

I EARLY SOCIETIES

From the Beginning of Time

Writing and City Life



EARLY SOCIETIES

IN this section, we will read about two themes relating to early societies. The first is about the beginnings of human existence, from the remote past, millions of years ago. You will learn how humans first emerged in Africa and how archaeologists have studied these early phases of history from remains of bones and stone tools.

Archaeologists have made attempts to reconstruct the lives of early people – to find out about the shelters in which they lived, the food they ate by gathering plant produce and hunting animals, and the ways in which they expressed themselves. Other important developments include the use of fire and of language. And, finally, you will see whether the lives of people who live by hunting and gathering today can help us to understand the past.

The second theme deals with some of the earliest cities – those of Mesopotamia, present-day Iraq. These cities developed around temples, and were centres of long-distance trade. Archaeological evidence – remains of old settlements – and an abundance of written material are used to reconstruct the lives of the different people who lived there – craftspeople, scribes, labourers, priests, kings and queens. You will notice how pastoral people played an important role in some of these towns. A question to think about is whether the many activities that went on in cities would have been possible if writing had not developed.

You may wonder as to how people who for millions of years had lived in forests, in caves or temporary shelters and rock shelters began to eventually live in villages and cities. Well, the story is a long one and is related to several developments that took place at least 5,000 years before the establishment of the first cities.

One of the most far-reaching changes was the gradual shift from nomadic life to settled agriculture, which began around 10,000 years ago. As you will see in Theme 1, prior to the adoption of agriculture, people had gathered plant produce as a source of food. Slowly, they learnt more about different kinds of plants – where they grew, the seasons when they bore fruit and so on.

From this, they learnt to grow plants. In West Asia, wheat and barley, peas and various kinds of pulses were grown. In East and Southeast Asia, the crops that grew easily were millet and rice. Millet was also grown in Africa. Around the same time, people learnt how to domesticate animals such as sheep, goat, cattle, pig and donkey. Plant fibres such as cotton and flax, and animal fibres such as wool were now woven into cloth. Somewhat later, about 5,000 years ago, domesticated animals such as cattle and donkeys were harnessed to ploughs and carts.

These developments led to other changes as well. When people grew crops, they had to stay in the same place till the crops ripened. So, settled life became more common. And with that, people built more permanent structures in which to live.

This was also the time when some communities learnt how to make earthen pots. These were used to store grain and other produce, and to prepare and cook a variety of foods made from the new grains that were cultivated. In fact, a great deal of attention was given to processing foods to make them tasty and digestible.

The way stone tools were made also changed. While earlier methods of making tools continued, some tools and equipment were now smoothened and polished by an elaborate process of grinding. New equipment included mortars and pestles for processing and grinding grain, as well as stone axes and hoes, which were used to clear land for cultivation, as well as for digging the earth to sow seeds.

In some areas, people learnt to tap the ores of metals such as copper and tin. Sometimes, copper ores were collected and used for their distinctive bluish-green colour. This prepared the way for the more extensive use of metal for jewellery and for tools subsequently.

There was also a growing familiarity with other kinds of produce from distant lands (and seas). This included wood, stones, including precious and semi-precious stones, metals and shell, and obsidian (hardened) volcanic lava. Clearly, people were going from place to place, carrying goods and ideas with them.

With increasing trade, the growth of villages and towns, and the movements of people, in place of the small communities of early people there now grew small states. While these changes took place slowly, over several thousand years, the pace quickened with the growth of the first cities. Also, the changes had far-reaching consequences. Some scholars have described this as a revolution, as the lives of people were probably transformed beyond recognition. Look out for continuities and changes as you explore these two contrasting themes in early history.

Remember too, that we have selected only some examples of early societies for detailed study. There were other kinds of early societies, including farming communities and pastoral peoples. And there were other peoples who were hunter-gatherers as well as city dwellers, apart from the examples selected.

How to Read Timelines

You will find a timeline like this one in every section.

Each of these will indicate some of the major processes and events in world history.

As you study the timelines, remember—

- Processes through which ordinary women and men have shaped history are far more difficult to date than events such as a war between kings.
- Some dates may indicate the beginning of a process, or when it reaches maturation.
- Historians are constantly revising dates in the light of new evidence, or new ways of assessing old data.
- While we have divided the timelines on a geographical basis as a matter of convenience, actual historical developments often transcend these divisions.
- Also, there is a chronological overlap in historical processes.
- Only some landmarks in human history have been shown here – we have highlighted the processes dealt with in the themes that follow, which also have separate timelines.
- Wherever you see a*, you will also find an illustration related to the date along the column.
- Blank spaces do not mean that nothing was happening – sometimes these indicate that we do not as yet know what was happening.
- You will be learning more about South Asian history in general and Indian history in particular next year. The dates selected for South Asia are only indicative of some of the developments in the subcontinent.

TIMELINE I

(6 MYA TO 1 BCE)



This timeline focuses on the emergence of humans and the domestication of plants and animals. It highlights some major technological developments such as the use of fire, metals, plough agriculture and the wheel. Other processes that are shown include the emergence of cities and the use of writing. You will also find mention of some of the earliest empires – a theme that will be developed in Timeline II.

DATES	AFRICA	EUROPE
6 mya-500,000 BP	<i>Australopithecus</i> fossils (5.6 mya) Evidence of use of fire (1.4 mya)	
500,000-150,000 BP	<i>Homo sapiens</i> fossils (195,000 BP)	Evidence of use of fire (400,000 BP)
150,000-50,000 BP		
50,000-30,000		<i>Homo sapiens</i> fossils (40,000)
30,000-10,000	Paintings in caves/rock shelters (27,500)	Paintings in caves/rock shelters (especially France and Spain)
8000-7000 BCE		
7000-6000	Domestication of cattle and dogs	
6000-5000		Cultivation of wheat and barley (Greece)
5000-4000		
4000-3000	Domestication of donkey, cultivation of millet, use of copper	Use of copper (Crete)
3000-2000	Plough agriculture, first kingdoms, cities, pyramids, calendar, hieroglyphic script*, writing on papyrus (Egypt)	Domestication of horse (eastern Europe)
2000-1900		Cities, palaces, use of bronze, the potter's wheel, development of trade (Crete)
1900-1800		
1800-1700		
1700-1600		Development of a script (Crete)*
1600-1500		
1500-1400	Use of glass bottles (Egypt)	
1400-1300		
1300-1200		
1200-1100		
1100-1000		
1000-900		Use of iron
900-800	City of Carthage established in North Africa by the Phoenicians from West Asia; growing trade around the Mediterranean	
800-700	Use of iron (Sudan)	First Olympic games (Greece, 776 BCE)
700-600	Use of iron (Egypt)	
600-500		Use of coins* (Greece); establishment of the Roman republic (510 BCE)
500-400	Persians invade Egypt	Establishment of a 'democracy' in Athens (Greece)
400-300	Establishment of Alexandria, Egypt (332 BCE), which becomes a major centre of learning	Alexander of Macedonia conquers Egypt and parts of West Asia (336-323 BCE)
300-200		
200-100		
100-1 BCE		

6 THEMES IN WORLD HISTORY

DATES	ASIA	SOUTH ASIA
6mya-500,000 BP	Use of fire (700,000 BP, China)	Stone age site in Riwat (1,900,000 BP, Pakistan)
500,000-150,000 BP		
150,000-50,000 BP	<i>Homo sapiens</i> fossils (100,000 BP, West Asia)	
50,000-30,000 BP		
30,000-10,000 BP	Domestication of dog (14,000, West Asia)	Cave paintings at Bhimbetka (Madhya Pradesh); <i>Homo sapiens</i> fossils (25,500 BP, Sri Lanka)
8000-7000 BCE	Domestication of sheep and goat, cultivation of wheat and barley (West Asia)	
7000-6000	Domestication of pig and cattle (West and East Asia)	Early agricultural settlements (Baluchistan)
6000-5000	Domestication of chicken, cultivation of millet and yam (East Asia)	
5000-4000	Cultivation of cotton (South Asia); use of copper (West Asia)	
4000-3000	Use of the potter's wheel, wheel for transport (3600 BCE), writing (3200 BCE, Mesopotamia), use of bronze	Use of copper
3000-2000	Plough agriculture, cities (Mesopotamia); silk-making (China); domestication of horse (Central Asia); cultivation of rice (Southeast Asia)	Cities of the Harappan civilisation, use of script* (c.2700 BCE)
2000-1900	Domestication of water-buffalo (East Asia)	
1900-1800		
1800-1700		
1700-1600		
1600-1500	Cities, writing, kingdoms (Shang dynasty), use of bronze (China)*	
1500-1400	Use of iron (West Asia)	Composition of the <i>Rig Veda</i>
1400-1300		
1300-1200		
1200-1100		Use of iron, megaliths (Deccan and South India)
1100-1000	Domestication of the one-humped camel (Arabia)	
1000-900		
900-800		
800-700		
700-600		
600-500	Use of coins (Turkey); Persian empire (546 BCE) with capital at Persepolis; Chinese philosopher Confucius (c. 551 BCE)	Cities and states in several areas, first coins, spread of Jainism and Buddhism
500-400		
400-300		Establishment of the Mauryan empire (c. 321 BCE)
300-200	Establishment of an empire in China (221 BCE), beginning of the construction of the Great Wall	
200-100		
100-1 BCE		

DATES	AMERICAS	AUSTRALIA / PACIFIC ISLANDS
6 mya-500,000 BP		
500,000-150,000 BP		
150,000-50,000 BP		
50,000-30,000 BP		<i>Homo sapiens</i> fossils, earliest indications of sea-faring (45,000 BP)
30,000-10,000 BP	<i>Homo sapiens</i> fossils (12,000 BP)	Paintings (20,000 BP)
8000-7000 BCE		
7000-6000	Cultivation of squash	
6000-5000		
5000-4000	Cultivation of beans	
4000-3000	Cultivation of cotton, bottle gourd	
3000-2000	Domestication of guinea pig, turkey, cultivation of maize	
2000-1900	Cultivation of potato, chilli*, cassava, peanut, domestication of llama* and alpaca	
1900-1800		
1800-1700		
1700-1600		
1600-1500		
1500-1400		
1400-1300		
1300-1200		
1200-1100	Olmec settlements around the Gulf of Mexico, early temples and sculpture	Settlements in Polynesia and Micronesia
1100-1000		
1000-900	Development of a hieroglyphic script	
900-800		
800-700		
700-600		
600-500		
500-400		
400-300		
300-200		
200-100		
100-1 BCE		

ACTIVITY

Choose one date from each of the six columns and discuss the possible significance of the process/event for men and women living in the region.

THEME

1

FROM THE BEGINNING OF TIME



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THIS chapter traces the beginning of human existence. It was 5.6 million years ago (written as mya) that the first human-like creatures appeared on the earth's surface. After this, several forms of humans emerged and then became extinct. Human beings resembling us (henceforth referred to as 'modern humans') originated about 160,000 years ago. During this long period of human history, people obtained food by either scavenging or hunting animals and gathering plant produce. They also learnt how to make stone tools and to communicate with each other.

Although other ways of obtaining food were adopted later, hunting-gathering continued. Even today there are hunter-gatherer societies in some parts of the world. This makes us wonder whether the lifestyles of present-day hunter-gatherers can tell us anything about the past.

Fossils are the remains or impressions of a very old plant, animal or human which have turned into stone. These are often embedded in rock, and are thus preserved for millions of years.

Species is a group of organisms that can breed to produce fertile offspring. Members of one species cannot mate with those of other species to produce fertile offspring.

Discoveries of human fossils, stone tools and cave paintings help us to understand early human history. Each of these discoveries has a history of its own. Very often, when such finds were first made, most scholars refused to accept that these fossils were the remains of early humans. They were also sceptical about the ability of early humans to make stone tools or paint. It was only over a period of time that the true significance of these finds was realised.

The evidence for human evolution comes from fossils of species of humans which have become extinct. Fossils can be dated either through direct chemical analysis or indirectly by dating the sediments in which they are buried. Once fossils are dated, a sequence of human evolution can be worked out.

When such discoveries were first made, about 200 years ago, many scholars were often reluctant to accept that fossils and other finds including stone tools and paintings were actually connected with early forms of humans. This reluctance generally stemmed from their belief in the Old Testament of the Bible, according to which human origin was regarded as an act of Creation by God.

For instance, in August 1856, workmen who were quarrying for limestone in the Neander valley (see Map 2, p. 18), a gorge near the German city of Dusseldorf, found a skull and some skeletal fragments. These were handed over to Carl Fuhlrott, a local schoolmaster and natural historian, who realised that

they did not belong to a modern human. He then made a plaster cast of the skull and sent it to Herman Schaaffhausen, a professor of anatomy at Bonn University. The following year they jointly published a paper, claiming that this skull represented a form of human that was extinct. At that time, scholars did not accept this view and instead declared that the skull belonged to a person of more recent times.

RECOVERING FOSSILS

A painstaking process. The precise location of finds is important for dating.

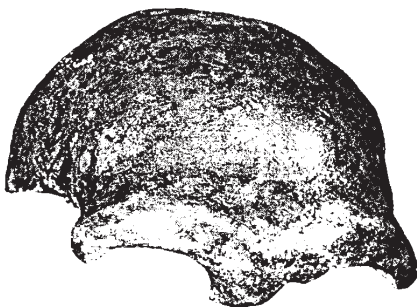


Shows the equipment used to record the location of finds. The square frame to the left of the archaeologist is a grid divided into 10 cm squares. Placing it over the find spot helps to record the horizontal position of the find. The triangular apparatus to the right is used to record the vertical position.



Shows how a fossil fragment is recovered from the surrounding stone, in this case a variety of limestone, in which it is embedded. As you can see, this requires skill and patience.

24 November 1859, when Charles Darwin's *On the Origin of Species* was published, marked a landmark in the study of evolution. All 1,250 copies of the first print were sold out the same day. Darwin argued that humans had evolved from animals a long time ago.



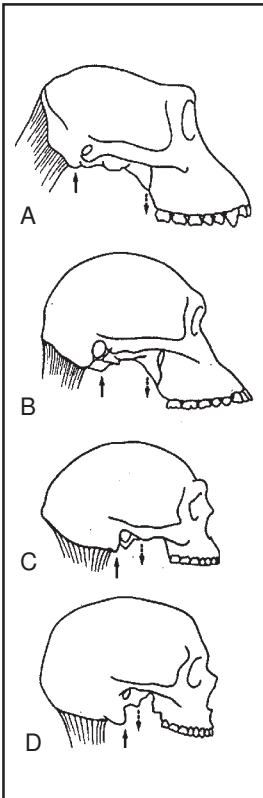
The skull of Neanderthal man. Some of those who dismissed the antiquity of the skull regarded it as 'brutish' or that of a 'pathological idiot'.

ACTIVITY 1

Most religions have stories about the creation of human beings which often do not correspond with scientific discoveries. Find out about some of these and compare them with the history of human evolution as discussed in this chapter.

The Story of Human Evolution

(a) The Precursors of Modern Human Beings



Look at these four skulls.

A belongs to an ape.

B belongs to a species known as *Australopithecus* (see below).

C belongs to a species known as *Homo erectus* (literally 'upright man').

D belongs to a species known as *Homo sapiens* (literally 'thinking/wise man') to which all present-day human beings belong.

List as many similarities and differences that you notice, looking carefully at the brain case, jaws and teeth.

The differences that you notice in the skulls shown in the illustration are some of the changes that came about as a result of human evolution. The story of human evolution is enormously long, and somewhat complicated. There are also many unanswered questions, and new data often lead to a revision and modification of earlier understandings. Let us look at some of the developments and their implications more closely.

It is possible to trace these developments back to between 36 and 24 mya. We sometimes find it difficult to conceptualise such long spans of time. If you consider a page of your book to represent 10,000 years, in itself a vast span of time, 10 pages would represent 100,000 years, and a 100 pages would equal 1 million years. To think of 36 million years, you would have to imagine a book 3,600 pages long! That was when primates, a category of mammals, emerged in Asia and Africa. Subsequently, by about 24 mya, there emerged a subgroup amongst primates, called hominoids. This included apes. And, much later, about 5.6 mya, we find evidence of the first hominids.

While hominids have evolved from hominoids and share certain common features, there are major differences as well. Hominoids have a smaller brain than hominids. They are quadrupeds, walking on all fours, but with flexible forelimbs. Hominids, by contrast, have an upright posture and bipedal locomotion (walking on two feet). There are also marked differences in the hand, which enables the making and use of tools. We will examine the kinds of tools made and their significance more closely later.

Two lines of evidence suggest an African origin for hominids. First, it is the group of African apes that are most closely related to hominids. Second, the earliest hominid fossils, which belong to the genus *Australopithecus*, have been found in East Africa and date back to about 5.6 mya. In contrast, fossils found outside Africa are no older than 1.8 million years.

Primates are a subgroup of a larger group of mammals. They include monkeys, apes and humans. They have body hair, a relatively long gestation period following birth, mammary glands, different types of teeth, and the ability to maintain a constant body temperature.

THE EVOLUTION OF THE HAND

A shows the precision grip of the chimpanzee.

B shows the power grip of the human hand.

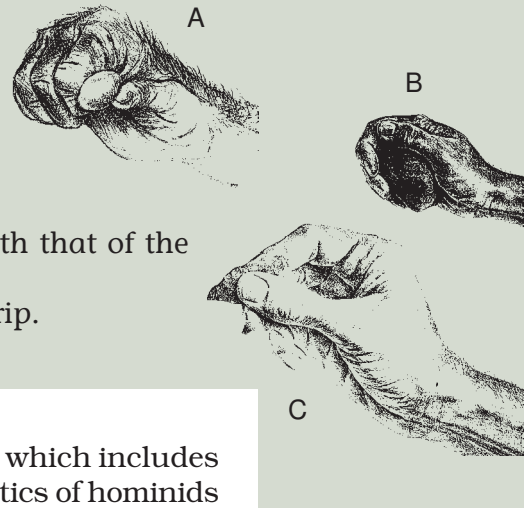
C shows the precision grip of the hominid.

The development of the power grip probably preceded the precision grip.

Compare the precision grip of the chimpanzee with that of the human hand.

Make a list of the things you do using a precision grip.

What are the things you do using a power grip?



Hominids belong to a family known as Hominidae, which includes all forms of human beings. The distinctive characteristics of hominids include a large brain size, upright posture, bipedal locomotion and specialisation of the hand.

Hominids are further subdivided into branches, known as genus, of which *Australopithecus* and *Homo* are important. Each of these in turn includes several species. The major differences between *Australopithecus* and *Homo* relate to brain size, jaws and teeth. The former has a smaller brain size, heavier jaws and larger teeth than the latter.

Virtually all the names given by scientists to species are derived from Latin and Greek words. For instance, the name *Australopithecus* comes from a Latin word, 'austral', meaning 'southern' and a Greek word, 'pithekos', meaning 'ape.' The name was given because this earliest form of humans still retained many features of an ape, such as a relatively small brain size in comparison to *Homo*, large back teeth and limited dexterity of the hands. Upright walking was also restricted, as they still spent a lot of time on trees. They retained characteristics

Hominoids are different from monkeys in a number of ways. They have a larger body and do not have a tail. Besides, there is a longer period of infant development and dependency amongst hominoids.



This is a view of the Olduvai Gorge in the Rift Valley, East Africa (see Map 1b, p. 14), one of the areas from which traces of early human history have been recovered. Notice the different levels of earth at the centre of the photograph. Each of these represents a distinct geological phase.

(such as long forelimbs, curved hand and foot bones and mobile ankle joints) suited to life on trees. Over time, as tool making and long-distance walking increased, many human characteristics also developed.

The Discovery of *Australopithecus*, Olduvai Gorge, 17 July 1959

The Olduvai Gorge (see p. 14) was first 'discovered' in the early twentieth century by a German butterfly collector. However, Olduvai has come to be identified with Mary and Louis Leakey, who worked here for over 40 years. It was Mary Leakey who directed archaeological excavations at Olduvai and Laetoli and she made some of the most exciting discoveries. This is what Louis Leakey wrote about one of their most remarkable finds:



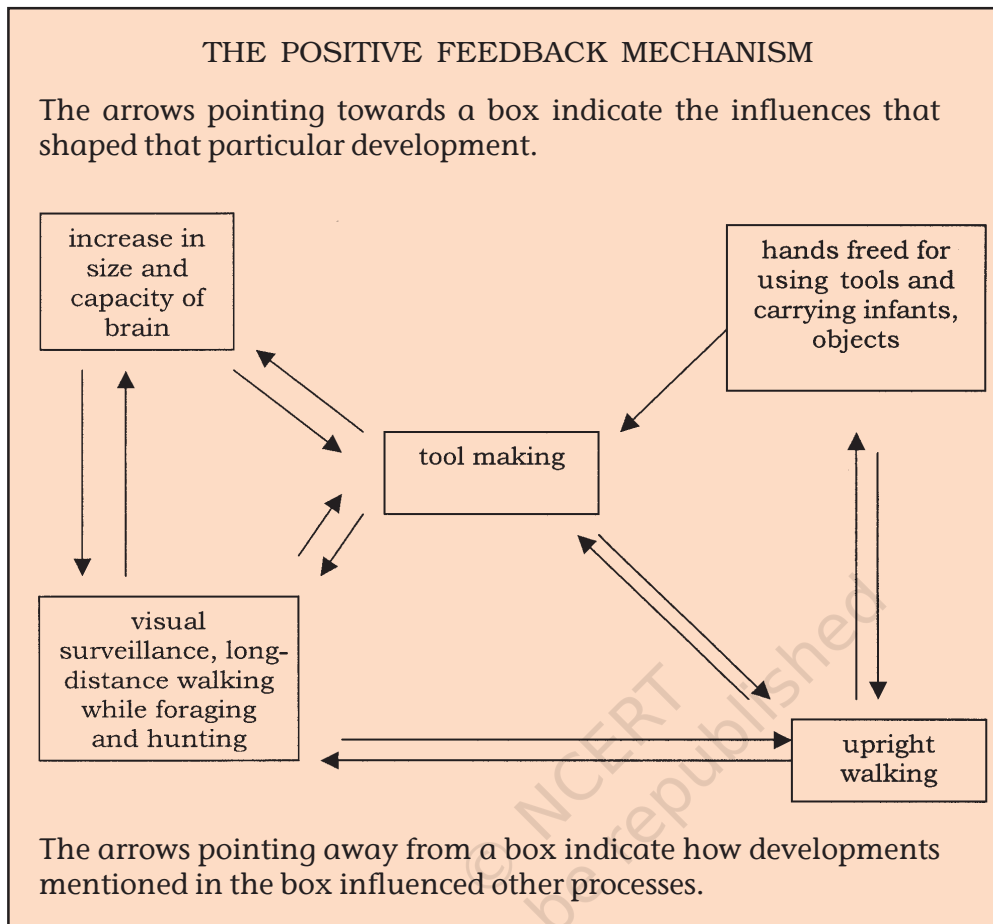
'That morning I woke with a headache and a slight fever. Reluctantly, I agreed to spend the day in camp. With one of us out of commission, it was even more vital for the other to continue the work, for our precarious seven-week season was running out. So Mary departed for the diggings with Sally and Toots [two of their dogs] in the Land-Rover [a jeep-like vehicle], and I settled back to a restless day off.

Some time later – perhaps I dozed off – I heard the Land-Rover coming up fast to camp. I had a momentary vision of Mary stung by one of our hundreds of resident scorpions or bitten by a snake that had slipped past the dogs.

The Land-Rover rattled to a stop, and I heard Mary's voice calling over and over: "I've got him! I've got him! I've got him!" Still groggy from the headache, I couldn't make her out. "Got what? Are you hurt?" I asked. "Him, the man! Our man," Mary said. "The one we've been looking for 23 years. Come quick, I've found his teeth!" '

– From 'Finding the World's Earliest Man', by L.S.B. Leakey, *National Geographic*, 118 (September 1960).

The remains of early humans have been classified into different species. These are often distinguished from one another on the basis of differences in bone structure. For instance, species of early humans are differentiated in terms of their skull size and distinctive jaws (see illustration on p.10). These characteristics may have evolved due to what has been called the positive feedback mechanism.



For example, bipedalism enabled hands to be freed for carrying infants or objects. In turn, as hands were used more and more, upright walking gradually became more efficient. Apart from the advantage of freeing hands for various uses, far less energy is consumed while walking as compared to the movement of a quadruped. However, the advantage in terms of saving energy is reversed while running. There is indirect evidence of bipedalism as early as 3.6 mya. This comes from the fossilised hominid footprints at Laetoli, Tanzania (see Section cover). Fossil limb bones recovered from Hadar, Ethiopia provide more direct evidence of bipedalism.

Around 2.5 mya, with the onset of a phase of glaciation (or an Ice Age), when large parts of the earth were covered with snow, there were major changes in climate and vegetation. Due to the reduction in temperatures as well as rainfall, grassland areas expanded at the expense of forests, leading to the gradual extinction of the early forms of *Australopithecus* (that were adapted to forests) and the replacement by species that were better adapted to the drier conditions. Among these were the earliest representatives of the genus *Homo*.

Homo is a Latin word, meaning 'man', although there were women as well! Scientists distinguish amongst several types of *Homo*. The names assigned to these species are derived from what are regarded as their typical characteristics. So fossils are classified as *Homo habilis* (the tool maker), *Homo erectus* (the upright man), and *Homo sapiens* (the wise or thinking man).

Fossils of *Homo habilis* have been discovered at Omo in Ethiopia and at Olduvai Gorge in Tanzania. The earliest fossils of *Homo erectus* have been found both in Africa and Asia: Koobi Fora and west Turkana, Kenya, Modjokerto and Sangiran, Java. As the finds in Asia belong to a later date than those in Africa, it is likely that hominids migrated from East Africa to southern and northern Africa, to southern and north-eastern Asia, and perhaps to Europe, some time between 2 and 1.5 mya. This species survived for nearly a million years.

MAP 1(a): Africa



MAP 1(b): The East African Rift Valley



In some instances, the names for fossils are derived from the places where the first fossils of a particular type were found. So fossils found in Heidelberg, a city in Germany, were called *Homo heidelbergensis*, while those found in the Neander valley (see p. 18) were categorised as *Homo neanderthalensis*.

The earliest fossils from Europe are of *Homo heidelbergensis* and *Homo neanderthalensis*. Both belong to the species of archaic (that is, old) *Homo sapiens*. The fossils of *Homo heidelbergensis* (0.8-0.1 mya) have a wide distribution, having been found in Africa, Asia and Europe. The Neanderthals occupied Europe and western and Central Asia from roughly 130,000 to 35,000 years ago. They disappeared abruptly in western Europe around 35,000 years ago.

In general, compared with *Australopithecus*, *Homo* have a larger brain, jaws with a reduced outward protrusion and smaller teeth (see illustration on p. 10). An increase in brain size is associated with more intelligence and a better memory. The changes in the jaws and teeth were probably related to differences in dietary habits.

PEOPLING OF THE WORLD		
WHEN	WHERE	WHO
5-1 mya	Sub-Saharan Africa	<i>Australopithecus</i> , early <i>Homo</i> , <i>Homo erectus</i>
1 mya-40,000 years ago	Africa, Asia and Europe in mid-latitudes	<i>Homo erectus</i> , archaic <i>Homo sapiens</i> , Neanderthals, <i>Homo sapiens sapiens</i> /modern humans
45,000 years ago	Australia	Modern humans
40,000 years ago to present	Europe in high-latitudes and Asia-Pacific islands	Late Neanderthals, modern humans
	North and South America in deserts, rain forests	

ACTIVITY 2

Plot the changes indicated in the chart above on an outline map of the world. Use different colours for the four time brackets. List the continents where you use (a) a single colour, (b) two colours, (c) more than two colours.

The Story of Human Evolution

(b) Modern Human Beings

THE EARLIEST FOSSILS OF MODERN HUMANS	
WHERE	WHEN (years ago)
ETHIOPIA Omo Kibish	195,000-160,000
SOUTH AFRICA Border Cave Die Kelders Klasies River Mouth	120,000-50,000
MOROCCO Dar es Soltan	70,000-50,000
ISRAEL Qafzeh Skhul	100,000-80,000
AUSTRALIA Lake Mungo	45,000-35,000
BORNEO Niah Cave	40,000
FRANCE Cro-Magnon, near Les Eyzies	35,000

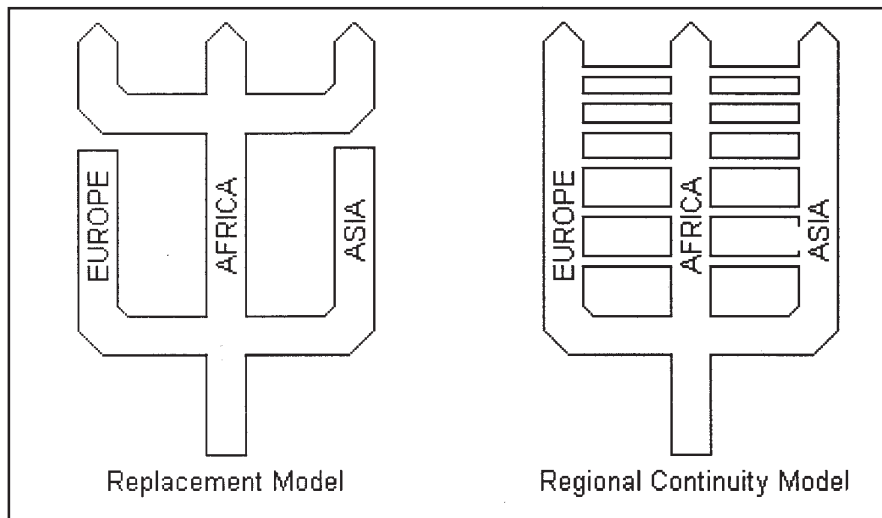
If you look at this chart, you will notice that some of the earliest evidence for *Homo sapiens* has been found in different parts of Africa. This raises the question of the centre of human origin. Was there a single centre or were there several?

The issue of the place of origin of modern humans has been much debated. Two totally divergent views have been expounded, one advocating the regional continuity model (with multiple regions of origin), the other the replacement model (with a single origin in Africa).

According to the regional continuity model, the archaic *Homo sapiens* in different regions gradually evolved at different rates into modern humans, and hence the variation in the first appearance of modern humans in different parts of the world. The argument is based on the regional differences in the features of present-day humans. According to those who advocate this view, these dissimilarities are due to differences between the pre-existing *Homo erectus* and *Homo heidelbergensis* populations that occupied the same regions.

The Replacement and Regional Continuity Models

The replacement model visualises the complete replacement everywhere of all older forms of humans with modern humans. In support of this view is the evidence of the genetic and anatomical homogeneity of modern humans. Those who suggest this argue that the enormous similarity amongst modern humans is due to their descent from a population that originated in a single region, which is Africa. The evidence of the earliest fossils of modern humans (from Omo in Ethiopia) also supports the replacement model. Scholars who hold this view suggest that the physical differences observed today among modern humans are the result of adaptation (over a span of thousands of years) by populations who migrated to the particular regions where they finally settled down.



Early Humans: Ways of Obtaining Food

So far, we have been considering the evidence of skeletal remains and seeing how these have been used to reconstruct the histories of the movements of peoples across continents. But, there are other, more routine aspects of human life as well. Let us see how these can be studied.

Early humans would have obtained food through a number of ways, such as gathering, hunting, scavenging and fishing. Gathering would involve collecting plant foods such as seeds, nuts, berries, fruits and tubers. That gathering was practised is generally assumed rather than conclusively established, as there is very little direct evidence for it. While we get a fair amount of fossil bones, fossilised plant remains are relatively rare. The only other way of getting information about plant intake would be if plant remains were accidentally burnt. This process results in carbonisation. In this form, organic matter is preserved for a long span of time. However, so far archaeologists have not found much evidence of carbonised seeds for this very early period.

In recent years, the term hunting has been under discussion by scholars. Increasingly, it is being suggested that the early hominids scavenged or foraged* for meat and marrow from the carcasses of animals that had died naturally or had been killed by other predators. It is equally possible that small mammals such as rodents, birds (and their eggs), reptiles and even insects (such as termites) were eaten by early hominids.

Hunting probably began later – about 500,000 years ago. The earliest clear evidence for the deliberate, planned hunting and butchery of large mammals comes from two sites: Boxgrove in southern England (500,000 years ago) and Schöningen in Germany (400,000 years ago)

*Foraging means to search for food.

(see Map 2). Fishing was also important, as is evident from the discovery of fish bones at different sites.

MAP 2: Europe



From about 35,000 years ago, there is evidence of planned hunting from some European sites. Some sites, such as Dolni Vestonice (in the Czech Republic, see Map 2), which was near a river, seem to have been deliberately chosen by early people. Herds of migratory animals such as reindeer and horse probably crossed the river during their autumn and spring migrations and were killed on a large scale. The choice of such sites indicates that people knew about the movement of these animals and also about the means of killing large numbers of animals quickly.

Did men and women have different roles in gathering, scavenging, hunting and fishing? We do not really know. Today we find societies that live by hunting and gathering, where women and men undertake a range of different activities, but, as we will see later in the chapter, it is not always possible to suggest parallels with the past.

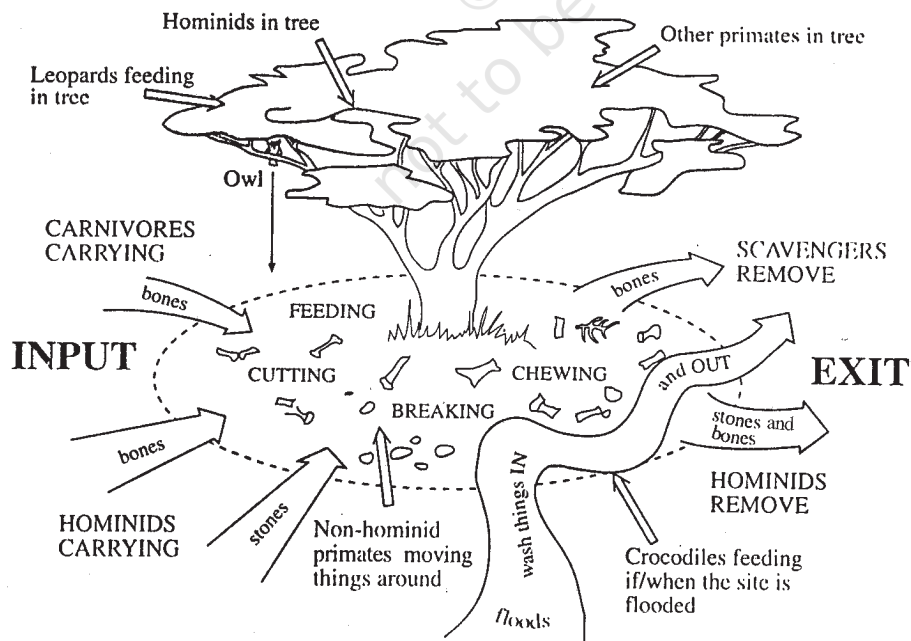
Early Humans From Trees, to Caves and Open-air Sites

We are on surer ground when we try to reconstruct the evidence for patterns of residence. One way of doing this is by plotting the distribution of artefacts. For example, thousands of flake tools and hand axes have been excavated at Kilombe and Olorgesailie (Kenya). These finds are dated between 700,000 and 500,000 years ago.



How did these tools accumulate in one place? It is possible that some places, where food resources were abundant, were visited repeatedly. In such areas, people would tend to leave behind traces of their activities and presence, including artefacts. The deposited artefacts would appear as patches on the landscape. The places that were less frequently visited would have fewer artefacts, which may have been scattered over the surface.

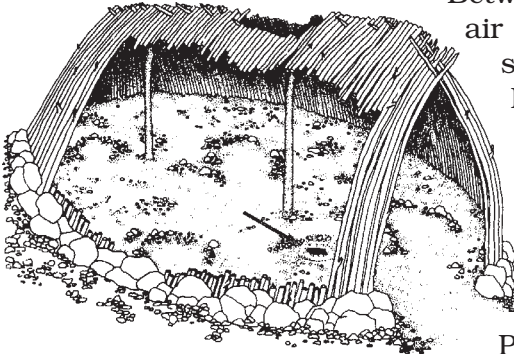
It is also important to remember that the same locations could have been shared by hominids, other primates and carnivores. Look at the diagram below to see how this may have worked.



Archaeologists suggest that early hominids such as *Homo habilis* probably consumed most of the food where they found it, slept in different places, and spent much of their time in trees. How would bones have reached the site? How would stones have reached the site? Would bones have survived intact?

Left: The site of Olorgesailie. The excavators, Mary and Louis Leakey, had a catwalk built around the site for observers. Above: A close-up of tools found at the site, including hand axes.

Artefacts are objects that are made by human beings. The term can refer to a wide range of things – tools, paintings, sculpture, engravings.



This is a reconstruction of a hut at Terra Amata. The large stone boulders were used to support the sides of the hut. The small scatters of stone on the floor were places where people made stone tools. The black spot marked with an arrow indicates a hearth. In what ways do you think life for those who lived in this shelter would be different from that of the hominids who lived on trees?

Between 400,000 and 125,000 years ago, caves and open-air sites began to be used. Evidence for this comes from sites in Europe. In the Lazaret cave in southern France, a 12x4 metre shelter was built against the cave wall. Inside it were two hearths and evidence of different food sources: fruits, vegetables, seeds, nuts, bird eggs and freshwater fish (trout, perch and carp). At another site, Terra Amata on the coast of southern France, flimsy shelters with roofs of wood and grasses were built for short-term, seasonal visits.

Pieces of baked clay and burnt bone along with stone tools, dated between 1.4 and 1 mya, have been found at Chesowanja, Kenya and Swartkrans, South Africa. Were these the result of a natural bushfire or volcanic eruption? Or were they produced through the deliberate, controlled use of fire? We do not really know.

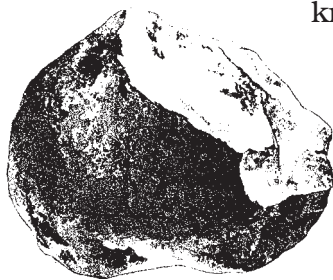
Hearths, on the other hand, are indications of the controlled use of fire. This had several advantages – fire provided warmth and light inside caves, and could be used for cooking. Besides, fire was used to harden wood, as for instance the tip of the spear. The use of heat also facilitated the flaking of tools. As important, fire could be used to scare away dangerous animals.

Early Humans: Making Tools

To start with, it is useful to remember that the use of tools and tool making are not confined to humans. Birds are known to make objects to assist them with feeding, hygiene and social encounters; and while foraging for food some chimpanzees use tools that they have made.

However, there are some features of human tool making that are not known among apes. As we have seen (see p. 11), certain anatomical and neurological (related to the nervous system) adaptations have led to the skilled use of hands, probably due to the important role of tools in human lives. Moreover, the ways in which humans use and make tools often require greater memory and complex organisational skills, both of which are absent in apes.

The earliest evidence for the making and use of stone tools comes from sites in Ethiopia and Kenya (see Map 1). It is likely that the earliest stone tool makers were the *Australopithecus*.



Some early tools. These tools were found in Olduvai. The one above is a chopper. This is a large stone from which flakes have been removed to produce a working edge. The one below is a hand axe. Can you suggest what these tools may have been used for?

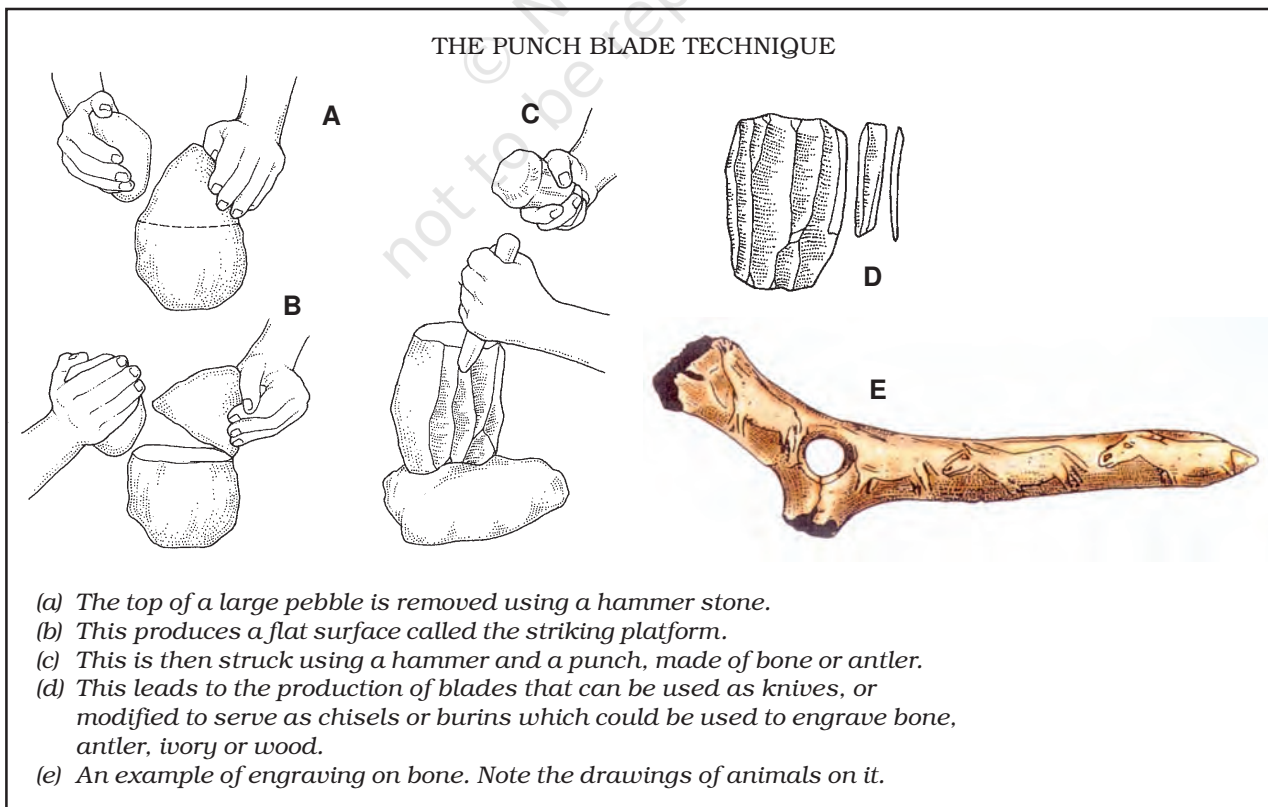
As in the case of other activities, we do not know whether tool making was done by men or women or both. It is possible that stone tool makers were both women and men. Women in particular may have made and used tools to obtain food for themselves as well as to sustain their children after weaning.

About 35,000 years ago, improvements in the techniques for killing animals are evident from the appearance of new kinds of tools such as spear-throwers and the bow and arrow. The meat thus obtained was probably processed by removing the bones, followed by drying, smoking and storage. Thus, food could be stored for later consumption.

There were other changes, such as the trapping of fur-bearing animals (to use the fur for clothing) and the invention of sewing needles. The earliest evidence of sewn clothing comes from about 21,000 years ago. Besides, with the introduction of the punch blade technique to make small chisel-like tools, it was now possible to make engravings on bone, antler, ivory or wood.



A spear-thrower. Note the carving on the handle. The use of the spear-thrower enabled hunters to hurl spears over longer distances. Can you suggest any advantage in using such equipment?



Modes of Communication: Language and Art

Among living beings, it is humans alone that have a language. There are several views on language development: (1) that hominid language involved gestures or hand movements; (2) that spoken language was preceded by vocal but non-verbal communication such as singing or humming; (3) that human speech probably began with calls like the ones that have been observed among primates. Humans may have possessed a small number of speech sounds in the initial stage. Gradually, these may have developed into language.

When did spoken language emerge? It has been suggested that the brain of *Homo habilis* had certain features which would have made it possible for them to speak. Thus, language may have developed as early as 2 mya. The evolution of the vocal tract was equally important. This occurred around 200,000 years ago. It is more specifically associated with modern humans.

A third suggestion is that language developed around the same time as art, that is, around 40,000-35,000 years ago. The development of spoken language has been seen as closely connected with art, since both are media for communication.

Cave Paintings at Altamira



A drawing of a bison at Altamira, northern Spain.

Altamira is a cave site in Spain. The paintings on the ceiling of the cave were first brought to the attention of Marcelino Sanz de Sautuola, a local landowner and an amateur archaeologist, by his daughter Maria in November 1879. The little girl was 'running about in the cavern and playing about here and there', while her father was digging the floor of the cave. Suddenly she noticed the paintings on the ceiling: 'Look, Papa, oxen!' At first, her father just laughed, but soon realised that

some sort of paste rather than paint had been used for the paintings and became 'so enthusiastic that he could hardly speak'. He published a booklet the following year, but for almost two decades his findings were dismissed by European archaeologists on the ground that these were too good to be ancient.

Hundreds of paintings of animals (done between 30,000 and 12,000 years ago) have been discovered in the caves of Lascaux and Chauvet, both in France, and Altamira, in Spain. These include depictions of bison, horses, ibex, deer, mammoths, rhinos, lions, bears, panthers, hyenas and owls.

More questions have been raised than answered regarding these paintings. For example, why do some areas of caves have paintings and not others? Why were some animals painted and not others? Why were men painted both individually and in groups, whereas women were depicted only in groups? Why were men painted near animals but never women? Why were groups of animals painted in the sections of caves where sounds carried well?

Several explanations have been offered. One is that because of the importance of hunting, the paintings of animals were associated with ritual and magic. The act of painting could have been a ritual to ensure a successful hunt. Another explanation offered is that these caves were possibly meeting places for small groups of people or locations for group activities. These groups could share hunting techniques and knowledge, while paintings and engravings served as the media for passing information from one generation to the next.

The above account of early societies has been based on archaeological evidence. Clearly, there is much that we still do not know. As mentioned at the beginning of this chapter, hunter-gatherer societies exist even today. Can one learn anything about past societies from present-day hunter-gatherers? This is a question we will address in the next section.

Early Encounters with Hunter-Gatherers in Africa

The following is an account by a member of an African pastoral group about its initial contact in 1870 with the !Kung San, a hunter-gatherer society living in the Kalahari desert:

When we first came into this area, all we saw were strange footprints in the sand. We wondered what kind of people these were. They were very afraid of us and would hide whenever we came around. We found their villages, but they were always empty because as soon as they saw strangers coming, they would scatter and hide in the bush. We said: 'Oh, this is good; these people are afraid of us, they are weak and we can easily rule over them.' So we just ruled them. There was no killing or fighting.

You will read more about encounters with hunter-gatherers in Themes 8 and 10.

Anthropology is a discipline that studies human culture and evolutionary aspects of human biology.

ACTIVITY 3

Why do the Hadza not assert rights over land and its resources? Why do the size and location of camps keep changing from season to season? Why is there never any shortage of food even in times of drought? Can you name any such hunter-gatherer societies in India today?

The Hadza

'The Hadza are a small group of hunters and gatherers, living in the vicinity of Lake Eyasi, a salt, rift-valley lake...The country of the eastern Hadza, dry, rocky savanna, dominated by thorn scrub and acacia trees...is rich in wild foods. Animals are exceptionally numerous and were certainly commoner at the beginning of the century. Elephant, rhinoceros, buffalo, giraffe, zebra, waterbuck, gazelle, warthog, baboon, lion, leopard, and hyena are all common, as are smaller animals such as porcupine, hare, jackal, tortoise and many others. All of these animals, apart from the elephant, are hunted and eaten by the Hadza. The amount of meat that could be regularly eaten without endangering the future of the game is probably greater than anywhere else in the world where hunters and gatherers live or have lived in the recent past.

Vegetable food – roots, berries, the fruit of the baobab tree, etc. – though not often obvious to the casual observer, is always abundant even at the height of the dry season in a year of drought. The type of vegetable food available is different in the six-month wet season from the dry season but there is no period of shortage. The honey and grubs of seven species of wild bee are eaten; supplies of these vary from season to season and from year to year.

Sources of water are widely distributed over the country in the wet season but are very few in the dry season. The Hadza consider that about 5-6 kilometres is the maximum distance over which water can reasonably be carried and camps are normally sited within a kilometre of a water course.

Part of the country consists of open grass plains but the Hadza never build camps there. Camps are invariably sited among trees or rocks and, by preference, among both.

The eastern Hadza assert no rights over land and its resources. Any individual may live wherever he likes and may hunt animals, collect roots, berries, and honey and draw water anywhere in Hadza country without any sort of restriction...

In spite of the exceptional numbers of game animals in their area, the Hadza rely mainly on wild vegetable matter for their food. Probably as much as 80 per cent of their food by weight is vegetable, while meat and honey together account for the remaining 20 per cent.

Camps are commonly small and widely dispersed in the wet season, large and concentrated near the few available sources of water in the dry season.

There is never any shortage of food even in the time of drought.'

– Written in 1960 by James Woodburn, an anthropologist.

Hunter-Gatherer Societies From the Present to the Past

As our knowledge of present-day hunter-gatherers increased through studies by anthropologists, a question that began to be posed was whether the information about living hunters and gatherers could be used to understand past societies. Currently, there are two opposing views on this issue.

On one side are scholars who have directly applied specific data from present-day hunter-gatherer societies to interpret the archaeological remains of the past. For example, some archaeologists have suggested that the hominid sites, dated to 2 mya, along the margins of Lake Turkana could have been dry season camps of early humans, because such a practice has been observed among the Hadza and the !Kung San.

On the other side are scholars who feel that ethnographic data cannot be used for understanding past societies as the two are totally different. For instance, present-day hunter-gatherer societies pursue several other economic activities along with hunting and gathering. These include engaging in exchange and trade in minor forest produce, or working as paid labourers in the fields of neighbouring farmers. Moreover, these societies are totally marginalised in all senses – geographically, politically and socially. The conditions in which they live are very different from those of early humans.

Another problem is that there is tremendous variation amongst living hunter-gatherer societies. There are conflicting data on many issues such as the relative importance of hunting and gathering, group sizes, or the movement from place to place.

Also, there is little consensus regarding the division of labour in food procurement. Although today generally women gather and men hunt, there are societies where both women and men hunt and gather and make tools. In any case, the important role of women in contributing to the food supply in such societies cannot be denied. It is perhaps this factor that ensures a relatively equal role for both women and men in present-day hunter-gatherer societies, although there are variations. While this may be the case today, it is difficult to make any such inference for the past.

Epilogue

For several million years, humans lived by hunting wild animals and gathering wild plants. Then, between 10,000 and 4,500 years ago, people in different parts of the world learnt to domesticate certain plants and animals. This led to the development of farming and pastoralism as a way of life. The shift from foraging to farming was a

Ethnography is the study of contemporary ethnic groups. It includes an examination of their modes of livelihood, technology, gender roles, rituals, political institutions and social customs.

ACTIVITY 4

What do you think are the advantages and disadvantages of using ethnographic accounts to reconstruct the lives of the earliest peoples?

major turning point in human history. Why did this change take place at this point of time?

The last ice age came to an end about 13,000 years ago and with that warmer, wetter conditions prevailed. As a result, conditions were favourable for the growth of grasses such as wild barley and wheat. At the same time, as open forests and grasslands expanded, the population of certain animal species such as wild sheep, goat, cattle, pig and donkey increased. What we find is that human societies began to gradually prefer areas that had an abundance of wild grasses and animals. Now relatively large, permanent communities occupied such areas for most parts of the year. With some areas being clearly preferred, a pressure may have built up to increase the food supply. This may have triggered the process of domestication of certain plants and animals. It is likely that a combination of factors which included climatic change, population pressure, a greater reliance on and knowledge of a few species of plants (such as wheat, barley, rice and millet) and animals (such as sheep, goat, cattle, donkey and pig) played a role in this transformation.

One such area where farming and pastoralism began around 10,000 years ago was the Fertile Crescent, extending from the Mediterranean coast to the Zagros mountains in Iran. With the introduction of agriculture, more people began to stay in one place for even longer periods than they had done before. Thus permanent houses began to be built of mud, mud bricks and even stone. These are some of the earliest villages known to archaeologists.

Farming and pastoralism led to the introduction of many other changes such as the making of pots in which to store grain and other produce, and to cook food. Besides, new kinds of stone tools came into use. Other new tools such as the plough were used in agriculture. Gradually, people became familiar with metals such as copper and tin. The wheel, important for both pot making and transportation, came into use.

About 5,000 years ago, even larger concentrations of people began to live together in cities. Why did this happen? And what are the differences between cities and other settlements? Look out for answers to these and other questions in Theme 2.

TIMELINE 1 (mya)	
36-24 mya	Primates; Monkeys in Asia and Africa
24 mya	(Superfamily) Hominoids; Gibbons, Asian orang-utan and African apes (gorilla, chimpanzee and bonobo or 'pygmy' chimpanzee)
6.4 mya	Branching out of hominoids and hominids
5.6 mya	<i>Australopithecus</i>
2.6-2.5	Earliest stone tools
2.5-2.0	Cooling and drying of Africa, resulting in decrease in woodlands and increase in grasslands
2.5-2.0 mya	<i>Homo</i>
2.2 mya	<i>Homo habilis</i>
1.8 mya	<i>Homo erectus</i>
1.3 mya	Extinction of <i>Australopithecus</i>
0.8 mya	'Archaic' <i>sapiens</i> , <i>Homo heidelbergensis</i>
0.19-0.16 mya	<i>Homo sapiens sapiens</i> (modern humans)

TIMELINE 2 (years ago)	
Earliest evidence of burials	300,000
Extinction of <i>Homo erectus</i>	200,000
Development of voice box	200,000
Archaic <i>Homo sapiens</i> skull in the Narmada valley, India	200,000-130,000
Emergence of modern humans	195,000-160,000
Emergence of Neanderthals	130,000
Earliest evidence of hearths	125,000
Extinction of Neanderthals	35,000
Earliest evidence of figurines made of fired clay	27,000
Invention of sewing needles	21,000



The Rift Valley, East Africa.

Exercises

ANSWER IN BRIEF

1. Look at the diagram showing the positive feedback mechanism on page 13. Can you list the inputs that went into tool making? What were the processes that were strengthened by tool making?
2. Humans and mammals such as monkeys and apes have certain similarities in behaviour and anatomy. This indicates that humans possibly evolved from apes. List these resemblances in two columns under the headings of (a) behaviour and (b) anatomy. Are there any differences that you think are noteworthy?
3. Discuss the arguments advanced in favour of the regional continuity model of human origins. Do you think it provides a convincing explanation of the archaeological evidence? Give reasons for your answer.
4. Which of the following do you think is best documented in the archaeological record: (a) gathering, (b) tool making, (c) the use of fire?

ANSWER IN A SHORT ESSAY

5. Discuss the extent to which (a) hunting and (b) constructing shelters would have been facilitated by the use of language. What other modes of communication could have been used for these activities?
6. Choose any two developments each from Timelines 1 and 2 at the end of the chapter and indicate why you think these are significant.

WRITING AND CITY LIFE

CITY life began in Mesopotamia, the land between the Euphrates and the Tigris rivers that is now part of the Republic of Iraq. Mesopotamian civilisation is known for its prosperity, city life, its voluminous and rich literature and its mathematics and astronomy. Mesopotamia's writing system and literature spread to the eastern Mediterranean, northern Syria, and Turkey after 2000 BCE, so that the kingdoms of that entire region were writing to one another, and to the Pharaoh of Egypt, in the language and script of Mesopotamia. Here we shall explore the connection between city life and writing, and then look at some outcomes of a sustained tradition of writing.*

In the beginning of recorded history, the land, mainly the urbanised south (see discussion below), was called Sumer and Akkad. After 2000 BCE, when Babylon became an important city, the term Babylonia was used for the southern region. From about 1100 BCE, when the Assyrians established their kingdom in the north, the region became known as Assyria. The first known language of the land was Sumerian. It was gradually replaced by Akkadian around 2400 BCE when Akkadian speakers arrived. This language flourished till about Alexander's time (336-323 BCE), with some regional changes occurring. From 1400 BCE, Aramaic also trickled in. This language, similar to Hebrew, became widely spoken after 1000 BCE. It is still spoken in parts of Iraq.

Archaeology in Mesopotamia began in the 1840s. At one or two sites (including Uruk and Mari, which we discuss below), excavations continued for decades. (No Indian site has ever seen such long-term projects.) Not only can we study hundreds of Mesopotamian buildings, statues, ornaments, graves, tools and seals as sources, there are thousands of written documents.

Mesopotamia was important to Europeans because of references to it in the Old Testament, the first part of the Bible. For instance, the Book of Genesis of the Old Testament refers to 'Shinar', meaning Sumer, as a land of brick-built cities. Travellers and scholars of Europe looked on Mesopotamia as a kind of ancestral land, and when archaeological work began in the area, there was an attempt to prove the literal truth of the Old Testament.



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*The name Mesopotamia is derived from the Greek words *mesos*, meaning middle, and *potamos*, meaning river.

According to the Bible, the Flood was meant to destroy all life on earth. However, God chose a man, Noah, to ensure that life could continue after the Flood. Noah built a huge boat, an ark. He took a pair each of all known species of animals and birds on board the ark, which survived the Flood. There was a strikingly similar story in the Mesopotamian tradition, where the principal character was called Ziusudra or Utnapishtim.

From the mid-nineteenth century there was no stopping the enthusiasm for exploring the ancient past of Mesopotamia. In 1873, a British newspaper funded an expedition of the British Museum to search for a tablet narrating the story of the Flood, mentioned in the Bible.

By the 1960s, it was understood that the stories of the Old Testament were not literally true, but may have been ways of expressing memories about important changes in history. Gradually, archaeological techniques became far more sophisticated and refined. What is more, attention was directed to different questions, including reconstructing the lives of ordinary people. Establishing the literal truth of Biblical narratives receded into the background. Much of what we discuss subsequently in the chapter is based on these later studies.



MAP 1: West Asia

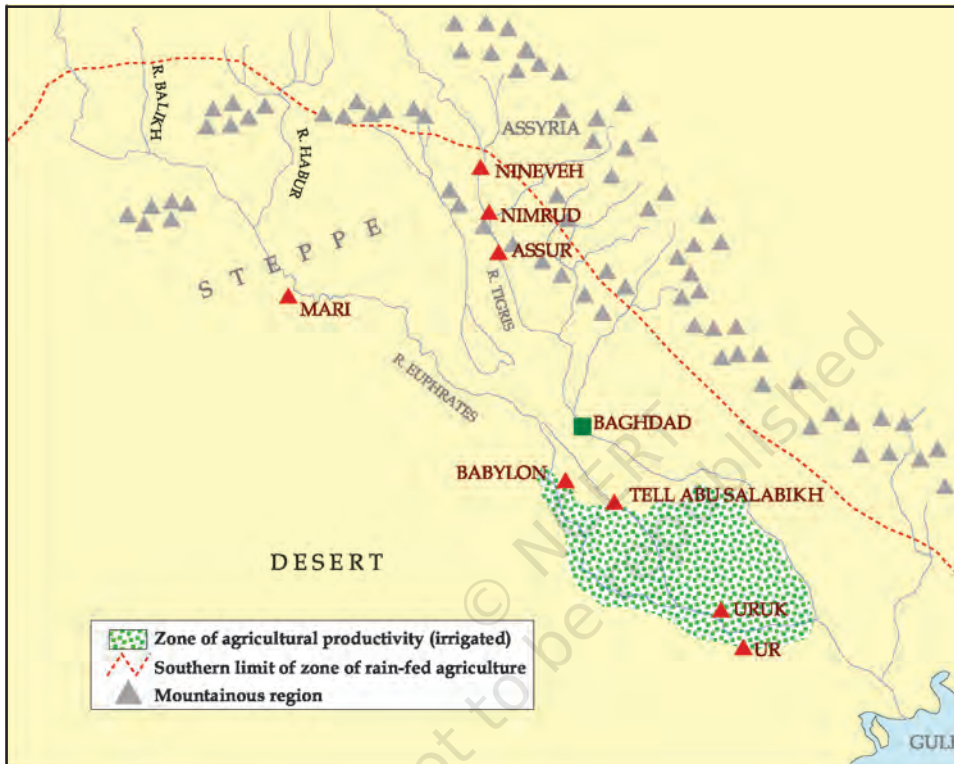
ACTIVITY 1

Many societies have myths about floods. These are often ways of preserving and expressing memories about important changes in history. Find out more about these, noting how life before and after the flood is represented.

Mesopotamia and its Geography

Iraq is a land of diverse environments. In the north-east lie green, undulating plains, gradually rising to tree-covered mountain ranges with clear streams and wild flowers, with enough rainfall to grow crops. Here, agriculture began between 7000 and 6000 BCE. In the north, there is a stretch of upland called a steppe, where animal herding offers people a better livelihood than agriculture – after the winter rains, sheep and goats feed on the grasses and low shrubs that grow here. To the east, tributaries of the Tigris provide routes of

communication into the mountains of Iran. The south is a desert – and this is where the first cities and writing emerged (see below). This desert could support cities because the rivers Euphrates and Tigris, which rise in the northern mountains, carry loads of silt (fine mud). When they flood or when their water is let out on to the fields, fertile silt is deposited.



MAP 2: Mesopotamia: Mountains, Steppe, Desert, Irrigated Zone of the South.

After the Euphrates has entered the desert, its water flows out into small channels. These channels flood their banks and, in the past, functioned as irrigation canals: water could be let into the fields of wheat, barley, peas or lentils when necessary. Of all ancient systems, that of the Roman Empire (Theme 3) included, it was the agriculture of southern Mesopotamia that was the most productive, even though the region did not have sufficient rainfall to grow crops.

Not only agriculture, Mesopotamian sheep and goats that grazed on the steppe, the north-eastern plains and the mountain slopes (that is, on tracts too high for the rivers to flood and fertilise) produced meat, milk and wool in abundance. Further, fish was available in rivers and date-palms gave fruit in summer. Let us not, however, make the mistake of thinking that cities grew simply because of rural prosperity. We shall discuss other factors by and by, but first let us be clear about city life.

The earliest cities in Mesopotamia date back to the bronze age, c.3000 BCE. Bronze is an alloy of copper and tin. Using bronze meant procuring these metals, often from great distances. Metal tools were necessary for accurate carpentry, drilling beads, carving stone seals, cutting shell for inlaid furniture, etc. Mesopotamian weapons were also of bronze – for example, the tips of the spears that you see in the illustration on p. 38.

The Significance of Urbanism

Cities and towns are not just places with large populations. It is when an economy develops in spheres other than food production that it becomes an advantage for people to cluster in towns. Urban economies comprise besides food production, trade, manufactures and services. City people, thus, cease to be self-sufficient and depend on the products or services of other (city or village) people. There is continuous interaction among them. For instance, the carver of a stone seal requires bronze tools that he himself cannot make, and coloured stones for the seals that he does not know where to get: his 'specialisation' is fine carving, not trading. The bronze tool maker does not himself go out to get the metals, copper and tin. Besides, he needs regular supplies of charcoal for fuel. The *division of labour* is a mark of urban life.

Further, there must be a social organisation in place. Fuel, metal, various stones, wood, etc., come from many different places for city manufacturers. Thus, organised trade and storage is needed. There are deliveries of grain and other food items from the village to the city, and food supplies need to be stored and distributed. Besides, many different activities have to be coordinated: there must be not only stones but also bronze tools and pots available for seal cutters. Obviously, in such a system some people give commands that others obey, and urban economies often require the keeping of written records.

ACTIVITY 2

Discuss whether city life would have been possible without the use of metals.

The Warka Head



This woman's head was sculpted in white marble at Uruk before 3000 BCE. The eyes and eyebrows would probably have taken lapis lazuli (blue) and shell (white) and bitumen (black) inlays, respectively. There is a groove along the top of the head, perhaps for an ornament. This is a world-famous piece of sculpture, admired for the delicate modelling of the woman's mouth, chin and cheeks. And it was modelled in a hard stone that would have been imported from a distance.

Beginning with the procurement of stone, list all the specialists who would be involved in the production of such a piece of sculpture.

Movement of Goods into Cities

However rich the food resources of Mesopotamia, its mineral resources were few. Most parts of the south lacked stones for tools, seals and jewels; the wood of the Iraqi date-palm and poplar was not good enough for carts, cart wheels or boats; and there was no metal for tools, vessels or ornaments. So we can surmise that the ancient Mesopotamians could have traded their abundant textiles and agricultural produce for wood, copper, tin, silver, gold, shell and various stones from Turkey and Iran, or across the Gulf. These latter regions had mineral resources, but much less scope for agriculture. Regular exchanges – possible only when there was a social organisation – to equip foreign expeditions and direct the exchanges were initiated by the people of southern Mesopotamia.

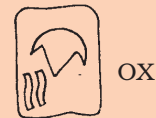
Besides crafts, trade and services, efficient transport is also important for urban development. If it takes too much time, or too much animal feed, to carry grain or charcoal into cities on pack animals or bullock carts, the city economy will not be viable. The cheapest mode of transportation is, everywhere, over water. River boats or barges loaded with sacks of grain are propelled by the current of the river and/or wind, but when animals transport goods, they need to be fed. The canals and natural channels of ancient Mesopotamia were in fact routes of goods transport between large and small settlements, and in the account on the city of Mari later in the chapter, the importance of the Euphrates as a 'world route' will become clear.

The Development of Writing

All societies have languages in which certain spoken sounds convey certain meanings. This is verbal communication. Writing too is verbal communication – but in a different way. When we talk about writing or a script, we mean that *spoken sounds* are represented in *visible signs*.

The first Mesopotamian tablets, written around 3200 BCE, contained picture-like signs and numbers. These were about 5,000 lists of oxen, fish, bread loaves, etc. – lists of goods that were brought into or distributed from the temples of Uruk, a city in the south. Clearly, writing began when society needed to keep records of transactions – because in city life transactions occurred at different times, and involved many people and a variety of goods.

Clay tablets c.3200 BCE. Each tablet is 3.5 cm or less in height, with picture-like signs (ox, fish, grain, boat) and numbers (U)



OX



GRAIN,
FISH



NUMBERS,
BOAT

še

kur

i

ma

Cuneiform syllabic
signs.

Mesopotamians wrote on tablets of clay. A scribe would wet clay and pat it into a size he could hold comfortably in one hand. He would

A clay tablet written on both sides in cuneiform. It is a mathematical exercise – you can see a triangle and lines across the triangle on the top of the obverse side. You can see that the letters have been pressed into the clay.



* Cuneiform is derived from the Latin words *cuneus*, meaning 'wedge' and *forma*, meaning 'shape'.

carefully smoothen its surfaces. With the sharp end of a reed cut obliquely, he would press wedge-shaped ('cuneiform*') signs on to the smoothened surface while it was still moist. Once dried in the sun, the clay would harden and tablets would be almost as indestructible as pottery. When a written record of, say, the delivery of pieces of metal had ceased to be relevant, the tablet was thrown away. Once the surface dried, signs could not be pressed on to a tablet: so each transaction, however minor, required a separate written tablet. This is why tablets occur by the hundreds at Mesopotamian sites. And it is because of this wealth of sources that we know so much more about Mesopotamia than we do about contemporary India.

By 2600 BCE or so, the letters became cuneiform, and the language was Sumerian. Writing was now used not only for keeping records, but also for making dictionaries, giving legal validity to land transfers, narrating the deeds of kings, and announcing the changes a king had made in the customary laws of the land. Sumerian, the earliest known language of Mesopotamia, was gradually replaced after 2400 BCE by the Akkadian language. Cuneiform writing in the Akkadian language continued in use until the first century CE, that is, for more than 2,000 years.

The System of Writing

The sound that a cuneiform sign represented was not a single consonant or vowel (such as *m* or *a* in the English alphabet), but syllables (say, *-put-*, or *-la-*, or *-in-*). Thus, the signs that a Mesopotamian scribe had

to learn ran into hundreds, and he had to be able to handle a wet tablet and get it written before it dried. So, writing was a skilled craft but, more important, it was an enormous intellectual achievement, conveying in visual form the system of sounds of a particular language.

Literacy

Very few Mesopotamians could read and write. Not only were there hundreds of signs to learn, many of these were complex (see p. 33). If a king could read, he made sure that this was recorded in one of his boastful inscriptions! For the most part, however, writing reflected the mode of speaking.

A letter from an official would have to be read out to the king. So it would begin:

‘To my lord A, speak: ... Thus says your servant B: ... I have carried out the work assigned to me ...’

A long mythical poem about creation ends thus:

‘Let these verses be held in remembrance and let the elder teach them;

let the wise one and the scholar discuss them;

let the father repeat them to his sons;

let the ears of (even) the herdsman be opened to them.’

The Uses of Writing

The connection between city life, trade and writing is brought out in a long Sumerian epic poem about Enmerkar, one of the earliest rulers of Uruk. In Mesopotamian tradition, Uruk was the city par excellence, often known simply as The City.

Enmerkar is associated with the organisation of the first trade of Sumer: in the early days, the epic says, ‘trade was not known’. Enmerkar wanted lapis lazuli and precious metals for the beautification of a city temple and sent his messenger out to get them from the chief of a very distant land called Aratta. ‘The messenger heeded the word of the king. By night he went just by the stars. By day, he would go by heaven’s sun divine. He had to go up into the mountain ranges, and had to come down out of the mountain ranges. The people of Susa (a city) below the mountains saluted him like tiny mice*. Five mountain ranges, six mountain ranges, seven mountain ranges he crossed...’

The messenger could not get the chief of Aratta to part with lapis lazuli or silver, and he had to make the long journey back and forth, again and again, carrying threats and promises from the king of Uruk. Ultimately, the messenger ‘grew weary of mouth’. He got all the messages mixed up. Then, ‘Enmerkar formed a clay tablet in his hand, and he wrote the words down. In those days, there had been no writing down of words on clay.’

*The poet means that once the messenger had climbed to a great height, everything appeared small in the valley far below.

*Cuneiform letters were wedge shaped, hence, like nails.

Given the written tablet, 'the ruler of Aratta examined the clay. The spoken words were nails*. His face was frowning. He kept looking at the tablet.'

This should not be taken as the literal truth, but it can be inferred that in Mesopotamian understanding it was kingship that organised trade and writing. This poem also tells us that, besides being a means of storing information and of sending messages afar, writing was seen as a sign of the superiority of Mesopotamian urban culture.

Urbanisation in Southern Mesopotamia: Temples and Kings

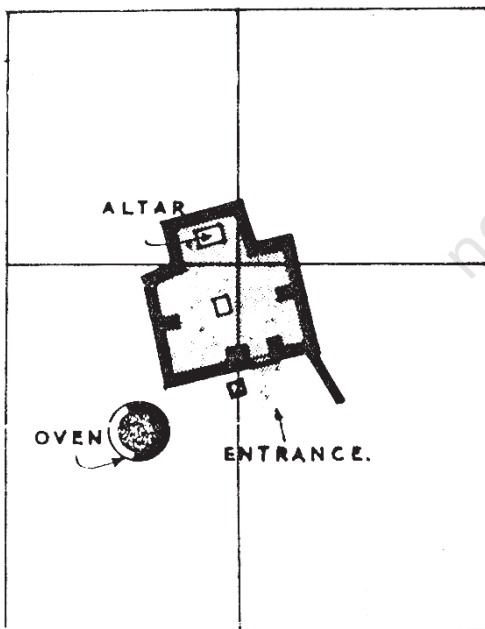
From 5000 BCE, settlements had begun to develop in southern Mesopotamia. The earliest cities emerged from some of these settlements. These were of various kinds: those that gradually developed around temples; those that developed as centres of trade; and imperial cities. It is cities of the first two kinds that will be discussed here.

Early settlers (their origins are unknown) began to build and rebuild temples at selected spots in their villages. The earliest known temple was a small shrine made of unbaked bricks. Temples were the residences of various gods: of the Moon God of Ur, or of Inanna the Goddess of Love and War. Constructed in brick, temples became larger over time, with

several rooms around open courtyards. Some of the early ones were possibly not unlike the ordinary house – for the temple was the house of a god. But temples always had their outer walls going in and out at regular intervals, which no ordinary building ever had.

The god was the focus of worship: to him or her people brought grain, curd and fish (the floors of some early temples had thick layers of fish bones). The god was also the theoretical owner of the agricultural fields, the fisheries, and the herds of the local community. In time, the processing of produce (for example, oil pressing, grain grinding, spinning, and the weaving of woollen cloth) was also done in the temple. Organiser of production at a level above the household, employer of merchants and keeper of written records of distributions and allotments of grain, plough animals, bread, beer, fish, etc., the temple gradually developed its activities and became the main urban institution. But there was also another factor on the scene.

In spite of natural fertility, agriculture was subject to hazards. The natural outlet channels of the Euphrates would have too much water one year and flood the crops, and sometimes they would change course altogether. As the archaeological record shows, villages were periodically relocated in Mesopotamian history. There were man-made problems as well. Those who lived on the upstream



The earliest known temple of the south, c. 5000 BCE (plan).



A temple of a later period, c.3000 BCE, with an open courtyard and in-and-out façade (as excavated).

stretches of a channel could divert so much water into their fields that villages downstream were left without water. Or they could neglect to clean out the silt from their stretch of the channel, blocking the flow of water further down. So the early Mesopotamian countryside saw repeated conflict over land and water.

When there was continuous warfare in a region, those chiefs who had been successful in war could oblige their followers by distributing the loot, and could take prisoners from the defeated groups to employ as their guards or servants. So they could increase their influence and clout. Such war leaders, however, would be here today and gone tomorrow – until a time came when such leadership came to increase the well-being of the community with the creation of new institutions or practices. In time, victorious chiefs began to offer precious booty to the gods and thus beautify the community's temples. They would send men out to fetch fine stones and metal for the benefit of the god and community and organise the distribution of temple wealth in an efficient way by accounting for things that came in and went out. As the poem about Enmerkar shows, this gave the king high status and the authority to command the community.

We can imagine a mutually reinforcing cycle of development in which leaders encouraged the settlement of villagers close to themselves, to be able to rapidly get an army together. Besides, people would be safe living in close proximity to one another. At Uruk, one of the earliest temple towns, we find depictions of armed heroes and their victims, and careful archaeological surveys have shown that around 3000 BCE, when Uruk grew to the enormous extent of 250 hectares – twice as large as Mohenjo-daro would be in later centuries – dozens of small villages were deserted. There had



Top: Basalt stele* showing a bearded man twice. Note his headband and hair, waistband and long skirt. In the lower scene he attacks a lion with a huge bow and arrow. In the scene above, the hero finally kills the rampant lion with a spear (c.3200 BCE).

been a major population shift. Significantly, Uruk also came to have a defensive wall at a very early date. The site was continuously occupied from about 4200 BCE to about 400 CE, and by about 2800 BCE it had expanded to 400 hectares.

War captives and local people were put to work for the temple, or directly for the ruler. This, rather than agricultural tax, was compulsory. Those who were put to work were paid rations. Hundreds of ration lists have been found, which give, against people's names, the quantities of grain, cloth or oil allotted to them. It has been estimated that one of the temples took 1,500 men working 10 hours a day, five years to build.

With rulers commanding people to fetch stones or metal ores, to come and make bricks or lay the bricks for a temple, or else to go to a distant country to fetch suitable materials, there were also technical advances at Uruk around 3000 BCE. Bronze tools came into use for various crafts. Architects learnt to construct brick columns, there being no suitable wood to bear the weight of the roof of large halls.

Hundreds of people were put to work at making and baking clay cones that could be pushed into temple walls, painted in different colours, creating a colourful mosaic. In sculpture, there were superb achievements, not in easily available clay but in imported stone. And then there was a technological landmark that we can say is appropriate to an urban economy: the potter's wheel. In the long run, the wheel enables a potter's workshop to 'mass produce' dozens of similar pots at a time.

*Steles are stone slabs with inscriptions or carvings.

Impression of a cylinder seal, c.3200 BCE. The bearded and armed standing figure is similar in dress and hairstyle to the hero in the stele* shown above. Note three prisoners of war, their arms bound, and a fourth man beseeching the war leader.



The Seal – An Urban Artefact

In India, early stone seals were stamped. In Mesopotamia until the end of the first millennium BCE, cylindrical stone seals, pierced down the centre, were fitted with a stick and rolled over wet clay so that a continuous picture was created. They were carved by very skilled craftsmen, and sometimes carry writing: the name of the owner, his god, his official position, etc. A seal could be rolled on clay covering the string knot of a cloth package or the mouth of a pot, keeping the contents safe. When rolled on a letter written on a clay tablet, it became a mark of authenticity. So the seal was the mark of a city dweller's role in public life.



Five early cylinder seals and their impressions.
Describe what you see in each of the impressions. Is the cuneiform script shown on them?

Life in the City

What we have seen is that a ruling elite had emerged: a small section of society had a major share of the wealth. Nothing makes this fact as clear as the enormous riches (jewellery, gold vessels, wooden musical instruments inlaid with white shell and lapis lazuli, ceremonial daggers of gold, etc.) buried with some kings and queens at Ur. But what of the ordinary people?

We know from the legal texts (disputes, inheritance matters, etc.) that in Mesopotamian society the nuclear family* was the norm, although a married son and his family often resided with his parents. The father was the head of the family. We know a little about the procedures for marriage. A declaration was made about the willingness to marry, the bride's parents giving their consent to the marriage. Then a gift was given by the groom's people to the bride's

*A nuclear family comprises a man, his wife and children.

people. When the wedding took place, gifts were exchanged by both parties, who ate together and made offerings in a temple. When her mother-in-law came to fetch her, the bride was given her share of the inheritance by her father. The father's house, herds, fields, etc., were inherited by the sons.

Let us look at Ur, one of the earliest cities to have been excavated. Ur was a town whose ordinary houses were systematically excavated in the 1930s. Narrow winding streets indicate that wheeled carts could not have reached many of the houses. Sacks of grain and firewood would have arrived on donkey-back. Narrow winding streets and the irregular shapes of house plots also indicate an absence of town planning. There were no street drains of the kind we find in contemporary Mohenjo-daro. Drains and clay pipes were instead found in the inner courtyards of the Ur houses and it is thought that house roofs sloped inwards and rainwater was channelled via the drainpipes into sumps* in the inner courtyards.

*A sump is a covered basin in the ground into which water and sewage flow.

A residential area at Ur, c. 2000 BCE. Can you locate, besides the winding streets, two or three blind alleys?



This would have been a way of preventing the unpaved streets from becoming excessively slushy after a downpour.

Yet people seem to have swept all their household refuse into the streets, to be trodden underfoot! This made street levels rise, and over time the thresholds of houses had also to be raised so that no mud would flow inside after the rains. Light came into the rooms not from windows but from doorways opening into the courtyards: this would also have given families their privacy. There were superstitions about houses, recorded in omen tablets at Ur: a raised threshold brought wealth; a front door that did not open towards another house was lucky; but if the main wooden door of a house opened outwards (instead of inwards), the wife would be a torment to her husband!

There was a town cemetery at Ur in which the graves of royalty and commoners have been found, but a few individuals were found buried under the floors of ordinary houses.

A Trading Town in a Pastoral Zone

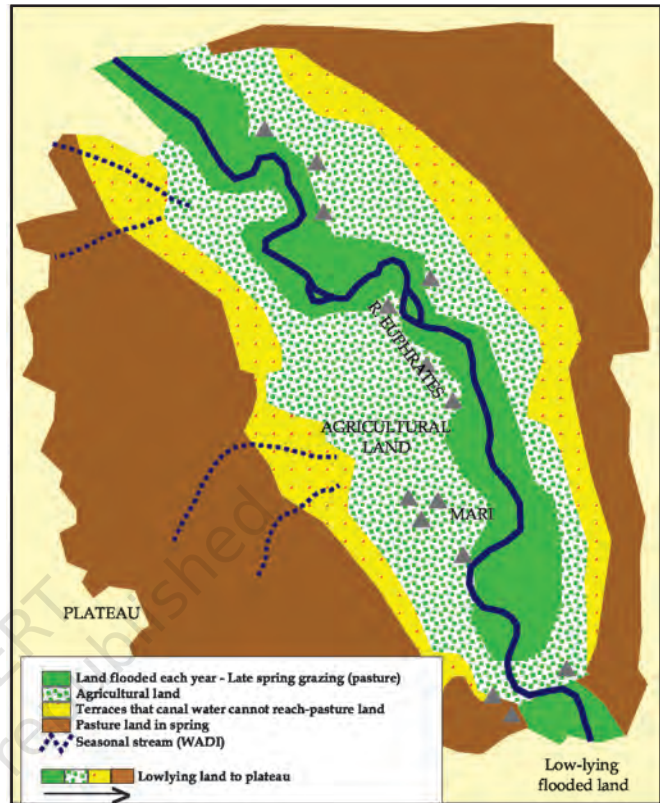
MAP 3: The Location of Mari

After 2000 BCE the royal capital of Mari flourished. You will have noticed (see Map 2) that Mari stands not on the southern plain with its highly productive agriculture but much further upstream on the Euphrates. Map 3 with its colour coding shows that agriculture and animal rearing were carried out close to each other in this region. Some communities in the kingdom of Mari had both farmers and pastoralists, but most of its territory was used for pasturing sheep and goats.

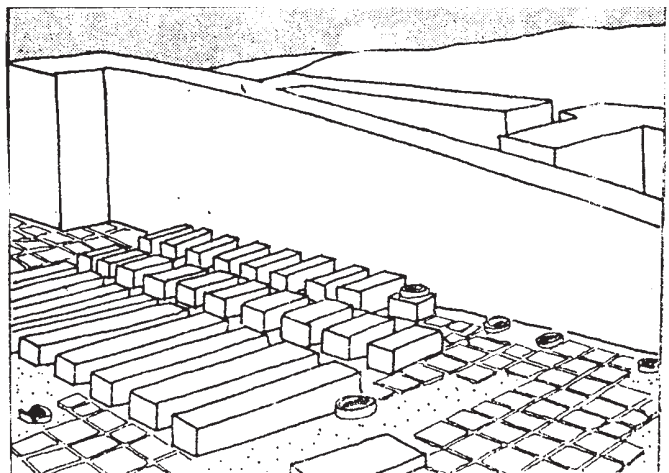
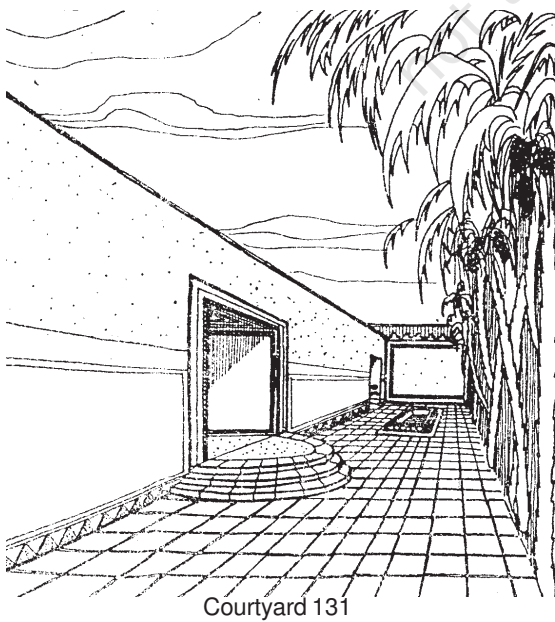
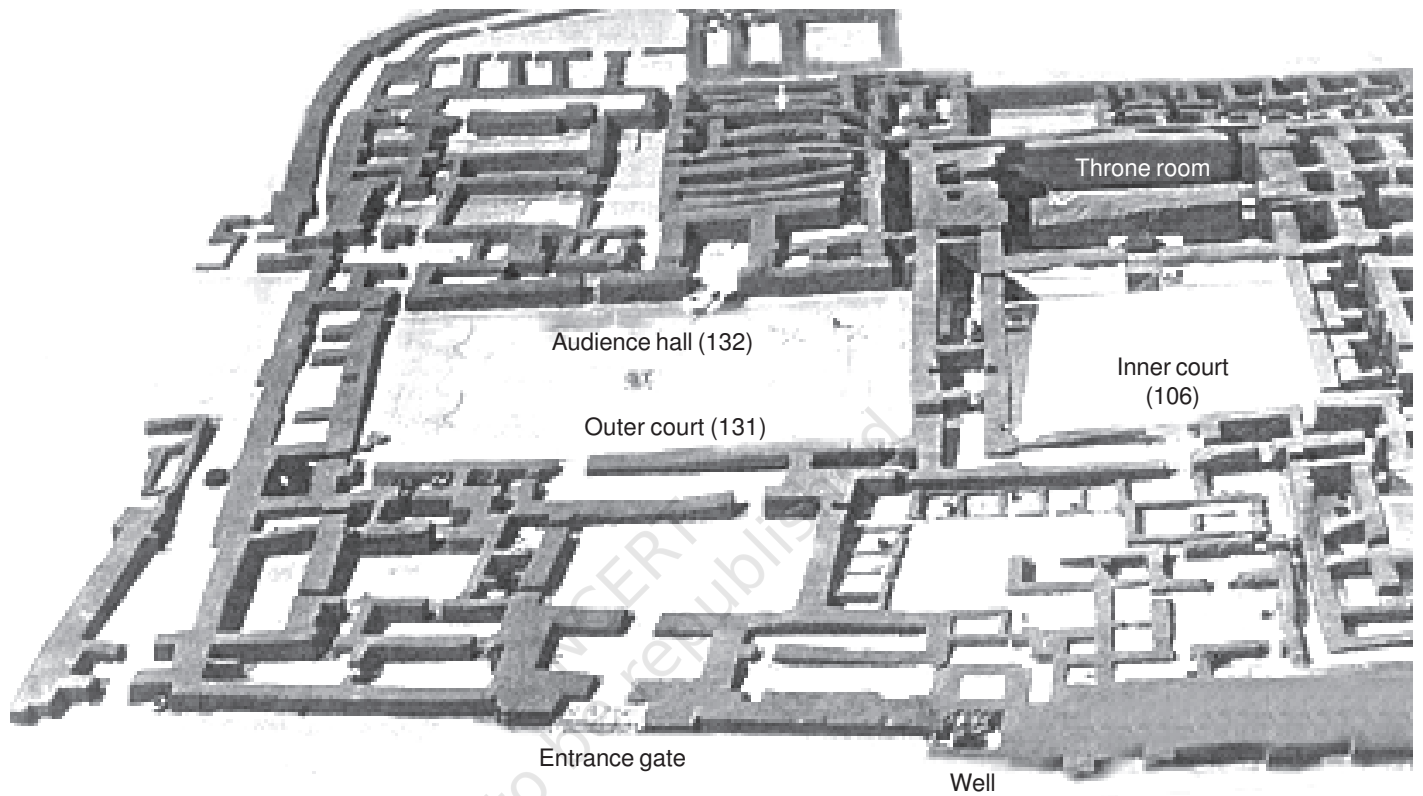
Herders need to exchange young animals, cheese, leather and meat in return for grain, metal tools, etc., and the manure of a penned flock is also of great use to a farmer. Yet, at the same time, there may be conflict. A shepherd may take his flock to water across a sown field, to the ruin of the crop. Herdsmen being mobile can raid agricultural villages and seize their stored goods. For their part, settled groups may deny pastoralists access to river and canal water along a certain set of paths.

Through Mesopotamian history, nomadic communities of the western desert filtered into the prosperous agricultural heartland. Shepherds would bring their flocks into the sown area in the summer. Such groups would come in as herders, harvest labourers or hired soldiers, occasionally become prosperous, and settle down. A few gained the power to establish their own rule. These included the Akkadians, Amorites, Assyrians and Aramaeans. (You will read more about rulers from pastoral societies in Theme 5.) The kings of Mari were Amorites whose dress differed from that of the original inhabitants and who respected not only the gods of Mesopotamia but also raised a temple at Mari for Dagan, god of the steppe. Mesopotamian society and culture were thus open to different people and cultures, and the vitality of the civilisation was perhaps due to this intermixture.

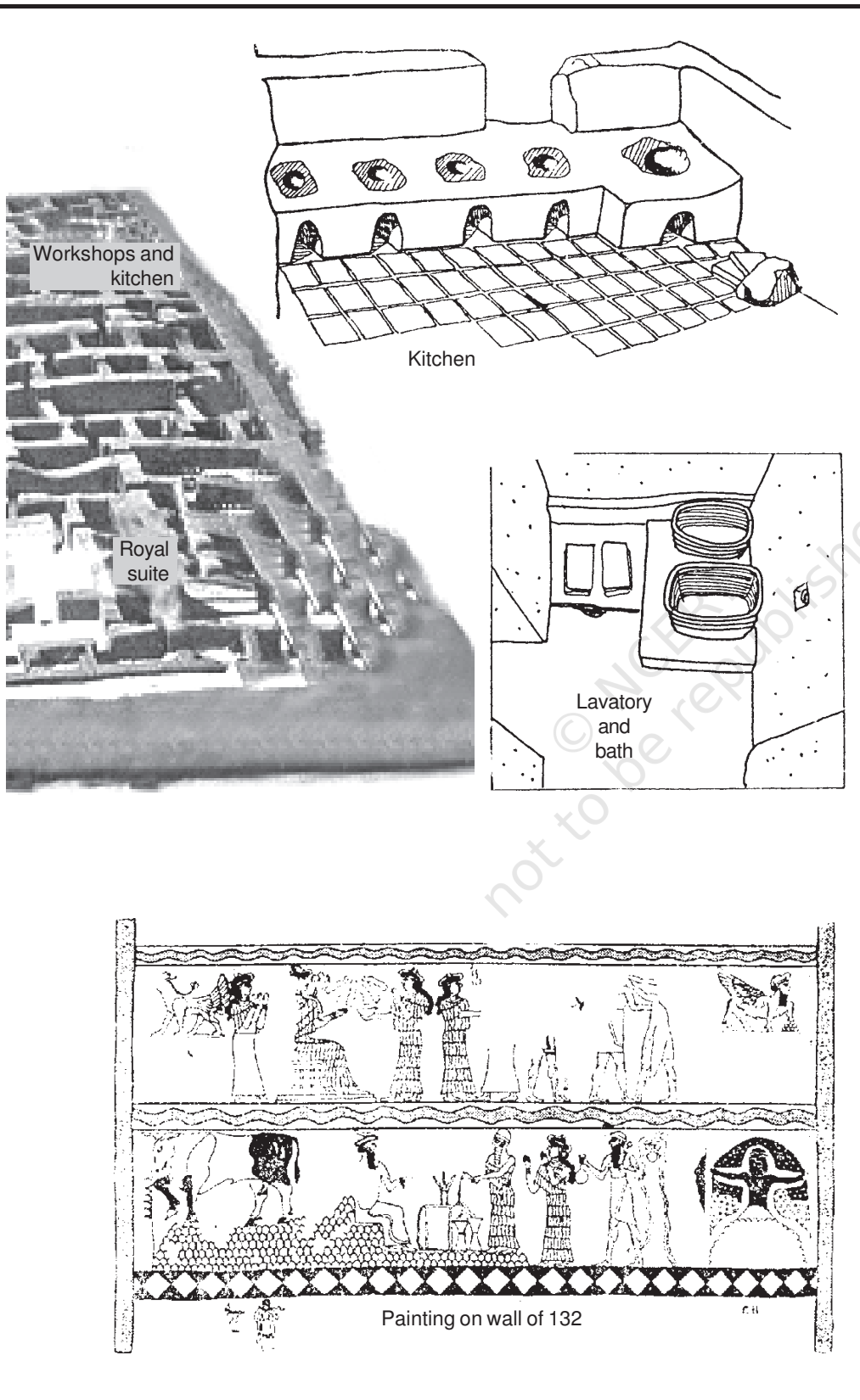
A warrior holding a long spear and a wicker shield. Note the dress, typical of Amorites, and different from that of the Sumerian warrior shown on p. 38. This picture was incised on shell, c.2600 BCE.



The Palace at Mari of King Zimrilim (1810-1760 BCE)



Scribes' office with benches and clay bins for storing tablets



The Palace at Mari of King Zimrilim (1810-1760 BCE)

The great palace of Mari was the residence of the royal family, the hub of administration, and a place of production, especially of precious metal ornaments. It was so famous in its time that a minor king came from north Syria just to see it, carrying with him a letter of introduction from a royal friend of the king of Mari, Zimrilim. Daily lists reveal that huge quantities of food were presented each day for the king's table: flour, bread, meat, fish, fruit, beer and wine. He probably ate in the company of many others, in or around courtyard 106, paved white. You will notice from the plan that the palace had only one entrance, on the north. The large, open courtyards such as 131 were beautifully paved. The king would have received foreign dignitaries and his own people in 132, a room with wall paintings that would have awed the visitors. The palace was a sprawling structure, with 260 rooms and covered an area of 2.4 hectares.

ACTIVITY 3

Trace the route from the entrance to the inner court. What do you think would have been kept in the storerooms? How has the kitchen been identified?

The kings of Mari, however, had to be vigilant; herders of various tribes were allowed to move in the kingdom, but they were watched. The camps of herders are mentioned frequently in letters between kings and officials. In one letter, an officer writes to the king that he has been seeing frequent fire signals at night – sent by one camp to another – and he suspects that a raid or an attack is being planned.

Located on the Euphrates in a prime position for trade – in wood, copper, tin, oil, wine, and various other goods that were carried in boats along the Euphrates – between the south and the mineral-rich uplands of Turkey, Syria and Lebanon, Mari is a good example of an urban centre prospering on trade. Boats carrying grinding stones, wood, and wine and oil jars, would stop at Mari on their way to the southern cities. Officers of this town would go aboard, inspect the cargo (a single river boat could hold 300 wine jars), and levy a charge of about one-tenth the value of the goods before allowing the boat to continue downstream. Barley came in special grain boats. Most important, tablets refer to copper from 'Alashiya', the island of Cyprus, known for its copper, and tin was also an item of trade. As bronze was the main industrial material for tools and weapons, this trade was of great importance. Thus, although the kingdom of Mari was not militarily strong, it was exceptionally prosperous.

Excavating Mesopotamian Towns

Today, Mesopotamian excavators have much higher standards of accuracy and care in recording than in the old days, so that few dig huge areas the way Ur was excavated. Moreover, few archaeologists have the funds to employ large teams of excavators. Thus, the mode of obtaining data has changed.

Take the small town at Abu Salabikh, about 10 hectares in area in 2500 BCE with a population less than 10,000. The outlines of walls were at first traced by scraping surfaces. This involves scraping off the top few millimetres of the mound with the sharp and wide end of a shovel or other tool. While the soil underneath was still slightly moist, the archaeologist could make out different colours, textures and lines of brick walls or pits or other features. A few houses that were discovered were excavated. The archaeologists also sieved through tons of earth to recover plant and animal remains, and in the process identified many species of plants and animals and found large quantities of charred fish bones that had been swept out on to the streets. Plant seeds and fibre remained after dung cakes had been burned as fuel and thus kitchens were identified. Living rooms were those with fewer traces. Because they found the teeth of very young pigs on the streets, archaeologists concluded that pigs must have roamed freely here as in any other Mesopotamian town. In fact, one house burial contained some pig bones – the dead person must have been given some pork for his nourishment in the afterlife! The archaeologists also made microscopic studies of room floors to decide which rooms in a house were roofed (with poplar logs, palm leaves, straw, etc.) and which were open to the sky.

Cities in Mesopotamian Culture

Mesopotamians valued city life in which people of many communities and cultures lived side by side. After cities were destroyed in war, they recalled them in poetry.

The most poignant reminder to us of the pride Mesopotamians took in their cities comes at the end of the Gilgamesh Epic, which was written on twelve tablets. Gilgamesh is said to have ruled the city of Uruk some time after Enmerkar. A great hero who subdued people far and wide, he got a shock when his heroic friend died. He then set out to find the secret of immortality, crossing the waters that surround the world. After a heroic attempt, Gilgamesh failed, and returned to Uruk. There, he consoled himself by walking along the city wall, back and forth. He admired the foundations made of fired bricks that he had put into place. It is on the city wall of Uruk that the long tale of heroism and endeavour fizzles out. Gilgamesh does not say that even though he will die his sons will outlive him, as a tribal hero would have done. He takes consolation in the city that his people had built.

The Legacy of Writing

While moving narratives can be transmitted orally, science requires written texts that generations of scholars can read and build upon. Perhaps the greatest legacy of Mesopotamia to the world is its scholarly tradition of time reckoning and mathematics.

Dating around 1800 BCE are tablets with multiplication and division tables, square- and square-root tables, and tables of compound interest. The square root of 2 was given as:

$$1 + 24/60 + 51/60^2 + 10/60^3$$

If you work this out, you will find that the answer is 1.41421296, only slightly different from the correct answer, 1.41421356. Students had to solve problems such as the following: a field of area such and such is covered one finger deep in water; find out the volume of water.

The division of the year into 12 months according to the revolution of the moon around the earth, the division of the month into four weeks, the day into 24 hours, and the hour into 60 minutes – all that we take for granted in our daily lives – has come to us from the Mesopotamians. These time divisions were adopted by the successors of Alexander and from there transmitted to the Roman world, then to the world of Islam, and then to medieval Europe (see Theme 7 for how this happened).

Whenever solar and lunar eclipses were observed, their occurrence was noted according to year, month and day. So too there were records about the observed positions of stars and constellations in the night sky.

None of these momentous Mesopotamian achievements would have been possible without writing and the urban institution of schools, where students read and copied earlier written tablets, and where some boys were trained to become not record keepers for the administration, but intellectuals who could build on the work of their predecessors.

We would be mistaken if we think that the preoccupation with the urban world of Mesopotamia is a modern phenomenon. Let us look, finally, at two early attempts to locate and preserve the texts and traditions of the past.

An Early Library

In the iron age, the Assyrians of the north created an empire, at its height between 720 and 610 BCE, that stretched as far west as Egypt. The state economy was now a predatory one, extracting labour and tribute in the form of food, animals, metal and craft items from a vast subject population.

The great Assyrian kings, who had been immigrants, acknowledged the southern region, Babylonia, as the centre of high culture and the last of them, Assurbanipal (668-627 BCE), collected a library at his capital, Nineveh in the north. He made great efforts to gather tablets on history, epics, omen literature, astrology, hymns and poems. He sent his scribes south to find old tablets. Because scribes in the south were trained to read and write in schools where they all had to copy tablets by the dozen, there were towns in Babylonia where huge collections of tablets were created and acquired fame. And although Sumerian ceased to be spoken after about 1800 BCE, it continued to be taught in schools, through vocabulary texts, sign lists, bilingual (Sumerian and Akkadian) tablets, etc. So even in 650 BCE, cuneiform tablets written as far back as 2000 BCE were intelligible – and Assurbanipal's men knew where to look for early tablets or their copies.

Copies were made of important texts such as the Epic of Gilgamesh, the copier stating his name and writing the date. Some tablets ended with a reference to Assurbanipal:

'I, Assurbanipal, king of the universe, king of Assyria, on whom the gods bestowed vast intelligence, who could acquire the recondite details of scholarly erudition, I wrote down on tablets the wisdom of the gods ... And I checked and collated the tablets. I placed them for the future in the library of the temple of my god, Nabu, at Nineveh, for my life and the well-being of my soul, and to sustain the foundations of my royal throne...'

More important, there was cataloguing: a basket of tablets would have a clay label that read: '*n* number of tablets about exorcism, written by X'. Assurbanipal's library had a total of some 1,000 texts, amounting to about 30,000 tablets, grouped according to subject.

And, an Early Archaeologist!

A man of the southern marshes, Nabopolassar, released Babylonia from Assyrian domination in 625 BCE. His successors increased their territory and organised building projects at Babylon. From that time, even after the Achaemenids of Iran conquered Babylon in 539 BCE and until 331 BCE when Alexander conquered Babylon, Babylon was the premier city of the world, more than 850 hectares, with a triple wall, great palaces and temples, a ziggurat or stepped tower, and a processional way to the ritual centre. Its trading houses had widespread dealings and its mathematicians and astronomers made some new discoveries.

Nabonidus was the last ruler of independent Babylon. He writes that the god of Ur came to him in a dream and ordered him to appoint a priestess to take charge of the cult in that ancient town in the deep south. He writes: 'Because for a very long time the office of High Priestess had been forgotten, her characteristic features nowhere indicated, I bethought myself day after day ...'

Then, he says, he found the stele of a very early king whom we today date to about 1150 BCE and saw on that stele the carved image of the Priestess. He observed the clothing and the jewellery that was depicted. This is how he was able to dress his daughter for her consecration as Priestess.

On another occasion, Nabonidus's men brought to him a broken statue inscribed with the name of Sargon, king of Akkad. (We know today that the latter ruled around 2370 BCE.) Nabonidus, and indeed many intellectuals, had heard of this great king of remote times. Nabonidus felt he had to repair the statue. 'Because of my reverence for the gods and respect for kingship,' he writes, 'I summoned skilled craftsmen, and replaced the head.'

ACTIVITY 4

Why do you think Assurbanipal and Nabonidus cherished early Mesopotamian traditions?

TIMELINE	
c. 7000-6000 BCE	Beginning of agriculture in the northern Mesopotamian plains
c. 5000 BCE	Earliest temples in southern Mesopotamia built
c. 3200 BCE	First writing in Mesopotamia
c. 3000 BCE	Uruk develops into a huge city, increasing use of bronze tools
c. 2700-2500 BCE	Early kings, including, possibly, the legendary ruler Gilgamesh
c. 2600 BCE	Development of the cuneiform script
c. 2400 BCE	Replacement of Sumerian by Akkadian
2370 BCE	Sargon, king of Akkad
c. 2000 BCE	Spread of cuneiform writing to Syria, Turkey and Egypt; Mari and Babylon emerge as important urban centres
c. 1800 BCE	Mathematical texts composed; Sumerian no longer spoken
c. 1100 BCE	Establishment of the Assyrian kingdom
c. 1000 BCE	Use of iron
720-610 BCE	Assyrian empire
668-627 BCE	Rule of Assurbanipal
331 BCE	Alexander conquers Babylon
c. 1st century CE	Akkadian and cuneiform remain in use
1850s	Decipherment of the cuneiform script

Exercises

ANSWER IN BRIEF

1. Why do we say that it was *not* natural fertility and high levels of food production that were the causes of early urbanisation?
2. Which of the following were necessary conditions and which the causes, of early urbanisation, and which would you say were the outcome of the growth of cities:
(a) highly productive agriculture, (b) water transport, (c) the lack of metal and stone, (d) the division of labour, (e) the use of seals, (f) the military power of kings that made labour compulsory?
3. Why were mobile animal herders not necessarily a threat to town life?
4. Why would the early temple have been much like a house?

ANSWER IN A SHORT ESSAY

5. Of the new institutions that came into being once city life had begun, which would have depended on the initiative of the king?
6. What do ancient stories tell us about the civilisation of Mesopotamia?