



Chris Gosden

# PREHISTORY

A Very Short Introduction

OXFORD

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UNIVERSITY PRESS

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The publisher and the author apologize for any errors or omissions in the above list. If contacted they will be pleased to rectify these at the earliest opportunity.

# Prehistory and archaeology – a note

There is another book in this series by Paul Bahn called *Archaeology: A Very Short Introduction*. There is some potential for confusion about the difference between archaeology and prehistory. Archaeology usually designates the process of making sense of the past through finding, excavating, analysing, and dating the remains of human activity. Archaeology can be applied to any period of the past, even the most recent. Prehistory is the story we tell about the period before writing (although I use the term in slightly different manner here as you will see). In this book I shall not focus on how sites are found, dated, and analysed, but rather on the stories we tell of the past.



# A very, very short introduction to chronology

The hard thing about writing a very short introduction to prehistory is that prehistory is so long. Human origins currently go back 6 million years, a time period which encompasses a number of different prehistoric and geological periods. Prehistory is about sets of sites, artefacts and landscapes from the past which we try to understand in the present, putting the evidence we have in the context of their contemporary environments, both physical and social. I will refer to commonly-used terms for periods of the past, and rather than pause to explain each of them in the text, provide some overview here. For each region of the world I have also constructed a series of very brief timelines at the back of the book.

Beneath me as I sit here in the centre of southern Britain lies the following general sequence of sediments and archaeological evidence. In the upper metre of soil and sub-soil is evidence from the last 10,000 years – what are locally known as the Mesolithic (*c.*8000–4000 BC – i.e. Before Christ) – a world of hunter-gatherers living in modern climatic conditions; the Neolithic period (*c.*4000–1800 BC) – the first farmers; the Bronze Age (1800–800 BC) – the first widespread use of metals; the Iron Age (800 BC–AD [Anno Domini] 43) – the end of prehistory. The period older than 10,000 years ago is known as the Palaeolithic and extends back to the start of direct human ancestry. The last 2 million years has been a period of fluctuating cold and warm periods known generally as the Ice Ages. Evidence from this period

is found in river gravels, cave deposits and relatively rare occurrences of old sediments, as we shall see in the next chapter. The Palaeolithic currently starts 6 million years ago in Africa, where our earliest direct ancestors originated to spread out to Eurasia and southeast Asia between 1.8 and 1 million years ago (see Fig. 6 for a depiction of early hominid evolution). The oldest evidence in Britain is no older than this. At this stage of human evolution we are looking at *Homo erectus* – a stocky creature with a small brain, a limited social life and restricted material culture (although life may not have been as dull as this makes it sound). The so-called Ice Ages of the last 2 million years were really fluctuating climates and so in the Thames gravels beneath me are evidences of cold-adapted faunas (mammoths, woolly rhinos etc.) and warm-loving creatures, including hominids who may have lived in Europe only during warm periods. This was not true of the last glaciation, which started around 40,000 years ago and reached its height around 18,000 years ago. Now there were two sets of hominid species permanently in Europe – ourselves (*Homo sapiens sapiens*) and Neanderthals (*Homo neanderthalensis*) – the latter a cold-adapted species found from Britain to central Asia, whose extinction has led to one of the great whodunits – did we wipe them out directly, out-compete them more indirectly, or did they die out due to an inability to cope with changing conditions? At the height of the last glacial, the northern polar ice caps extended down to the Thames, with tundra south of that and open savannah conditions down to the Mediterranean. Much of Canada was covered by ice, and the expansion of the southern ice sheets caused glaciers in Tasmania, the Australian mainland and Argentina. Because so much of the earth's water had frozen and because ice is denser than water, global sea levels dropped, joining Britain to Europe, Papua New Guinea to Australia, and Borneo to peninsular Malaysia. There was drought in the tropical zones, extending the deserts and savannahs and creating holes in the equatorial rainforest. As the earth's climate warmed after 14,000 BC the ice retreated, and plants, animals, insects and birds moved into higher latitudes in both hemispheres and recolonized former deserts. Land was lost to the

rising sea, especially in southeast Asia, and more continuous rainforest may have posed some barriers in the tropics. This cycle of warm and cold has been repeated a number of times over the last 2 million years.

Although a small part of the story in terms of overall time, we are most interested in people like us – *Homo sapiens sapiens*. We arose in Africa about 120,000 years ago, moving out to the Middle East by 90,000 years ago and the Indian sub-continent and beyond by 70,000. Europe and Australia were both colonized about 50,000 years ago, the latter for the first time, and the last large landmass to receive people was the Americas 20–15,000 years ago. After that the last big movements were to islands – the Caribbean and Mediterranean islands were permanently settled around 6000 BC, the remote Pacific islands after 1500 BC, with places like Iceland in the northern hemisphere and New Zealand in the southern being the last sizeable pieces of land people reached, about 1000 years ago.

The chronological scheme for understanding prehistory, the so-called Three Age system, was mainly developed in Europe. The Stone Age was divided into two by the start of farming, with the Old Stone Age (Palaeolithic, with its own three divisions – lower, middle and upper) succeeded by the New Stone Age (Neolithic). The metal ages of Bronze and Iron, it was thought, saw the development of tribal societies with sophisticated farming and the ability to build monuments like hillforts or create metal objects both for use and for long-distance exchanges. The Three Age system works fine for much of Eurasia (although not Japan) and with some reservations for southeast Asia. Australia and the Pacific had only stone ages; the first metals were introduced by Europeans. Africa's bronze age probably came after its iron age and the Americas developed only copper, eschewing bronze or iron. Reflecting their different histories the Americas have developed their own terminologies, sometimes aimed at understanding the growth of states and civilizations in central and southern America (Archaic, Formative,

Classic etc.) or local sequences in north America (Woodland, Anasazi etc.). Since the 1960s absolute dates, especially radiocarbon determinations, have come through in numbers providing the basis for a comparative world prehistory, so that we can now ask what was happening in the world 18,000 or 5000 BC. Absolute dates have not solved all our chronological problems, but have shifted attention from when things happened to why they happened.

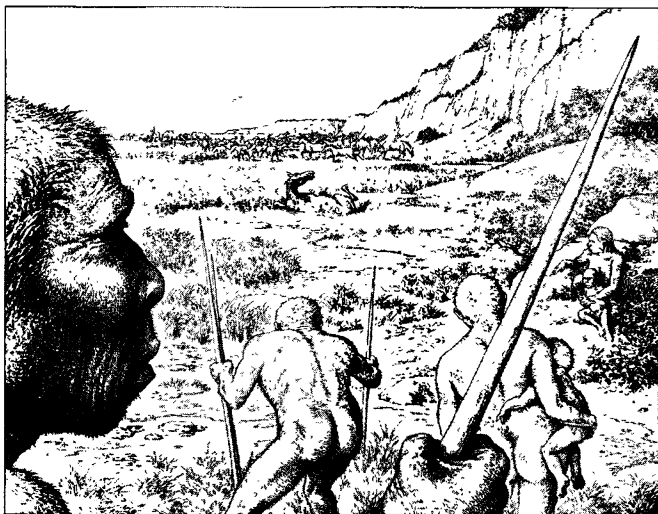
Absolute dates have changed our views of processes. In many areas of the world we can now see that the adoption of farming, which used to be seen as a sudden and dramatic change, often happened over a long period of time. The acceptance of sheep, cattle, pigs, wheat, barley and oats over much of western Eurasia occurred slowly and through complicated means between 10,000 and 3000 BC in differing areas; the movement of rice, probably first domesticated in China around 6000 BC, to Japan, India and southeast Asia took many millennia, as did the movement of millet and sorghum in Africa or maize and beans in the Americas. Indeed, many now think that the origins of farming is not really the issue. More significant is the total, but changing, pattern of production and consumption, which includes not only plants and animals, but also stone tools, pots, baskets, textiles and metals. Over the last ten thousand years people have created a complex series of worlds for themselves drawing on even older skills and resources – but such issues take us beyond an introduction to chronology and I will leave them for later chapters.

# Chapter 1

## **What and when is prehistory?**

On the plain there lay a horse. Clustered tightly around it was a group of creatures intent on what they were doing; some watched the group of hyenas circling the dead animal, occasionally throwing stones to keep them off. Some still held their wooden spears.

Six had their heads down, working flint. They had already prepared some of the great nodules of local flint from the nearby sea cliff by taking off flakes to give the rough shape of a handaxe and now each was working a prepared chunk with great speed and skill. The other scavengers and predators kept away: they had tangled with these creatures before and learnt to keep a distance. As soon as the first knapper had finished the razor-sharp artefact that we now call a 'handaxe', they scrambled on to the horse carcass and began to cut the meat. Joints were taken from the legs and haunches and once the bones had been revealed the larger ones were smashed to extract the marrow. Let us imagine that the adults helped to feed the kids and the young aided the old, although the weaker members may have had to grab what they could. Some meat was consumed on the spot, the choicer joints were taken to the top of the cliff where the group had a base and consumed at leisure. Let us imagine again that they could relax now for a day or two, replace their



## 1. The Boxgrove hominids hunt a horse

spears, make a new hammer for flint working from a suitable horse bone, and play with their children.

This happened at a place which half a million years later would be known as Boxgrove, near Chichester in southern England. None of the creatures involved had the remotest awareness that traces of their activities would survive for half a million years, preserved by rapid burial under collapsing cliff sediments. No words survive to tell us of this and countless other incidents, but we can give voice to questions aplenty. Because Boxgrove is an extraordinary site there is a surprising number of things we can know with certainty.

Beautifully detailed excavation and recording of the site has shown six (or perhaps seven) discrete areas of flint working where the handaxes were fashioned. Dealing with a three-dimensional jigsaw puzzle, archaeologists have worked in reverse order to the earlier hominids and, rather than breaking down a big nodule of flint into small flakes and a large handaxe, they have put the flakes back together again to create a complete nodule with only one missing

middle element – the handaxe itself. A void is left in the centre of the stone reminding us that in some parts of the world more recent stone knappers have seen their task as not making a stone tool, but rather freeing it from its encasing stone material. Once freed these particular handaxes have so far eluded archaeological detection, although they may lie in another part of the same site, discarded by a meat-bloated creature moving off to rest somewhere safe. Indeed many dozens of near-pristine handaxes have been recovered from Boxgrove, some with microscopic traces that indicate they were used for butchery.

The horse bones themselves tell their own story. This was the largest true horse species ever found in Britain, for a start, making a very attractive quarry for a hunting band. The horse bones that lie scattered amongst the flint debris show evidence of butchery in the form of thin scores into the surface of the bone resulting from the process of filleting to remove blocks of meat and muscle. The bones are smashed, probably with flint hammers, for marrow extraction. Microscopic examination shows the marks of animal teeth, with hyenas moving in after the hominids had left. We can tell which order various creatures got to the carcass as the teeth marks gouged across existing flint butchery marks, hyenas coming in to crunch the bone (and incidentally to scatter some of the flint debris a little in the process) after the hominids had left. In this set of coastal communities hyenas were not top dog and although working in a socially organized fashion themselves could not compete with the tools, intelligence, and organization of the hominids.

How do we know that these creatures had spears? Here we enter an area of slightly less certain inference. One scapula (shoulder blade) of the horse has a perfectly circular hole, which, on the basis of comparisons with holes made experimentally on modern skeletons, could probably only have been made by a pointed object travelling at a high velocity. This is not inconsistent with a spear thrown from a distance hitting the horse at considerable speed. Why use such equivocal language? The trivial reason is that the horse bone is

somewhat chalky and flaky after its 500 millennia of burial, raising questions about the nature of the hole and how it got there, but really there is little doubt about the identification of the wound. The more important reason is that a lot hangs on whether these creatures hunted or not. Many have said that hunting only developed with fully modern humans some 50,000 years ago and in earlier times there was not the social cohesion, technology, or wit to do more than scavenge the kills of large carnivores or gather plant foods. To bring down, kill, and butcher a large fit horse is no easy task and makes us think about the nature of group organization, levels of physical skills, and mental acuity. It is not something most of us would like to do armed only by stone age technology.

Our humanity resides in social cooperation and a flexibility of mental and physical response to the world and we are fascinated by the origins of all these abilities. For creatures half a million years ago to appear to possess many of the things that make us human causes us to reflect on some of the deeper questions of human existence. These creatures were rather different to us in physical form, so what is the link between the nature of bodies and brains (biology, in short) and culture? Their range of material culture (at least that which survives) appears to lack elements of decoration and style we would associate with all modern material culture known from the last 50,000 years. Does this matter? Does it signal a less rounded and deep appreciation of the material and social worlds? Does the lack of apparent stylistic and symbolic content of their material culture indicate that these creatures lacked the most sophisticated symbolic system of all – language? Were gestures, grunts and the sharing of food all that passed between them? Or did they sit and discuss the killing of the horse for weeks and months afterwards? Of course we do not know and will never know for sure, but these are the questions that most interest us.

Archaeological excavation is often described as moving from the known to the unknown; working from deposits and sequences on areas of the site which are well understood to those which are not.



The process of inference that creates prehistory moves in a similar sequence. We start from the nature of knapping and butchery debris, which methods of reconstruction developed over the last century allow us to understand with some certainty. We then move from the reconstructed flint nodule with the ghost of a handaxe at its heart to the manual actions which produced it, the use of the missing tool for cutting up the horse, to the nature of social and physical skills lying behind these acts and on to their individual and social consequences. Prehistorians need to exercise extreme vigilance, both for themselves and for others, as to when they cross the line between being reasonably sure about something into less directly grounded inference. The issues we are driven to understand lie always in the areas of least uncertainty, so that too cautious an approach will leave us grounded in the fascinating but ultimately trivial world of stone tool technologies or butchery practices. We can throw caution to the winds, especially in a synthetic volume such as this, pursuing the big picture, straying increasingly far from the secure inferences that stone or bone analysts can provide, exciting their rightful scorn – ‘There is no way you can be sure of *that*.’

Writing prehistory is a question of balance. The immense scope of prehistory (some 6 million years or so at present) poses the big questions of what makes us human both as individuals and members of groups. The difficulty and paucity of our evidence leaves us uncomfortably aware that the imaginative effort needed to understand the past can easily lead to fantasy, to projecting our common-sense views of the world onto the big screen of human prehistory. Writing a prehistory partly derives from the results of archaeology, from the things that people have dug up and made sense of, and partly from critical awareness of our biases and taken-for-granted. A central paradox of prehistory is that we are interested in the past because it was different from the present, so that the study of prehistory can add vital new insights into humanity past and present. But because prehistory was different, it cannot be understood as we understand the world today.

If a time machine were to take us back to the Boxgrove beach flats half a million years ago we would be profoundly shocked by what we found. The hominid group would not act in ways that we could immediately understand (they would not act like other apes or like fully modern humans) and we would probably be less interested in studying them than surviving. Would they let us join the group or see us a threat and how would we find out without fatal consequences? Would there be mutual recognition of some shared humanity separating us from other species? Or would they feel more related to the hyenas, a constant, intimate part of their lives, than to us? If we joined the group could we develop any useful skills to benefit it? I'm not sure I could learn to bring a running horse down with a yew spear or make a good handaxe and cut meat before the hyenas moved in, but I might have been able to look after the kids. What would the grit in the horse meat do to our fillings? What would our responsibility be towards the group? Should we tell them that the most severe glacial cold ever experienced in Britain would drive their descendants from the area? Or suggest that cooked food might be a good idea? Coming back to the present our detailed field notes and video footage would be leapt on by media and academia alike, but would a snapshot of life half a million years ago be necessarily more informative than the fragmentary, but long-term, history provided by archaeology? All these are questions without easy and obvious answers.

Boxgrove takes us back to an early stage in European prehistory. For a while, it had a good claim to be the earliest site in Britain (there are now sites which might be twice that old). *The Times* described a tibia from the site as evidence of the 'first European'. Certainly it is still by far the best preserved and most skilfully excavated site from such an early period. Obviously no spoken or written records survive from this period (in the absence of our hypothetical time-travellers) and this is the definition of prehistory. It is the time before words. Prehistory is the sense we make of our physical evidence. What form should prehistory take, if we cannot write the sorts of detailed accounts of the past that are possible once we have

written or oral histories? Does the length and breadth of prehistoric evidence compensate for its human depth, our lack of access to everyday experience, thought, and feeling? These are central questions which I shall try to throw some light on in the course of what follows.

## Ending prehistory

We have started to look at what prehistory might be, but have not tackled the question of when it was. Boxgrove provides a window into the deep past of Britain. As chance would have it, prehistory ended when Julius Caesar landed on the south coast not that many miles away from Boxgrove. The authors of *1066 and All That* began their memorable history of Britain (composed of only those dates and events that most people remember) 'The first date in English history is 55 BC in which year Julius Caesar (the *memorable* Roman Emperor) landed, like all other successful invaders of these islands, at Thanet.' The fact that Caesar was not an emperor should not detract from the overall truth of the statement, that British history starts, although patchily, with Caesar's accounts of his invasion. This proto-historical period only gained more thorough historical coverage later in the Roman period and even then there are many areas of life unilluminated by written accounts. Although late in comparison to places like Mesopotamia which have histories some 3,000 years before Caesar, the passage from prehistory to history long predates that found in many parts of the world. In some places, like Papua New Guinea, prehistory has ended within the living memory of the oldest people.

What and when is prehistory?

Ongka was terrified. I shall let him use his own words (in translation) to describe the events. The fact that his words survive is crucial.

When the first planes of the white men came, I was down by a stream. There were several of us, old men and young boys, all working at shaping stone axes. I thought I heard one of the

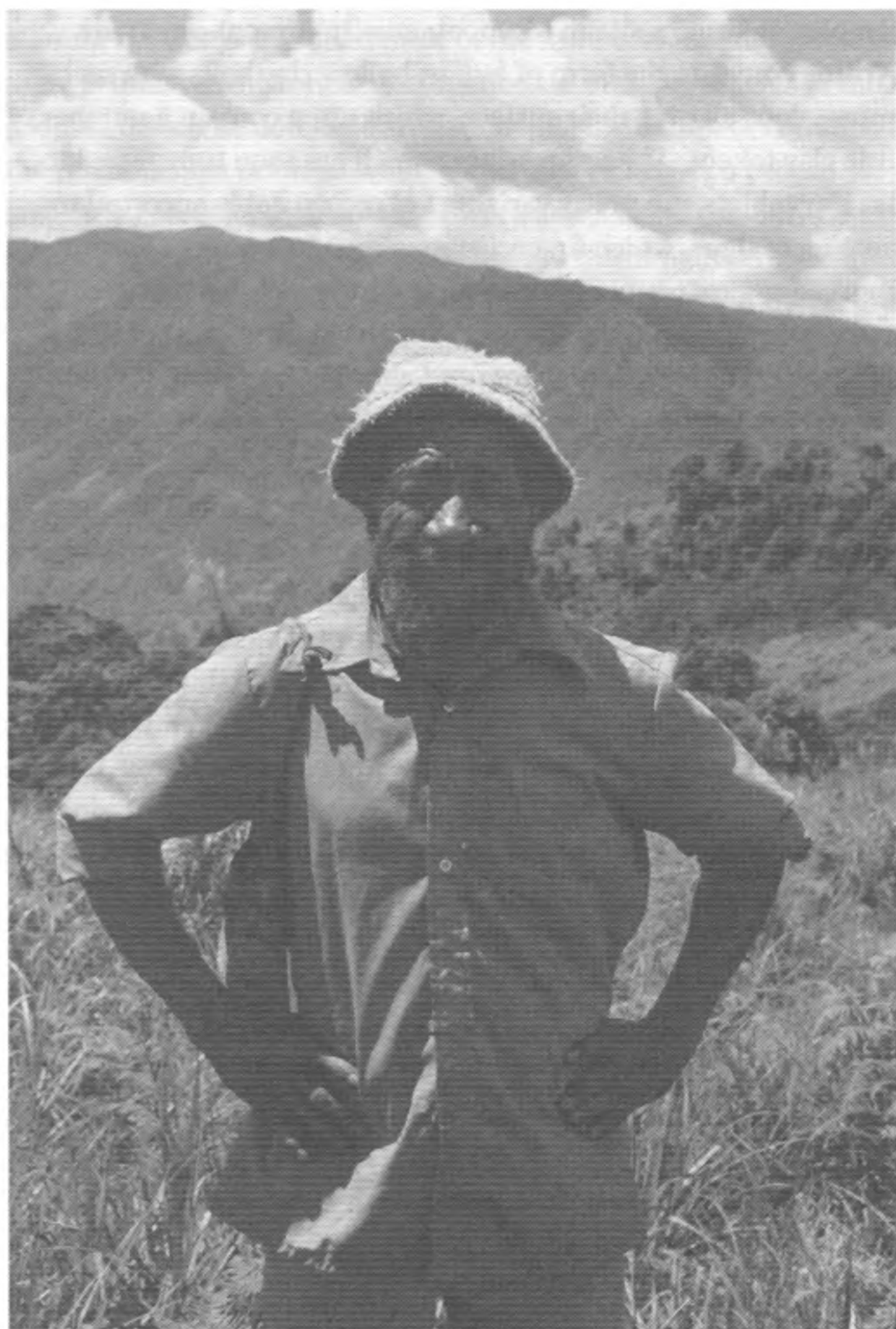
...marsupials that growl as they go along and have tails like lizards' tails. We chased the noise through the undergrowth; it kept moving in front of us and we couldn't catch it. Then we looked up and saw it was in the sky and we said 'It's a kind of witchcraft come to strike us and eat us up!' We argued about it: was it really witchcraft, or was it a big hornbill or an eagle? Some said it was a thunderclap gone mad and come down from the sky. Then it went away and we said that we would find out about it later. . . . Later we saw Jim Taylor himself, [Taylor was a government officer accompanying Mick and Dan Leahy, two gold prospectors, into the New Guinea Highlands] he came through and called out for supplies for his many carriers. People took sugar-cane, sweet potatoes, bananas and pigs to him. He would draw out of his long trouser pockets a big mottled cowrie shell of the kind we valued, and show it to them and they said 'Oh! He has a big cowrie and he's drawn it out of his own behind!' That was how we got to know the white man. (Ongka 1979: 5-6)

## Prehistory

Prehistory ended for Ongka and others of the Kawelka group at 10 a.m. on 8 March 1933 when the Leahy's expedition first flew over the New Guinea Highlands in a chartered Junkers biplane looking for promising areas for gold prospecting.

Two weeks later they walked in, the first white people to enter the densely populated New Guinea Highlands, bringing an end to prehistory in the process. The axe-making expedition that Ongka was on was probably the last ever carried out by the Kawelka, as stone was replaced by steel as a chopping tool and by the now common seashells as a form of brideprice. The end of prehistory was filmed by Mick Leahy, who took a 16 mm movie camera with him, making several hours of film, as well as taking over 5,000 35 mm still photographs with a Leica, and these have subsequently been incorporated into a film called *First Contact* by Anderson and Connolly, together with the testimony of local people who remember these events.

Most prehistories do not end quite as suddenly as that of the New



2. Ongka in discussion

Guinea Highlands. The groups of interior New Guinea were some of the last in the world to enter the ambit of historical documentation, a process which first started 5,000 years ago. The earliest writing that we know of comes from the Eanna Temple complex at Uruk, a site in Mesopotamia (in present-day Iraq). Writing comes in the form of *bullae*, hollow clay balls with seal impressions all over their surface, which often contain a number of little clay tokens. The impressions, which are soon transferred to flat clay tablets, are pretty variable but recognizably ancestral to cuneiform signs, which first arise roughly 3000 BC. The earliest impressions are pictographic in form – little pictures that are stylized versions of the things they represent. And most of the things they represent are plants and animals. The earliest writing derived from vision rather than sound. Syllabic scripts, which were phonetically based, only appeared gradually and were able to represent both abstract concepts, for which there could be no picture, and the sound of the language. It was only when Akkadian took over from Sumerian as the main spoken language after 2300 BC that syllabic text really came into its own. The first scripts were not used for poetry or forms of creative expression, but for accountancy: keeping a track of plants, animals, and craft products from the point of production through various forms of exchange. Here is one immediate attraction of prehistory – it is the period before accountants came to dominate the earth. Only later was epic poetry recorded in script, with *The Epic of Gilgamesh* having a claim to being the first written poem that survives. Elsewhere writing was developed at much the same time, but probably under Mesopotamian influence. The hieroglyphic scripts of Egypt are totally different in form to cuneiform, but there is evidence of influence from Mesopotamia and a lack of indications of any precursors to writing such as are found in the Mesopotamian *bullae*. The Elamite scripts of Iran took inspiration from cuneiform and both scripts probably influenced the early writing systems of the Indus (present-day Pakistan and India). China clearly had its own trajectory towards writing, but also using a pictographic script, as did groups in central America, such as the Aztecs and the Mayas.

The start of history is not a single event or process, with records starting gradually and for a variety of reasons.

Prehistory ends gradually for a number of reasons. The drive to account for things excluded most of life from consideration, so that there is little real historical documentation of many aspects of most people's lives. The domestic arrangements, the nature of childhood, the relationships between women and men or between people and their gods, the daily round of work and leisure, can only be reconstructed for later periods and used to throw light on the earlier ones. The lack of abstract concepts in the early pictographic scripts means that our desires to understand abstract philosophies or forms of love and hate go unrequited for the first millennium that scripts existed. In many areas periods where writing is found are interspersed with 'dark ages' without literacy. The pictographic script of the Minoans which developed from around 1600 BC onwards was first deciphered by Michael Ventris using code-breaking techniques developed in the Second World War. The script was pictographic, but could also be shown to be an early form of Greek, which was a surprise to many as it indicated long-term continuities between at least the late Bronze Age and the present. Like the Mesopotamians the Minoans at palaces like Knossos were obsessive list makers, recording the trivia of production and transactions in a manner that makes both fascinating and eye-glazing reading. We learn a lot about sheep rearing, textile production, and pots and pans, but almost nothing about the textures of people's lives.

Then about 1200 BC the line goes dead. The palaces collapse in both Crete and mainland Greece, taking with them a need for a script. We re-enter a period of prehistory.

From the eighth century BC writing reappears, but this time it is the Greek syllabic script (taken from the Phoenicians) which lasts, albeit in an evolving form, down to the present. Unlike the previous Linear B script of the accountants we now hear the voice of a poet.





There is much debate about the person and writings of the poet Homer (was he one person or a set of traditions personified in a single name; how far do his tales reflect the world-view of the previous Bronze Age society or views more contemporary with when they were written down?). What we can be sure of is that story of the Trojan War has stayed with us until the present, to be joined by the later philosophy of Socrates, Plato and Aristotle as part of the foundations of Western culture. Although ancient historical traditions have been reinvented and remade through the Roman world, the Renaissance and the Enlightenment and although much of the influence of Aristotle on Europe came through the Arabic world, there is a continuity of written tradition between eighth-century Greece and the present that is not found with earlier periods, whose scripts needed to be discovered anew and deciphered. Issues of continuity and discontinuity of written traditions make us realize that not all forms of writing are the same, so that not all historical periods produce histories of the same type. For much of written history, the ability to read and write has been restricted to the elite and gives us a record (partial at that) of their interests and views of the world. Of the mass of humanity we learn little or nothing.

There are also penumbras around history, sometimes known as proto-history. Such forms would include Julius Caesar's account of southern Britain during his abortive invasion of 55 and 54 BC. *Veni, vidi, vici* is a compelling rhetorical statement by a master of the art, but without much information content or historical accuracy. We cannot take the accounts of the (would-be) victors at face value. More intriguing is the account of a journey, probably to Britain via Gaul, by Pytheas the Greek in the third century BC, an account which does not survive today but can be painstakingly reconstructed from secondary sources. And what are we to make of the Incas who used a system of knotted strings tied to a circular string (the *quipu*), but lacked any written script? The use of the *quipu* disappeared soon after the Spanish invasion and we don't really know how it worked. The knots on the strings probably acted

as mnemonics for a system of knowledge mainly held in specialists' heads, with the positions of knots on various strings reminding the specialists of knowledge they had painfully committed to memory. Once the specialists had disappeared, due to the destructive effects of the Spanish invasion, the knots lost their meaning. The Incas are a rare, possibly unique, case of state organization that survived without a script and a method of accounting, putting them halfway between history and prehistory as these terms are generally defined.

If prehistory is such a hazy concept, why do we bother with it and what use does it serve? The word was first used in 1832, but only really came into common use after the publication of Sir John Lubbock's *Prehistoric Times* in 1865 (still in print in 1912, a true Victorian best-seller). Alternative terms, such as ante-history, never took off. The concept became really necessary because of an expansion of the imaginative universe during the 19th century and the opening up of larger expanses of time for biological and human history. At the beginning of that century most people who thought about it at all believed in a biblical chronology, taking the book of Genesis literally. Bishop Ussher at the end of the 18th century estimated that the earth was created in 4004 BC, which seems to us ludicrous not just in its brevity, but also its precision. Such an estimate might seem a mildly amusing by-product of an older intellectual history (although we are all aware that our own mistakes will occasion a wry smile a century from now) if it were not for the fact that belief in a short history for the earth is again growing. Creationist belief centres around the factual accuracy of the Bible as a guide to world history and the crucial role of God, as divine creator, in that history. The debate between archaeologists and creationists is seen as part of an ongoing argument between science and religion, with the creationists decrying an arid science that undermines sustaining forms of faith and belief and the archaeologists asserting the importance of concepts and results that are open to questioning, criticism, and re-evaluation. Prehistory represents a battle-ground for different world-views: the archaeologists envisaging some 6 million years back to the time of

Our earliest human ancestor, creationists denying the existence of any prehistory as the whole of our existence is covered from Genesis onwards.

Prehistory suffers from implicit links with illiteracy. To be civilized is to be literate, so that reading and writing are the basis of all education and much of our cultivation as cultured and sensitive human beings. People lacking the ability to read and write are cut off from many worlds of imagination, education, and experience. Not only are prehistoric periods those from which our evidence is deficient, but they are also periods when people's lives were deficient as they lacked the civilizing influences of written words. Such views are implicit in our attitudes to the past, rather than explicitly voiced prejudices, but they have their effects just the same. There are opposing views of course, held by people with different cultural values. For Aboriginal people in Australia, the concept of prehistory is suspect. The whole of human and pre-human history is contained in the notion of the Dreaming. The Dreaming was a period of time, infinitely far back in the past, when ancestors moved across the landscape creating the shape of that landscape and giving it cosmological significance. A stand of trees, a rock formation, or a river were all created by snakes, sharks, goannas, or other ancestral forms and given not just a shape, but a role in people's lives, so that some places were dangerous, some had beneficial powers and some ambiguous. People in the present have a duty to protect the landscape and to treat it in the right way and such duties are recorded and encoded in stories, dance, and forms of art. Initiation into society is through an education in these forms of knowledge, the most powerful of which is restricted to a few. Prior to the coming of whites in 1788 nothing was written down, but all significant history was recorded and transmitted in culturally appropriate forms. The concept of prehistory, telling of a forgotten time beyond the reach of written histories that needs to be discovered through archaeology, is puzzling and potentially offensive, making for difficult relationships between Aboriginal people and non-Aboriginal archaeologists. In such situations

prehistory is an arena of debate and knowledge about the past that is intimately involved with control of life in the present.

Prehistory is mute and silent. It is history with all the words taken out. To many this seems not to leave a lot and they yearn for some direct evidence of the thoughts, feelings, and experiences of people from the prehistoric past. Not only is it wasteful to hope for things that cannot exist, but, much more importantly, this misses the point of what prehistory can tell us. Words are only a part of human experience. Me the writer and you the reader of this book are pretty logocentric; we like words, their sounds and meanings, and especially their written form. All our schooling and much of our experience have put words at the centre of our lives. But there is more to life than that. Many of our physical skills, our abilities to sense and appreciate material things and other people, do not derive from words nor can what pleases, disturbs, or bores us about the world easily be put into words. It is our experience of the physical and social world outside words that links us with prehistory and it is the nature of this experience I want to explore.

Prehistory

## Prehistory puzzles 1

Before moving on, let us think about *your* prehistory. Prehistory is the aspect of life that lies beyond the reach of words. Most of prehistory is in the past, but all of our lives have elements which we find difficult to put into words, mainly because they are the bits of our lives we take for granted. Familiar objects and the skills to use them are basic aspects of everyone's existence. Familiarity can breed contempt, but also can give basic emotional and practical shape to everyday life. I once ran a class on material culture studies in a university in Melbourne, where I used to teach. As an ice-breaker and to get people to think about material things on a personal level I asked the class to fill an imaginary cubic metre of space with things that both told the story of their lives and which meant much to them. Two students' reactions stick in my mind. One said that he had already done this in reality. His house on the edge of Melbourne

had been threatened by the Ash Wednesday bushfires in 1983, so that he and his family had been told to evacuate their house taking only a carload of things for the four of them. They had to make an almost instantaneous choice and went for things that told the story of their individual lives and their history as a family – a violin, a painting kit, jewellery, favourite toys for the kids, and the family photo album, plus a change of clothes each. He said they all realized without giving it much thought that without certain objects their lives would never be the same again and these were the ones they took. Fortunately their house did not burn down, but their feeling about the house and the things in it had changed irrevocably. The second student talked not long after her father died and had been buried. She said that the most affecting part of the service was when each member of the immediate family placed an object in the grave which most reminded them of their father and their relationship with him. The grave was filled in and the objects were buried with him. She said that picking the objects had made them all think deeply about their father, their relationship, and their loss, and helped them grieve an unexpected death.

What happens if you perform the same thought experiment? What areas of life are crucial, derive mainly from an attachment to objects, and lie partly beyond the scope of words? With what would you fill your cubic metre of space or sum up a relationship to someone very close? We all have our prehistories, even in this best documented of all centuries, and they are vital to our emotional, intellectual, and social well-being.

# Chapter 2

## The problems of prehistory

The idea of prehistory arose gradually between the 16th and early 19th centuries, but grew large and influential through debates about evolution in the middle of the 19th century. The establishment of a long prehistory is one of the great achievements of that century, as important in its own way in changing peoples' views of the world as the voyages of discovery of the previous 300 years. The discovery of the Americas was a profound shock to Europeans, leading them to question where all the peoples of the Americas came from, as none were mentioned in the Bible, and what sorts of relationships created and spread various peoples around the world. The discovery of a long prehistory had the same impact as finding a new continent, with its own myriad and strange ways of life, except that some of the inhabitants of the continent of prehistory were definitely ancestral to those writing prehistory. For places like Britain where identity is and was an issue, ancestry was problematical – should Britons derive their ancestry from the Normans, the Anglo-Saxons, the Romans, or now the Celts and indeed possibly pre-Celtic peoples? If Britons are people of mixed ancestry, how does one evaluate the mix of language, genes, artefacts, and landscapes that derives from the past? The same questions arise for Nigerians, Brazilians, Americans, or Chinese.

National and personal identities were problematical, and also those of race and class as we shall see, but there were deeper issues of

identity that came to the surface through 19th-century debates which have never gone away. In a legendary meeting of the British Association for the Advancement of Science in the University Museum of Natural History in Oxford, Saturday 30 June 1860, the bishop of Oxford, 'Soapy Sam' Wilberforce, confronted Thomas Huxley, 'Darwin's Bulldog', in front of an audience of some 700 people. It was a meeting of high emotion where Lady Baxter fainted, the audience gasped, laughed, and applauded and no holds were barred (at least in the legendary accounts that are best remembered now). 'Soapy Sam' did ask Huxley whether he was descended from a monkey on his grandmother's or his grandfather's side, but the reply that it was better to be descended from a monkey than a bishop, came not from Huxley but from Hooker, another pro-Darwinite.

This half-remembered confrontation crystallized the spirit of the debate, which appeared to be about the remote past, but in fact concerned people's personal identity in the present. Darwin had long delayed the publication of *The Origin of Species*, which appeared in 1859, afraid of the controversy it would cause and the possible damage to his standing as a member of the establishment. A more complicated reception awaited his work than he anticipated, which was seized upon by different strands of thought and belief, as a perfect test of where people stood on issues of history and empiricism versus faith. Part of the origin myth of prehistory for us is that the acceptance of a long prehistory meant a rejection of a biblical chronology which put the origin of the world at 4004 BC, and was thus part of a victory of reason over superstition, science over religion. Here lies the continuing interest of the 1860 debate which looks like a cameo version of a broader clash of social values. However, the scientists often came from a particular set of religious backgrounds, such as Quakerism, which always placed emphasis on empirical investigation and personally derived truths, in contrast to more established religious forms amongst which the Bible was the crucial truth. All controversies in the 19th century were to some extent religious controversies, due to

the greater religiosity of the age. It was only in the 20th century and a more secular society that science confronted religion in a more simplistic fashion. Evolution and prehistory are now real shibboleths for extreme views on both sides, with the nature of children's education a crucial litmus test. Prehistorians are seen to be on the side of the apes, rather than the angels, and are generally proud of the fact.

The excavation of Brixham Cave in 1858 was a crucial step towards the scientific acceptance of high human antiquity. Classical Darwinian theory, centred around the idea of descent with modification, held that the modifications from generation to generation made offspring either better suited to their contemporary environmental conditions, less suited, or made no difference at all. Those better suited had an increased chance of surviving to produce their own offspring, passing on their beneficial characteristics; those less suited were more likely to die before having offspring: hence the survival of the fittest, a biological encoding of the competitive spirit of capitalism. For Darwin change proceeded through small modifying steps and needed long periods of time to work itself out, especially once one thought of all the changes needed to move from single-celled organisms to the full complexity of human beings. It was impossible to see how this might be fitted into the biblical chronology of only 6,000 years since the creation of the earth. Empirical support for longer timescales poured in from geologists and biologists. For the first half of the 19th century there had been debate about the 'antiquity of man', to use the then contemporary terminology, surrounding a number of sites which might produce firm evidence that human beings had existed in the company of extinct animals, such as mammoths and woolly rhino, not mentioned in the Bible. For Victorians, seeing was believing and the site of Brixham provided visual proof of human antiquity. On 29 July 1858, Pengelly, a founder member of the Torquay Natural History Society and organizer of the excavations of the fissure known as the Bone Cave at Brixham, found his first flint tool from beneath 3 inches of stalagmite and in association with the



# **BRIXHAM.**

**GREAT NATURAL CURIOSITY.**

**INTERESTING EXHIBITION ! !**

## **THE "Ossiferous Cavern"**

Recently discovered on Windmill Rea Common, will be exhibited for a short time only, by Mr. PHILP, who has just disposed of it to a well-known scientific gentleman.

Those who delight in contemplating the mysterious and wonderful operations of nature, will not find their time, or money mis-spent, in exploring this remarkable Cavern, and as the fossils are about to be removed, persons desirous of seeing them had better apply early.

Many gentlemen of acknowledged scientific reputation, have affirmed that the stalactitic formations are of the most unique and interesting character, presenting the most fantastic and beautiful forms of crystallization, representing every variety of animal and vegetable structure.

Here too, may be seen the relics of animals that once roamed over the Earth before the post-tertiary period, or human epoch.

**THE BONES AND TEETH, &c., OF**

**HYENAS, TIGERS, BEARS,  
LARGE FOSSIL HORNS**

of a Stag, all grouped and arranged by an eminent Geologist.

N.B. Strangers may obtain particulars of the locality, &c., of the Cavern, on application to Mr. BROWN, of the Bolton Hotel; or at the residence of the Proprietor, Spring Gardens.

**THE CHARGE FOR ADMISSION TO THE "CAVERN," SIXPENCE.**

*Children will be admitted for FOURPENCE.*

*Aded, Brixham, June 10th. 1858.*

**EDWARD FOX, PRINTER, &c., BRIXHAM.**

4. The initial announcement of finds from Brixham Cave, where later stone tools were found in association with extinct animals

bones of rhinos and hyenas. Visits were made by the gentlemen scholars of the various geological, archaeological, and anthropological societies, who were impressed by the care and precision of Pengelly's excavation and recording, but most struck by the association between undoubted human products and extinct animals coming from a different and earlier phase in the earth's history. Rapid reassessment occurred of other sites, not least those of the Somme gravels (where the later battle was fought), previously disparaged by the British as French hyperbole, where stone tools had also been found with rhino bones some metres below the surface.

Having visited Brixham and Abbéville in northern France, Sir Charles Lyell, Britain's most influential geologist, put aside his earlier scepticism about the 'age of man' and addressed the British Association of the Advancement of Science meeting in Aberdeen on 18 September 1859. For Lyell to change his mind was a sign that the British intellectual establishment was opening up to the possibility that prehistory was immensely long, placing recent ways of life in stark perspective. In his talk Lyell mentioned in passing the forthcoming publication of a book which, he felt, would have some influence on thinking about issues of timescale and the relationships between people and nature – this was *The Origin of Species*, to appear on 24 November 1859.

One outcome of Darwinian thought is modern genetics. The Human Genome Project, which seeks to sequence the whole of a single human genome for the first time, has concluded that we each have some 30,000 genes, about a third the number in previous estimates. In many ways the smallness of our genome is a conclusive demonstration of ideas stemming from Darwin, which emphasize that we are part of nature, as we share the majority of our genes with other species. A letter writer to the *Guardian* newspaper said that he no longer knows whether he is a man or a mouse, as there is surprisingly little genetic difference between the two. On the other hand, our genetic closeness to all other species underlines the fact

that we are different. Our shared genetic inheritance makes it pretty well impossible to argue for a genetic basis for culture. There are not enough genes only found in humans to find a basis for cultural complexity there. People are cultural, I would argue, not due to biology but because we have involved material things so deeply in our social relations (see Chapter 3). Some see a culture–nature divide, where human life is all about creating domesticated landscapes, plants, animals, and artefacts, the human imprint on which is so overwhelming that we have to assign these to culture and not nature. Nature is ‘red in tooth and claw’ and is the part of the world that has escaped human influence. Some of nature is not outside us, but within, giving us an instinctive basis for life, usually seen in terms of the selfishness of the individual (or their genes) locked in a struggle with all other organisms (human or not) in order to thrive. But not everyone in the world divides nature and culture.

All understandings of the world are both socially based and constructed through action in the world which teaches us about the properties of the world. All humans carry around preconceptions of the ways in which the world works, which are put at risk through action. It goes without saying that we all see the world in our own image, but we can be proved wrong. A stress on the individual as the unit of selection and as the basis for the struggle of each against each makes good sense to Westerners, who have had 200 years of social and cultural encouragement to see themselves as sovereign individuals. Not everyone sees the world in the same way.

For instance, the Mbuti Pygmies of the Ituri rainforest in Zaire refer to the forest as either ‘Mother’ or ‘Father’ and this is not just because it gives them food, warmth, clothing, and shelter. Just like a parent, the forest gives them affection. The Batek Negritos of Malaysia see themselves as having an intimate set of relationships with the plants, animals, and *hala*’ (the creator spirits who made both people and the forest world and exercise care over it). In understanding

such feelings about the world, Tim Ingold has argued, we should not see the primary relations as being social ones (parent-child) which are then projected onto the natural world (the forest), but to see that all these conceptions and relations are one and the same. Society does not exist before nature or vice versa, but both exist within a seamless network of relationships that unfold through action. Forests have intentions and emotions too, to which human beings have to pay attention, so that hunting and gathering in the forest is not just a matter of right technology or training, but of respect and an understanding for all the relationships people are enmeshed within. To create an evolutionary biology along these lines (if it were culturally necessary or possible) would not start from the selfish gene or the individual, as concepts such as selfishness or the individual would not come easily to the Mbuti, for instance.

If we are trying to understand hunter-gatherers in Europe 20,000 years ago can we assume that they had similar feelings and world-views to hunter-gatherers today? The answer to this question is obviously 'no'. We can't make such an assumption. Equally obviously we cannot assume that our approach to the world, our own cosmology, will be appropriate, although many start their analysis on this basis. A cosmology lays out expectations about how relationships will unfold, whether these are between people or with other elements of the world. A cosmology also specifies how relationships ought to work, whether through respect, antagonism, care, or avoidance. Cosmologies have both a physical and a metaphysical element, describing how the world works, how it should work in a moral sense and the responsibilities that entails. Our sciences, such as biology, have a cosmological basis, deriving from more generally held social and cultural values, and this is also true of other peoples' ways of life. Imaginative understanding is needed to appreciate the cosmologies of others and we need to beware of the fine line that separates our imagination from fantasy, a constant problem in understanding prehistory.

We need some mental tools to understand the lives of others, especially when we are working from artefacts, sites, and landscapes without the benefit of words. A key term is relationship. What we might take to be entities, such as people or objects, exist not in and through themselves, but through their relationships with others. We are all aware that in different situations we become slightly different people. With our parents we act differently than with our children and with one friend we may talk sport and politics and with another explore our psychological states or family relationships. The meeting of groups of friends can be uncomfortable as they each expect from you a particular sort of relationship and personality. If we take the principle that relationships alter people and write it larger, we can see that various social forms value and privilege certain sorts of relationships over others, and a single person may move through networks of relations changing as they go. A society is made up of a particular spectrum of relationships, not found elsewhere, and people move through parts of this spectrum as they move through life. We should not expect men always to exhibit attributes of males (locally defined), but to develop female characteristics under some circumstances, and women can explore maleness. Gender attributes are never entirely fixed or invariant and nor is any other aspect of people's identity. This includes the degree to which people exist as separable individuals or as parts of a group. As again we are aware, sometimes we stand out as individuals, when we have to make a presentation, are brought before a court, or have a party thrown in our honour. On such occasions our own personal actions are apparent and our responsibility for these might be under question. At other times, such as watching a good film or at the family exchange of Christmas presents, we exist primarily as part of a group, sharing emotions with others and having these emotions reinforced because they are shared.

As we have seen, relationships do not just exist between people but between people and things. Imagine the wearer of the Sunghir necklace made of 3,000 beads who lived 18,000 years ago (see

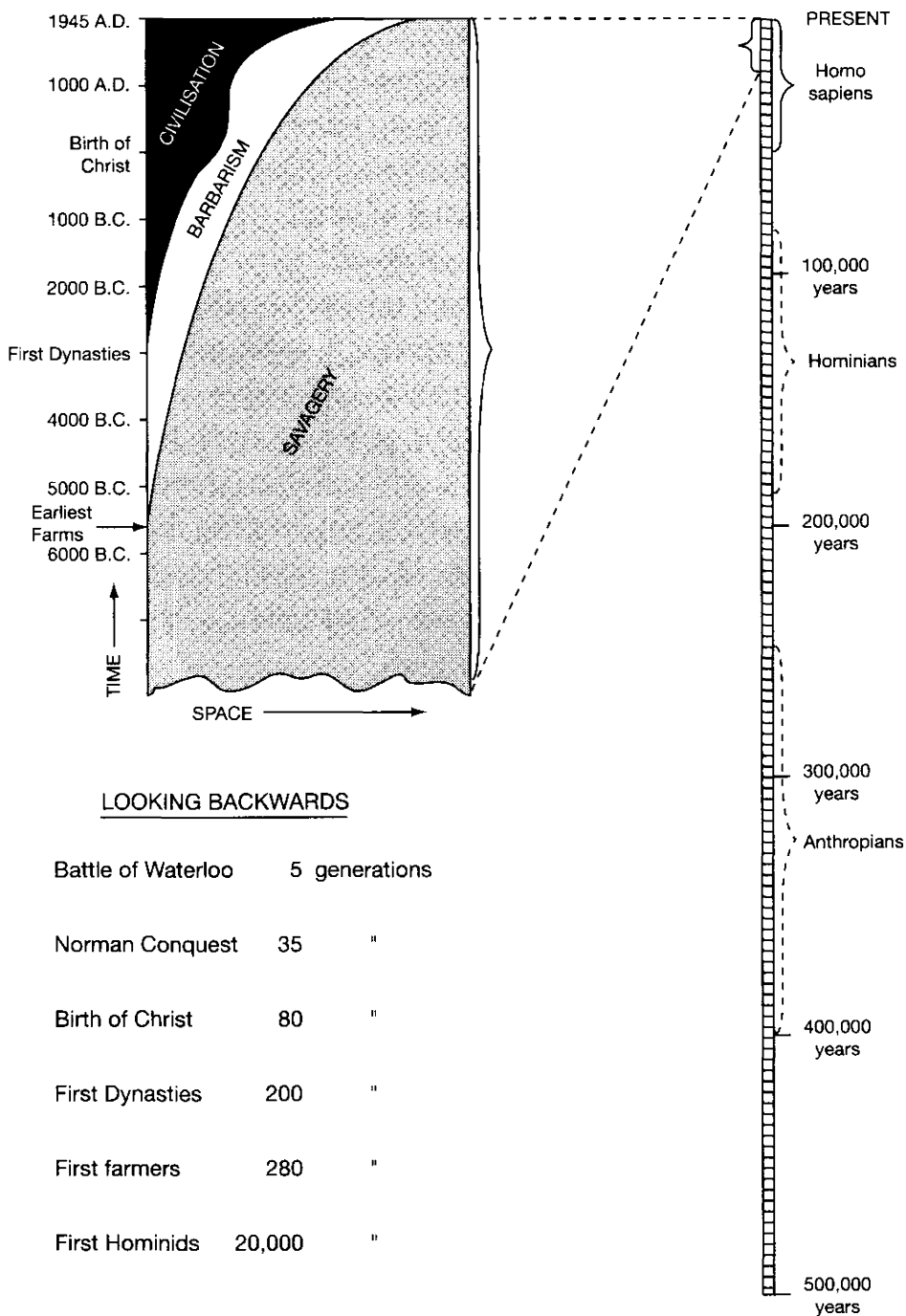
Chap. 3), standing on the snow in what is now northern Russia. She would have been clothed in furs, neatly sown and possibly decorated, she probably had eye goggles to cut the glare, snowshoes to walk around on, and possibly sleds and other contrivances. Stone, bone, and antler tools existed in abundance on a settlement where there were houses made of mammoth bone. Two children were buried within the settlement at Sunghir with ivory beads sown into their caps and clothing, as well as having figurines and ivory spears. In a marginal environment in the last Ice Age up by the Arctic Circle, people had created a rich world for themselves, where their social position and links to others were created in and through complicated forms of material culture. Let us think also of the Highlands of New Guinea 6,000 years before Ongka lived there, where tropical heat is only modified by altitude and which became the site of an independent invention of agriculture. High up in the central mountain cordillera people learnt to drain swamps in order to plant large root crops, such as taro, and tree crops like bananas. Those with access to swamp land that they had learnt to use productively were better able to engage in exchanges of axes, shells, and bird of paradise plumes, exchanges all ultimately underwritten by the production of food. People created and defined themselves socially through the objects they made and used, exploring new dimensions to humanity. It is the variety of human dimensions that is ultimately interesting to us; prehistory is when so many dimensions were explored and expanded.

Part of learning about the past is an unlearning of the present, questioning and perhaps jettisoning values that we hold dear. Understanding prehistory is both an empirical and a philosophical business. We need excavations and surveys to provide secure information about the past; equally we must question how we live, think, and feel in order to open our imaginations to other orders of life which make different sense of the same world.

To a great extent, prehistory has investigated the origins of people

like 'Us'. In its 19th-century origins prehistory was created mainly by the white, male middle classes who appeared secure in their identity and superiority. The heat generated by early debates over evolution and human antiquity show that the participants were anything but secure, in a period where religion confronted science, international imperial links reconfigured issues of class and the role of the nation state, and notions such as the 'primitive' were used to create as much distance as possible from the working classes and the colonial masses. Darwin is a good leitmotif for the times, his constant ill health a physical expression of his worry about the human implications of evolution and its reception by his peers. Prehistory was born as a series of steps and stages taking humanity from people like Them – unfortunate hunter-gatherers living at the mercy of a fickle environment, i.e. savages – to people like Us – those enjoying an urbane lifestyle made possible through the progressive application of the powers of reason which have given people control over the physical world through the invention of farming (barbarism), cities (civilization), and industrialism/imperialism.

Even for Europeans the triumphalist story of prehistory has always been counter-posed by a darker tale – Marx decrying the fact that the material wealth of capitalism had been bought at the expense of spiritual impoverishment; Weber mourning the loss of magic in a specialized, routinized, and bureaucratic world; Freud analysing civilization and its discontents; Woody Allen, most succinctly, saying that 'My one regret in life is that I am not somebody else'. Prehistory stretches narrative strands between the twin poles of then and now, and the tension holding those strands taut depends upon our conception of those twin poles. Prehistory as it still exists today was born in a revolutionary moment in the middle of the 19th century when there was rapid reassessment of past and present, so that tension was palpable. By the end of the 19th century the shock of our animal nature had been buried under a story of the emancipation from our original state through the application of reason, materialized as technology. By the end of the 20th century



## 5. Prehistory as a movement from savagery through barbarism to civilization



the reasonableness of civilization was harder to accept. The movement out of empire had made Western superiority seem a dubious basis from which to write history, and the exploration of elements of the human personality other than the faculty for reason was gathering pace. Tension has re-entered the writing of prehistory. Quite what the relationship between past and present is right now varies throughout the world depending on the intellectual and political climate, a variation that I shall explore in what follows.

## Prehistory puzzles 2

Archaeology has been described as the science of rubbish. Prehistory is the sense we make of that rubbish. In the early 1970s a group of archaeologists set up the so-called Tucson Garbage Project, under the leadership of Bill Rathje, working in the city of that name in southern Arizona. Their aim was to find out how what people threw away reflected the way that they lived and their patterns of consumption. Tucson then had some 360,000 inhabitants, over a quarter of whom were of Mexican descent. The city's 66 urban census districts were sampled to get a range of areas with different ethnic backgrounds, economic status, and age.

Garbage was analysed from 19 census districts by the Tucson Sanitation Division and over 300 student volunteers (having had suitable injections) sorted the rubbish into different categories of food and household waste. For three census districts, interviews were carried out to match people's accounts of their consumption with what went into the bin. There were considerable differences between 'front door' and 'back door' evidence. Some were unsurprising. Beer consumption was generally underestimated, although middle class households were more accurate than working class ones. Of the 33 households who said they never bought beer only 12 discarded no beer cans. One 'non-consuming' household threw away enough cans to make up three and a half cases. Part of the reason for the mismatch was that many of the poor households lived on government food stamps, which couldn't be used to buy

beer, and didn't want their beer-buying habits to come to official attention.

Poorer households consumed less economically than richer ones. Unable to buy detergent or cereal in large cheap packs because money was short, they bought what they could, when they could. Households with larger and more predictable incomes were able to make economies of scale in their purchases. There was a beef shortage in 1973 during which the amount of beef thrown away increased. The researchers felt that this was because people bought beef in large amounts when it was available and then, unable to eat it all, threw more than normal away. Rathje and his team estimated that during 1974 some 9,500 tons of once-edible food ended up in landfills, food worth \$9–\$11 million at 1974 prices. Rathje subsequently went on to do an archaeology of landfill sites, coring down through strata of rubbish to help complete his understanding of the waste disposal cycle.

Prehistory

How far do you think what goes into your bin reflects your age, income, and class? How accurately are you able to estimate what you consume and what you discard? Do any of us really know what happens to the rubbish we generate once it leaves our dustbins? What sorts of new political and personal policies are needed to deal with the mountains of rubbish we generate?

The Tucson Garbage Project helped illustrate further the gap between words and our relationships with things, some of the gaps predictable. We talk and think about consumption in one way, but the rubbish we generate provides a different story. In periods without written records, this rubbish is the whole story; where words are preserved they demonstrate the tension between conscious thought and speech, and action.

# Chapter 3

## Human skills and experiences

The changing haircuts, the extravagant lifestyle, the obsession with fashion might make it difficult for many to accept or appreciate the nature of Beckham's intelligence (do substitute the sportsperson of your choice, if Beckham or football are unfamiliar – similar things could probably be said of Michael Jordan or Venus Williams). But, like many difficult issues, this one turns on a problem of definition. I'm only concerned with Beckham's day job, what he is able to do on a football pitch. He can accomplish physical feats most other people cannot; not only does he run some 16 km in the course of a match, but he can kick a ball 60 metres to drop right into the path of a running team mate. He can then move into an area of the pitch where he might be able to receive the ball back; he can jink and turn, and bend the ball around the goal keeper. Consider what set of aptitudes are needed to be David Beckham. There are the remarkable, but essentially uninteresting, levels of fitness, suppleness, and strength. But there are also crucially a set of anticipations of the nature of the physical and social aspects of the game of football which are crucial both to the game and my argument. When on form Beckham knows what will happen to the ball when he kicks it with a particular velocity and part of his foot. He is able to compensate for a heavy, soggy pitch or a windy day, although he doesn't always get it right. Even more importantly he can anticipate what his team mates and his opponents are doing and will expect. When everything is going well, he can glance up

whilst running with the ball, take in the configuration of his own side and the opposition and play a ball that a highly experienced opposing team don't expect, but that someone on his team will. The fast-moving game of football blends a series of social and material skills seamlessly, all of which can be enacted on the instant, without the benefit of reflection. Training, of course, is vital. Many hours each day are spent kicking, running, and kicking again, to build up what is known as muscular memory: the muscles' ability to act in the proper sequence and with the right degree of delicacy and strength. Even a week or two off will make a player rusty. Tactics are also discussed. The strengths and weaknesses of the opposition, what happened last time and what can be learnt from the videos of previous games. But tactics are a minor part of the preparation, perhaps as important to give the team confidence that they are prepared and have a plan. It is the instantaneous action on the pitch, the fumbles, the brilliance, the surprises that turn the match.

#### Prehistory

Consider now the Boxgrove hominids, spears in hands, stalking the herd of horses (here we are moving rapidly over the line defining certain knowledge). They have a similar balance of the material and the social to get right if they are to hunt successfully. Crouched in the scrub around the open ground where the herd grazes they cannot each see all the other members of their group or all of the horses. They have to anticipate what others of their group and what the horses might do and this anticipation may have to be weighed in an instant. Once the group breaks cover to isolate a horse, they are running across broken ground, spears ready to be thrown, and they will not have long – this is a big, dangerous, fast horse. Individual prowess will help, but it is really essential that they all act together, knowing what the others are likely to do and adjusting their actions accordingly. Group action is the bedrock on which success is built. Like David Beckham—and many other sportsmen—their skills and intelligence are shown to best advantage when they are operating as part of a group.

These are all areas of life beyond words – the heft of a spear, the

allowing for wind and the swerving run of the horse – these things can be taught to some degree through verbal instructions, but can only be *learnt* through carrying them out. We can instruct children how to ride a bicycle, but they can only learn it for themselves, building up the right muscular memory, forms of balance, and understanding how hard you need to pedal up the big hill, not to mention the actions of drivers, pedestrians, and other cyclists. Much of our life is physical not verbal and involves a bodily understanding of the physical properties of objects and the social actions of others (these might be plants and animals as well as people). We can talk about riding a bicycle but never do full justice to the actual experience. Such skills are not something we know, but something that we are.

A Western view of intelligence emphasizes abstract thought. If Beckham were able to reduce the game of football to a series of equations describing the flight and velocity of the ball under different conditions, few would doubt his intelligence, although not many would pay to see him in action. The fact that he can actually make the ball fly in many different ways without the benefit of prior calculation does not fit within our definitions. But I would say that to know how the world works and how people operate within it forms the basis of our daily skills and intelligence and without these skills we would be something less than human.

As human beings we can do things and we can also think, talk, and write about what we have done, or even what we should have done, but didn't. Conventional views of intelligence emphasize the words in which we shape and express our thoughts as crucial. I am not trying to deny the importance of conscious thought or words, replacing this importance with action. Rather, the real mystery of human life lies in the intersection of habitual, but skilled action and conscious thought. Climbing onto my bike to ride to work in the morning, I'm rarely conscious of the bike itself, but am thinking about what has just happened at home, what is about to happen at

work, and what I hope to do that day (or hope not to do). Only if the chain comes off the bike do I stop and pay attention to it, irritated at the oil on my hands and interruption to the flow of my thoughts. If I had to think about riding the bike, I could not give attention to the mass of other things that I consider to be really important. And my day, like everyone else's day, is made up of actions that require little conscious thought, along with a stream of actions that do, our attention flickering between the taken-for-granted world ('Why's that bloody printer so slow?') and what we need to give real conscious thought to ('How am I going to convince Jones that his thesis won't pass unless he puts in a lot more work?'). It is only when the taken-for-granted world poses a real problem (printer breaks at vital moment) or, more rarely, provides us with new and unexpected opportunities through working better than we had expected (Jones agrees immediately and goes off to the library, leaving me with a bonus three-quarters of an hour) that we need to give conscious thought to what we are doing.

Prehistory lacks words and seems impoverished as a result. Much of history lacks an understanding of habitual skilled action because the right sort of evidence has not been recorded, but people are less aware of this lack. To produce a handaxe you need thought about the shape of the nodule, the order in which you need to remove flakes for the handaxe shape to develop, and to modify your actions as the axe develops. The skill needed to strike the correct shape and size of flake is directly accessible from an analysis of the flakes by the archaeologist (providing they have the right skills). To reproduce the pattern of thought behind the handaxe is more difficult, involving more supposition, but is still possible.

At one time the boundary between humans and animals was thought to be formed by tool use. 'Man the toolmaker' had a series of technical skills that chimpanzees, gorillas, or monkeys lacked and this, it was thought, formed the basis of human evolution. From the 1960s Jane Goodall showed that chimps in Tanzania made tools from small twigs or grass to dip into termite mounds and fish out

insects to eat. Chimps of the Ivory Coast and Liberia in West Africa spend over two hours a day cracking nuts open, using stones or branches to hit the nuts wedged into the roots of trees. Nut cracking is not easy and only adults can do it. The young are taught by their mothers how to make and use tools, but it takes some time to learn the skills. Good stone hammers are hidden near nut trees and chimps can remember a number of locations where hammers are hidden. Even more interestingly, not all chimp troupes in the Ivory Coast and Liberia crack nuts, even when the nut trees and suitable stone for hammers are found near each other. At some point in the history of a group an individual developed skills of nut cracking, passing it on to its young, but this did not happen in all groups. Different groups had their own histories and cultures. Other cultural differences between chimps have been observed with variations in the types of tools utilized for the same purpose in different areas. If chimps have technology in the wild, then the distinction with people breaks down. However, there is one really significant difference, I would argue: chimps never use material culture as the basis for their social relations; humans rarely create social relations without the use of material culture.

In his classic essay *The Gift* the French anthropologist Marcel Mauss called gift-giving in non-capitalist societies a 'total social fact', meaning that all human life could be traced to and from the obligations of give and take surrounding gifts. Mauss saw three obligations deriving from gifts – the obligation to give, the obligation to receive, and the obligation to repay. Certain situations oblige gifts (initiation rites, marriages, or deaths, as well as exchange partnerships set up for formalized exchanges). If I give you a gift, you cannot refuse it without seriously insulting me, and once you have taken it, repayment is required. Fine social judgement is needed as to when to repay (too soon looks like a refusal of the relationship, too late looks like you have forgotten or do not care), what to repay (the correct quality and amount of things must be finely judged), and with what degree of ceremony. Ongka, whom we met in the first chapter, was part of the

ceremonial exchange systems of the New Guinea Highlands where pigs, shells, and in more recent years, beer, money, and Toyota Landcruisers, are given in great public ceremonies where the local Big Men proclaim their social power through practised rhetoric and their sense of theatre, as well as displaying the wealth they can afford to give away (a fine film *Ongka's Big Moka* was made of one such ceremonial transaction, part of a system of exchanges known locally as Moka). Sometimes identical exchanges are practised, such as axes for axes, and these forms of reciprocity show that it is the relationship that is important rather than the utility of the items being exchanged. Indeed, gift-giving has been termed a series of systems for creating social relations and is thus not straightforwardly economic in the sense that we would understand the term: people are exchanging to maintain contacts with others and (above all) to manipulate relationships of power, not to obtain things they need to live. Exchanges in many societies operate across a spectrum, from food sharing within the family, to regular, but socially unimportant, exchanges of food and other necessities within the group, to large ceremonial exchanges (or thefts) between groups. We have added market relations based around profit to such exchanges, but the exchange and accumulation of materials is still crucial to many social interactions. All social relations are at once material relations. For tool-using animals this is not true, with grooming, sex, and violence being the basis for most sociability. Food is shared, but little else is exchanged.

The Boxgrove hominids half a million years ago had technology of a sophisticated kind (way beyond anything that can be produced by chimps), but how far did they use this as the basis for their social life? We should not expect their sociability to look like our own, nor will it look like that of a chimp, leaving us to puzzle out what social life might have been like on the margins of southern Britain so long ago. One powerful recent theory outlining the basis of primate intelligence sees social life as crucial. Aiello and Dunbar have found a relationship between brain size and group size, so that the larger and more complex the group, the bigger the size of the brain (or,



more accurately, the bigger the brain as a proportion of bodily size). This empirical relationship between brain and group size is thought to exist because the most complex area of a primate's life, and that which needs most thought, is the set of social relations in which they engage, which are much more complicated than dealing with the practical exigencies of the material world. Applying these ideas to human evolution we can see that the size of the brain has increased much more than we would expect simply on the basis of increased size of the body and in the last million years or so brain size has grown hugely, as has the complexity of its architecture, which is also very important. Aiello and Dunbar put this increase down to language. I would say that this is only part of the story and that language and material culture have both combined to give a complexity to hominid physical and mental skills that are unprecedented. Language is part of the change, but is not the only, or even the crucial, element. Tool use, as far as we know, started some 2.5 million years ago. The origins of language are still hotly debated, but are much more recent.

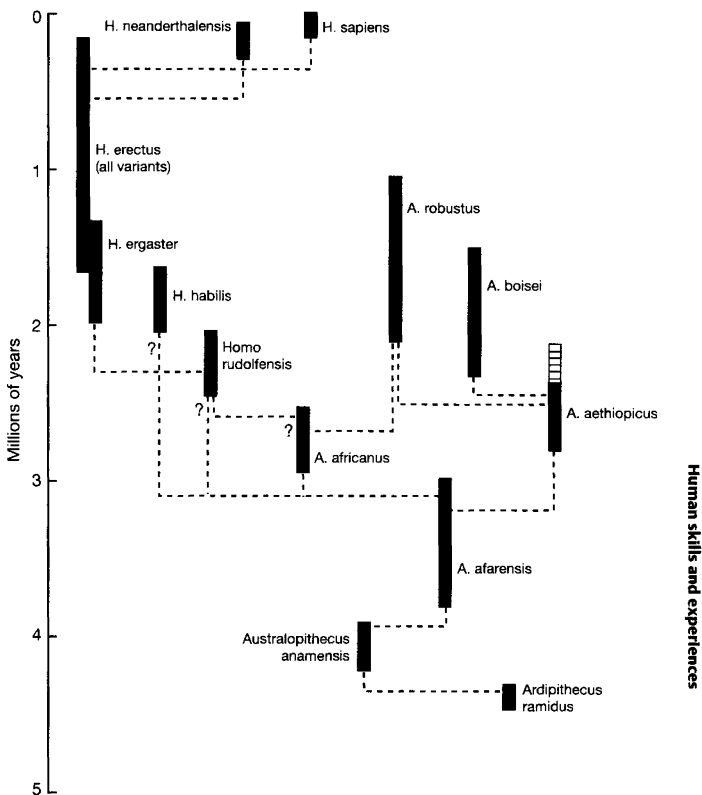
Prehistory is the history of social life and the sets of social and physical abilities that underpin our sociability, as indicated by material culture. To socialize we need certain skills and intelligence. Most other species that we would consider intelligent have well-developed patterns of sociability (primates, dolphins, and whales), but only humans develop their social life through two inextricable avenues at once, manipulating the physical world and the social world. To do this we have also combined a series of physical skills and mental abilities that are unique. Our lives have dual dimensions of the habitual and the thought, the things that we can do and our verbal abilities to think and talk. These are not opposed poles of thought and habit, but rather both make up our stream of consciousness in complex ways. We can think about how we ride a bicycle and come up with new and better ways to ride, but we can also ride and think about life, the universe, and everything, only being intermittently aware of cars, traffic lights, and pedestrians. We would love to know whether the skilled Boxgrove knapper

chatted as she turned the flint nodule or worried silently about group relations, or the properties of different woods for making spears, or whether she had to give all her attention to the nodule itself, so that the rest of the world vanished in the act of knapping. Were handaxes or spears ever given as gifts? Were special cuts of meat given to particular people as they are in many modern societies? Did these hominids have words to worry with or to exchange? If none of these existed, when did human social life start, with its blend of thoughts and habits?

## Becoming human

What does it mean to be human? I have just given one important element of the answer – we are the only animals to create our social life through things. Modern human beings share certain abilities. All live socially and their lives are shaped by the necessities of social obligations: they have to receive, to give, and to repay if they wish to remain members of society, although these obligations are given different cultural expressions. All use material culture to help create their social lives, not just through forms of exchange, but food, clothing, housing, and forms of wealth all create social personae of different kinds. All have non-verbal forms of expression through music and dance. All attempt to alter their consciousness and emotional states through drugs, trance, and dance. All human beings create and use language. These universals unite us all and make cross-cultural communication possible, despite the huge differences of cultural life around the planet. We presume, but don't really know, that such abilities have existed for the past 40,000 years. The longer history of what makes us human, going back to Boxgrove and way beyond, is increasingly murky, as are the exact trajectories of human life and difference on various parts of the planet.

So when did we become fully human? You will not be surprised to find that different answers are given to such a large question. The use of our bodies, the creation and manipulation of things and our



## 6. A family tree of hominid evolution over the last 5 million years

abilities with words are all vital to our sense of humanity and I shall look at each in turn.

The development of anatomically modern human bodies is becoming better known. Most people think that anatomically modern humans, *Homo sapiens sapiens*, first arose in Africa between 120,000 and 150,000 years ago, but even here there is controversy. The recent African origin model (recent in evolutionary terms that is!) holds that everyone in the world today

descends from a common ancestral group in Africa and spread out from that continent a little less than 100,000 years ago into the Middle East and thence into Europe, Asia, and beyond. Modern humans encountered previous groups of humans, the best known of which are the Neanderthals (*Homo sapiens neanderthalensis*), a cold-adapted species found throughout Eurasia, and who probably descended from species like *Homo heidelbergensis*, the Boxgrove hominids. After a period of considerable overlap, especially in areas like the Middle East, the Neanderthals died out (whether they were wiped out by our ancestors or could not survive in the same landscape as them is unknown, but the subject of much speculation in TV programmes and novels), leaving us as the only hominid species. The competing hypothesis, known as the multi-regional model, holds that modern humans derive ultimately from populations of *Homo erectus* which moved out of Africa from about 1.8 million years ago onwards into Europe (probably), Asia, and south-east Asia, down to places like present-day Java. Supposed similarities in skull type, such as robust cheek bones, between *Homo erectus* fossils and modern-day Australian Aboriginal people lead to the conclusion of local evolution with only limited input from later incoming fully modern populations.

These two models, the recent African origin and the multi-regional hypothesis, like anything to do with human origins and diversity, each encourage different trains of thought about human unity, the nature of racial difference, and regional histories. The multi-regional hypothesis emphasizes human difference, raising the possibility that racial types, like those found in Europe and Asia, have long histories to them, making people and their histories separate and distinct. There are even dangers that by linking Aboriginal people to *Homo erectus*, an earlier human ancestor, they will be seen as 'primitive' in comparison to others, a view rife amongst 19th-century Europeans, but critiqued today (see Chapter 4). There is a considerable range of evidence, mainly fossil and genetic evidence, against the multi-regional hypothesis, although its advocates are still stubborn in its defence. If we all derive from

African populations we would expect Africans to be more diverse genetically than the rest of us, which appears true, and for modern human genetic variability outside Africa to represent a subset of African genetic lineages. Not only does it appear that we are descended from a common ancestor from Africa, but that all human genes outside Africa probably derive from lineages found in present-day Somalia and Ethiopia, exactly where we would expect humans migrating out of the continent to be found. Taken as a whole, human genetic variability is very low, much less than that found within chimps or gorillas. The differences of skin colour, hair, and face shape, which some people make so much of, are controlled by very few genes and tend to mask a much deeper human unity. Equally important as evidence against the multi-regional hypothesis is the fact that the recovery of ancient DNA from three different Neanderthal skeletons in Europe and the Caucasus indicates no genetic link between ourselves and Neanderthals, making it very unlikely that they are the ancestors of present-day Europeans, all of whom derive from the African migrants, as must be true for the rest of the globe. Last, but by no means least, the earliest fossils of fully modern humans are found in Africa, only turning up later elsewhere and this may also be true of some types of stone tools associated with our own direct ancestors.

For most prehistorians, a recent African origin for fully modern humans is the only means to make sense of the evidence we have. A more difficult, partly philosophical, question is when did we become behaviourally human? I assume that if it were possible to clone a fully modern human from 100,000 years ago, put them in modern dress, suitably washed and coiffured, and sit them on a bus no one would pick them out as physically different. But they might well behave oddly. Even our earliest fully modern ancestor would have been much the same height, weight, and brain size as the rest of us, their arms and legs worked in the same way, as did their eyes, ears, and brain. But possessing the same physical and mental abilities as ourselves does not mean that they would have learnt to use them in the same way. And here we return to a crucial element

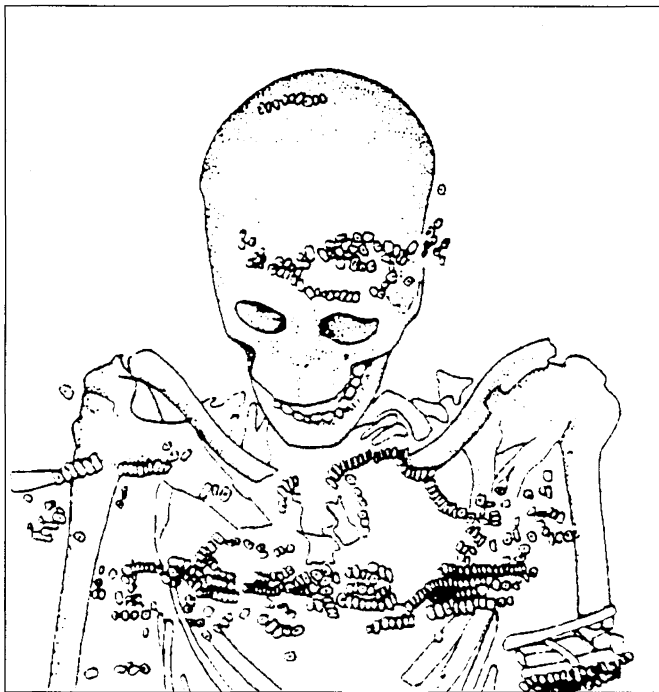
of my argument. All fully modern humans, of whatever time and place, have the same capacity for culture as ourselves, but may not have learnt or needed to exercise that capacity. Being fully human is not just about the capability of the body, but about the links between the body and the material world which have developed the capabilities of the body in lots of different ways. In the present all humans have close links with other plant and animal species, as well as with lots of material things, and these relationships have developed over many millennia. We could take our cloned ancestor off the bus and teach them to ride a bicycle, but this would involve them in learning physical and social skills, necessary for them to stay up and to anticipate what drivers and pedestrians were going to do, which they did not originally have and thus extending themselves in new ways. Human history is about the extension of the inherent capacities of the body through actual use, and because various cultures have different needs and values human bodies are given different skills and develop various capabilities. I remember a chastening experience in Papua New Guinea trying to learn to windsurf together with a local guy who had sailed in canoes all his life, who had a sense of balance, and an understanding of manoeuvring a sail that I entirely lacked. Whereas he stepped onto the windsurfer and made immediate, satisfying progress across the bay, I spent all my time pulling the sail out of the water, falling straight back in, and complaining that the wind was too strong for a beginner. The gap in our abilities greatly enhanced his enjoyment of the experience.

A crucial lesson for the prehistorian to learn is to avoid anachronism: not to assume that the world of the past is too like that of the present, that just because fully modern humans could potentially do all the things that we can that they actually did so. It thus becomes an empirical matter to decide when *Homo sapiens sapiens* started to use their capabilities in a manner we would recognize as fully modern human in a social and cultural sense. The general answer given to this is between 60,000 and 20,000 years ago, with the transition between the Middle and the Upper

Palaeolithic. This, as Clive Gamble has written, involved ‘the Other becoming Us’. Gamble also feels that the main change is a growing freedom from the immediacies of life, so that time and space become socially extended. Boxgrove hominids made beautiful handaxes, demonstrating considerable skill in producing artefacts of great utility and considerable aesthetic appeal (to us and possibly to them). These handaxes were made from material obtained locally and were often dropped very close to where they had been used. Making stone tools in the Upper Palaeolithic (40,000–10,000 BC) came to involve getting stone from considerable distances, up to several hundred kilometres, and longer chains of action to make things, as well as people keeping, using, and exchanging things for longer. Social interaction and the use of material culture to build social links were not just about the here and now in the Upper Palaeolithic, but artefacts came to take on some of the values attached to places and significant others. A convincing definition of a symbol is ‘something which stands for something else’ – the colour red for blood or the word ‘cat’ for the animal. Ivory and bone are carved into the shapes of people and animals and so-called Venus figurines are made from clay and stone. The Sunghir necklace, found on a site in northern Russia at the height of the last glacial (around 18,000 years ago) was made from 3,000 individual beads and must have enhanced or changed the social standing of the wearer in some manner (Figure 5).

In the Upper Palaeolithic artefacts take on significances beyond the here and now, extending people’s chains of social connection over space and across time. Material culture and social relations are intimately linked, so that one could not exist in the same form without the other. Places and people were probably imbued with meanings and emotional responses as never before.

Meaning and symbolism do not just adhere to things, but are also bound up with language, the last major element of modern humanity. There is considerable controversy as to when human language started, whether with the Neanderthals (or even earlier)



5. The Sungir burial with necklace

or with the fully moderns. Attempts to teach chimpanzees to speak in the 1960s foundered on the fact that chimps lack the right architecture of the mouth and throat to create the range of sounds that we can. They were thus unable to speak at all well. Once the researchers switched to sign language, however, things changed, so that both chimps and gorillas were able to demonstrate sophisticated concepts about themselves, others, the material world, the past, and the future through signing. Much discussion of Neanderthal language has concerned whether they could vocalize in the same manner as ourselves, a discussion held back by the lack of much direct evidence on throat length, tongue, or palate. Even if they could not speak, Neanderthals could probably communicate



through a range of actions and sounds. But the question really turns not only physical abilities, but on social needs. The longer, deeper chains of action involving extended and deep relations between people and things over time and space seem to be lacking for the Middle Palaeolithic. Neanderthal societies, for whatever reason, restrained the need to develop sophisticated forms of linguistic communication. Neanderthals may not have felt the need to engage in discussions of the type of 'Remember that mammoth we killed five years ago, I'm still using one of its bones to knap flint with', whereas a fully modern human might have said 'I treasure this bow, because it was made for me by my mother using the sinews of a mammoth she helped kill five years ago'. Of course we will never know the emotional attachments of either species but suspect a greater range and depth of attachments to people and things from the Upper Palaeolithic than for any previous period and a greater ability to express these attachments verbally. Deep attachments to artefacts and to people derived both from the things themselves and their significances, but also from words spoken about people and things. This sets up a tension between the habitual, taken-for-granted areas of life, which we feel but cannot speak, and words which directly, if partially, express what people feel. It is this tension between words and action that is crucial to our lives and may not have existed for any other species.

Full humanity arose through a special combination of bodily abilities, the world of things and the dimension of language, all of which combined in modern form for the first time around 40,000 years ago.

David Beckham is certainly no word-smith, but he does display vital elements of human intelligence in abundance, combining the physical and the social on the football pitch in ways that few others can manage. As Sarah Bernhardt said: 'If I could talk it, I wouldn't need to dance.' Dance would not see itself as an art form which is poorer than theatre, but something quite different. Football is a form of theatre created through actions, which can only

inadequately be described by the commentator. Prehistory concerns performances, mundane and spectacular, and the uses of the human body in creating worlds that make sense to us, which we belatedly try to capture in words. The variety of those worlds, past and present, is one of the things that draws us to study human society and culture, so that the nature of variety and difference lies at the heart of the puzzles of prehistory.

## Chapter 4

# Continental prehistories

In this chapter I shall explore the possibility that each continent has its own form of prehistory. There is evidence, as I shall outline, that the populations of each continent go back 15,000 years, without massive additions in later periods. This continuity of people may form the basis for a continuity of culture and history, even in fairly ephemeral areas of life like mythology. If this argument for long-term continuity holds water (and it is contentious), it means that what has generally been seen as the big change in human prehistory, the invention of farming, does not herald great population increases or movements, nor a rapid and fundamental alteration in all areas of people's lives. In this chapter I shall look first at the genetic evidence for population continuity, deriving from the processes of global colonization and the influence of the last glaciation, then critically review the evidence for large migrations of people due to population increases after farming developed and then consider new ways of thinking about the co-dependencies between people, plants and animals which have varying manifestations on each continent. Putting forward a novel interpretation like this is risky and many other prehistorians will disagree with it, not least due to interpretations of the evidence. However, to emphasize differences between continents also has implications for human unity and diversity.

Archaeologists and anthropologists have taken two basic routes to

understanding human variety and unity. The first derives from the social evolutionary approaches of the mid-19th century where our similarity as a species was stressed and effort was directed towards understanding how humanity as a whole progressed through stages like hunting and gathering, farming, the development of states, and, most importantly, civilization. Social Darwinists, so-called, ranging from Herbert Spencer to Pitt Rivers and E. B. Tylor, struck by the force of Darwin's views, were attracted by the possibility of a single theoretical basis for approaches to the humanities, which also chimed with their desire to found archaeology and ethnology as sciences. The 'onwards and upwards' view of prehistory was predicated on a belief in progress, implicit in which was the idea that not everyone progressed at the same rate or to the same degree. Only those of European descent made it through the full gamut of historical stages to become rational, civilized, democratic, and energetic, leaving less progressive others in their wake, still remnants of earlier stages of world history, in the form of Australian aboriginal people, African peasant farmers, or the more 'static' civilizations of various parts of Asia.

It is not hard to see why progressive and unitary views of human life were unattractive to many, including some of European descent.

At the beginning of the 20th century, an alternative set of views was promulgated by Boas in America, but working from the intellectual framework of a German tradition which emphasized the local specificity and integrity of human cultures. Culture was later to be defined by the archaeologist Gordon Childe as a constantly recurring set of traits, such as artefacts, houses, burials, food, and so on, behind which lay similarities harder to discern archaeologically such as of kinship, language, and customs. These cultural historical views saw the world as a mosaic of cultural forms, each with their habits of life, ways of seeing the world, and histories. Each culture could only be understood in its own terms and it was variety that was characteristic of human life, not unity. Bruce Trigger's view of



### 8. Triumphalist evolution

the history of archaeological thought is one of alternation between approaches stressing unity, such as the early evolutionary approaches of the later 19th century, which made a resurgence between the 1950s and 1970s, and those stressing difference. Boas's and Childe's culture-historical views, emphasizing different local historical trajectories, made something of a come-back in the 1980s as postmodernist thought raised doubts about the scientific ambitions of an evolutionary archaeology, and made a broader

critique of a possible Western objective viewpoint, stressing the need to understand other forms of life in their own terms.

Today our questions have shifted away from why some people did not ascend to the top rung of the ladder of progress and towards how people created worlds for themselves that made internal sense. Indeed, many now question whether these local worlds can be encompassed by a single scheme, especially one developed to make sense of the European past. Also, an emphasis on technological change has been replaced (for some at least) by an enquiry into how people construct worlds for themselves through putting together varying skills and techniques, developing particular sets of social, physical, and intellectual skills in the process. Human beings have a huge range of potentials; cultural forms and histories involve developing some of these skills but neglecting others. Australian Aboriginal people were described as the virtuosos of the human mind by the anthropologist Lévi-Strauss because of the huge amount of genealogical and cosmological knowledge they developed and maintained, putting much less emphasis on the creation and use of material things. A set of cultural forms in which knowledge is power challenges the prehistoric archaeologist whose main evidence is artefacts. But it does alert us to the idea that cultures cannot be measured along a single axis, as more or less complex, still less better or worse, but rather as being different. Cross-cultural comparison is necessary, but to bring out contrasts with others, not to measure everyone with the same yardstick.

The tension between difference and unity has always been crucial to writing prehistory. I am attempting here a tricky act of balance in saying that there are things that all human beings share, but that there are differences which divide us. To help understand what I am trying to do, let us look briefly at language. All human groups have languages. Children in human society learn language spontaneously: we can encourage them in this learning, but it is not a process that adults need to initiate; it happens anyway. The so-called Sapir-Whorf hypothesis (which is controversial within

linguistics) holds that language is not just the means through which we express our thoughts and feelings about the world, but the means through which we develop those thoughts and feelings. If languages, as forms of conceptual apparatus, differ around the globe, people will not just talk and write about the world in their own way, they will actually inhabit their own worlds of thought, feeling, and belief. So, we could put two different language groups in the same environment, English speakers and Aboriginal Australians for instance, and that environment would not be the same at all. This is an experiment that colonial history has played out, at enormous cost to Aboriginal people. We know that the two groups do attend to different aspects of the world: whites are interested in metal resources, the possibilities for grazing sheep and growing wheat, not to mention the qualities of surf and sea; Aboriginal people live in a totemic landscape, created by ancestral figures in the Dreamtime, who shaped the rocks, rivers, deserts, plants, and animals, which need to be cared for as much as exploited. As I have stressed previously, people do not just live linguistically, but through patterns of skilled action in the world, and they do not perceive the world passively but rather through their patterns of action which shape the world, as it shapes them. Human unity resides in our ability to build relations with one another through the medium of material things and in our ability to create language. Everywhere also there is some tension between language and action, which lies at the heart of what it means to be human. Languages, human beings, and cultural forms all have their own more local histories, which unfold at a number of levels, from the continental to the truly local, and it is the role of the continents in creating human difference out of unity that I want to explore here.

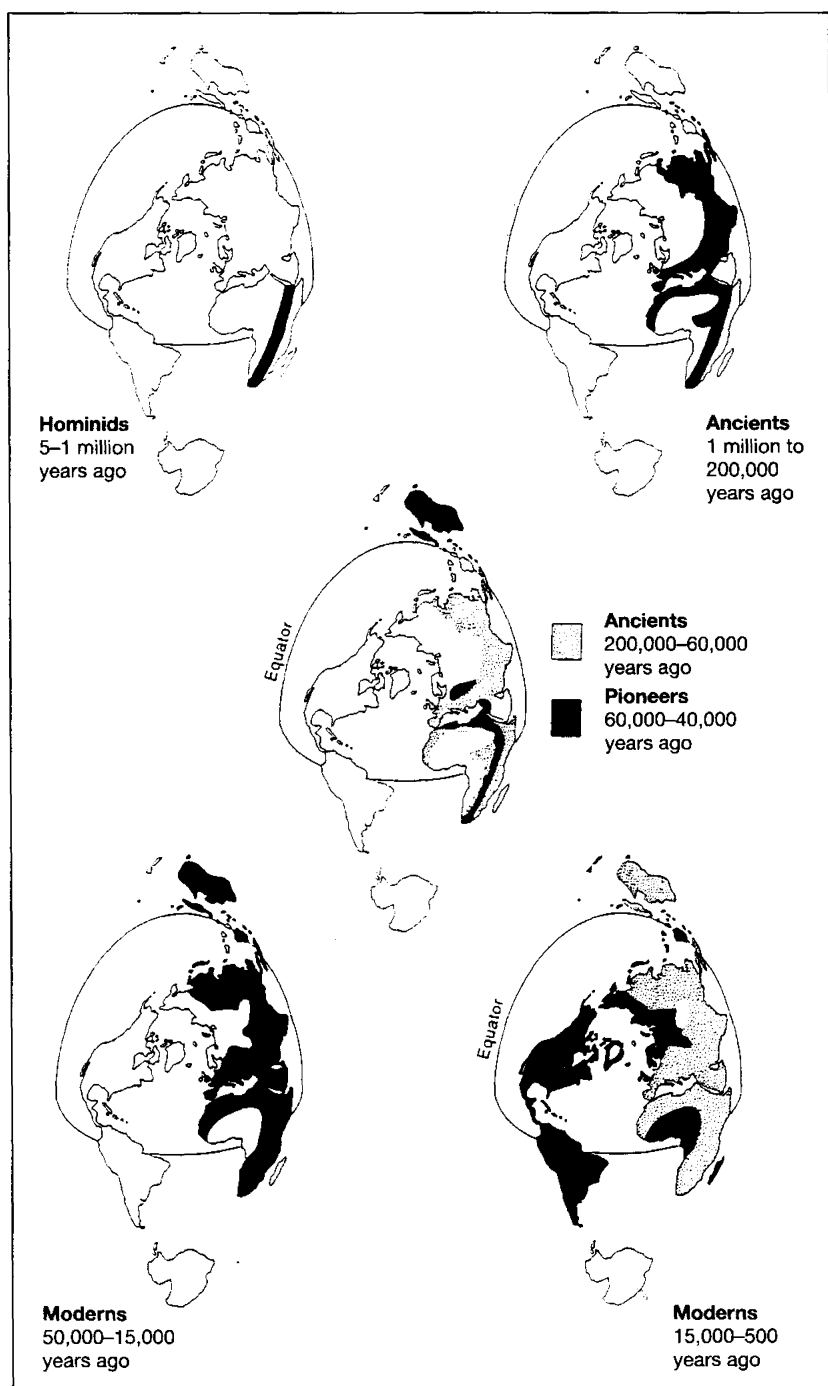
To emphasize the depth of human difference in a temporal and cultural sense is a dangerous and possibly irresponsible act in a world where much fear and distrust are accruing around people who aren't quite like us. Saying that the variety of languages, customs, beliefs, thoughts, and feelings have long and deep histories

to them might make those differences appear unbridgeable. There is no doubt that distrust can derive from difference. Equally, all of us are capable of acts of sympathetic understanding that allow us, to some degree, to enter into and live in other people's worlds. The spirit of our enquiry is crucial, which, if it starts from the need for inter-cultural communication, can lead us to explore the history of human variability and, while not attempting to overcome, deny, or do away with otherness, we can see it as an incitement and a challenge which will necessitate us (whoever we are) expanding our conceptual universe and human sensibilities. Ultimately, for me the study of prehistory has this as an admittedly utopian goal.

How, why, where, and when do the continents differ in their prehistories? To start to answer such a daunting raft of questions let us go back to the history of human colonization we left in the last chapter. The only primate species living on all the continents is *Homo sapiens sapiens*. The expansion of humans is unique and has only been completed over the last 15,000 years or less (Figure 9).

In Chapter 3, we saw that our modern human ancestors arose in Africa some 120,000 years ago, leaving that continent 90,000 years ago and spreading through Europe and Asia by 40,000 BC. A most amazing part of this expansion was the movement into Australia and New Guinea, at least 40,000 years ago (and possibly as long ago as 60,000 BC – dates are controversial). Although Australia and Papua New Guinea were joined at periods of lower sea level into the giant landmass known as Sahul until 6000 BC, this landmass has always been separated by sea from the island archipelago of present-day Indonesia. The biologist Wallace, a contemporary of Darwin's who came up with a theory of biological change similar to the theory of evolution, recognized the huge differences in plants and animals between south-east Asia and Australia. The Wallace Line divides the placental mammals (monkeys, elephants, tigers, etc.) of south-east Asia from the marsupials of Sahul. The history of continental drift created the super-continent of Wallacea





9. The process of global colonization

(composed of Antarctica, South America, southern Africa, India, and Sahul) on which marsupials developed and then broke it up, so that Antarctica drifted south and froze, killing all animal life, and all the other continental fragments bumped into other continents (North America, northern Africa, and Asia) which had large, carnivorous animals which promptly ate all the marsupials. Australia reached its present position some 10 million years ago and remained isolated enough by the northern seas to deter the entry of placental mammals.

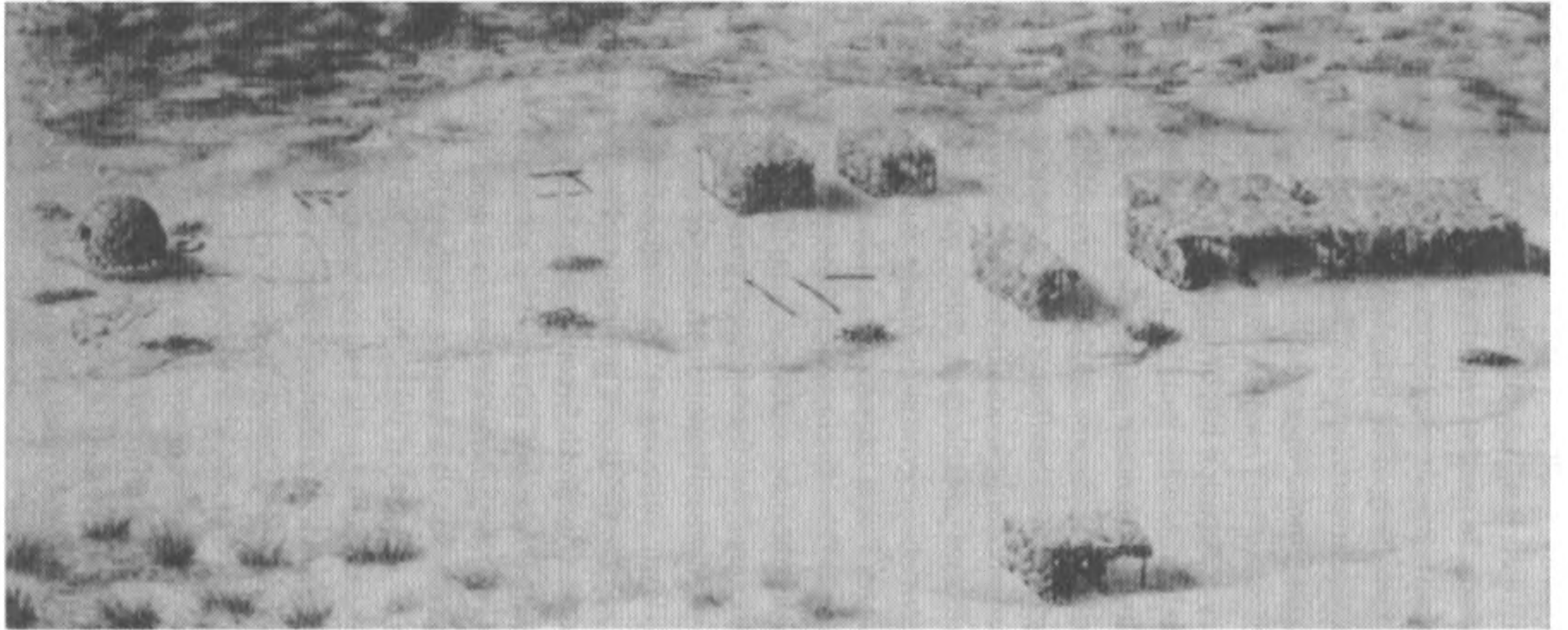
Humans were the first species to cross this major biogeographical barrier and entered a world of plants (the gums, acacias, etc.) and animals completely new to them. Such novelty was increased by the latitudinal range of Sahul which stretched from the Equator to sub-Antarctic regions of southern Tasmania, including the Highlands of New Guinea, the highest mountains east of the Himalayas and the massive central deserts. Sahul represents a laboratory for testing out modern human capabilities, tests which our ancestors passed with ease, so that by 40,000 years ago there were groups hunting up by glaciers in central Tasmania, in the temperate zones of south-eastern and south-western Australia, well into the desert, and all over the tropical north. Not long afterwards they reached islands off present-day Papua New Guinea, where I have spent some time digging caves, which have revealed some of the earliest marine fishing in the world and evidence of island occupation much earlier than any of the other island groups of the world, such as the Mediterranean or the Caribbean.

Given the date and apparent ease with which people moved into and through Sahul, the occupation of the Americas poses a considerable puzzle. There has been more controversy over the human history of the Americas than any other continent. There have been claims of occupation 80,000 years ago or more, but these are not the really controversial ones because they lack an empirical basis. Given that people entered the Americas from Siberia it is surprising that there are two sites in South America, Pedra Furada

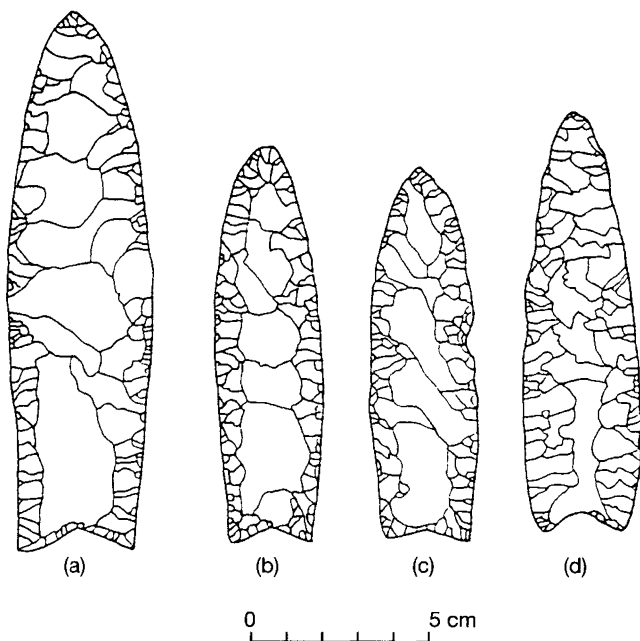
in Brazil and Monte Verde in Chile, which may be older than any found in north America, possibly first used by people 30,000 years ago. Monte Verde, in south-central Chile, has an undoubted occupation of an open-air site 13,000 years ago, with evidence preserved in a peat bog of log foundations for huts, a piece of mastodon flesh, a human footprint, animal skins, plant remains, wooden and stone tools (Figure 10).

This sedentary occupation has brought into question the notion that early inhabitants were mobile hunter-gatherers, and the site shows trade links with other groups. But the possibility that there might be an occupation some 20,000 years older is controversial and troubling, and one that Tom Dillehay, the excavator of the site, seems increasingly doubtful about: below the main layers are a possible hearth and possible tools dating to 30,000 BP, the qualifications receiving greater emphasis as time goes by. Pedra Furada in eastern Brazil has produced dates between 32,000 and 17,000 years ago. There is considerable scepticism (especially amongst North American archaeologists) about these dates, as the charcoal dated may come from natural fires and the stone tools may have been created when stones on the top of the cliff above the site were washed down, suffering natural fractures mimicking those produced by people. Of course, pride is involved here. Huge effort has been expended in North America to find very early sites, with no generally accepted results. There may be more professional archaeologists in North America than in much of the rest of the world put together and it is hard for all these highly skilled professionals to accept that there might be early sites out there that they have failed to find. And as our common sense would indicate that people entered the continent from the north we would expect a cline of dates from north to south, not the reverse.

In 1932 large blade tools were found near the town of Clovis, New Mexico, in association with the bones of extinct animals. Clovis points have now been found in every state of the Union, up into the Arctic Circle, and deep into South America.



**10. Reconstruction of the site at Monte Verde, Chile**



### 11. Typical Clovis blades

Radiocarbon dates place these sites at 12,000 years ago, with another horizon of Folsom points about 2,000 years later. Clovis represents the first undoubted occupation of the continent and at this time the continent was inhabited by a series of so-called megafauna, such as mammoths, sabre-toothed tigers, giant moose, and a species of beaver, the size of a modern bear, making the continent very attractive to hunters. It seems most sensible that people walked into the continent from present-day Siberia, which was inhabited from at least 23,000 years ago, with distributions of leaf-shaped points covering north-eastern Siberia, Alaska, and western Canada by 15,000 years ago. Glaciations producing periods of lower sea level have created a land bridge across the Bering Sea (so-called Beringia) at least four times in the last 60,000 years and

this has led to migrations of a range of animal species from Asia to America. Humans may have been deterred by the relative paucity of game in Beringia itself, a relatively barren area, and the size of the ice-sheets across Alaska. Alternatively they may have gone down the coast, travelling by sea, as did the first entrants into Australia, which would make some sense of early dates in somewhere like Monte Verde. I would be happy with early dates from South America, but accept that the present evidence is not overwhelming. On the basis of the distributions of leaf-shaped points down into eastern Canada and the fact that the 13,000-year-old occupation at Monte Verde does not look like the initial stages of colonization, I would opt for an initial date of some 15,000 years ago for the first colonization of the Americas, leaving time for the build-up of population which led to the widespread visibility of Clovis sites, some 3,000 years later.

#### Prehistory

Such a date allows interesting parallels to be drawn with Eurasia. Although fully modern humans entered south-west Asia more than 90,000 years ago and moved thence into Europe, there is increasing evidence, from Europe especially, that during the last glacial maximum down to some 14,500 years ago, people retreated to places like northern Spain-southern France and the Balkans-Ukraine areas, along with a whole range of other animal and plant species, only to recolonize the continent once temperatures started to rise. Intriguing recent genetic evidence shows that 80 per cent of Europeans can trace their lineage through their mother's line back to populations that were in Europe some 14,000 years ago, with only 20 per cent of mitochondrial lineages coming in more recently. The surprise contained in such a result is because many felt that the development of farming at around 10,000 years ago would have caused a rise in population levels, due to more secure food supplies, leading to expansions of populations from early centres of agriculture (such as the Near East in the Eurasian case, but also China, Central America, South America, and Highland Papua New Guinea) out in all directions to overwhelm the low-density hunter-gatherer groups.