so much on the origins of modern humans themselves, but on the spread of our remote ancestors through the Old World and into the Americas. Assignment 6 covers the following:



#### WHAT LIES AHEAD

#### Assignment Objectives

After completing Assignment 5, you will be able to:

1. Compare and contrast the two major competing hypotheses for human origins,
2. Describe and evaluate the ways in which late Ice Age people adapted to conditions of extreme cold,
3. Describe and evaluate the significance of the sequence of Upper Palaeolithic cultures for Western Europe and their art, and the culture of people living on the Eurasian plains,
4. Synthesize the evidence for the peopling of the Old World and the Americas during and immediately after the Ice Age.



#### Work expected of you

This assignment requires you to:

- Complete 4 Web exercises: *Homo erectus*, Middle Palaeolithic stone technology, Upper Palaeolithic stone technology, and The Peopling of the World.
- Make summary notes on technological and behavioral changes in late Ice Age Europe and on plains adaptation.



## LECTURE 1: THE CRO-MAGNONS

This lecture is a visual journey through the world of the late Ice Age and divides into three parts:

- First, we introduce the Cro-Magnons and the diverse surroundings in which their sites are found, notably in southwestern France and western Russia,
- Second, we examine some of the spectacular artifacts that they manufactured, and the significance of Cro-Magnon technological innovations.

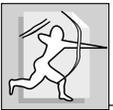


*The Videoclip on the Web introduces the subject matter of Assignment 5. You might care to view this now . . . Then read on here . . .*



## LECTURE 2: THE MEANING OF CRO-MAGNON ART

The Upper Palaeolithic art of Central and Western Europe is claimed to be the earliest human art in the world. The paintings and engravings are well known, but the methods of studying them and the various schools of thought regarding their interpretation are not. We discuss some of the methods used to copy and record art, as well as date it, also cutting edge research which has provided fresh insights into the significance and use of the art. The lecture ranges widely over cave art generally and pays particular attention to both Cro-Magnon art from Europe and San paintings from South Africa.



## BRIDGING THE GAP: THE ARCHAIC WORLD (1.6 MYA TO 100,000 YEARS AGO)

First, we must cover the long period of time between the earliest humans and the origins of modern people. Some initial reading . . .



**World Prehistory.** Read pp. 69–88.

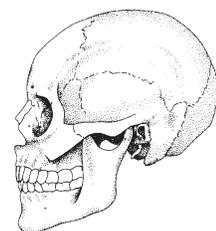
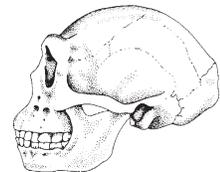
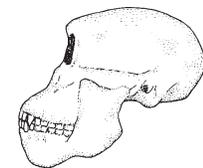
This reading is essential background for this assignment. Take trouble to read it carefully and make notes.

Let us now take a closer look at the anatomy of *Homo erectus*, comparing it with that of earlier humans and *Homo sapiens sapiens* . . .



**WEB EXERCISE: HOMO ERECTUS (5-1)**  
(30 to 90 minutes)

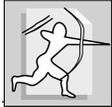
This exercise compares the cranial characteristics of *Homo erectus* with those of Australopithecines, early *Homo*, and later humans, including modern people and the Neanderthals. When you have completed it, write a *10-line summary* of the salient physical characteristics of *Homo erectus*. What do you consider to be the most significant physical features of these humans in terms of the unfolding story of the human past?



*Homo erectus* (b) compared with early *Australopithecus* (a) and anatomically modern *Homo sapiens* (c).

The exercise allows you two useful ways to compare the cranial features of all species of hominids to one another. You can either take measurements of various features of the crania and compare those across species, or you can overlay the scale drawings to directly compare the features of individual species. Interleaf your reply in your Guide.

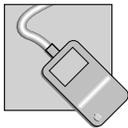
When you have finished, please read on . . .



## STONE TECHNOLOGIES

You'll recall that we surveyed the earliest stone tool technologies in Assignment 4. You'll also recall from the reading earlier in this assignment that handaxes and more advanced tool forms and technology came into use after 1.6 mya. We must now trace the later development of ancient stone technology as background for the remainder of this assignment . . .

Back to the Web . . . Write your response in the space that follows:



### WEB EXERCISE: MIDDLE PALAEOLITHIC STONE TECHNOLOGY (5-2)

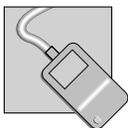
(20 to 30 minutes)

This is a cumulative exercise that builds on what we learned about technology in Assignment 4. This time, we examine:

- The development of handaxe technology,
- The evolution of the more advanced Levallois and disc-core technologies, which appeared about 250,000 years ago and remained in use until at least 40,000 years ago.

To complete the exercise, *draw a diagram* on an interleaved sheet that shows the difference between disc core and Levallois technology, and assess, *in a paragraph or two*, the advantages of each to a stone worker. What do you think would be the practical advantages of each to a small band?

Then continue . . .



### WEB EXERCISE: BLADE TECHNOLOGY

(15 to 20 minutes)

The final Web exercise for this assignment discusses fundamental changes in human technological achievement that took hold with the emergence of modern humans. The exercise covers:

- The appearance of blade technology and the advantages of same,
- How blade tools were made and the range of potential artifacts,
- Bone and antler artifacts and their manufacture.

Note that the exercise requires you to answer some questions about changes in lithic technology through time. Interleaf your response with your Study Guide.

When you have finished read:



**Anthology section: “The significance of blade technology.”**

When you have completed this reading, read on . . .



**THE ORIGINS OF MODERN HUMANS**

For a brief description of the controversies surrounding the emergence of modern humans, please read:



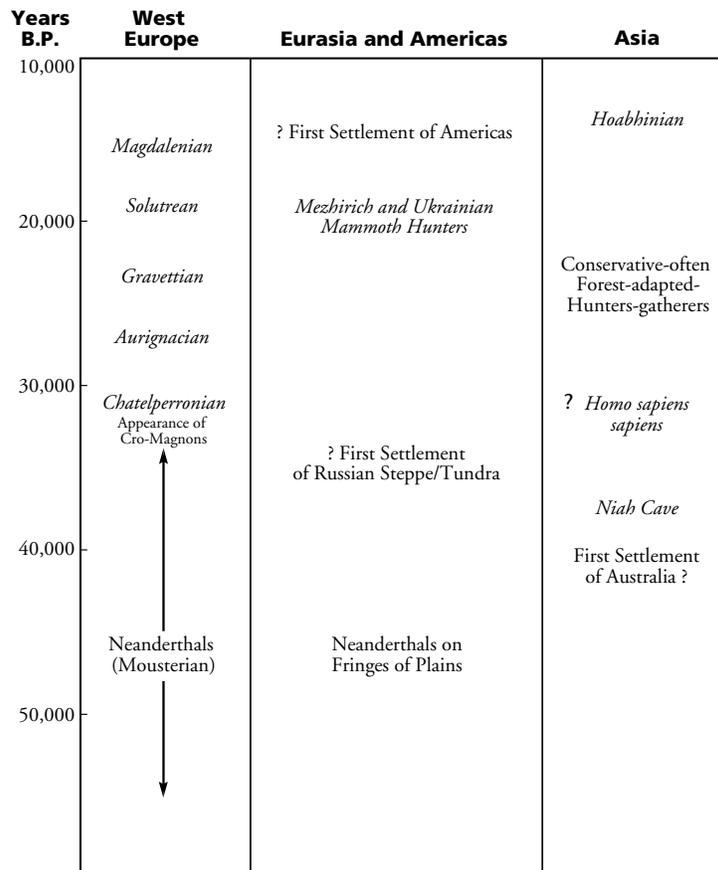
**World Prehistory.** Read pp. 88–94.

This passage surveys the major hypotheses, and involves archaeology, fossil evidence, and archaeology. When you have the theories fixed in your mind, please read on, as we will be discussing the spread of modern humans through the world. . .



**CHRONOLOGY**

Time for our next Chronological Table. This one straddles 35,000 years ago to just after the end of the Ice Age, 12,000 years ago. Do not worry if there are unfamiliar cultural names here: they will become clear as you go through the assignment.



*Note:*

- The first settlement of arctic regions about 35,000 years ago, perhaps a little earlier,
- The first settlement of Australia and island southeast Asia in about 40,000,
- The first settlement of the Americas after 15,000 years ago.

You should also study the map in *World Prehistory*, Figure 4.1,

- which summarizes this data.

Now read on... When you have finished, please read the short essay on the *significance* of the new technology, which follows. This is a fundamental issue in the next assignment, when we discuss the spread of *Homo sapiens sapiens* throughout the Old World.



## THE CRO-MAGNONS

This assignment is built around some fundamental questions:

- What were the environmental realities of Europe and Eurasia during the late Ice Age?
- What were the innovations and changes in human behavior that were needed to settle in extreme arctic environments?
- What kinds of human societies emerged in these regions, and how and when did they spread across Europe, Eurasia, and Siberia?
- How can we account for the remarkable efflorescence of artistic and creative life that emerged in Europe and elsewhere before 30,000 years ago?



### ***Anthology Section: "Introducing the Cro-Magnons"***

Please begin by reading the short essay in the Anthology section as background. When you have finished, please proceed without delay to read:



### ***World Prehistory:*** Read pp. 103–106.

This is an outline description of the origins of the Cro-Magnons, their basic cultural sequence, lifeway, and social organization. When you have finished, please read:



### ***World Prehistory:*** Read pp. 109–114.

This short passage describes adaptations on the Eurasian plains.

When you have finished these passages, please answer the following questions on an interleaved sheet:

- What is the most remarkable feature of the Cro-Magnons' adaptation in western Europe?
- What were the basic features of the plains adaptation?

When you have finished, please read on . . .



## THE WORLD'S FIRST ARTISTIC TRADITIONS

The first Stone Age cave paintings were discovered in 1875, at Altamira in northern Spain. These depictions of bison were so fresh that most scientists refused to believe they were painted during the Ice Age. It was only in the early years of this century that the discovery of further paintings in sealed caves in southwestern France led to a general acceptance of the reality of Stone Age art. Since then, an enormous, speculative literature has surrounded humanity's earliest art. How did it originate? What were the motives behind the paintings and engravings? Please read:

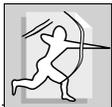


*World Prehistory.* Read pp. 106–109.



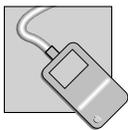
*Anthology Section: "Stone Age art."*

When you have finished move on ...



## THE PEOPLING OF THE OLD WORLD AND THE FIRST AMERICANS

By 10,000 years ago, all of the world was settled except for some remote arctic regions and the Pacific offshore islands. In the closing sections of this assignment, we examine the peopling of the rest of the world by modern humans during, and immediately after, the late Ice Age. Let's proceed in two stages:



### WEB EXERCISE (5-4): THE PEOPLING OF THE GLOBE

(30-45 minutes)

This short exercise uses the computer to dramatize the rapid spread of anatomically modern people over the Old World and into the Americas. The maps used are based on late Ice Age sea levels and land features, and show how it was possible for humans to cross narrow straits of open water with simple watercraft. The exercise is concerned with chronology and rate of colonization rather than details of sites and cultures, which are covered in the final segment of this assignment.

Finally, to complete the story, please read:



*World Prehistory:* Read pp. 114–120.

E N D O F A S S I G N M E N T 5

## ASSIGNMENT 5: ANTHOLOGY

### 1. THE SIGNIFICANCE OF BLADE TECHNOLOGY

#### *The Significance of Blade Technology*

No one has ever defined precisely what is meant by a “blade,” or a “flake blade,” nor need these highly technical distinctions detain us long here. Both blades and flake-blades have some important distinctions from earlier stone flakes. They are usually of far more standardized size and shape, struck from carefully prepared cores that were fashioned to produce several relatively similar blanks for making a much wider variety of tools than ever before. These more refined artifact blanks tend to stand out among the more irregular disc-core and Levallois flakes that were so commonplace in Africa 200,000 years ago. Many of them are triangular or parallel sided, the latter highly versatile tool blanks that could be made into scrapers and spokeshaves, hide processing tools, sharp knives, and fine spear points. Not only that, large numbers of blades could be struck from one core, and be turned into highly effective artifacts very easily indeed, a highly efficient use of often precious fine-grained rocks.

So distinctive are parallel-sided blade tools that they were long thought to have been the work of *Homo sapiens sapiens* and no earlier humans at all. Until recently, the earliest Stone Age blades came from 35,000 year-old occupation levels in French caves, and the technology—and *Homo sapiens*—were thought to be very recent. The unexpected appearance of very similar parallel-sided blades before 100,000 years ago in Ethiopia and elsewhere in Eastern and Southern Africa has raised the possibility that both blade technology and *Homo sapiens* are very much earlier than once thought — if blade technology and anatomically modern humans are truly associated with one another.

Fine, parallel-sided stone blades have been considered the hallmark of anatomically modern human beings ever since the nineteenth century, when French archaeologists found them associated not with the beetle browed Neanderthals, but with the modern-looking Cro-Magnons, who succeeded them after 35,000 years ago. None other than the celebrated French prehistorian Abbe Breuil proclaimed in the early years of this century that blade technology was one of the hallmarks of modern humans. So were fine antler and bone tools, unknown in earlier times. No question, blade technology, with its parallel-sided blanks, was a major advance on earlier Levallois and disc core technology. Not only did blades enable the stone worker to manufacture far lighter, more standardized tools, they also allowed people to make a much wider range of smaller artifacts, many of which could be mounted on wood and bone handles, or even be used as stone barbs inserted into spear heads.

Blade production was seen as requiring far more sophisticated stone working skills. The stone worker would carefully select a lump of fine grained rock such as flint or obsidian, then shape it into a cylindrical or conical form, with a carefully prepared working platform for striking off identical blade after identical blade. Once the core was ready, the artisan would grasp the core between his feet, take a punch, and knock off a series of thin blades. Obsidian blade making reached its apogee long after the Ice Age, in the hands of expert Ancient Egyptian artisans and Aztec Indian craftsmen. Franciscan Friar Toribio de Torquemada observed obsidian workers at their craft in colonial New Spain in 1615, long after the Spanish Conquest. The stone workers would take a stick and press it against a stone core with their “brest.” “With the force of the stick there flies off a knife,” he marveled.

## 2. STONE AGE ART

The first Stone Age cave paintings were discovered in 1875, at Altamira in northern Spain. These depictions of bison were so fresh that most scientists flatly refused to believe they were painted during the Ice Age. It was only in the early years of this century that the discovery of further paintings in sealed caves in Southwestern France caused a general acceptance of the reality of Stone Age art. Since then, more spectacular discoveries and an enormous speculative literature have surrounded this remarkable art, some of the earliest in the world.

### *Origins*

We say “some of the earliest in the world. . . .” Until relatively recently, everyone thought that the French and northern Spanish cave paintings and art objects were the world’s first artistic tradition. In fact, there are signs that people were painting and creating art objects in other parts of the world at least 18,000 years ago — in Australia and South Africa, to mention only two possible examples. Obviously, one fundamental question comes to mind: why did human beings suddenly start to paint on cave walls, decorate their bodies, and their artifacts? There is precious little intelligent speculation on this point, partly because everyone realizes we are simply too remote in time from the Magdalenians and other late Stone Age artists.

### *Motives for the Art*

Having tried to answer the question why, we must now probe further and examine the motives of the art. The theories about the reasons for Stone Age art revolve around three fundamental hypotheses:

- That the artists created art for art’s sake. This supposes that they had the same attitudes to art as we do — thus, the artists may often have created an image to entertain themselves, for the enjoyment of their audience, but everything we know about living hunter-gatherer societies hints at much more profound motives.

- “Sympathetic hunting magic” theories. Such theories argue that, since most of the images are of animals, then the art was connected with the fertility of animals and success in the hunt. That the art is connected with the animal world seems beyond question, but the relationship between the animals and humans seems far more complex than merely one of hunting magic.
- What we can loosely call “symbolism theories.” Modern investigators are examining rock art on a comparative basis, looking at the symbolism of modern hunter-gatherers and the art of such groups as the San of Southern Africa and the Australian Aborigines.

### ***San Rock Art and Its Meaning***

Some of the richest data comes from historical and ethnographic researches into the San peoples who inhabited much of southern Africa in late prehistoric times. When Europeans settled at the Cape of Good Hope in 1652, the San were still painting pictures not only of game and daily life, but of important ceremonies and trance rituals. In the three centuries that followed, they were decimated by disease and encroaching European settlement and the painters gradually died out—but not before painting red coated soldiers hunting them in the mountain valleys below. To the colonists they were little more than animals. “He has no religion, no laws, no government, no recognized authority, no fixed abode,” wrote one European missionary. In the 1830s, farmers hunted them on horseback on Sunday afternoons—for sport.

Today, only a few thousand San survive in the Kalahari Desert of what is now Botswana. None of the groups responsible for prehistoric rock art survived the nineteenth century. But they left an extraordinary chronicle behind them—thousands of painted and engraved rock surfaces in Zimbabwe and South Africa. The paintings are delicate, even minuscule. Human figures are often no more than a few inches high. Reds, blacks, yellows, whites, the colors vibrate softly from rock shelter walls. Archaeologists have long been intrigued with this magnificent art and the motives behind it.

One of the first people to study the art was German linguist Wilhelm Bleek, in the 1870s. Living in Capetown, he discovered by chance that some San were working as prisoners on the breakwaters for the new harbor. He persuaded the Governor to release them into his care, so he could learn their language and customs. Bleek compiled more than 12,000 pages of notes on San rituals, myths, and beliefs. The San told him of the medicine men of the game and the rain, who controlled antelope herds and the mythic beasts that brought rainfall. Bleek showed his informants some copies of rock paintings, in which they identified medicine men leading rain animals across their hunting territory.

Bleek also learned of trance performances that the medicine men would use to control game or capture the rain animal. While the women clapped and sang the medicine songs, the men would dance. This activated a supernatural potency that made them tremble, sweat, experience a rising sensation, bleed from the nose, and finally “die.” In the trance, the medicine men’s spirits were thought to leave their bodies to fight off evil influences, control game, or capture the rain animal. Some of these men were painters.

The eland is the largest and fattest of all antelope, so bulky that an agile hunter can run it down. One kill can sustain a band of hunters for weeks. “All other animals are like servants to the eland,” a San told archaeologist David Lewis-Williams, an expert on prehistoric art. This animal figures large in nineteenth century hunting ritual. Bleek’s informants had recounted eland myths that associated the animal with honey, a substance with a strong, sweet smell similar to that which rises from a dead eland when it is skinned. Lewis-Williams soon discovered this scent is considered redolent with power among modern San. Kalahari San will dance around the carcass of a freshly killed eland. In this dance, the medicine man, who has special control of eland potency, enters a trance and cures everyone of ills by removing “arrows of sickness” that may be directed against them.

Lewis-Williams has examined thousands of prehistoric paintings with this ritual at the back of his mind. There are many depictions of eland with medicine men. In some instances dancers cavort around a dying eland, its hooves crossed like those that Lewis-Williams himself saw dying. White dots depict the sweat that pours from the dying animal, this time falling from a dancer who is “dying” in the trance. He believes that many paintings show dancers acquiring the potency released by the death of the eland. The trance is so powerful the men become eland themselves. The whole being of the medicine men and the people becomes merged with the most potent of all animals.

Lewis-Williams believes San rock art made up complex metaphors that reflected symbolic values in the San world. Each superimposition, each frieze, whether of eland or other animals, was a network of relationships that had profound meaning to the artists and medicine men. Undoubtedly, the same was true of Cro-Magnon art, which means that we will never comprehend the precise symbolic meaning of the first art from a remote, long vanished world.