

B.A. Arts(HISTORY) Core –II
UNDER CHOICE BASED CREDIT SYSTEM
1ST SEMESTER UNDER CBCS

SOCIAL FORMATIONS AND CULTURAL PATTERNS OF
THE ANCIENT WORLD

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Core Paper II
SOCIAL FORMATIONS AND CULTURAL PATTERNS OF THE
ANCIENT WORLD

Unit-I:

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Unit-IV: Ancient Greece:

1. Athens and Sparta
2. Politics, Economic
3. Culture

Suggested Text Books:

1. Burns and Ralph. World Civilizations, Vol. A.
2. V. Gordon Childe, What Happened in History?

Reference Reading:

1. G. Clark, World Prehistory: A New Perspective.
2. Bisman Basu, The Story of Man
3. H.Neil & M.C.Willam, A World of History, Oxford, New York, 1907.
4. H.R. Hall, Ancient History of the Near East, 1932.
5. H.S. Baghela, World of Civilization

Unit-I

Evolution of Man

Objectives

In this lesson, students investigate hominid evolution. Throughout the chapter, an emphasis will be on the importance of fossil evidence in unraveling the history of our ancestors. After completing this chapter, you will be able to:

- understand the concept and various theories of human evolution on the earth surface
- learn about the genetic relationship between humans and our closest living relatives
- trace the fossil history of the mankind and to Identify major fossil groups: Australopithecus, Homo Habilis, Homo Erectus, Homo-Neanderthalensis, and Homo sapiens.
- discuss that concepts like culture, religion and ethics evolved with humans.

Introduction

There are questions that have bothered mankind for ages such as from where did we come from, when did our ancestors appear on earth? And there have been as numerous answers as there are religions in the world. But common to all early ideas was the concept of creation. It was almost universally accepted that the world and all its creations- plants, insects, birds, animals and human beings-were created at the same time by some supernatural being, call it God, or whatever. No wonder, the idea of creation was deep-rooted in almost all religious faiths and humans were considered to be the supreme creation of god. Science, however, looks at things differently. It tries to understand and observed facts on the basis of logical explanations and evidence wherever possible. In this lesson students will subsequently come across various aspects about human evolution such as the concept of evolution, ours primate heritage and phases of human evolution.

Before the discussion of human origin, we should know the meaning of the tem evolution. Evolution is defined as the process by which different kinds of living organism developed from earlier forms. In another version it would define as the development of dissimilarities between ancestral and descendant population. In the process of evolution all living organism on this earth surface witnessed certain changes in their morphology through time. Human being, the wisest among the creature passes through several phases of evolution which is regarded as the climax of phylogenic history of organisms. The evolution of man can be studies through its morphology by comparative anatomy of fossils and also by the comparative biochemistry of the present day humans, apes and other primates. The fossil record of the human history, although rudimentary, has been quite helpful in determining largely what we are seeking, namely a sound history and evolution of human species. This observation is obvious if one looks at the fossil history from early primates to the present man.

Theory and Fact of Human Evolution

Different theories have been given by different scholars, scientist, Anthropologist, religious teachers regarding the origin and evolution of man. During the 18th century, scholars grew increasingly interested in biological diversity and human origins. The following are some of the theories of human evolutions.

Theory of creationism

Before the scientific discoveries of fossils records, in the theological world the commonly accepted explanation for the origin of species came from **Genesis**, the first book of the Bible, wherein it is stated that God had created all life during six days of creation and this is known as the theory of creationism. According to creationism, biological similarities and differences originated at the Creation. Characteristics of life forms were seen as absolute; they could not change. Through calculations based on genealogies in the Bible, the biblical scholars James Ussher and John Lightfoot even claimed to trace the creation to a very specific time: October 23, 4004 B.C., at 9 A.M.

Theory of Catastrophism

Fossil discoveries during the 18th and 19th centuries raised doubts about creationism. In this circumstance a modified explanation combining creationism with catastrophism arose to replace the original doctrine. In this view, fires, floods and other catastrophes, including the biblical flood involving Noah's ark, had destroyed ancient species. After each destructive event, God had created again, leading to contemporary species. On this theory critics questioned that how did the catastrophists explain certain clear similarities between fossils and modern animals? And the proposer of this theory argued that some ancient species had managed to survive in isolated areas. For example, after the biblical flood, the progeny of the animals saved on Noah's ark spread throughout the world.

Theory of Transformism/Evolution

The alternative to creationism and catastrophism was transformism, also called evolution. Evolutionists believe that species arise from others through a long and gradual process of transformation, or descent with modification. Charles Darwin became the best known of the evolutionists. However, he was influenced by earlier scholars, including his own grandfather. In a book called **Zoonomia** published in 1794, Erasmus Darwin had proclaimed the common ancestry of all animal species.

In 19th century, Charles Darwin put forward the idea that humans have evolved from apes, in his book *The Descent of Man*. Darwin based his hypotheses on his wide-ranging studies of plant and animal life, of different continents and island of the world, which he carried out during a five year voyage-from 1831 to 1836 on board the research ship HMS Beagle. On examining the hundreds of species of plants, animals and birds he had seen and collected during

his voyage, Darwin could distinguish small changes in characters between similar species inhabiting different ecological niches. He summarized his findings in the book, *On the Origin of Species by Means of Natural Selection*, published in 1859, in which he described how one species could evolve into another more fit to survive in a changed environment, by a process which he called natural selection. Human beings, Darwin believed, evolved by a similar process. Charles Darwin also was influenced by Sir Charles Lyell, the father of Geology.

During his famous voyage to South America aboard the *Beagle*, Darwin read Lyell's influential book *Principles of Geology*, which exposed him to Lyell's principle of uniformitarianism, which states that the present is the key to the past. Explanations for past events should be sought in the long-term action of ordinary forces that still operate today. Thus, natural forces such as rainfall, soil deposition, earthquakes, and volcanic action gradually have built and modified geological features such as mountain ranges. The earth's structure has been transformed gradually through natural forces operating for millions of years.

Uniformitarianism was a necessary building block for evolutionary theory. It cast serious doubt on the belief that the world was only 6,000 years old. It would take much longer for such ordinary forces as rain and wind to produce major geological changes. The longer time span also allowed enough time for the biological changes that fossil discoveries were revealing. Darwin applied the ideas of uniformitarianism and long-term transformation to living things. He argued that all life forms are ultimately related and that the number of species has increased over time.

Charles Darwin provided a theoretical framework for understanding evolution. He offered natural selection as a powerful evolutionary mechanism that could explain the origin of species, biological diversity, and similarities among related life forms. Darwin proposed a theory of evolution. The theory of evolution, through natural selection, was Darwin's major contribution. Darwin postulated the theory that apes and human had a common ancestors. In his descent of man he discussed about human ancestry. According to him man descended from minute organisms, the simplest forms of distant past and from simple form evolved the complex form through various stages. The most complex form is represented by man.

Our place among primates

Our nearest relatives (animals with which we share common ancestry) are other members of the zoological order known as primates, which includes humans, apes, monkeys, and lemurs. Apes are our closest relatives. Similarities between apes and humans are evident in anatomy, brain structure, genetics and biochemistry. Many similarities between organisms reflect their common ancestry. In other words, organism's share features they have inherited from the same ancestor. Apes and humans belong to the same taxonomic super family, Hominidea (hominoids) means all two legged man like species extinct or living. Apes and humans are more closely related to each other than either is to monkeys. Most closely related to humans are the African

great apes: chimpanzees and gorillas. A more distant relative is Asia's great ape, the orangutan, which survives on two Indonesian islands, Gibbons and Siamangs are smaller and more widespread Asian apes. The primates share structural and biochemical homologies that distinguish them from other mammals. Human being belong to the large mammalian order of primates, with in that order, humans being is the members of genus homo means gean of a family of hominidae, characterized by a relatively large cranial capacity, limbs structure adopted to a habitual erect postures and a bipedal gait, well developed and fully erect posture and a hand capable of power and precision, grips and ability to make, standardized precision tools using one tool to make another. Thus, human although belong the order of primates is the wisest among them owing to his intelligence and others physical features which separated human from rest of the mammals of primates order.

Primate Heritage

In course of search for missing link between primates and human to trace the evolution of mankind on the earth surface, in the 20th century a numbers of fossils remains were discovered from different parts of globe. All those discoveries gives us a good ideas on the origin of human being. As per the paleontological study the primate fossil history dates back to 60 million years

i.e. to Paleocene times, more specifically to the cretaceous age (Cretaceous is a geological age of our earth), the fossils of mammals of this period, their teeth, jaws and skulls bear affinities with Lemuroids. Next primates fossil record found in the Eocene times were comparable to modern lemurs except that their brain was smaller and teeth specializations were not found. There is a poor fossil record of primates in Oligocene times. Some 20 million years ago during Miocene times the fossils of **hominoids** appeared and towards the end of Miocene the old world monkeys appeared.

In the line of hominid evolution the major fossil record was that of *Dryopithecus*. This fossil had teeth like those of living apes, and long limb bones. *Dryopithecus* belongs to the sub- family Dryopithecinae which included chimpanzees, gorillas and orangutans. The next major fossil finds belong to Pliocene age dating back to 10 million years. Such fossils also belong to the late Miocene age. These rare fossils of subfamily Dryopithecinae belong to the genera *Sivapithecus* and *Ramapithecus* and were discovered in Siwalik hills of northern India. These fossils were the earliest recognizable hominid fossils along with those discovered in Kenya and Hungary. Subsequently, the genus *Gigantopithecus* was found both in Siwalik Hills and Pleistocene deposits of South China. All these fossils show certain hominid characters such as the shortening of the face, thickening of molar enamel and modest development of canines. The hominid nature of such fossils became obvious with the discovery of a beautifully preserved partial skull of a *Sivapithecus* discovered in **1982** by Pilbeam. The skull resembled that of orangutan. To sum up, although several late Miocene and Pliocene fossils were found there was

no real consensus that they belonged to hominids. The real hominid fossils did not appear, until Pleistocene times that is until eight million years before the present. In the subsequent discussion we will be discussing the hominid fossils that were ancestral to the genus *Homo* and provided evidence for the evolution of modern man.

Trends in Human Evolution

The world's climate began to get cooler in five to ten million years ago, and the rain forests of Africa were replaced with savannas and open woodland. In these climatic changes evolved a new kind of hominoid of bipedal order. These new hominoids are classified as hominids-that is, of the human line. There are two major groups of hominids: few species of the genus *Homo* and some species of the older, smaller-brained genus *Australopithecus*. In the subsequent paragraphs we will discuss *Australopithecus*, and then *Homo* along with their varieties based on the fossil findings.

Before our discussion on the fossil history of the humans we shall briefly look into those facts, which distinguish humans or genus *Homo* from his ancestors namely the apes. These differences are clearly indicative of the trends in human evolution which are to a certain extent supported by the available fossil evidence. Some of the general trends in human evolution which we will examine in the subsequent discussion are: The development of bipedalism so that the forelimbs are set free for performing specific tasks, the development of visual capacity which has been perfected by the evolution of a binocular stereoscopic vision, an increase in cranial capacity in order to accommodate a larger volume of brain, a receding forehead, development of opposable thumb and the development of arched feet, etc.

Besides the above mentioned anatomical changes other important factors that were responsible for delimiting the genus *Homo* are: Evolution of culture by which it is meant that individuals in a society formulate concepts and communicate them to the other members of the society and by evolution of communication to express their views among each other it is meant that language has to be developed as a fundamental medium of culture. We will also examine here the cultural advances of mankind as per the material evidence they left behind such as lithic tools and traces of art activities.

In subsequent paragraphs our analysis of human evolution would focus the trends we mentioned above in relation to fossil records. Whereas it is possible to obtain the fossil evidence for the anatomical traits we mentioned and to a certain extent to depict cultural evolution such as subsistence pattern and other cultural activities.

Australopithecines: The Earliest Hominins

The oldest known hominidae remains are classified as belonging to the genus *Australopithecus* and are found only in Africa. The first ever australopithecine fossil was found in 1924 at Taung, South Africa by famous anatomist Raymond Dart. It was the skull of a 5 year old child still with its milk teeth showing a mixture of human and ape like features. What fascinated Dart's attention was that the rock in which the skull was embedded had been collected near other fossils that suggested that the rocks and their fossils were several million years old. Scientists estimate Dart's skull to be 2.8

million years old. Professor Raymond Dart coined the term *Australopithecus Africanus* (from the Latin *australo*, meaning -southern and the Greek *pithecus*, meaning -ape), the ape from the south of Africa to describe the first fossil representative of this species, the skull of a juvenile that was found accidentally in a quarry at Taung, South Africa.

Other Australopithecus Species

In 1938, a second, stockier kind of *Australopithecus* was unearthed in South Africa. Called *Australopithecus robustus*, it had massive teeth and jaws. In 1959, in East Africa, Mary Leakey discovered a third kind of *Australopithecus* called *Australopithecus boisei* (after Charles Boise, an American-born businessman who contributed to the Leakeys' projects)—who was even more stockily built. Like the other australopithecines, *Australopithecus Boisei* was very old- almost 2 million years.

In 1974, anthropologist Don Johanson went to the remote Afar Desert of Ethiopia in search of early human fossils and hit the jackpot. He found the most complete, best preserved australopithecine skeleton known. Nicknamed -Lucy, the skeleton was 40% complete and over 3 million years old. The skeleton and other similar fossils have been assigned the scientific name *Australopithecus Afarensis* (from the Afar Desert). The shape of the pelvis indicated that Lucy was a female, and her leg bones proved she walked upright. Her teeth were distinctly hominid but her head was shaped like an ape's and her brain was about the size of a large orange.

In the subsequent years, three additional kinds of australopithecines have been reported. These seven species provide ample evidence that australopithecines were a diverse group, and additional species will undoubtedly be described by future investigators. The evolution of hominids seems to have begun with an initial radiation of numerous species. Based on stratigraphy of these fossil hominins, found at five main sites in South Africa, the time of these fossils can be placed in between 3 and 2 million year ago. Subsequent to this finding several additional skeletons, most of which were incomplete, were found. All such finds fell into two groups:

- i) A lighter more progressive group or the **Gracile** type
- ii) A heavier less progressive group or the **Robustus** type.

-Gracile indicates that members of *Australopithecus Africanus* were smaller and slighter, less robust, than were members of *Australopithecus Robustus*. The trend toward enlarged back teeth, chewing muscles and facial buttressing continued in the South African australopithecines. However, the canines are reduced and the premolars are fully bicuspid. The diet of Australopithecine was the vegetation of the Savanna, although these early hominins also might have hunted small and slow-moving game. As well, they may have scavenged, bringing home parts of kills made by large cats and other carnivores. Overall robustness, especially in the chewing apparatus, increased through time among the australopithecines.

In East Africa the site of Laetoli is located 50 kms south of Olduvai Gorge in Tanzania. In this site

M. Leaky found in volcanic ash a twenty meter trail of footprints of three hominids of 3.75 million years age. Also fossil fragments of 13 individuals, mostly teeth and jaws with a few post-cranial bones were found. The discovery of fossil footprints of 3.75 million years old essentially suggests that upright walking had already developed to a great degree. This observation has to be viewed in relation to the brain size. Mostly the brain case of australopithecines ranged from 400 to 600 C.C. and was in fact much larger in proportion to that of the body which was about 1.2 meters tall and weighed around 23 kilograms. Most of the fossils were found in cave sites which mean that by 2 million years ago the use of caves as shelter has begun. It is believed that the males while collecting and bringing in the food for the families should have got their forelimbs freed. In other words bipedalism evolved in relation to the concept of provisioning for the family. The forehead was more rounded than chimpanzees and eyebrow ridges were still very prominent but less so than in chimpanzees. The jaws protrude prominently but less than those of modern apes. The dental arcades of australopithecines were intermediate between the apes and other advanced hominids in overall shape, in the size of the canines and in the prominence of cusps of premolars and molars. Thus, the characters of the australopithecines suggest a hominid ancestry in them.

From the available fossil evidence it cannot be precisely said the point of time at which the branching of the genus *Homo* from australopithecines took place. As date, there is reason to believe that *Australopithecus Africanus* could be the point from which the genus, *Homo* bifurcated. This hypothesis seems to be reasonable until new fossils suggesting a different line of bifurcation is discovered. Our discussion on the australopithecines, as the immediate ancestors of genus *Homo* ends here.

Homo Habilis or the Handy man

Olduvai Gorge is a deep gash running between the volcanic highlands and the Serengeti Plains of east Africa. The landscape of Olduvai gorge today is in many way similar to that seen by early man a couple of million years ago. The only differences is that in early times a lake occupied what is now the central part of the Gorge. It is here among exposed layers of clay and volcanic ash that remains of *Homo Habilis*, the first true member of the human family were discovered.

The first fragments of *Homo Habilis* fossils earthed by the British paleoanthropologist and son of Louis S.B. Leakey, Richard Leakey and his team around 1960, about the same time that *Boisei* fossils came up. But at that time they didn't really provide any clue to the creature they belonged to. It was only in April 1964 that it was announced that 1.8 million year old fragments belonged to a new genus with features resembling humans more than apes was discovered. At the suggestion of Raymond Dart it was named *Homo Habilis*, or handy man. The name was quite appropriate as a large collection of primitive stone tools were also recovered at the same site, indicating that *Homo Habilis* was indeed quite adept at making tools.

Although the original *Habilis* fossils were discovered at Olduvai Gorge in Tanzania, the best specimens were unearthed later at Koobi Fora on the shores of Lake Turkana in Kenya. There in,

1972, Richard Leakey's team recovered the most complete skull of Homo ever found, along with thousands of fossils of other animals, and stone tools.

Even a casual look at the Habilis skull found at Koobi Fora was enough to convince anyone that it was more humanlike than apelike. The face of Homo Habilis was flatter than that of any of the Australopithecus species and its brain size was significantly larger-680 ml-although still only half as large as the average human brain today. So Homo Habilis must have been more intelligent than any of the earlier ape-like ancestors of man. But what is more significant is that the Habilis brain was not only bigger but also more complex than the brain of any of the Australopithecus species.

From the shape of the skull and the marks of its inner surface, brain specialists have identified a specific area in the Habilis brain similar to what is known as Broca's area in the human brain, which is essential for speech. This means that, although Homo Habilis had a brain only half as big as the human brain, it probably had the capability of uttering a few simple

words, but not much. The appearance of Homo Habilis marked a quantum jump in the human evolution process. Australopithecus Robustus and Australopithecus boisei which came before it were more apelike, living an exceedingly primitive life, without articulate speech, with poor tools and weapons and probably surviving on a meatless diet. In which heralded not only the beginning of speech, but also the all important advantage of stone tools.

From the kind of stone tools found at Habilis sites one thing became clear, Homo Habilis was intelligent enough to gather the right kind of stone for making tools from places as far as 10 to 15 Km away and then shape them carefully into various forms. From the way the tools were shaped by hand by flaking, one can tell that the first human like tool makers were right handed. They were possibly our earliest ancestors known to eat meat. The fossil sites also give an impression of group activity and some sort of social organization. Some scientists even conjecture that Homo Habilis saw the beginning of ritual and folklore typical human endeavors.

From the sampling of stone tools recovered from Habilis sites, it appears that the tools were quite useful. Small sharp edged flakes chipped off larger stones formed tools for cutting the meat from bones of dead animals. That such tools were actually been used for cutting meat is evident from the fine cut marks seen on fossil bone fragments unearthed at Habilis sites. The pattern of accumulations of these remains suggests that our early ancestors brought dead animals and tools to a common spot where meat was butchered.

On the basis of the fossil finds at Olduvai Gorge and Koobi Fora, we can build up a possible scenario in which Homo Habilis lived. The daily life at Olduvai represents a crucial juncture in human evolution. These earliest ancestors of ours shared the land with rich faunas- antelopes, pigs, birds, tigers and elephants which flourished in the salubrious climates of 1.85 million years ago, which was far cooler and wetter than today's parched plains. Like all primates Homo Habilis subsisted mainly on a diet of plant parts such as fruits and berries and also roots and tubers which they dug up using pointed bones and also stone tools. In addition, the diet also included raw meat which they probably scavenged from the kills of other carnivores.

Although they were more enterprising than the earlier apes, Homo Habilis in all probability made their homes in the trees to escape from carnivores. We know this from their skeletal remains: they reveal that Homo Habilis had long arms well adapted to tree climbing.

From the study of fossils remains, other interesting facts about Homo Habilis have come to light. Patterns of tooth growth indicate that the family life at Olduvai was more like that of an ape than of humans. They indicate that Habilis children grew up nearly twice as fast as children of modern humans. This would also mean that our early ancestors would have been young adults by age 12, parents in their teens, and become old by the time they turned 30.

An interesting thing about the fossils finds at Olduvai Gorge and Koobi Fora is that all the sites where fossil remains of Homo Habilis have been located are also the sites which have yielded fossil fragments of Australopithecus boisei lived at the same time and possibly in the same terrains as Homo Habilis did. But we have no idea as to how the two coped with each other or whether they competed for food, which seems unlikely. Homo Habilis with much greater brain power and stone tools must have had a wider choice of food than the more primitive Australopithecus Boisei. No wonder, it would be the more advanced Homo Habilis that would now be on the direct road to human hood, leaving the others by the wayside.

It is now an accepted fact that the appearance of Homo Habilis was the turning point in human evolution; it marked a major milestone in the march of the lowly ape towards human hood. Most probably it was brought about by a sharp environmental change of the kind that had earlier provided the stimulus to primitive apes to come out of the forest and adopt to a life on ground. That this may really have been the cause is borne out by climatic data. Records show that after the global freeze about 6 million years ago the climate had warmed up again. But, around 2.5 million years ago temperature dropped again bringing in a little of ice age.

It was during this period, it is now believed, that the early ancestors of man split into two diverging branches. One branch leading to Australopithecus Robustus and the other to Homo Habilis, which subsequently led towards modern humans. By the time Homo Habilis died some 1.5 million years ago, a new, more advanced human ancestor had appeared on the scene. Named Homo erectus or the upright man, this large brained ancestor of ours was a true wanderer. It would become the first early humans to leave the cradle of the African continent and spread around the world.

Early Tools

The oldest obviously manufactured tools were discovered in 1931 by L. S. B. and Mary Leakey at Olduvai Gorge, Tanzania along with the fossils record of the species Homo habilis. This site gave the tools their name-Oldowan pebble tools. The oldest tools from Olduvai are about 1.8 million years old. Still older stone tools have been found in Ethiopia, Congo, and Malawi. Stone tools consist of cores and flakes. The core is the piece of rock from which flakes are removed; the core can be worked to become a tool itself. A chopper is a tool made by flaking the edge of such a core on one side.

Oldowan pebble tools represent the world's oldest formally recognized stone tools. With the use of cores about the size of a tennis ball, flakes were struck off one or both sides to form a chopping or cutting edge. The flakes also could be fashioned into tools and were the basis of several later stone tool industries. Thus, Homo Habilis being capable of using his hand was the first species in the line of human evolution to manufacture stone tools for his sustenance. This species is popularly known as the handy man.

Homo Erectus: The Erect Man

In the last decade of the nineteenth century an unusual fossil discovery was made in the island of Java in South-East Asia that would turn out to be a landmark in the search for human origin. The discovery was made by Dutch Anatomist Eugene Dubois, who in the late 1880s developed a passion for finding the true human ancestor, the missing link between apes and modern man. At that time a dozen of discoveries of manlike fossils were known but nothing that could be considered as the missing link. Dubois was inspired by the writings of German Zoologist Ernst Haeckel, who was a strong supporter of Darwin's ideas. Haeckel reasoned that since humans and apes are closely related, then, if humans have indeed evolved from apes, there must have been some kind of an intermediate link between them. He had even given a name for that intermediate form. He called it Pithecanthropus, meaning ape like man. He even suggested where remains of such a creature would be found- in the bone caves of the Malay Archipelago. In 1887, Dubois sailed for the Dutch East India with the avowed intention of finding remains of fossil ape -man.

In 1889, two years after arriving in Java, Dubois set out on his search along the Solo River. In 1891, two key fossils turned up near the village Trinil- a tooth and a skull cap. The next year, a modern looking thigh bone was found which clearly did not belong to an ape. The fossils were dated at about 1 million years. Realizing that the skull cap certainly belonged to a creature with a large brain and convinced that the tooth, skull cap and thigh bone came from the same individual Dubois was sure that he had stumbled upon the fossils remains of Haeckel's missing link. He called the creatures Pithecanthropus Erectus., because from the shape of its thigh bone there was no doubt that this ape-like man walked upright. To the public it would be known as Java Man. Dubois claimed that his Java man was the transition from which in accordance with the teachings of evolution, must have existed between man and the apes. Several other specimens of pithecanthropus were discovered later from the nearby sites.

Forty years later, in China, a young paleontologists, named W.C. Pei, found a similar skull cap embedded in deposits in a limestone cave in a large hill near the village of Zhokoudian, near Beijing. Pei's find was named *Sinanthropous Pekinensis* or Chinese man of Perking. To the public at large it was just the Peking man. The fossils of Peking man were less than 1 million year old. Today, of course, we know about both Java man and Peking man belonged to the same species Homo Erectus, a species intermediate between the first upright walking human ancestors and modern man. The oldest and most complete specimens of Homo Erectus came up at a site at Nariokotome on the

western shore of Lake Turkana in Kenya in 1984. The discovery of the fossils was made by Richard Leakey's team. It was almost an entire skeleton, fragmented, of course, of a boy, who must have been no more than nine year old when he died at the edge of the ancient lake, more than 1.5 million years ago. The specimens soon came to be known as the Turkana boy.

The age at which the Turkana boy died was inferred from his teeth growth pattern. At the time of his death his second molar was beginning to show through, in modern human children this would happen at the age of 11 and in apes at age seven. Since the place of *Homo erectus* was somewhere midway it was reasonable to assume that the boy had died when he was nine.

The discovery of the almost complete skeleton of the Turkana boy lay to rest the earlier ideas about the physical appearance of *Homo Erectus*. Ever since Dubois' time, it was 'squat, heavy-boned and powerfully muscled' creature. The Turkana boy changed all that. According to Alan Walker- Richard Leakey's team mate who led the group that studied the skeleton- the boy would have grown to a tall, slender adult with a height not less than 1.8 m. he was build much like the people who live around Lake Turkana today- people whose long, slender limbs and bodies are good at shedding the heat load mercilessly imposed by the sun. what is more important is that the Turkana boy represented the earliest human ancestor known to science whose general body proportions marked those of living people.

In facial appearance, *Homo Erectus* was not much different from its predecessor, *homo Habilis*. The face still had protruding jaws, no chin, thick brow ridges and a long, low skull, although its teeth were somewhat smaller. But what distinguished it from its predecessors was its rather large brain, with a volume close to 1000 cc, compared to 680 cc for *Homo Habilis* and 1,350 cc for modern humans.

With its larger, more complex brain, *Homo Erectus* certainly had better intelligence than its predecessor and must have developed intellectual curiosity none of its predecessors was endowed with. it may even have had some capability of speech. We can tell about the higher intelligence of *Homo erectus* from the variety of advanced stone tools and weapons found at the excavation sites. These included large quantities of double-edges, teardrop-shaped hand axes and other sharp edged cutting tools.

Evidence from china and elsewhere where charcoal has been found at several sites suggests that *Homo Erectus* also know how to control fire and cook food. This may have been one of the factors that led to a reduction in teeth size in later human ancestors, because chewing cooked food needs less force than chewing n raw meat or uncooked food.

The Great Exodus and Aftermath

The larger brain capacity may also have endowed *Homo Erectus* with an urge to venture out beyond its immediate neighborhood in search of new pastures. Like humans today, he must have wanted to see what was on the other side of the mountains. Another factor that may have made *Homo Erectus* move out of Africa could be population pressure due to increasing numbers at the few

favorable locations. But, whatever may have been the driving force, with its better hunting and foraging skills and substantially improved capability of exploiting the environment, Homo erectus may not have faced much difficulty in moving into a new unexplored territory. And so, with Homo erectus began the big exodus out of Africa, about 1 million years ago. They spread far and wide as fossil evidences from China, South-East Asia and from the Narmada Valley in India show. Surprisingly, no definitive fossil evidence of the presence of Homo Erectus has been found in Europe. The Ice Age glaciations prevailing in that part of the world at that time may have prevented the early human wanderers from venturing north onto the frigid ice- covered land, at least temporarily.

When populations of Homo Erectus began to move out of Africa about 1 million year ago, they carried their improved knowledge of tool making with them which was crucial for their survival in an unknown, hostile environment. As they spread across Europe and Asia, they improved their tool-making techniques-broad flakes gave way to narrow blades. The blades were further shaped to produce the finest of implements. These mute stones, products of a different kind of mind at work, tell the story of a real change in the path of human history.

Besides improved tool making, Homo Erectus migrant brought in a different kind of change. Faced with unfamiliar environments in their new homes, they rapidly evolved area- specific adaptations which helped them cope more successfully with the new environments. The change in skin colour may have been one of them.

As Homo Erectus moved into cooler lands of Europe, they found that sunlight was not as abundant as in their earlier home i.e. tropical Africa. Their brown skins would have been a problem. Not only was a layer of protective pigment no longer necessary against the mild sun, but the pigment would also have prevented the synthesis of Vitamin D in the skin. So some of the migrants living in cooler climates must have lost, over a few generations, much of the skin pigmentation, and become white skinned. In this way, regional physical distinctions may have become gradually established.

From the size of the skull of the Turkana boy it has been estimated that homo erectus were born with brains one third of the size of the adult brain, as in t modern humans. It is quite possible that the Turkana boy also must have come into this world in a helpless state, like modern human infant do. This could mean that the intense parental care of infants which is part of modern human social milieu had already begun to develop in early Homo Erectus, some 1.7 million years ago.

With its larger brain, and greater intelligence, Homo Erectus represented a pivotal point in human evolution. It can be said that whatever came before it was more apelike and whatever came later was more humanlike.

Over a period of a million years Homo Erectus evolved gradually. The above discussion shows that Homo Erectus pushed the hominin range beyond Africa-to Asia, Europe and Eurasia , as evidenced from the discoveries of fossils record from China and Indonesia in the east besides Africa. Small groups broke off from larger ones and moved a few miles away. They foraged new tracts of

vegetation and carved out new hunting territories. Through population growth and dispersal, *Homo Erectus* gradually spread and changed. By around 500,000 years ago some of our ancestors looked sufficiently like us and sufficiently different from earlier *Homo Erectus*.

Homo Erectus first arose about 1.6 million years ago and is believed to have lived for at least 600,000 years at a time when the transition to *Homo sapiens* took place. The fossil finds of *Homo Erectus* indicate several first happenings in the human history.

- For the first time man became from being an opportunistic scavenger to a cooperative and big game hunter.
- For the first time he had come to know the use of fire.
- From being a mere stone scrapper, he became a systematic tool maker.
- There is evidence to indicate that he had home bases of campsites from where he operated.
- And also for the first time we had such fossils from outside Africa, in Eurasia. *Homo erectus* variously named as Pithecanthropus, Sinanthropus and Atlanthropus, first appeared during the Pleistocene interglacial period. Natural selection, it appears acted on specific characters which favoured the accumulated wisdom, such as increased body size, increased longevity, symbolic human-style culture, and loss of body heat.
- The cranial capacity of the pithecanthropine man ranged between 800 C.C. to 1125 C.C. The later populations of *Homo Erectus* were known as cave man or ape man.

The fossil evidence did suggest that *Homo Erectus* was very clever as compared to the apes but dull as compared to the modern man.

Tool of *Homo erectus*

Two specific skills of *Homo Erectus* make him stand apart from all his predecessors: i) skills as an efficient tool maker ii) skills as a cooperative game hunter. Both the skills could be associated with the larger brains they had. The tools made by *Homo Sapiens* were more refined than those of their immediate ancestors. The *Homo Erectus Species* was the real author of lower Paleolithic age. Stone tool making industry can be said to fall into two categories:

- i) Tools of Oldowan industry which were simple, unspecialised and geographically restricted. Subsequently, the Oldowan industry developed more skill and sophistication as is known in South and East Africa.
- ii) The Acheulian industry is characterized by large hand axes with fine workmanship. Such tools were abundant in regions from France to India. The Acheulian industry lasted almost a million years and probably *Homo Sapiens* also used these tools.

Big Game Hunting

The most important event that led to the evolution of modern man is his transition from being a hunter-gatherer to that of a big game hunter. During the middle Pleistocene times there were huge

herds of very large mammals. Bones of such large mammals were found associated with the human fossil finds and the contemporary fossil tools. Initially the big game hunting was probably not carried out on a large scale and might have been cooperative venture. Here, several males surrounded a selected individual and killed it by the handiest method. The important point is that the whole process was a cooperative venture. It could be true that although the hunting was a cooperative venture, *Homo Erectus* could not have detailed any specific plan in advance because of the lack of communication skills. But the cooperative venture served one big purpose namely it enabled the formation of multi-family groups and socializing tendencies. In other words, big game hunting could have been the reason for the development of different social roles for males and females. This means the division of labour was being established and the role of female was getting confined mostly to child bearing and rearing children along with gathering of vegetal matter and slow game. The big game hunting brought certain changes in the physical structure of the human beings. Man hunted the animals during the day time. This meant that the hard work of chasing and killing animals had to be done in the hot sun. Selection during these times favoured individuals that lost the metabolic heat faster than their fellow individuals. During these times possibly man had lost the thick hair of body and developed a high density of sweat glands in the skin. Man could effectively evaporate and cool all over the body.

Invention and Use of Fire

Another tool that *Homo Erectus* has learnt to use was fire and in fact man had multiple uses for fire. It is not very clearly known how man had learnt to tame the fire but he understood that it was a source of warmth at a time when the thick hair from the body was being eliminated. Man also found use in fire in scaring of large carnivores. With a generalized tooth row that he was now developing, it became important for him to soften the tough meat and vegetables. Fire was also used to harden the pointed wooden stakes so that it is converted into a spear. Finally, fire also contributed to the development of social behaviour.

The era of *Homo erectus* should have probably come to an end some 275 thousand years ago, but by that time all those salient characters that are found in modern man had come to be established in *Homo erectus*. It has not been possible for the paleontologists and anthropologists to determine precisely the time of transition from *Homo erectus* to *Homo sapiens* although the first fossils of *Homo sapiens* were at least 300,000 years old.

Homo Sapiens: The Wise Man

Africa, which was center stage during the australopithecine period, is joined by Asia and Europe during the *Homo Erectus* and *Homo Sapiens* periods of hominid evolution. Recent discoveries, along with reinterpretation of the dating and the anatomical relevance of some earlier finds, are filling in the gap between *Homo Erectus* and archaic *Homo Sapiens*. Archaic *Homo Sapiens* (300,000 to 28,000 B.P.) encompasses the earliest members of our species, along with the Neanderthals (130,000 to 28,000 B.P.) of Europe and the Middle East and their Neanderthal-like

contemporaries in Africa and Asia. A rounding out of the brain case was associated with the increased brain size. Homo sapiens first appeared in the fossil record between 200,000 to 300,000 years ago.

There are only slight physical differences between Homo Erectus and Homo Sapiens and the transition between the two species is obvious from the earliest known groups of Homo Sapien, the Neanderthal man. Whereas Homo Sapien is characterized by a large and round brain case, smaller brow ridges and a more pronounced chin as compared to pithecanthropus, Neanderthals were more or less intermediate

The Neanderthals:

The first Neanderthal was found in 1856 in a German valley called Neander Valley-*tal* is the German word for valley. Scientists had trouble interpreting the discovery. It was clearly human, yet different enough from modern people to be considered strange and abnormal. There have been numerous subsequent discoveries of Neanderthals in Central Europe and the Middle East. For example, Neanderthal fossils found at the Shanidar cave in northern Iraq date to around 60,000 B.P., as does a Neanderthal skeleton found at Israel's Kebara cave.

By 75,000 B.P., after an interglacial interlude, Neanderthals man again faced extreme cold as the Wurm glacial began. To deal with that environment, they wore clothes, made elaborate tools, and hunted reindeer, mammoths, and woolly rhinos. The Neanderthals were stocky, with large trunks relative to limb length that minimizes surface area and thus conserves heat. Another adaptation to extreme cold was the Neanderthal face, which has been likened to a Homo erectus face that has been pulled forward by the nose. This extension increased the distance between outside air and the arteries that carry blood to the brain and was adaptive in a cold climate. The brain is sensitive to temperature changes and must be kept warm.

The massive nasal cavities of Neanderthal fossils suggest long, broad noses. This would expand the area for warming and moistening air. Neanderthal characteristics also include huge front teeth, broad faces, and a rugged skeleton and musculature. Neanderthal teeth probably did many jobs later done by tools. The front teeth show heavy wear, suggesting they were used for varied purposes, including chewing animal hides to make soft winter clothing out of them. The massive Neanderthal face showed the stresses of constantly using the front teeth for holding and pulling.

Neanderthal man was distributed all over Europe, Asia and Africa. Their cranial capacity was larger than that of modern man. It is not very clear whether Neanderthals represent a stage in the evolution of modern man or whether they represent another race of modern man. Both modern man and Neanderthals were found together during the later part of Wurm glaciations and since this is so at one point, it indicates that the Neanderthals represent only another modern race. Neanderthals are known for their fine tool industry, the Mousterian industry in which the hand axe was slowly replaced by various tools. With prominent eyebrow ridges, they had a receding forehead and the cranial capacity was greater than that of modern man averaging about 1450 C.C. The teeth and jaws were large and

heavy as compared to modern man and he had a receding chin. Indications are that he had a powerful neck musculature, robust limb bones and a skeleton more adapted to higher levels of activity and stress. Anatomy of the hand indicated a powerful grip. The stature was 1.5 meters and he was a cave dweller. Culturally Neanderthals appeared to be more advanced. They had the habit of burying dead ones with reverence as was evidenced by the presence of flowers in the burial centers. This group was biologically very successful and consisted of a homogeneous and widely distributed people.

The Homo Sapien Sapien: Cro-Magnon Man

Modern humans, Homo Sapiens Sapiens appeared in fossils some **33** thousand years ago. The first fossil was discovered from the Cro-Magnon shelter in France and hence the fossil was known as Cro-Magnon man. Subsequently many such fossils were known from France, Italy and Middle East. All such fossils exhibited reduced brow ridges, steep forehead, high rounded cranial vault, short face and pronounced chin. Being bulky, they were not as tall as Neanderthals. Structurally the Cro-Magnon man had a lot of resemblance to modern Europeans.

It appears that the stone implements of Cro-Magnon's man had a high technological perfection. Modern human being in Europe made tools in a variety of traditions, collectively known as Upper Paleolithic because of the tools' location in the upper, or more recent, layers of sedimentary deposits. Upper Paleolithic traditions emphasized blade tools. Blades were chipped off prepared cores 4 to 6 inches high, by hitting a punch made of bone or antler with a hammer stone. Blades then were modified to produce a variety of special-purpose implements. Some were composite tools that were made by joining reworked blades to other materials. Europe's Upper

Paleolithic economy depended on cooperative hunting of mammoths, woolly rhinoceroses, bison, wild horses, bears, wild cattle, wild boars, and-principally-reindeer. Increasing sophistication and diversity in tool-making techniques are the varied special- purpose tools made by Upper Paleolithic populations. Scrapers were used to hollow out wood and bone, scrape animal hides, and remove bark from trees. Burins, the first chisels, were used to make slots in bone and wood and to engrave designs on bone. Awls, which were drills with sharp points, were used to make holes in wood, bone, shell, and skin. Upper Paleolithic bone tools have survived: knives, pins, needles with eyes, and fish hooks. The needles suggest that clothes sewn with thread-made from the sinews of animals-were being worn. Fishhooks and harpoons confirm an increased emphasis on fishing.

One could obtain in fossils long thin blades of various types. Further, Cro-Magnons had a taste for art. They made beads, carved statues and even engraved pictures. The cave paintings made by these men are a record of their aesthetic sense. Their burials were ceremonial and gave an indication of their cultured life. It could be said that with the appearance of Cro-Magnon, the modern human, the morphological evolution of humans is more or less complete and any further progress is relate to culture and language.

A significant shift in the pattern of the human activity has occurred beginning about 10,000 years

ago. This shift manifested itself in various aspects of his life. For instance, there was a shift from hunting and gathering to agriculture. There was a shift in the tool making process also. From the Paleolithic age which was marked by making stone tools, he began to make his implements first in bronze and then in iron. And beginning 5,000 years ago special occupations developed, the cities began to be formed and the development of various aspects of culture such as writing, history, wealth, leisure, science and arts took place. This can briefly be the evolution of modern humans.

An Overview of Hominid Evolution

In the above sections we discussed in detail the fossil record of primates in general and more particularly those of apes and the humans. Despite the fact that in recent years a number of hominid fossils have been discovered, the fossil history of humans is not complete and the evidence is only fragmentary. Therefore, it has become necessary that based on the available evidence we need to synthesize an acceptable path of human ancestry. It is only during the late Pliocene period the first remarkable hominid *Australopithecus Afarensis* (Lucy) appeared. The *Australopithecus Afarensis* led to *Australopithecus Africanus* which divided into two lineages: 1) to *Australopithecus Robustus* and *Australopithecus Boisei* which represented the termination of the australopithecine lineage. 2) the more progressive branch gave rise to *Homo Habilis* to *Homo Erectus* and finally to *Homo Sapiens*.

The fossil history of humans makes one thing clear that at any given time not more than one species of *Homo* existed, although many contemporary sub-species could have lived. The fossil evidence suggests that the origin of *Homo Sapiens* from *Homo Erectus* could have occurred during the middle Pleistocene times. While discussing the origin of modern man we mentioned that the Neanderthals were a separate race by themselves. The classical Neanderthal fossils of later date were found from Western Europe although the skeletons of early Neanderthals were found in Eastern Europe and Asia. Obviously the Neanderthal race, a modern but a distinct race from *Homo sapiens* occupied the old world as early the second interglacial period.

By around the fourth glaciations the classical Neanderthal man got separated from the main population. The *Homo Sapiens Sapiens*, it is believed, should have arisen from the main population and developed into a more progressive Cro-Magnon man. From the Eastern Europe the Cro-Magnon man invaded the West and replaced his Neanderthal cousins. Neanderthal fossils are at least 45,000 years old and are associated with Mousterian tools. About 40,000 years before the present skeletons of both Neanderthals and modern man could be found. Considering the fact that these fossils were found in Eastern Europe it is suggested that modern humans made their appearance in the Middle East Europe, moved out from there and replaced the Neanderthals. At such times inter-mating could have occurred between Neanderthals and Cro-Magnon man and the latter inherited the genes of the former.

Evolution is an ever continuing process, what we have discussed here is one aspect of human evolution. Currently man is evolving by adapting biologically to his own cultures. The evolution of cultures and civilization will be the subject matter of our next unit.

Summary

In this chapter we attempted to reconstruct certain aspects of human evolution based on the scanty fossil evidence that is available. You have studied that:

- The fact of evolution was known before Darwin and Wallace. The theory of evolution, through natural selection (how evolution occurred), was their major contribution. Natural selection requires variety in the population undergoing selection.
- Humans, apes, monkeys, and prosimians are primates. Anthropoids include humans, apes, and monkeys. All share several primate trends, including depth vision and color vision. The great apes are Orang-utans, gorillas, and chimpanzees. The African apes—chimps and gorillas—are our nearest relatives.
- The human evolutionary history can be traced back to 60 million years that is to the cretaceous age of the Palaeocene times. The Palaeocene primates possessed several of anthropoid characters such as the size of the body, the number of teeth, , and the structure of the canines.
- Towards the Miocene times the hominoids started making their appearance and the old world monkeys dominated the late Miocene times. The fossil of the genus proconsul, a pongid dating back to 17 to 21 million years before the present had / several of the hominoid characters and was the direct ancestor of Dryopithecus.
- About 10 million years before the present during the late Miocene stage the fossils of the genera Sivapithecus and Ramapithecus were found from the Siwalik hills of northern India. These were the earliest recognisable hominid fossils with characters which were a mixture of hominids and pongids.
- The human evolutionary history begins with the discovery of the hominid fossils. The trends that were observed in these fossils leading to the evolution of modern man were the development of bipedalism, increased cranial capacity, receding (forehead and brow ridges, development of stereoscopic binocular vision, development of an opposable thumb and the development of an arched feet.
- Based on fossil evidence it is observed that the hominid lineage separated from the australopithecines some 3.5 million years ago. The australopithecines became extinct with Australopithecus Robustus and Australopithecus Boisei. The hominid lineage passed through different stages such as Homo Habilis and Homo erectus before the modern man evolved. A race of modern human species the Neanderthals were possibly the connecting link between Homo Erectus and Homo Sapiens. The first Homo Sapiens Sapiens, the Cro-Magnon man possibly represented the transition between the Neanderthal man and the modern man.
- The process of evolution is still continuing. It may be happening that still human being is

under the process of biological evolution but owing to our short life span we are unable to observe. We are only observing the evolution of mankind in the cultural part, where it still evolving and searching for more comfort and leisure by the employing advance technologies, even once used to roam in the forest as a denizen mankind is now searching for extraterrestrial land to settle himself.

Key terms

- ***Australopithecus Afarensis***: Early form of Australopithecus, known from Hadar in Ethiopia (—Lucyl) and Laetoli in Tanzania; the Hadar remains date to 3.3–3.0 m.y.a.; the Laetoli remains are older, dating to 3.8–3.6 m.y.a.; despite its many apelike features, *A. afarensis* was an upright biped.
- **Archaic Homo Sapiens**: Early Homo sapiens, consisting of the Neanderthals of Europe and the Middle East, the Neanderthal-like hominins of Africa and Asia, and the immediate ancestors of all these hominins; lived from about 300,000 to 28,000 B.P.
- **Australopithecines**: Varied group of early hominins. The term is derived from their former classification as members of a distinct subfamily, the Australopithecinae; now they are distinguished from Homo only at the genus level, as Australopithecus.
- **Bipedalism**: Upright two-legged locomotion, the key feature differentiating early hominins from the apes. Evolution Belief that species arose from others through a long and gradual process of transformation, or descent with modification.
- **Gracile**: Opposite of -robust; indicates that members of *A. africanus* were a bit smaller and slighter, less robust, than were members of *A. robustus*.
- **Hominid**: A member of the taxonomic family that includes humans and the African apes and their immediate ancestors.
- **Hominin**: A member of the human lineage after its split from ancestral chimps; the term hominin is used to describe all the human species that ever have existed, including the extinct ones, and excluding chimps and gorillas.
- **Homo habilis**: Term coined by L. S. B. and Mary Leakey; immediate ancestor of *H. erectus*; lived from about 2.0 to 1.7 m.y.a. mutation Change in the DNA molecules of which genes and chromosomes are built. m.y.a. Million years ago.
- **Natural selection**: The process by which the forms most fit to survive and reproduce in a given environment do so in greater numbers than others in the same population; more than survival of the fittest, natural selection is differential reproductive success.
- **Neanderthals**: Members of an archaic *H. Sapiens* group that lived in Europe and the Middle East between 130,000 and 28,000 B.P.
- **Oldowan**: Earliest (2.5 to 2.0 m.y.a.) stone tools; first discovered in 1931 by L. S. B. and Mary Leakey at Olduvai Gorge.

- **Palaeolithic:** Old Stone Age (from Greek roots meaning -old and -stone); divided into Lower (early), Middle, and Upper (late). robust Large, strong, sturdy; said of skull, skeleton, muscle, and teeth; opposite of gracile.
- **Theory:** A set of ideas formulated (by reasoning from known facts) to explain something. The main value of a theory is to promote new understanding. A theory suggests patterns, connections, and relationships that may be confirmed by new research.
- **Uniformitarianism:** Belief that explanations for past events should be sought in ordinary forces that continue to work today.
- **Upper Palaeolithic:** Blade-tool-making traditions associated with early H. sapiens sapiens; named from their location in upper, or more recent, layers of sedimentary deposits.

1.2 : Paleolithic Cultures

Objective

This chapter provide you an insight into the different aspects of life and cultures of the prehistoric man and his march towards civilisations including appearance of agriculture, transition of the early agricultural societies to the stage of civilisation. By the end of this chapter you would be able to:

- know about the major cultural phases of the primitive men.
 - understand the importance of stone tool for the development of human societies in primitive time.
 - understand the appearance of metals in the life of primitive men and its impact on the subsequent period of human civilisation.
- learn the various concept of history such as culture and civilisations etc.

Introduction

In the previous chapter of this unit we have discuss the story of human evolution. From there we come to know that life on earth was started from a simple cell and subsequently form developed into complex living beings in thousands of species. All these living beings have been changing and developing over time which is otherwise called as process of evolution. Humans, unlike other animals, are cultural beings. Culture is the sum total of the ways of living built up by a group and passed on from one generation to another. Culture includes all the daily activities and behaviour of mankind. The flexible hands helped the primitive man to hold and make tools and so to create the material artefacts of culture. Culture is learned and not inherited; it permits rapid adaptation to changing conditions, making possible the spread of humanity to almost all the lands of the globe. With the appearance of Homo Erectus species cultures spread across the globe. The earliest humans

lived by hunting, fishing, and collecting wild plants. Only some 10,000 years ago did they learn to cultivate plants, herd animals, and make airtight pottery for storage. These discoveries transformed them from gatherers to producers and allowed them to grow in number and to lead a settled life.

Beginning about 5,000 years ago a far more complex way of life began to appear in some parts of the world. In these places humans learned how to increase harvests through irrigation and other methods, making possible much larger populations. They came together in towns, cities, and other centres, where they erected impressive structures and where industry and commerce flourished. They developed writing, enabling them to keep inventories of food and other resources. Specialized occupations emerged, complex religions took form, and social divisions increased. These changes marked the birth of civilization. This chapters will reveals the material cultures of human being flourished in the prehistoric stone age thrived during the Pleistocene and subsequent Holocene epoch of the earth. The lesson will discuss the entire human cultures from Palaeolithic or Old Stone Age to arrival of metal and appearance of civilisation in different parts of the world in various sections.

The Stone Age cultures.

The Stone Age is a broad prehistoric period during which stone was widely employed by man for manufacturing of implements or tools. The stone tools used by our primitive ancestors are the sources of study for the prehistoric society. The period lasted roughly 3.4 million years, and ended between 4500 BC and 2000 BC with the advent of metal working. Stone Age artifacts include tools used by mankind in the different stage of its evolution. Bone tools were used during this period as well, but are more rarely preserved in the archaeological record.

The Stone Age is further subdivided by the types of stone tools in use. The Stone Age is nearly contemporaneous with the evolution of the genus *Homo* from the stage of *Homo Habilis* to *Homo Sapiens Sapiens*. The period called Stone Age covers more than 98% of the total period of human history and is considered as pre-history as there are no written sources available for it. It is, divided into two broad periods the Palaeolithic or Old Stone Age, identified with the period when food gathering became the dominant form of living and the Neolithic or new Stone Age is identified with domestication of plant and animal by mankind there by human become a producer. In between Old Stone Age and the new Stone Age culture there is a transitional phase occur that is known as Mesolithic culture characterized by small stone tools or the so called microliths. During the entire Stone Age stage of mankind, the prehistoric man manufactured so much of stone tools that, tools have been found in all parts of the globe, generally spread in and around the settlements inhabited by their users. In the subsequent paragraphs we will discuss the growth of tools and their technology for the whole of Stone Age cultures identifying clear stage of development in the tools, raw materials used and their technology.

The Paleolithic Culture

The early phase of Stone Age cultures is known in prehistory as Paleolithic age or the Old Stone Age

culture. The word is derived from two Latin words *Paleo- Old* and *Lithic-Stone*. In literal terms this is the Old Stone Age culture. During the whole of this period humans predominantly used stone tools. These tools underwent a lot of change like the types of stone used, the shape of tools, the way and purposes for which tools were used as also other materials used side by side with stone i.e. wood, bones and others. It was not only the tools which underwent change, even the physical features and anatomy of humans changed during this phase of human culture. One may mention Homo Habilis, Homo Erectus, Homo Sapiens, Neanderthals and Homo Sapiens Sapiens as the major human species using stone tools. Depending on the tool types, the human species and other cultural traits the Paleolithic period has been subdivided into lower Paleolithic, middle Paleolithic and upper Paleolithic. In the archaeological context the objects excavated at the lowest stratum are the earliest and on the upper levels the latest. Therefore, the lower is the earliest while the upper the later Palaeolithic. Many scholars even further divide them into sub-sub divisions. In this context it is essential to keep in mind that in chronological terms these periods did not start or end around the same time in all regions inhabited by hunting gathering people. In certain regions use of tools, human types and cultural traits which identified middle Paleolithic or upper Paleolithic may be quite different from the others. Another point to be kept in view is that in no region or place one type of tools or human species or cultural traits were completely replaced by the other. There are at times some amount of overlap is clearly noticed in continuance of the types of tools and characteristics of users belonging to different periods.

Lower Paleolithic

In the last chapter we learn that the earliest hominids date back to around more than 2-6 million years. Their spread is mainly confined to Africa. Closely following them we have more developed hominid species known as Homo Erectus dating back to around 1.5 million years. They have been noticed till around 2, 50,000 years. Their presence has been recorded in fairly wide spread regions. Evidence for their presence is available in Europe, Africa and Asia. The presence of both these hominids has been confirmed by the presence of fossilized bone of skull fragments, tools and other artifacts. The period is referred as lower or earlier Paleolithic.

It is believed that regular tool making started with the emergence of Homo Habilis. The earliest stone tools date back to 1.8 to 1.6 million years have been found in Olduvai Gorge (North Tanzania) and Melka Kunture (Ethiopia). These tools are referred as Oldovian tools after their first finding in the Olduvai Gorge. They were put to use to cut plant foods, digging roots and to skin meat of small animals. It is believed that meat constituted a small proportion of food during this period. Procurement of meat at best was through scavenging of dead animals. The tools found at these sites are known as choppers and were made by removing flakes from one side of stone providing it with a cutting edge. The tools were mostly made from the stones available in locality with minimum changes in their natural form. It is suggested that probably flakes were also used for scrapping. Homo Habilis were the users of these tools.

Further changes in tools are noticed in Acheulian tools. These are available for a very long period of time, from around 1.4 million years to 2, 00,000 years in Africa and 1, 00,000 years in Europe. They draw their name from St. Acheul a site in North France. Homo erectus was the main users of these tools. Acheulian tools had a simple range which was used for chopping, cutting, piercing and pounding. These were effective for both butchering meat and preparing plant food. The hand axe and cleavers were the main tool types. The hand axes were pear shaped or tear drop shaped with a pointed end and a broad end. These hand axes had sharp cutting edge on both sides which was obtained by removing flakes from both sides towards the pointed end. The tools made by removing flakes from one side are termed unifacial and when removed from both sides are termed bifacial. Now for the first time a distinction between core tools and flake tools is made. Flakes were those pieces which were detached from a large block while core tools were those from which flakes were removed. Flakes could be used for tasks which required sharp edges. In many cases edges were retouched to obtain a desired edge or to facilitate holding in hand. Flaking was done with a hammer stone. It is noticed that certain materials were favoured for making tools in specific regions even if it meant procurement from some distance. Generally siliceous rocks, chert and quartz were used for small tools which required sharp and tough edges. Lime stones were used for heavier tools. Quartzite, sand stones and basalt were other materials in use. During this period existence of a few bone or ivory tools has also been confirmed. The Acheulian tools have been found in all sites of lower Palaeolithic cultures.

Middle Palaeolithic

During the long periods when Homo Erectus inhabited various pockets, some sub species began to develop in different parts. These were various species of Homo sapiens. Of these most robust and wider spread were Homo Sapiens Neanderthalensis. They were discovered in all parts of Europe. There were a number of variants of these which are traceable from around 400000 years. However, Neanderthal proper are more clearly to be found from around 230000 years and their stable lineage from around 100000 years to 40000 years. These Neanderthals had a short and stout body, absent chin, protruding brow-ridges, a narrow forehead and an average cranial capacity of 1450 c.c. The period of flourishing of their culture is referred as Middle Paleolithic and their technology as Mousterian. The name is drawn from the site of Le Moustier in Southern France where their tools were found. The spread of Neanderthals is reported from Northern Africa; Southern Africa; East Africa; Europe and Asia.

The tools which are classified as Mousterian have been found in Middle Paleolithic sites. The main finds are from Europe and Asia and their users have been identified as various species of Homo sapiens and predominantly Neanderthals. A large number of different types of varying tools have been ascribed to this culture. Among the stone tool types found are scrapers, borers, knives, blades, burins etc. during this period five main type of tools are used such as;

- 1) Tool types predominated by borers, end scrapers, and knives. These may have been

used to work bone and wood into shafts or hafts and to work skins for cordage. These tools are associated with tool making and maintenance activities.

- 2) Tool types, including three kinds of points, scrapers and burins. The inferred function is hunting and butchering.
- 3) Tool types mostly flakes and knives for butchering.
- 4) Tool types, including used flakes and scrapers. The suggested function is preparing wood and plant foods and possibly the scraping of bones.
- 5) Tool types, including a projectile-point type, discs, scrapers and blades. This kit appears to be a blend of hunting and butchering and perhaps other kinds of tools.

One significant aspect of the middle Paleolithic tools is the use of bones, horns and wood. Sharpened wooden sticks with points hardened with fire to be used and spears are indicative of the hunting of large animals.

Upper Palaeolithic

Homo sapiens Neanderthalensis gave way to Homo Sapiens Sapiens around 40000-35000 years back. These were like modern humans in physique, brain capacity, structure and facial features. The first fossils of this modern man were discovered in France and given the name Cro- Magnon after the rock shelter where it was found. There have been considerable debates among scholars as to whether this modern man first appeared in Africa, Asia or Europe. The latest researches are more inclined to indicate that it first appeared in Africa. The sudden disappearance of Neanderthals was also one of the complex questions. Most probable large scale migration and interbreeding with the new species led to the extinction of Neanderthal genes. This was the last phase of Paleolithic which lasted till around 12000 years back after which the Mesolithic culture appears. This phase as a whole is called upper Paleolithic. However, within this phase a number of cultures flourished with distinct characteristics, tool types and regional and geographic variations. The important phases of upper Paleolithic are:

- i) Aurignacian (34000 to 30000 years ago)
- ii) Solutrean (22000 to 18000 years ago)
- iii) Magdalenian (18000 to 11000 years ago)

Other small cultural groups identified are Perigordian, Gravettian, Szeletian etc. Upper Paleolithic culture has been recorded with a large number of evidences from all parts of the world including Australia, and North and South America. Their penetration into every continent, in different regions especially to Americas might have been deadly through frozen Tundra's and grassy plains and Australia moving through islands. It was probably made possible by their ability to adapt quickly and perfectly to changing conditions due to the growth of mental faculty. After the upper Paleolithic cultures and before the Neolithic cultures another phase of hunting and gathering cultures an intermediate stage called Mesolithic culture is also identified.

During the upper Paleolithic phase the art of tool making reached new heights with Homo Sapiens

Sapiens. Large variety of tools, regular use of materials other than stones, tools which could be used from a distance, composite tools through hafting, use of special intermediary tools for making tools, manufacture of microlithic tools, and certain artistic and aesthetic sense in tool making are some of the major achievements in tool making during this phase.

During this period technology of blade production was perfected. The shape of blade was regular with parallel edges to serve as knife. The tools were now processed by pressure flaking with stone, bone or wood. It was perfected by retouching the edge and point. Burin was perfectly made and was an important tool for engraving or drilling. New weapons for killing a prey at a distance were light spear, spear thrower and bow and arrows. It was probably around the later period of upper Paleolithic that bows and arrows made their first appearance. For making stone tools diverse materials like flint, horn stones, quartzite, quartz, clay stones and crystalline schist were used. Use of precious stones like rock crystal, chalcedony, obsidian, opal, agate and jasper etc. has been indicated. Many of these were acquired from distant places. The presence of non-local stone tools in a region indicates some sort of barter or exchange of materials.

The use of material other than stones is on a much larger scale in an organized manner. These were bones, horns, antlers, teeth, tusks and wood. These tools comprised standardized forms such as spear points, daggers various points, picks, polished tools, pins, needles, awls, hammers, cylindrical grinding implements, shovel-like and spoon like implements, clubs, perforated antlers and others which were designed for various important tasks. Some of them were composite tools or were lengthened by a handle. Many of these tools made of organic materials have not survived due to natural decay. Their remarkable feature is those have not been found only in their natural form but have been worked upon through shaping and creating edges, points etc. Many available materials were put to other uses too such as hollowed logs as boats, concave stones as vessels or dishes.

Another important feature was introduction of very small tools called microliths. These were used as independent tools or were joined with some handle, or a sharp edge or harpoon or heads of projectiles for specialized tasks for hunting small animals, fishing, processing the hunted animal or giving shape to tools or engraving some aesthetic and art work. However, the full potential of microliths was exploited during the Mesolithic period only. Finally, now we notice use of tools for making tools. Patterns of flaking or tool working shows that several tools were made from the same stone indicating that the methods of tool making also advanced.

Habitation and way of life of Paleolithic man

The sources for reconstruction of mode of living, habitation, means of subsistence, disposal of dead and rituals and belief systems of hunting gathering people is fragmentary. Mostly the inorganic substances have survived while the degradable organic material have not. However, the small fragments, tools, artifacts, locations of finds and circumstances of their preservation throw some light about their habitation, means of subsistence and their social organisation. During lower Palaeolithic period very little is known about the dwellings of the Homo Habilis. Their main food came from

plants and a small proportion from scavenging dead animals or very small animal hunt which was probably consumed in raw form.

From the period of Homo Erectus we notice certain significant features like the use of fire, building dwellings, living in bands of 25-30 people, social relations and planned hunting. All these gave them a certain life style. Their shelters are in the form of natural caves as well as built dwellings which were oval or circular in shape. Tree branches and covering of skins were used to erect these. Presence of hearth in dwellings indicates regular use of fire. Now the meat was consumed grilled on fire or cooked in pits. The hearths are open. Hunting was a regular practice which was mainly the work of men while women were involved in gathering of plant food and foraging. Human groups lived separately but did come together on seasonal or cyclic manner. The movements of groups were within a limited territory.

During the period of Neanderthalensis and early Homo Sapiens Sapiens Cro-Magnon the methods of hunting, types of hunt, consumption of food, types of tool and the bones available at habitation sites suggest that large animals especially herbivores were also hunted along with smaller animals. We have evidence of hunt of large animals like bison, mammoths, horses, wild boar, reindeer, various species of deer and other cattle. In Europe Reindeer was the main animal hunted and around 90% of the bones available pertain to them only. The use of spears must have facilitated big game hunt. The hunt of large animals was a group activity and confined to men folk. The hunted animals were to be shared by the whole group. Meat was consumed cooked, grilled or baked on fire. All parts of animals were consumed even the bone marrow was extracted with specific tools or by smashing the bones. The new item in animal food now added was fish and other water animals. Huge quantity of bones found in Kudaro caves in great Caucasus belong to Salmon fish. In upper Palaeolithic availability of suitable tools for hunting and catching increased the proportion of fish.

In plant food also the variety seems to have increased. Tools for extracting roots were varied and the storage of plant food is also evident. Generally the consumption of plant food was dictated by the immediate environment and available flora. However, the subsistence needs were fulfilled through collection of food and exploiting the resources available in natural form without altering the nature. The available evidence also suggests the domestication of dog which was probably an asset in hunting operations.

Habitation sites of Neanderthals indicate that caves and sites were occupied repeatedly by different groups inhabiting these regions. The important cave sites are caves of Kilna (Moravia), Bockstein caves (Germany), Hortus Caves (Southern France), Shanidar Caves (Iraq) and Teshik- Tash Cave (Uzbekistan). Caves are more important for the finds of artifacts, bones etc. During upper Paleolithic period human made habitations and settlements are numerous as compared to earlier period. Caves and rock shelters available in habitation zones were continued to be occupied. Habitation sites seem to have been chosen near water bodies, rivers and fords as also near places where prey animals were available. The construction of huts is refined with clear demarcations. Wooden frames with covering

made of skins were the main material used. Bones, stones and mud also appear to have been used. The shapes of huts are varied, irregular, oval, round and even kidney shaped. Some of these were temporary tent like while others of some permanent nature especially during the late Paleolithic. Apart from securing the dwellings the people protected their bodies with the use of animal hide. Presence of hearths inside or outside is strongly indicated. These are open as well as covered and a tendency to preserve fire is suggested. Wood and even bones were used as fuel. The large deposits of ash and bones near the habitation sites indicate the size and frequency of using a site for long periods. As a way of life they seem highly mobile though the area of movement was limited. It is believed that this movement was within a small region. According to Leaky their movements were mainly restricted to specific territories usually 25-30 kilometers in all directions from a central water source or home base. It is also indicated that smaller groups came together for short periods where exchange of materials or mates might have taken place. Social relationships were strong. Some evidence suggests that wounded persons were looked after and the healing process is also evident which indicates social bonding and taking care of the sick persons in the group. During the middle Palaeolithic strong evidence is available to suggest that the dead were disposed off or buried by the surviving members of groups. In Shanidar Cave in the Zagros Mountains of Iraq a burial, which is around 60,000 years old, probably of some leader or important person has been laid on bed of branches and even flowers are placed.

Around 50 burials were studied belonging to around 20 sites in Europe, Africa and Asia. Here around one third is children and a few women which indicate love and care for children as a few of them are new born. The burials are mostly in shallow trenches. The cemetery of La Ferrassie (France) contains the burial of a man, a woman and children. They probably belong to the same family. In many cases some tools, horn, animal bones and even flowers have been placed on the bodies and buried. In some cases red powder is sprinkled. These sorts of burials indicate some ritual practices associated with it.

Arts and communication

Various forms of arts have come down to us from Paleolithic societies. These are in the form of engravings, markings, colouring of bones, some polishing, or holes in bones etc. It is only with upper Palaeolithic period that we get a lot of evidence in the form of objects, artifacts, statues and cave or rock paintings and engravings. The most elaborate surviving art is in the form of rock or cave art. This is available in the form of drawings made on walls, ceiling or floor of caves. The engravings and colours have been used to draw them. The drawings mainly pertain to animal figures representing mammoths, deer, fishes, birds etc. Human figures are less frequently drawn. Hunting scenes with weapons in the hands of hunters are also drawn. The most remarkable find of cave paintings is in Spain in the Altamira caves. The paintings done on the ceiling had bison, horses, deer, wolves and boars. These are life size and brown, yellow, red and black colours were used. These have been dated between 34000 and 12000 years. In Las Caux cave in France similar paintings were found, estimated to be around 15-14000 years old. The figures here are not merely portraits of animals but appear full

of action, movement and life. Bulls, horses, stags, wild goats, bison, cows even lion are represented. Arrows or spears stuck in animals, even a dead man and a few geometrical designs are shown. In Africa and Asia a number of such caves have been found. In India most important caves with prehistoric rock art is those of Bhimbetaka in Madhya Pradesh, which is a world heritage site. In Odisha, there more than 100 rock shelters and caves where rock paintings and engraving are discover.

A lot of similarities in subjects and style can be noticed. In most of the cases figures are jumbled up one on the other. Human figures wherever drawn are sketchy, stick like and only lines have been drawn to represent them. The colours seem to have been obtained by natural mineral pigments of manganese oxide, ochre, even charcoal and applied through some sticks, brush like objects, or fingers. There is a lot of debate among scholars to ascertain the meaning and purpose of this cave art. Some see it as representing some sort of magic or ritual for hunting.

Other art forms are decorated tools of bones, horns or stones. A few decorated objects have been found which seem like ornaments. These were used to adorn arms, wrists, neck or feet. The decoration is done by colouring, drawing lines, engraving, polishing, drilling holes and giving specific shapes to art objects. Another example of art is in the form of statues or figurines. Famous Venus figurines such as the one found at Willendorf in Austria showing faceless female figure with bulging belly, heavy breasts and prominent genital organ smeared in red colour are also found in many places across the globe. Besides, animal figurines are also come from numbers caves in Europe and other part of world.

As far as communication is concerned it was only the Neanderthals man were capable of making limited words but whether they were able to speak sentences or communicate verbally is doubtful. They might have communicated with the use of symbols, markings or limited sounds. It is believed that Homo Sapiens Sapiens during upper Paleolithic was capable of speech as they are akin to modern humans. One can with a degree of certainty say that means of communication developed during this period. Now speech as also drawings, symbols and markings were used for communication within the group and with other groups and the use of symbols can be considered as precursors of script which developed during.

Mesolithic Culture

The period starting from the end of the last ice age, 10,000 years ago, to around 6,000 years ago was characterized by rising sea levels and a need to adapt to a changing environment and find new food sources. The development of microlith tools began in response to these changes. They were derived from the previous Palaeolithic tools, hence the term Epipalaeolithic, or were intermediate between the Paleolithic and the Neolithic, hence the term Mesolithic or Middle Stone Age has been employed. The Mesolithic (Greek: mesos "middle", lithos "stone") is an archaeological concept used to refer to specific groups of archaeological cultures defined as falling between the Paleolithic and the Neolithic. The term refers to material that did not fit into the other categories of prehistory. The

term "Epipaleolithic" is often used for areas outside northern Europe but was also the preferred synonym used by French archaeologists until the 1960s.

The term is used to refer to different time spans in different parts of Eurasia. It was first used to refer to post-Pleistocene but pre-agricultural material in northwest Europe about 10,000 to 5000 BCE but is also applied to material from the Levant (about 20,000 to 9500 BCE); in Japan the Jomon period (about 14,000 to 400 BCE) is sometimes called Mesolithic.

In the archaeology of northern Europe, for example for archaeological sites in Great Britain, Germany, Scandinavia, Ukraine, and Russia, the term "Mesolithic" is almost always used. In the archaeology of sub-Saharan Africa, Lower Palaeolithic is replaced by "Early Stone Age," Middle Palaeolithic is replaced by "Middle Stone Age" and Upper Palaeolithic by "Later Stone Age" according to the terminology introduced by John Hilary Gooden and Clarence van Riet Lowe of South Africa in the early 20th century. Therefore, care must be taken in translating "Mesolithic" as "Middle Stone Age", as the latter term has an unrelated technical meaning in the context of African archaeology.

History of the Concept

The three lithic age are subdivisions of the Stone Age in the three-age system developed since classical times and given a modern archaeological meaning by Christian Jurgensen Thomsen, a Danish archaeologist, in the early 19th Century. Subdivisions of "earlier" and "later" were added to the Stone Age by Thomsen and especially his junior colleague and employee Jens Jacob Asmussen Worsaae. John Lubbock kept these divisions in his work *Pre-historic Times* in 1865 and introduced the terms Paleolithic ("Old Stone Age") and Neolithic ("New Stone Age"). He saw no need for an intermediate category. It was Hodder Westropp, who in 1866 introduced the term Mesolithic as a technology intermediate between Palaeolithic and Neolithic. By the time of Gordon Childe's work, *The Dawn of Europe* (1947), which affirms the Mesolithic, sufficient data had been collected to determine that the Mesolithic was in fact necessary and was indeed a transition and intermediary between the Palaeolithic and the Neolithic.

Characteristics

The time frame of Mesolithic varies by geographical region. Childe's view prevails that the term generally covers the period between the end of the Pleistocene and the start of the Neolithic. The times of these events vary greatly; moreover, the various Mesolithics within the span might be as short as roughly a thousand years or as long as roughly 15,000 years depending on the circumstances. The Paleolithic was an age of purely hunting and gathering while in the Neolithic domestication of plants and animals had occurred. Some Mesolithic peoples continued with intensive hunting. Others were practising the initial stages of domestication. Some Mesolithic settlements were villages of huts. Others were walled cities.

The small or pigmy type of tool remains the diagnostic factor of Mesolithic culture. Microliths or small size (1 to 5 inches long) were used in the manufacture of more efficient composite tools,

resulting in an intensification of hunting and fishing and with increasing social activity the development of more complex settlements. Domestication of the dog as a hunting companion probably dates to this period.

Mesolithic culture followed the Aurignacian . By the end of the Aurignacian, gradual changes took place in stone industries. Small stone tools called microliths and retouched bladelets can be found for the first time, this period is more properly called Epipaleolithic. By 20,000 to 18,000 BCE the climate and environment had changed, the cool and dry period ended starting a period of transition. The arid climate resulted depletion of forest and replaced by steppe. The hunter-gatherers of the last part of upper Palaeolithic cultures would have had to modify their way of living and their pattern of settlement to adapt to the changing conditions. The crystallization of these new patterns resulted in early phase of Mesolithic. New types of settlements and new stone industries developed. The inhabitants of this phase left little more than their chipped stone tools behind. The industry was of small tools made of bladelets struck off single-platform cores. Besides blade lets, burins and end-scraper were found. A few bone tools and some ground stone have also been found.

The second phase of Mesolithic, is also called the Natufian Culture. This period is characterized by the early rise of agriculture that would later emerge into the Neolithic period. Radiocarbon dating places the Natufian culture between 12,500 and 9500 BCE. This period is characterised by the beginning of agriculture.

In European landmass Mesolithic began with the Holocene warm period around 11,660 BP and ended with the introduction of farming, the date of which varied in each geographical region. Regions that experienced greater environmental effects as the last glacial period ended have a much more apparent Mesolithic era, lasting millennia. In northern Europe, for example, societies were able to live well on rich food supplies from the marshlands created by the warmer climate. Such conditions also delayed the coming of the Neolithic until as late as 5000-4000 BC in northern Europe. Spread of Neolithic cultural trait including farming, herding, polished stone axes, timber longhouses and pottery into Europe, resulting the marginalized Mesolithic way of life and its eventually disappearance. Mesolithic adaptations such as sedentism, population size and use of plant foods are cited as evidence of the transition to agriculture. However in north-Eastern Europe, the hunting and fishing lifestyle continued into the medieval period in regions less suited to agriculture.

Unit-II

The Neolithic Culture

1.1: Food Production:

In archaeological terms the Neolithic period followed the Palaeolithic and Mesolithic periods. The concept of Neolithic was introduced by the archaeologist John Lubbock in 1865 to differentiate it from the Old Stone Age or the Palaeolithic. Etymologically the term ‘Neolithic’ is derived from two Greek words – ‘neo’ meaning new and ‘lithos’ meaning stone. Till the mid twentieth century the term Neolithic was associated with the period represented by new ground and polished tools. That the term implies much more than the use of new tools and encompasses a change in the life of hunter-gatherers has been sufficiently established now. The domestication of plants and animals and near total dependence on farming, increase in population and in the size of settlements, use of pottery and weaving, greater social and cultural interaction among people are some of the features associated with Neolithic. In most societies of the world the Neolithic period preceded the emergence of a complex society and a civilization.

The term Neolithic Revolution was used by V. Gordon Childe in his book *Man Makes Himself* (1936) to highlight the revolutionary significance of the beginning of agriculture in the world. According to him, the period followed the acute climatic crisis of the early Holocene and made humans active partners with nature instead of parasites on nature. Fresh research has however proved that climatic change was neither sudden nor drastic. Following the last period of glaciations, temperatures rose gradually. It was finally around 10,000 years ago that the climate grew progressively warmer. Climatic change, which fell short of a crisis, nevertheless had a far-reaching impact on the patterns of existence. Some scholars have raised objections to the word ‘revolution’ to characterize the change. However, the transition to agriculture and stock-raising were so crucial for the social and economic organisation of human communities that the term revolution has been used to highlight the consequences of beginning of agriculture. For Childe, therefore, food production was the greatest economic revolution in human history after the mastery of fire. Now there was a possibility of a storable surplus for communities to use variously. It could be used during time of crisis, could support a larger population and could be exchanged. It should be remembered that not all early agricultural societies had a food surplus to depend on. Besides, the Neolithic way of life has now come to be associated with a long period of evolution rather than representing rapidity of change. Several parts of the world are now

associated with the beginning of agriculture, in the subsequent paragraphs our focus would be on

some of the other aspects of this stage of cultural transition.

Changes in dietary pattern

One of the first consequences of the Neolithic way of life was a radical change in human diet. Whereas the Paleolithic diet was mainly meat-based, it became more and more diversified in the Mesolithic. Now, in the Neolithic, it was based primarily on cereals – wheat and corn in western Asia and Europe, rice in southern and eastern Asia, sorghum and millet in Africa, maize in America. The development of the food producing economies took place in two stages. The first saw some farming and herding of animals and bulk of the diet came from game and wild vegetable foods. The next stage came about 8000 years ago when more productive cereal grains and cattle, sheep, goats and pigs were completely domesticated. This created the fully agricultural and stock-raising economy that persisted into historic times, of course in more elaborate forms. The domestication of animals added an entirely new element in the diet: milk and its derivatives. The replacement of a meat diet with a largely vegetable one necessitated the use of salt which became an item of trade.

Settlement pattern

The domestication of plants and animals seemed to have brought about significant changes in the way people lived. A sedentary way of life was one of the main consequences of food production. Earlier it was felt that a site was permanently settled if it contained artifacts like flint sickles, blades, querns (milling stones) and facilities like storage pits. Research has shown that there have been villages without such tools and without farmers. For instance, during the Upper Paleolithic and the Mesolithic advanced hunter-gatherers who adopted an annual migratory cycle and practiced seasonal nomadism, lived in camp like dwellings. Early Neolithic villages in Mallaha (northern Israel, inhabited around 11,000 BP.), Tell Mureybit (Syria) and Suberde (Turkey) were more dependent on intensive collection of wild food. The pattern of settlement changed over a period of time. The Neolithic way of life had considerable demographic consequences. Even in the absence of reliable figures or statistics it can be said that populations were increasing. In almost all the Neolithic cultures, the number and size of settlements and the number of cemeteries considerably increased in the Neolithic compared with earlier periods.

Excavations in Cayonu, Jericho and Jarmo and in the Mediterranean islands of Crete and Cyprus have revealed successive levels of occupation at the same sites. This had resulted in mounds and an increase in the circumference of the site. The Neolithic village of Jarmo was occupied more than 7000 years ago and measured approximately three to four acres. It was a cluster of about 24 houses built of baked mud. These were repaired and rebuilt on the same spot, perhaps to economize on land and to guard against floods. As a result of the very frequent reoccupation of the area, the elevated areas created about 12 distinct levels of occupancy. Villages of mud-plastered walls, as in Jarmo and pavements of limestone cobbles and stone walls in Cayonu, hint at a somewhat elaborate village network of about 150 people. Beidha (Jordan) reveals two types of settlement. It is easy to distinguish between the layers of Natufian open-air settlements which had living floors with post-holes and

sunken hearths which suggest a temporary settlement and the substantial semi-subterranean round house up to four meters in diameters and built with stone walls of the subsequent Neolithic period. A terrace wall to retain the sand dunes on which it was built surrounded the village, entered by a few stone steps. When the village was rebuilt, after the fire of 8,650 BP., the houses were freestanding and rounded. They finally became rectangular in shape. As compared to these, a rectangular plan of houses existed in Jericho from the very beginning of the PPNB phase. A rock-cut ditch more than 9 feet deep and 10 feet wide was bordered by a finely built stone wall with towers. The bee-hive shaped huts of Jericho were within these defenses. While the Neolithic sites here date from 10,500 years ago, the defense wall was constructed about nine thousand years ago. While the exact reasons for the wall are not clear, the competition for scarce resources and the need for defense was perhaps one of the reasons for it.

About 8000 to 7000 years ago, the Neolithic settlement of Catal Huyuk covered about 32 acres. Numerous houses of sun-dried bricks of standard sizes were built. The foundation of houses also consisted of mud bricks. The houses were rectangular with a small storeroom attached to them. They were designed to back onto one another, occasionally separated by small courtyards. The insides of the houses show a remarkable consistency of plan with specific areas for resting, cooking and for worship. The entrance to the houses was through the roof, access to which could have been with the help of a moveable ladder. This could have provided protection against outsiders and floods. This system of defense must have been quite successful because the only form of destruction suffered by Catal Huyuk was fire. In Europe, initially Greece or rather the Aegean world, where Neolithic began nine thousand years ago, i.e., about two thousand years later compared with Anatolia, the buildings were mainly made of sun-dried bricks, wood and wattle and daub. The settlements of the Yangshao culture in the Henan province in China go back to c.7100 to 4900 years ago. Life had become sedentary and settlements measured from tens of thousands to a hundred thousand or more square metres. Some of the villages had defensive moats. The houses were either semi-subterranean or surface buildings of wooden constructions. The remains of the houses show that the Yangshao culture had reached a high level of competence in house building. SO far as Indian subcontinent is concerned the Neolithic settlement of Mehrgarh in Baluchistan is noteworthy. Tools

Cultivation and all the processes associated with it like clearing of forestland, turning over of the soil, sowing of seeds, harvesting, thrashing and grinding of cereals, required special tools. There had been some attempts in this direction during the Mesolithic. A digging stick and a hoe were some of the early tools used to prepare the ground for cultivation. While a hoe helped in turning over the soil, a digging stick was used to dig furrows in soil for planting seeds. Reaping knife and sickle helped in harvesting ripened plants. Cereals like wheat and barley had to be separated from the husk by threshing and winnowing, and then ground into flour. The grinding and pounding tools like mortars, querns and pestles had to be of tough stone.

However, only certain artifacts used for cutting like axes or adzes were polished. Moreover the

technique of polishing was only a minor innovation for it involved application to stone of an earlier technique for working bone that had been in use since the Upper Palaeolithic or perhaps even earlier. New technology was being devised for the manipulation and exploitation of plants and other sources of food. A specialised tool like a sickle was made by attaching short blades of flint on to a wooden handle. The sickle blades of Jarmo (Zagros Mountains) were made of chipped flint. When used for harvesting grain they could be mounted on a piece of wood or bone. For the first time the farmers of this region began using tools of obsidian – a volcanic glass which provided a cutting edge sharper and harder than stone. Tools like axes were polished by rubbing the edges on stones because people must have realised that they could fell trees more effectively with a polished axe than with an axe-head made simply by flaking the material roughly into shape. This was achieved by removing very small flakes from the surface by pressure-flaking, i.e., by pressing against the edge of a flint or obsidian with a pointed bone or hardened wood, rather than by striking flakes with the stone. It had been known earlier, but it came to be widely used now.

Pottery making and weaving

People had now begun using the material naturally available quite ingeniously. Clay was one such material. It was used for laying down floors and for making toys and other artifacts. It has been suggested that small geometric objects such as spheres, cones and disks made from clay were used in recording information pertaining to the changing seasons, harvests etc. In the absence of writing, stray methods as these could have served the purpose of storing basic information. Clay was hardened by firing and shaped into bowls and other pots.

The hunters and foragers had used organic material as hide and wood and vegetables like gourds and pumpkin to make containers. But these had a limited utility. They could not be used for cooking purposes. Pots are particularly useful for groups who collect or cultivate durable foods such as nuts, grass-seeds and grain. Gradually Neolithic pottery became more sophisticated than the plain earthenware of the Mesolithic. It is important to note that clay was mixed with other materials such as sand or even organic materials to prevent excess shrinkage during drying to prevent the clay from breaking when it was fired. The early farmers seem to have been quite careful about the quality of the finished product. To facilitate the retention of liquids the potters of West Asia may have been the first ones to glaze the surface of the vessel or to burnish it with a stone. The method of burnishing had earlier been practiced to polish the floors and the wall of the early houses. A question frequently asked is how did the early agriculturists shape the vessel in the absence of the wheel? Perhaps this was done by initially making the base of the pot over some hemispherical object and then they must have added rings of clay to provide the vessel a structure and height. The early pottery could have been either sun dried or fired in domestic hearth or a bonfire. We have no evidence of a furnace or a kiln specifically for this purpose at this early date.

In most Neolithic societies pottery and weaving came to be associated with agriculture. These activities involved creating or making new substances that did not occur ready-made in nature. The

vessels cut out of wood or soft stone or shaped from vegetables like gourds and used by hunter-foragers continued to be used but were not useful if food had to be cooked or stored for a long time. Some groups of hunter-gatherers of the Upper Palaeolithic already knew that clay hardens on contact with fire. This is evidenced by the terracotta figures of animals of this period from some parts of the world like Moravia. It was, however, far more difficult to make a ceramic vessel. It is necessary to purify the clay, mix it with straw or small fragments of stones or shell in order to temper it and prevent it from cracking during firing, mould the vessel and fire it at a high temperature in a pit or primitive kiln. Thus pottery made primarily with clay came into prominence. However this was not true of all the food producing economies. In some parts of the world like Anatolia, West Asia, Greece and South America the early phase of Neolithic was marked by a ceramic cultures.

Initially clay pottery was handmade, but with the introduction of the wheel in the sixth millennium BC, fine wheel made pottery became common in places like West Asia. Over a period of time, Neolithic communities began decorating their pottery. The styles and the designs chosen changed very slowly. Pottery has thus emerged as one of the best indicators for the identification of particular cultures and for determining the period of these cultures. The ceramic products of the earliest inhabitants of Catal Huyuk in Anatolia (modern Turkey) for instance, consist of many shapes – oval bowls, handled jars, and flat based vessels. By the time of the Halaf culture (7500-6700 BP, northwestern Iraq) the motifs on the ceramics had become distinctive, indicating the presence of regional centres in the manufacture of pottery. In the Yangshao culture in the Henan province of China, dating back to c.7,100 to 4,900 years ago, kilns found near the settlements show that they were capable of firing pottery at a very high temperature to produce a red ware and hand-made pottery like bowls, jars and tripods.

However, there is no simple co-relation between the beginning of agriculture and pottery- making. This and other kinds of craft production are dependent on factors like environment and social and economic needs and pressures. There are hunter-gatherers who make pottery and who grind and polish stone tools. There are farmers who do neither. Certain tools like flint sickles and adzes and axes were used around 11,000 BP. in Southwest Asia by groups who were selectively hunting and herding and harvesting wild wheat and barley. In the Tehuacan Valley of Meso- America, the earliest cultigens are found around 7,000 BP. pottery 4,300 BP. and polished stone axes much later around 3,200 BP. Granaries were dug to store the crop.

In Fayum (Egypt), dating back to about 6300 BP, straw-lined pits were found filled with grains of domesticated wheat and barley. Weaving is also more likely to develop under more sedentary conditions. It requires a steady supply of fibers, wool, flax or cotton. The domestication of goat and sheep in West Asia and of the llama and other animals like guanaco and vicuna in the Andes (South America) led to the beginning of weaving only when the fleece of these animals grew suitable for spinning and weaving. This happened when certain mutations had occurred due to domestication. Thus, since the earliest domesticated sheep had hairy coats, woolen textiles developed long after the

beginning of sheep herding. This further establishes the point raised earlier in the context of domestication of animals that the herders could not have knowingly selected sheep for 'woolliness'. As far as the tools are concerned, the early settlers made bone needles, including net making needles, awls and fishhooks.

Trade and Exchange

The advances made in creative abilities did not take place in isolation. The advanced hunter-gatherers and early farmers depended on each other for the exchange of products and the movement of flocks between seasonal pastures. Some of the stone tools could not have been used without some kind of an exchange mechanism. Rare stones were exchanged for surplus seeds or other non-perishable items. To cite an example, tools made from obsidian have been found all over southwest Asia. It is a hard volcanic glass which produces an extremely sharp cutting edge. It was used for making scrapers and knives as early as 30,000 years ago. Tools made from obsidian have been found in Shanidar (Iran) around 10,000BC. And in other Natufian sites like Jarmo in the Levant.

In the Neolithic settlement of Catal Huyuk both obsidian and flint were used for making daggers, scrapers, firestones and knives. The major source of obsidian were regions of recent volcanic activity, for instance, places around Italy, some islands in the Aegean Sea, Taurus (the mountain region around modern Turkey) and Armenia. The presence of the material thousands of miles away from its source indicates an active exchange in it. Around 10,000 years ago obsidian was traded in the form of glass lumps or cores. The extent of use of this material depended largely on the distance from the sources of supply. While Jericho, which was about 500 miles away from Anatolia (an important supplier of obsidian), used more flint than obsidian, farmers of Jarmo were almost completely dependent on it. They acquired it from across the Zagros Mountains. It could have been transported largely on foot or by boat from across the mountains down the Tigris River. The farmers of West Asia and the Mediterranean region exchanged flint and Spondylus shells (a Mediterranean mussel used for ornamentation) and precious stones as jadeite and greenstone. Apart from representing growth of economic contact between geographically separated areas, exchange of such materials also encouraged and strengthened social ties among people. Thus none of the Neolithic communities were completely self-sufficient. Both essential items like grains, game and jungle products and luxury articles were bartered and exchanged.

Evidence for these shows that interaction of Neolithic communities with other groups was more frequent and extensive than among Palaeolithic food gatherers. In Gordon Childe's words, 'the pooling of human experience had to that extent been accelerated by the Neolithic revolution'. It is now believed that the widespread exchange of raw materials accelerated the diffusion of a whole range of innovations far and wide, among them, the introduction of pottery and eventually copper and bronze metallurgy.

Social structure

It should be evident from the discussion so far that the shift from hunting gathering to more

scheduled food collecting techniques was backed by subtle changes in the social structure. A family as a unit of residence or working groups of men and women could have occupied the villages that emerged with early farming practices. As compared with hunter-gatherers, early agriculturists needed a more corporate social structure. There had been an increase in economic activities pursued in the Neolithic villages. In the Upper Palaeolithic there was but one specialist, the sorcerer-shaman, while all other members of the community shared the same activities: the making of tools and other artifacts, hunting, fishing and so on. In the Neolithic villages, on the other hand, a variety of activities like farming, stock-breeding, pottery-making, weaving, stone and metal work, carpentry etc. demanded a more rigorous division of labour among sexes and among different sections of people.

In Gordon Child's estimate, discovery of suitable plants and appropriate methods for their cultivation were tasks accomplished by women. In fact according to him, pottery-making and spinning and weaving and almost all the major inventions and discoveries were works of women. Recent studies show that question of whether men or women should get 'credit' for the innovation of agriculture in any particular region is rather irrelevant. First, it ignores the fact that plant and animal reproductive biology was well known to people even in the Pleistocene. Second, the successful commitment to agriculture is something that the entire society has to accept. However, it is clear that the transition to agriculture was accompanied by dramatic changes in the economic and social roles of men and women. Working on the fields with a hoe (before the introduction of the plough), pottery-making, weaving, tending to the animals, collecting ripened seeds, grinding flour and cooking, besides other kinds of household activities, came to be performed by women. In farming societies, the desire for more children to fuel the agricultural workforce, further added to the responsibilities shared by women. Clark Larsen's study has shown that men carried on hunting and fishing after the adoption of agriculture, perhaps at a more leisurely rate, whereas women took on the taxing field and household chores.

The possibility of a storable surplus as in Jericho and Catal Huyuk must have gradually necessitated distribution and redistribution of land among individual families within the larger kinship organisation of the Neolithic societies. These families now sought facilities that were held jointly earlier. These developments encouraged competitiveness and a feeling of economic insecurity. As mentioned earlier, a stone wall surrounded the closely clustered houses in Jericho. A stone tower of some 8 meters in height was built outside the wall. This is considered world's first monumental architecture. A ditch was also cut into the bedrock outside the wall. None of these building activities would have been possible without supervision and control by a cohesive group. In Merimde (Egypt) huts were arranged in regular rows along streets. Architectural traits such as these point towards some kind of an ordered community existence. In Catal Huyuk some of the structures were found to be larger and more elaborately equipped than others. This has given the impression that it had religious cult centers or shrines for the performance of ritual functions.

The structure of the houses is in fact an indication of the social organisation of the individuals

inhabiting these. The circular huts of the early period were small and could hardly be seen in the archaeological record between 11,000 and 8,500 BP. These houses built with thatched roof could be easily carried along. However, more rooms could be added to the rectangular houses of the later Neolithic period, for instance, in early Meso-America and West Asia between 9,000 and 7,500 BC. These houses could accommodate more members. They had wattle and daub (mud plastered) walls, which are a sign of permanence. The presence of individual storage-bins as compared with common granaries or storage-pits seen in villages with circular huts indicates the importance of families as social units. The multi-room rectangular residences of Jarmo for the period 6,750 to 6,000 BC shows that some herding and farming families had opted for large families that could assist in several different activities associated with agriculture. This also meant that there was now a need to evolve a few social mechanisms to prevent tension and control strife. The hunter-gatherers, among whom the kinship ties are far more flexible, perhaps coped with interpersonal conflicts and competition by moving in smaller bands. It is quite possible that the early Neolithic villages dealt with the social problems generated by a more sedentary life by seeking the intervention of a few individuals or a set of people who began functioning as arbiters in disputes.

Belief system

In a Neolithic set-up, agriculture and the social network that supported it had to have commonly accepted customs to ensure smooth relations among the inhabitants. A common religion and a common language perhaps bound the Neolithic villagers together. The physical environment they lived in found a reflection in the world-view or the belief system of the early farmers. Similar to the inter-relationship between the hunting-gathering economy of the Paleolithic and the symbolic representation of animals in the cave art of the Upper Paleolithic period, there was now during the transition to agriculture a renewed interest in the reproductive/procreative abilities of plants, animals and human beings.

A persisting concern with fertility and procreation is natural to agricultural societies. The religions of the Neolithic were clearly fertility cults with dual male and female principles. Female figurines, moulded in clay or carved in stone or bone, have been found in almost all the Neolithic societies. These are ancestors of the 'Mother Goddess' cults of the subsequent period. It is inferred in these practices that the earth from whose bosom the grain sprouts is a woman who would be influenced by prayers, sacrifices and rites and incantations. The male partner in fertilization is depicted through phallic representations as phalli of clay and the like.

Ritual became an essential part of these societies. Burial of the dead came to be performed with greater pomp compared with the Paleolithic cultures. At Jericho and Ain Ghazal in Jordan, the dead were buried with their heads severed, sometimes under the floors of the houses. The archaeological remains show that the early farmers believed in some form of survival after death. The cult of the dead played an important part in their communities. Neolithic burials were characterised by both, single graves and collective tombs. As Neolithic societies came to be differentiated on the basis of

prestige and power, the pattern of burial for different groups in society changed likewise. In Europe a very elaborate form of burial is represented by the megalithic tombs, perhaps meant for a small number of privileged people who enjoyed great prestige in their societies. Similarly, at the beginning of the Neolithic, grave goods i.e. the goods that accompanied the dead were simple.

End of the Stone Age

Innovation of the technique of smelting ore ended the Stone Age and began the Bronze Age. The first most significant metal manufactured was bronze, an alloy of copper and tin, each of which was smelted separately. The transition from the Stone Age to the Bronze Age was a period during which modern people could smelt copper, but did not yet manufacture bronze, a time known as the Copper Age, or more technically the Chalcolithic, "copper-stone" age. The Chalcolithic by convention is the initial period of the Bronze Age and is unquestionably part of the Age of Metals. The Bronze Age was followed by the Iron Age. During this entire time stone remained in use in parallel with the metals for some objects, including those also used in the Neolithic, such as stone pottery.

The transition out of the Stone Age occurred between 6000 BCE and 2500 BCE for much of humanity living in North Africa and Eurasia. The first evidence of human metallurgy dates to between the 5th and 6th millennium BCE in the archaeological sites of Majdanpek, Yarmovac and Plocnik, though not conventionally considered part of the Chalcolithic or "Copper Age", this provides the earliest known example of copper metallurgy and the Rudna Glava mine in Serbia. Otzi the Iceman, a mummy from about 3300 BCE carried with him a copper axe and a flint knife.

In regions such as Sub Saharan Africa, the Stone Age was followed directly by the Iron Age. The Middle East and South-eastern Asia regions progressed past Stone Age technology around 6000 BCE. Europe, and the rest of Asia became post-Stone Age societies by about 4000 BCE. The proto-Inca cultures of South America continued at a Stone Age level until around 2000 BCE, when gold, copper and silver made their entrance, the rest following later. Australia remained in the Stone Age until the 17th century. Stone tool manufacture continued. In Europe and North America, millstones were in use until well into the 20th century, and still are in many parts of the world.

The Bronze Age and the Birth of Civilization

Neolithic agricultural villages and herding cultures gradually replaced Paleolithic culture in much of the world. Then another major shift occurred, first in the plains along the Tigris and Euphrates rivers in the region the Greeks and Romans called Mesopotamia (modern Iraq), later in the valley of the Nile River in Egypt, and somewhat later in India and the Yellow River basin in China. This shift was initially associated with the growth of towns alongside villages, creating a hierarchy of larger and smaller settlements in the same region.

Some towns then grew into much larger urban centres and often drew populations into them, so that nearby villages and towns declined. The urban centres, or cities, usually had monumental buildings, such as temples and fortifications. These were vastly larger than individual houses and could be built only by the sustained effort of hundreds and even thousands of people over many years. Elaborate

representational artwork appeared, sometimes made of rare and imported materials. New technologies, such as smelting and the manufacture of metal tools and weapons, were characteristic of urban life. Commodities like pottery and textiles that had been made in individual houses in villages were mass produced in cities, which also were characterized by social stratification—that is, different classes of people based on factors such as control of resources, family, religious or political authority, and personal wealth. The earliest writing is also associated with the growth of cities. Writing, like representational art, was a powerful means of communicating over space and time and was probably invented to deal with urban problems of management and record keeping.

These attributes—urbanism; technological, industrial, and social change; long-distance trade; and new methods of symbolic communication—are defining characteristics of the form of human culture called civilization. At about the time the earliest civilizations were emerging, someone discovered how to combine tin and copper to make a stronger and more useful material—bronze. Archaeologists coined the term Bronze Age to refer to the period 3100–1200

B.C.E. in the Near East and eastern Mediterranean.

Summary

- In this Unit we have tried to present an account of the evolution of hominids as a biological species and hunting gathering cultures.
- Hunting gathering as a way of life spans almost 98 per cent of the period of existence of humans on earth. Hominids have lived on earth for more than 2.5 million years.
- In their hunting gathering mode of life humans underwent through a process of change and development. This period has been divided into three phases. Lower Palaeolithic, middle Palaeolithic and upper Palaeolithic with distinctive features.
- During the whole Palaeolithic period the tools used by humans passed through various stages of development. Oldovan, Acheulian Mousterian and upper Palaeolithic are main tool types. Stone tools represented the dominant tool type throughout the period. However, bones, ivory, horns and wood also came to be used in later phases.
- The pattern of habitation and settlement of hunting gathering cultures also changed during this period. Apart from caves and rock shelters they made dwellings of various types in almost all parts inhabited by them. Discovery and use of fire had a lot of impact on food consumption and way of life during the Palaeolithic period.
- In the Palaeolithic cultures we come across arts in various forms. Some important ones were cave paintings, decorative arts and statues which have come down to us from various Palaeolithic settlements.
- The Palaeolithic culture was succeeded by Mesolithic cultures characterised with use of pigmy tools or small stone tools.
- The Mesolithic culture was followed by Neolithic culture, which is marked by the domestication of plant and animal and settled life of mankind.

- The term Neolithic Revolution was employed to describe the incidents that took place during this phase of Stone Age.
- Neolithic has come to represent a period of profound social change when human communities developed new mechanisms of control over land, labour and capital which resulted in social differentiation. Further social, economic and political complexities for instance in the form of civilizations would not have emerged without the existence of agriculture and animal husbandry.
- The Neolithic culture was superseded with the mankind knowledge of metal smelting, which gave birth to the Chalcolithic culture or the Bronze Age Culture across the globe in the history of mankind.
- Gradually the use of metal intensified human agricultural activities, surplus production leads to exchange and further necessitated the process of urbanisation in the river valleys of Africa, Asia and Meso-America.

Key Term

Culture: Culture is the sum total of the ways of living built up by a group and passed on from one generation to another. Culture includes all the daily activities and behaviour of mankind.

Prehistory: A large section of human history, lasting over a millennia, during which there are no written records. The only information we have about the prehistoric period is attained through archaeology.

Palaeolithic: ‘The Old Stone Age’ The period before the end of the last Ice Age when people lived as hunter-gathers, using stone tools, without agriculture or pottery.

Neolithic: The ‘New Stone Age’. A period in history beginning at the end of the last Ice Age, when people cultivated plants and kept animals but still used stone rather than metal tools. In northern Europe this period also sees the first pottery production. (c.4000-2000BC)

Mesolithic: The ‘Middle Stone Age’. Represents a period of transition from the Paleolithic hunter-gathers of the last glaciation, to the Neolithic farmers of the post-glaciation period.

Microlith: Small size stone tools used by prehistoric man during Mesolithic Age.

Olduvai Gorge: A Gorge in Tanzania, Africa famous for discovery of fossils remains of early human species.

Unifacial: Paleolithic stone tools with flaking in one side.

Quartzites: A kind of hard rock.

Chalcolithic: The period of human history when mankind used both stone and Metals(Copper/Bronze) for manufacturing of tools.

Bronze Age: The first period in which metal implements and ornaments were made.
(C.2000.700BC)

Iron Age: The first period in which iron was used to make weapons and tools. This period is distinctive for its strong tribal societies who defended their settlements in hill forts, usually located on a natural promontory and defended by a series of banks and ditches.

Hunter-gatherers: A term used to describing a society whose main sources of food are hunted wild animals and gathered wild plants. During the last 3 million years of human evolution hunter-gathering has been the main method of subsistence.

Unit-III

Bronze Age Civilisation

Objectives

The chapter deals with ancient civilisation of Egyptian. In Egypt the mighty Nile river helps its earliest habitant to built a mighty civilisations. This Nile valley civilisation survived for a long time till its final extinction in the hand of Alexander and gifted many things to the mankind. The objectives of this unit are to.

- Make you aware about development of civilization in Egypt on the bank of Nile.
- Provide a brief sketch on the geography, prehistoric origin and role of river Nile for development of civilisation in Egypt.
- Describe the political, economic, social and religious aspects of various phases of Egyptian civilization.
- Enumerate the development of Art and Architecture, script and literature and science and technology in Egypt and
- Assess the contribution of Egypt to subsequent human civilizations.

Introduction

The discovery of Egypt is one of the most brilliant incidents in the history of archeology. Till the Enlightenment, Egypt was known only for the Pyramids. It was during the 1st decade 19th century that Egyptology was born as a by-product of Napoleonic imperialism. During his expedition to Egypt in 1798 Napoleon took with him a number of draughtsman and engineers to explore and map the terrain and prepared place for certain scholars absurdly interested in Egypt for the sake of a better understanding of history. It was this group of men who first revealed ancient glory of this forgotten civilization. Decipherment of the famous Rosetta stone containing inscription in hieroglyphics, demotic and the Greek script by Francois Champollion in 1822 resulted in discovery of the entire Egyptian alphabet and opened the way to the recovery of a lost world.

Egypt- The Gift of Nile

The great civilization of Egypt, flourished on the flood plain of mighty Nile River, the longest river in the world. As a thin ribbon of water in a dry desert land, the great river brings its water to Egypt from distant mountains, plateaus and lakes in present-day Burundi, Tanzania, Uganda, and Ethiopia. Egypt's settlements arose along the Nile on a narrow strip of land made fertile by the river. As in the valley of Euphrates and Tigris in Mesopotamia, yearly flooding brought the water and enriches soil that allowed settlements to grow. Every year in July, rains and melting snow from the mountains of east-central Africa caused the Nile River to rise and spill over its banks. When the river receded in October, it left behind a rich deposit of fertile black mud. Before the scorching sun could dry out the

soil, the peasants would hitch their cattle to plows and prepare their fields for planting. All fall and winter, they tended the wheat and barley plants. They watered their crops from an intricate network of irrigation ditches. At last came the welcome harvest. This cycle of flood, plant, harvest repeated itself year after year. In an otherwise parched land, the abundance brought by the Nile was so great that the Egyptians worshiped it as a god who gave life and seldom turned against them. Hence, the ancient Greek historian Herodotus remarked in the fifth century B.C., Egypt was the *-gift of the Nile*. Ancient Egyptians knew only the lower part of the Nile—the last 750 miles before the river meets the Mediterranean Sea. Their domain ended at a point where jagged granite cliffs and boulders turn the river into churning rapids called a cataract. Riverboats could not pass this spot, known as the First Cataract, to continue upstream to the south. Between the First Cataract and the Mediterranean lay two very different regions. Upper Egypt (to the south) was a skinny strip of land from the First Cataract to the point where the river starts to fan out into many branches. Lower Egypt (to the north, near the sea) consisted of the Nile delta region, which begins about 100 miles before the river enters the Mediterranean. The delta is a broad, marshy, triangular area of land formed by deposits of silt at the mouth of the river. This rich land provided a home for many birds and wild animals. The Nile provided a reliable system of transportation between Upper and Lower Egypt. The Nile flows north, so northbound boats simply drifted with the current. Southbound boats hoisted a wide sail. The prevailing winds of Egypt blow from north to south, carrying sailboats against the river current. The ease of contact made possible by this watery highway helped unify Egypt's villages and promote trade. The vast and forbidding deserts on either side of the Nile acted as natural barriers between Egypt and other lands. They forced Egyptians to stay close to the river, their lifeline, which reduced their interaction with other peoples. At the same time, the deserts also shut out invaders. For much of its early history, Egypt was spared the constant warfare that plagued the Fertile Crescent.

Egyptians were coming into contact with the people of Mesopotamia due to movement of goods and ideas by 3200 B.C. In the mean time, Egyptian traders were also traveling up the Nile on barges to the lands of Nubia and Kush to the south. They were in search of such goods and commodities as gold, ivory, cattle and granite blocks for their massive temples and tombs. Whole groups of people seem to have moved freely from one region to another in search of better land for farming or grazing. The early Egyptians may have borrowed some ideas from the Mesopotamians in the early development of their cities and in their system of writing. However, the period of Mesopotamian influence ended quickly. From then on, Egypt followed its own cultural path, which was very different from Mesopotamia's. Egypt blended the cultures of the Nile Valley peoples with the cultures of peoples who migrated into the valley from other parts of Africa and from the Fertile Crescent. Egypt thus was a land of cultural, ethnic and racial diversity throughout its 3,000-year history.

The 3,000-year span of ancient Egyptian history is traditionally divided into thirty-one royal dynasties, from the first dynasty, said to have been founded by Menes, the king who originally united

Upper and Lower Egypt, to the last, conquered by Alexander the Great in 332 B.C.E. Ptolemy, one of Alexander's generals, founded the Ptolemaic Dynasty, whose last ruler was Cleopatra. In 30 B.C.E. the Romans defeated Egypt, effectively ending the independent existence of a civilization that had lasted three millennia.

The unification of Upper and Lower Egypt was vital for it meant that the entire river valley could benefit from an unimpeded distribution of resources. Three times in its history, Egypt experienced a century or more of political and social disintegration, known as Intermediate periods. During these eras, rival dynasties often set up separate power bases in Upper and Lower Egypt until a strong leader reunified the land.

Dynastic history did not appear in Egypt all of a sudden, like other civilizations of the world. Nile valley also witnessed gradual accumulation of human from prehistoric age. It was Sir Flinders Petrie, who discovered the first flints in the valley of the Nile. However, in 1895 De Morgan revealed an almost continuous gradation of Paleolithic cultures. Slowly the Paleolithic remains graduate into Neolithic at depths indicating an age 10,000-4000 B.C. The stone tools become more refined and reach indeed a level of sharpness, finish and precision unequaled by any other Neolithic culture known. Towards the end of the period metal work enters in the form of vases, chisels and pins of copper and ornaments of silver and gold. Finally, as a transition to history, agriculture appears. From that early age the inhabitants of the Nile valley began the work of irrigation, cleared the jungles and the swamps, won the river from the crocodile and the hippopotamus and slowly laid the groundwork of civilization. These and other remains give us some hints of Egyptian life before the first of the historic dynasties. It was a culture midway between hunting and agriculture and just beginning to replace stone with metal tools. The people made boats, ground corn, wove cloths, wore jewels and spray perfumes, barbers and domesticated animals and delighted to draw pictures chiefly of the prey they pursued.

They used painted pottery and had pictographic writing and Sumerian-like cylinder seals. But nothing is known about the source of migration of these early Egyptians. It is presumed that they were a cross between Nubian, Ethiopian and Libyan natives on one side and Semitic or Armenoid immigrants on the other; even at that date there were no pure races on the earth. Probably the invaders or immigrants from Western Asia brought a higher culture with them and their intermarriage with the vigorous native stocks provided that ethnic blend which is often the prelude to a new civilization. Slowly, from 4000 to 3000 B.C., these mingling groups became a people and created the Egypt of history.

Political History of Egyptian Civilisation.

The Old Kingdom

By the 4th Millenniums B.C., the early habitant of the Nile had forged a form of government. The population along the river was divided into "*nomes*," in each of which the inhabitants were essentially of one stock, obeyed the same chief and worshiped the same gods by the same rites. Throughout the

history of ancient Egypt these *nomes* persisted Their "nomarchs" or rulers having more or less power and autonomy according to the weakness or strength of the reigning Pharaoh.

The growth of trade and the rising costliness of war forced the *nomes* to organize themselves into two kingdoms one in the south, one in the north; a division probably reflecting the conflict between African natives and Asiatic immigrants. This dangerous condition of geographic and ethnic differences was resolved for a time when Menes, a half-legendary figure, brought the Two Lands of Egypt under his united power, promulgated a body of laws given him by the god Thoth, established the first historic dynasty, built a new capital at Memphis, taught the people to use tables and couches and introduced luxury and an extravagant manner of life.

What sorts of circumstance made the Fourth Dynasty the most important in Egyptian history is still a matter of puzzle. Perhaps it was the profitable mining operations and the ascendancy of Egyptian merchants in Mediterranean trade as well as the brutal energy of Khufu, first Pharaoh of the new house, which made the fourth dynasty a powerful one in the history of ancient Egypt.

The Old Kingdom represents the culmination of the cultural and historical developments of the Early Dynastic period. For over 400 years, Egypt enjoyed internal stability and great prosperity. During this period, the Pharaoh was a king who was also a god. From his capital at Memphis, the god-king administered Egypt according to a set of principles. Prime among these principles was *maat*, an ideal of order, justice, and truth. In return for the king's building and maintaining temples, the gods preserved the equilibrium of the state and ensured the king's continuing power, which was absolute. Because the king was obligated to act infallibly in a benign and beneficent manner. The welfare of the people of Egypt was automatically guaranteed and safeguarded.

The royal power of Old Kingdom was manifested in the pyramids built as pharaonic tombs. Beginning in the Early Dynastic period, kings constructed increasingly elaborate burial complexes in Upper Egypt. Djoser, a Third Dynasty king, was the first to erect a monumental six-step pyramid of hard stone. Subsequent pharaohs built other stepped pyramids until Snefru, the founder of the Fourth Dynasty, converted a stepped pyramid to a true pyramid over the course of putting up three monuments.

The pyramids were tombs, lineally descended from the most primitive of burial mounds. Apparently the Pharaoh believed like any commoner among his people, that every living body was inhabited by a *ka*, which need not die with the breath. The *ka* would survive all the more completely if the flesh were preserved against hunger, violence and decay. The pyramid, by its height, in its form and position, sought stability as a means to deathlessness. Again, it was to have permanence and strength; therefore stones were piled up here with mad patience as if they had grown by the wayside and had not been carried from quarries hundreds of miles away.

In Khufu's pyramid there are two and a half million blocks, some of them weighing one hundred and fifty tons, all of them averaging two and a half tons. The stone structure cover half a million square feet and rise 481 feet into the air. And the mass is solid; only a few blocks were omitted, to leave a

secret passage way for the carcass of the King. A guide leads the trembling visitor on all fours into the cavernous mausoleum, up a hundred crouching steps to the very heart of the pyramid. There in the damp center, buried in darkness and secrecy once rested the bones of Khufu and his queen. The marble sarcophagus of the Pharaoh is still in place but broken and empty. Even these stones could not deter human robbery nor all the curses of the gods.

However, the pyramid of Khufu has lost twenty feet of its height and all its ancient marble casing is gone. Beside it stands Khafre's pyramid, a trifle smaller, but still capped with the granite casing that once covered it all. Humbly beyond this squats the pyramid of Khafre's successor Menkaure covered not with granite but with shamefaced brick, as if to announce that when men raised it the zenith of the Old Kingdom had passed. The statues of Menkaure that have come down to us show him as a man more refined and less forceful than Khafre. Civilization like life destroys what it has perfected already it may be the growth of comforts and luxuries, the progress of manners and morals, had made men lovers of peace and haters of war. Suddenly a new figure appeared usurped Menkaure's throne, and put an end to the pyramid-builders' dynasty.

The First Intermediate Period and Middle Kingdom (2200–1630 B.C.E.)

Toward the end of the Old Kingdom absolute pharaonic power waned as royal officials called nomarchs became more independent and influential. About 2200 B.C.E. the Old Kingdom collapsed and gave way to the decentralization and disorder of the First Intermediate period, which lasted until about 2025 B.C.E.

Amunemhet I, the founder of Dynasty 12 and the Middle Kingdom, probably began his career as a successful vizier under an Eleventh Dynasty king. After reuniting Upper and Lower Egypt, he turned his attention to making three important and long-lasting administrative changes. First he moved his royal residence from Thebes to a brand-new town, just south of the old capital at Memphis signalling a fresh start rooted in past glories. Second he reorganized the *nome* structure by more clearly defining the *nomarchs'* duties to the state, granting them some local autonomy within the royal structure. Third he established a co-regency system to smooth transitions from one reign to another.

Amunemhet I and the other Middle Kingdom pharaohs sought to evoke the past by building pyramid complexes like those of the later Old Kingdom rulers. Yet the events of the First Intermediate period had irrevocably changed the nature of Egyptian kingship. Gone was the absolute, distant god-king; the king was now more directly concerned with his people. In art, instead of the supremely confident faces of the Old Kingdom pharaohs, the Middle Kingdom rulers seem thoughtful, careworn and brooding. Egypt's relations with its neighbours became more aggressive during the Middle Kingdom. To the south, royal fortresses were built to control Nubia and the growing trade in African resources. To the north and east, Syria and Palestine increasingly came under Egyptian influence. Even as fortifications sought to prevent settlers from the Levant from moving into the delta. The Twelfth Dynasty was powerful under Amenemhet 1 during which all the arts, excepting perhaps architecture, reached a height of excellence never equaled in known Egypt before or again.

The Second Intermediate Period and the New Kingdom (1630–1075 B.C.E.)

During the period of dynasty 13, the kingship changed hands rapidly and the western delta established itself as an independent kingdom under dynasty 14, ushering in the Second Intermediate period. The eastern delta with its expanding Asiatic populations, came under the control of the Hyksos (Dynasty 15) and minor Asiatic kings (Dynasty 16). Meanwhile, the Dynasty 13 kings left their northern capital and regrouped in Thebes and re-established themselves as dynasty 17.

The Hyksos were almost certainly Amorites from the Levant, part of the gradual infiltration of the delta during the Middle Kingdom. After nearly a century of rule, the Hyksos were expelled a process begun by Kamose the last king of Dynasty 17 and completed by his brother Ahmose, the first king of the Eighteenth Dynasty and the founder of the New Kingdom.

During the Eighteenth Dynasty, Egypt pursued foreign expansion with renewed vigour. Military expeditions reached as far north as the Euphrates in Syria with frequent campaigns in the Levant. To the south, major Egyptian temples were built in the Sudan, almost 1,300 miles from Memphis. Egypt's economic and political power was at its height.

Egypt's position was reflected in the unprecedented luxury and cosmopolitanism of the royal court and in the ambitious palace and temple projects undertaken throughout the country. The Eighteenth Dynasty pharaohs were the first to cut their tombs deep into the rock cliffs of a desolate valley in Thebes, known today as the Valley of the Kings. To date only one intact royal tomb has been discovered there that of the young Eighteenth Dynasty king Tutankhamun and even it had been disturbed shortly after his death. The thousands of goods buried with him many of them marvels of craftsmanship, give a glimpse of Egypt's material wealth during this period.

Following the premature death of Tutankhamun in 1323 B.C.E., a military commander named Horemheb assumed the kingship, which passed in turn to his own army commander, Ramses I. The Ramessides of Dynasty 19 undertook numerous monumental projects, among them Ramses II's rock-cut temples at Abu Simbel, which was moved to a higher location when the Aswan High Dam was built in the 1960s. There, Ramses II left textual and pictorial accounts of his battle in 1285 B.C.E. against the Hittites at Kadesh on the Orontes in Syria. Sixteen years later the Egyptians and Hittites signed a formal peace treaty formed an alliance against an increasingly volatile political situation in the Middle East and the eastern Mediterranean during the thirteenth century B.C.E.

Merneptah, one of the offspring of Ramses II, held off a hostile Libyan attack as well as incursions by the Sea Peoples, a loose coalition of Mediterranean raiders who seem to have provoked and taken advantage of unsettled conditions. Despite Merneptah's efforts by the end of the Twentieth Dynasty, Egypt's period of imperial glory had passed. The next thousand years witnessed the Third Intermediate period, a Saite renaissance, Persian domination, conquest by Alexander the Great, the Ptolemaic period and finally, defeat at the hands of the Roman Emperor Octavian in 30 B.C.E.

The Political Organisation

The Pharaoh

As became so godlike a person, the Pharaoh was waited upon by a variety of aides, including generals, launderers, bleachers, guardians of the imperial wardrobe, and other men of high degree. Twenty officials collaborated to take care of his toilet, barbers who were permitted only to shave him and cut his hair, hairdressers who adjusted the royal cowl and diadem to his head, manicurists who cut and polished his nails, perfumers who deodorized his body, blackened his eyelids with eyeliner and reddened his cheeks and lips with rouge. So pampered, he tended to degenerate and sometimes brightened his boredom by manning the imperial barge with young women clad only in network of a large mesh.

1.2.4.2. The Egyptian Law

Civil and criminal legislation were highly developed and already in the Fifth Dynasty the law of private property and bequest was intricate and precise. There was equality before the law whenever the contesting parties had equal resources and influence. The oldest legal document in the world is a brief inscription presenting to the court a complex case in inheritance. Judges required cases to be pled and answered, reargued and rebutted, not in oratory but in writing which compares favorably with our windy litigation. Perjury was punished with death. There were regular courts, rising from local judgment-seats in the *nomes* to supreme courts at Memphis, Thebes or Heliopolis. Torture was used occasionally as a midwife to truth; beating with a rod was a frequent punishment, mutilation by cutting off nose or ears, hand or tongue, was sometimes resorted to, or exile to the mines or death by strangling, trampling, beheading, or burning at the stake. The extreme penalty was to be embalmed alive. Criminals of high rank were saved the shame of public execution by being permitted to kill themselves. The Egyptian don't have a system of police. Even the standing army always small because of Egypt's protected isolation between deserts and seas was seldom used for internal discipline. Security of life and property, and the continuity of law and government rested almost entirely on the prestige of the Pharaoh, maintained by the schools and the church.

2.2.4.3. The Bureaucrats

It was a well-organized government with a better record of duration than any other in history. At the head of the administration was the Vizier, who served at once as prime minister, chief justice, and head of the treasury. He was the court of last resort under the Pharaoh himself. A tomb relief shows us the Vizier leaving his house early in the morning to hear the petitions of the poor, to hear, as the inscription reads, what the people say in their demands and to make no distinction between small and great.

Economic Condition

Agriculture

The fertile bank of Nile deposited in its inundation and irrigated during farming seasons was the real cause behind the prosperity of this great civilization. Every acre of the soil in ancient Egypt belonged to the Pharaoh and other men could use it only by his kind indulgence. Every tiller of the earth had to

pay him an annual tax of ten or twenty per cent in kind. Large tracts were owned by the feudal barons or other wealthy men. Cereals, fish and meat were the chief items of diet.

In spite of large tract of fertile land the lot of the peasant was hard. The free farmer was subject only to the middleman and the tax-collector who dealt with him on the most time-honored of economic principles, taking all that the traffic would bear out of the produce of the land. The peasant was subject at any time to the exploitation, doing forced labor for the King, dredging the canals, building roads, tilling the royal lands or dragging great stones and obelisks for pyramids, temples and palaces. Probably a majority of the laborers in the field were moderately at ease, accepting their poverty patiently. Many of them were slaves, captured in the wars or bonded for debt. Sometimes slave-raids were organized and women and children from abroad were sold to the highest bidder at home. Thus, in ancient Egypt condition of farmer was in utter despair but owing to availability of fertile land agriculture was highly productive. The ruling class by exploiting the tiller of land led their life in luxury and built huge structure which still shows the glorious civilization which was once flourished on the bank of river Nile.

Industry

The fertile land and hard work of the peasantry resulted in surplus production. The surplus food was laid aside for workers in industry and trade. Unavailability of minerals forced ancient Egyptian to import those from Arabia and Nubia. The great distances offered no temptation to private initiative and for many centuries mining was a government monopoly. Copper was mined in small quantities, iron was imported from the Hittites, gold mines were found along the eastern coast, in Nubia and in every vassal treasury.

In its early dynasties period Egypt learned the art of making Bronze by mingling copper with tin. They utilized bronze to manufactured different equipments. Egyptian workers made brick, cement and plaster of paris; they glazed pottery, blew glass and glorified both with colour. They were masters in the carving of wood; they made everything from boats and carriages, chairs and beds to beautiful coffins that almost invited men to die. Out of animal skins they made clothing, quivers, shields and seats. All the arts of the tanner are pictured on the walls of the tombs; and the curved knives represented there in the tanner's hand are used by cobblers to this day. From the papyrus plant Egyptian artisans made ropes, mats, sandals and paper. Other workmen developed the arts of enameling and varnishing and applied chemistry to industry. Still others wove tissues of the subtlest weave in the history of the textile art. Specimens of linen woven four thousand years ago show today, despite time's corrosion, a weave so fine that it requires a magnifying glass to distinguish it from silk. The best work of the modern machine-loom is coarse in comparison with this fabric of the ancient Egyptian hand-loom.

The workers were mostly freemen, partly slaves. In general every trade was hereditary in nature, as in India and sons were expected to follow and take over the occupations of their fathers. The great wars brought in thousands of captives, making possible the large estates and the triumphs of engineering.

Rameses III presented 1,13,000 slaves to the temples during the course of his reign.

Egyptian engineering was superior to all the civilization and cultures before the Industrial Revolution. Senusret III, for example, built a wall twenty-seven miles long to gather into Lake Moeris the waters of the Fayum basin, thereby reclaiming 25,000 acres of marsh land for cultivation, and providing a vast reservoir for irrigation. Great canals were constructed some from the Nile to the Red Sea; the caisson was used for digging and stones weighing a thousand tons were transported over great distances. Ships a hundred feet long by half a hundred feet wide plied the Nile and the Red Sea and finally sailed the Mediterranean. Trade was comparatively primitive; most of it was by barter in village marketplace. Foreign commerce grew slowly, restricted severely by the most up-to-date tariff walls. The various kingdoms of the Near East believed strongly in the "protective principle," for customs dues were a mainstay of their royal treasuries. Nevertheless Egypt grew rich by importing raw materials and exporting finished products Syrian, Cretan and Cypriote merchants crowded the markets of Egypt and Phoenician galleys sailed up the Nile to the busy docksides of Thebes.

Coinage had not yet developed; payments, even of the highest salaries, were made in goods corn, bread, yeast, beer, etc. Taxes were collected in kind, and the Pharaoh's treasuries were not a mint of money but storehouses of a thousand products from the fields and shops. After the influx of precious metals that followed the conquests of Thutmose III, merchants began to pay for goods with rings or ingots of gold, measured by weight at every transaction; but no coins of definite value guaranteed by the state arose to facilitate exchange. Credit, however, was highly developed; written transfers frequently took the place of barter or payment. Scribes were busy everywhere accelerating business with legal documents of exchange, accounting and finance in the Ancient Egypt.

Social Condition

The Marriage System.

The government of the Pharaohs resembled that of a dictator like Napoleon, even to the incest. Very often the king married his own sister occasionally his own daughter to preserve the purity of the royal blood. It is difficult to say whether this weakened the stock. The words brother and sister in Egyptian poetry, have the same significance as lover and beloved in the modern days. In addition to his sisters the Pharaoh had an abundant harem, recruited not only from captive women but from the daughters of the nobles and the gifts of foreign potentates. Some of the nobility imitated this tedious extravagance on a small scale, adjusting their morals to their resources.

The Position of Women.

The common people satisfied themselves with monogamy. Family life was apparently as well ordered as wholesome in moral tone and influence as in the highest civilizations of our time. Divorce was rare until the decadent dynasties. The husband could dismiss his wife without compensation if he detected her in adultery; if he divorced her for other reasons he was required to turn over to her a substantial share of the family property. The position of woman was more advanced than in most countries today. The monuments picture them eating and drinking in public, going about their affairs

in the streets unattended and unharmed and freely engaging in industry and trade. Greek travelers were amazed at this liberty. Women held and bequeathed property in their own names. Hatshepsut and Cleopatra rose to be queens, and ruled and ruined like kings. It is likely that this high status of woman arose from the mildly matriarchal character of Egyptian society. Not only was woman full mistress in the house but all estates descended in the female line. Men married their sisters not because familiarity had bred romance but because they wished to enjoy the family inheritance, which passed down from mother to daughter and they did not care to see this wealth give aid and comfort to strangers. The powers of the wife underwent a slow diminution in the course of time, perhaps through contact with the patriarchal customs of the Hyksos and through the transit of Egypt from agricultural isolation and peace to imperialism and war. Even then, however, the change was accepted only by the upper classes. The Egyptian commoner adhered to matriarchal ways. Possibly because of the mastery of woman over her own affairs, infanticide was rare. Families were large, and children swarmed in both hovels and palaces. The well-to-do were hard put to it to keep count of their offspring.

Even in courtship the woman usually took the initiative. Hence modesty as distinct from fidelity was not prominent among the Egyptians. They spoke of sexual affairs with a directness alien to our late morality, adorned their very temples with pictures and bas-reliefs of startling anatomical candor and supplied their dead with obscene literature to amuse them in the grave. Dancing-girls, were accepted into the best male society as providers of entertainment and physical edification. They dressed in diaphanous robes or contented themselves with anklets, bracelets and rings. Evidences occur of religious prostitution on a small scale as late as the Roman occupation. The most beautiful girl among the noble families of Thebes was chosen to be consecrated to Amon. When she was too old to satisfy the god she received an honorable discharge, married, and moved in the highest circles.

Character, Games, Appearance and Costumes etc.

If we try to visualize the Egyptian character we find it difficult to distinguish between the ethics of the literature and the actual practices of life. Very frequently noble sentiments occur and some of the elders give very laudable advice to their children. In general the Egyptians were enamored of size given to gigantic engineering and majestic building, industrious and accumulative practical even in the midst of many ultra mundane superstitions. They were the arch-conservatives of history. The more they changed, the more they remained the same. Through forty centuries their artists copied the old conventions religiously. They had no sentimental regard for human life and killed with the clear conscience of nature. Egyptian soldiers cut off the right hand or the phallus of a slain enemy and brought it to the proper scribe that it might be put into the record to their credit. In the later dynasties the people long accustomed to internal peace and to none but distant wars lost all military habits and qualities until at last a few Roman soldiers sufficed to master all Egypt.

They played many public and private games, such as checkers and dice. They gave many modern toys to their children, like marbles, bouncing balls, tenpins and tops. They enjoyed wrestling

contests, boxing matches and bullfights. At feasts and recreations they were anointed by attendants, were wreathed with flowers, feted with wines, and presented with gifts.

From the painting and the statuary we picture them as a physically vigorous people, muscular, broad-shouldered, thin-waisted, full-lipped and flat-footed from going unshod. The upper classes are represented as fashionably slender, imperiously tall with oval face, sloping forehead, regular features, a long, straight nose, and magnificent eyes. Their skin was white at birth, but rapidly darkened under the Egyptian sun. Their artists idealized them in painting the men red and the women yellow. Perhaps these colors were merely cosmetic styles. In many instances, the people and their rulers were of different races, the rulers of Asiatic and the people of African derivation. Women bobbed their hair in the most modern mode; men shaved lips and chin but consoled themselves with magnificent hairpiece.

According to their means they repaired the handiwork of nature with subtle cosmetic art. Faces were rouged, lips were painted, nails were colored, hair and limbs were oiled; even in the sculptures the Egyptian women have painted eyes. The remains abound in toilet sets, mirrors, razors, hair-curlers, hair-pins, combs, cosmetic boxes, dishes and spoons made of wood, ivory, alabaster or bronze and designed in delightful and appropriate forms. Perfumes of all sorts were used on the body and the clothes, and homes were made fragrant with incense.

Their clothing ran through every gradation from primitive nudity to the gorgeous dress of Empire days. Children of both sexes went about, till their teens naked except for ear-rings and necklaces. The girls showed a beseeching modesty by wearing a string of beads around the middle. Servants and peasants limited their everyday wardrobe to a loin-cloth. Under the Old Kingdom free men and women went naked to the navel, and covered themselves from waist to knees with a short, tight skirt of white linen. When wealth increased, clothing increased. During the Middle Kingdom the Egyptian added a second and larger skirt over the first and it was under the Empire they added a covering for the breast. Women, in the prosperous dynasties, abandoned the tight skirt for a loose robe that passed over the shoulder and was joined in a clasp under the right breast. Both sexes loved ornament and covered neck, breast, arms, wrists and ankles with jewelry. As the nation fattened on the tribute of Asia and the commerce of the Mediterranean world, jewelry ceased to be restricted to the aristocracy and became a passion with all classes.

Art of Writing and Literature

The priests imparted rudimentary instruction to the children of the well-to-do in schools attached to the temples. In the ruins of a school which was apparently part of the Ramesseum a large number of shells has been found, still bearing the lessons of the ancient pedagogue. The teacher's function was to produce scribes for the clerical work of the state. The chief method of instruction was the dictation or copying of texts, which were written upon potsherds or limestone flakes. The subjects were largely commercial because the Egyptians were the first and greatest utilitarian; but the chief topic of pedagogic discourse was virtue and the chief problem, as ever, was discipline. Discipline was

vigorous.

A large number of the temple students were graduated from the hands of the priest to high schools attached to the offices of the state treasury. There, in the first known School of Government, the young scribes were instructed in public administration. On graduating they were apprenticed to officials, who taught them through plenty of work. In this manner Egypt and Babylonia developed more or less simultaneously the earliest school-systems in history.

In the higher grades the student were allowed to use paper one of the main items of Egyptian trade and one of the permanent gifts of Egypt to the world. The stem of the papyrus plant was cut into strips, other strips were placed crosswise upon these, the sheet was pressed, and paper, the very stuff of civilization was made. Sheets were combined into books by gumming the right edge of one sheet to the left edge of the next; in this way rolls were produced which were sometimes forty yards in length. Ink, black and indestructible, was made by mixing water with soot and vegetable gums on a wooden palette. The pen was a simple reed, fashioned at the tip into a tiny brush.

With these modern instruments the Egyptians wrote the most ancient of literatures. Their language had probably come in from Asia. The oldest specimens of it show many Semitic affinities. The earliest writing was apparently pictographic, where an object was represented by drawing a picture of it: e.g., the word for house was indicated by a small rectangle with an opening on one of the long sides. As some ideas were too abstract to be literally pictured, pictography passed into ideography, where certain pictures were by custom and convention used to represent not the objects pictured but the ideas suggested by them; so the forepart of a lion meant supremacy (as in the Sphinx), a wasp meant royalty, and a tadpole stood for thousands. As a further development along this line, abstract ideas, which had at first resisted representation were indicated by picturing objects whose names happened to resemble the spoken words that corresponded to the ideas; so the picture of a lute came to mean not only lute, but good, because the Egyptian word-sound for lute-nefer resembled the word-sound for good nefer. Hieroglyphics are as old as the earliest dynasties; alphabetic characters appear first in inscriptions left by the Egyptians in the mines of the Sinai peninsula, variously dated at 2500 and 1500 B.C.

Whether wisely or not the Egyptians never adopted a completely alphabetic writing. They mingled pictographs, ideographs and syllabic signs with their letters to the very end of their civilization. In the course of time a more rapid and sketchy form of writing was developed for manuscripts as distinguished from the careful "sacred carvings" of the monuments. Since this corruption of hieroglyphic was first made by the priests and the temple scribes, it was called by the Greeks hieratic. It soon passed into common use for public, commercial and private documents. A still more abbreviated and careless form of this script was developed by the common people and therefore came to be known as demotic.

Most of the literature that survives from ancient Egypt is written in hieratic script. Little of it remains and we are forced to estimate it from the fragments that do it only the blind justice of chance. The

oldest extant Egyptian literature consists of the "Pyramid Texts" pious matter engraved on the walls in five pyramids of the Fifth and Sixth Dynasties. Libraries have come down to us from as far back as 2000 B.C. Papyri rolled, packed in jars, labeled and ranged on shelves. In one such jar was found the oldest form of the story of Sinbad the Sailor is a simple autobiographical fragment, full of life and feeling. Short stories are diverse and plentiful in the fragments that have come down to us of Egyptian literature. There are marvelous tales of ghosts, miracles and other fascinating concoctions, as credible as the detective stories that satisfy modern statesmen. There are high-sounding romances of princes and princesses, kings and queens. There are fables of animals illustrating by their conduct the foibles and passions of humanity and pointing morals. The early literature of the Egyptians is largely religious; and the oldest Egyptian poems are the hymns of the Pyramid Texts. As the Old passes into the Middle Kingdom, the literature tends to become secular and profane.

Formal letters, legal documents, historical narratives, magic formulas, laborious hymns, books of devotion, songs of love and war, romantic novels, moral exhortations, philosophical treatises everything is represented here except epic and drama. Historiography, in Egypt, is as old as history. Even the kings of the pre-dynastic period kept historical records proudly. Official historians accompanied the Pharaohs on their expeditions, never saw their defeats and recorded or invented, the details of their victories. Already the writing of history had become a cosmetic art. As far back as 2500 B.C. Egyptian scholars made lists of their kings, named the years from them, and chronicled the outstanding events of each year and reign. By the time of Thutmose III these documents became full-fledged histories, eloquent with patriotic emotion.

In Egypt the language of everyday speech diverged gradually. For a long time authors continued to compose in the ancient tongue. Scholars acquired it in school and students were compelled to translate the "classics" with the help of grammars and vocabularies. In the fourteenth century B.C. Egyptian authors rebelled against this bondage to tradition and dared to write in the language of the people. Ikhnaton's famous Hymn to the Sun is itself composed in the popular speech.

Religious Organisation and Philosophy

Philosophy

The most ancient fragments left to us by the Egyptians are writings that belong to the moral philosophy. The oldest work of philosophy known to us is the "Instructions of Ptahhotep," which apparently goes back to 2880 B.C. 2300 years before Confucius, Socrates and Buddha. Ptah-hotep was Governor of Memphis and Prime Minister to the King, under the Fifth Dynasty. Retiring from office, he decided to leave to his son a manual of everlasting wisdom. It was transcribed as an antique classic by some scholars prior to the Eighteenth Dynasty. Such periods do not endure; hope soon wins the victory over thought. The intellect is put down to its customary menial place and religion is born again, giving to men the imaginative stimulus apparently indispensable to life and work. We need not suppose that such poems expressed the views of any large number of Egyptians. The small but vital minority that pondered the problems of life and death in secular and naturalistic terms were

millions of simple men and women who remained faithful to the gods and never doubted that right would triumph, that every earthly pain and grief would be atoned for bountifully in a haven of happiness and peace.

Ancient Egyptian philosophy was highly concerned with proper conduct and justice. Many texts were prescriptive, telling its readers how to behave. Although Egyptian philosophy did not discuss epistemology, it did discuss how to teach justice. The political system was not written about, but some writings pessimistically considered the consequences when there is no legitimate king, and others offered advice to princes that were to become kings. Methods of persuasion, such as Greek rhetoric, were not discussed. Overall, Egyptian philosophies were flexible, pragmatic, and attentive to emotion.

Religion

For beneath and above everything in Egypt was religion. We find it there in every stage and form from totemism to theology. We see its influence in literature, in government, in art, in everything except morality. We cannot understand the Egyptian until we study their gods. In the beginning, said the Egyptian, was the sky and to the end this and the Nile remained his chief divinities. All these marvelous heavenly bodies were not mere bodies, they were the external forms of mighty spirits. The sky itself was a vault, across whose vastness a great cow stood, who was the goddess Hathor; the earth lay beneath her feet and her belly was clad in the beauty of ten thousand stars. Constellations and stars might be gods: for example, Sahu and Sopdit (Orion and Sirius) were great deities. Occasionally some such monster ate the moon but only for a moment; soon the prayers of men and the anger of the other gods forced the greedy sow to vomit it up again. In this manner the Egyptian populace explained an eclipse of the moon.

The oldest god in Egypt was moon, but in the official theology the greatest of the gods was the sun. Sometimes it was worshiped as the supreme deity Ra or Re, the bright father who fertilized Mother Earth with rays of penetrating heat and light. Sometimes it was a divine calf, born at every dawn, sailing the sky slowly in a celestial boat and descending into the west, at evening, like an old man tottering to his grave. So exuberant was this piety that the Egyptians worshiped not merely the source but almost every form of life. Many plants were sacred to them. The palm-tree that shaded them amid the desert, the spring that gave them drink in the oasis, the grove where they could meet and rest; were holy things and to the end of his civilization the Egyptian worshipped them with offerings. Not only plant but also the animal gods were popular among the Egyptians. Egyptians worshiped the bull, the crocodile, the hawk, the cow, the goose, the goat, the ram, the cat, the dog, the chicken, the swallow, the jackal, the serpent and allowed some of these creatures to roam in the temples. Sometimes women were offered to certain of these animals as sexual mates. The bull as the incarnation of Osiris, received this honor and at Mendes, the most beautiful women were offered in coitus to the divine goat. The ancient Egyptian used to carry out sex worship, which is appear not only in the many cases in which figures are depicted on temple reliefs with erect organs but in the

frequent appearance. In Egyptian symbolism the cross with a handle appear as a sign of sexual union and vigorous life.

The personal gods of Egypt were merely superior men and women, made in heroic mould, but composed of bone and muscle, flesh and blood; they hungered and ate, thirsted and drank, loved and mated, hated and killed, grew old and died. There was Osiris, the god of the beneficent Nile, Profound, too, was the myth of Isis, the Great Mother. She was not only the loyal sister and wife of Osiris; but also she was the god of fecundity. She was, above all, the symbol of that mysterious creative power which had produced the earth and every living thing. The Egyptians worshiped her with especial fondness and piety and rose up jeweled images to her as the Mother of God. In ancient Egypt, the king was chief-priest of the faith, and led the great processions and ceremonies that celebrated the festivals of the gods. It was through this assumption of divine lineage and powers that he was able to rule so long with so little force. In effect, though not in law, the office of priest passed down from father to son, and a class grew up which, through the piety of the people and the generosity of the kings, became in time richer and stronger than the feudal aristocracy or the royal family itself.

What distinguished this religion above everything else was its emphasis on immortality. If Osiris, the Nile and all vegetation, might rise again, so might man. The amazing preservation of the dead body in the dry soil of Egypt lent some encouragement to this belief, which was to dominate Egyptian faith for thousands of years.

For the most part, Egyptian religion had little to say about morality. The priests were busier selling charms, mumbling incantations and performing magic rites than inculcating ethical precepts. Even the Book of the Dead teaches the faithful that charms blessed by the clergy will overcome all the obstacles that the deceased soul may encounter on its way to salvation; and the emphasis is rather on reciting the prayers than on living the good life. At every step the pious Egyptian had to mutter strange formulas to avert evil and attract the good. The gods themselves used magic and charms against one another. The literature of Egypt is full of magicians of wizards who dry up lakes with a word, or cause severed limbs to jump back into place, or raise the dead. The king had magicians to help or guide him; and he himself was believed to have a magical power to make the rain fall or the river rise. Life was full of talismans, spells, divinations; every door had to have a god to frighten away evil spirits or fortuitous strokes of bad luck. Such was the state of religion in Egypt when Ikhnaton, poet and heretic came to the throne and inaugurated the religious revolution that destroyed the Empire of Egypt.

Ikhnaton -The Heretic King

In the year 1380 B.C. Amenhotep III, who had succeeded Thutmose III, died after a life of worldly luxury and display and was followed by his son Amenhotep IV, destined to be known as Ikhnaton. A profoundly revealing portrait-bust of him, discovered at Tell-el-Amarna, shows a profile of incredible delicacy, a face feminine in softness and poetic in its sensitivity. He had hardly come to power when

he began to revolt against the religion of Amon, and the practices of Amon's priests. The young emperor, whose private life was a model of fidelity, did not approve of this sacred harlotry. The blood of the ram slaughtered in sacrifice to Amon stank in his nostrils; and the traffic of the priests in magic and charms, and their use of the oracle of Amon to support religious obscurantism and political corruption disgusted him to the point of violent protest. His youthful spirit rebelled against the sordidness into which the religion of his people had fallen. He hated the indecent wealth and lavish ritual of the temples and the growing hold of a mercenary hierarchy on the nation's life. With a poet's audacity he threw compromise to the winds, and announced bravely that all these gods and ceremonies were a vulgar idolatry, that there was but one god Aton.

Ikhnaton saw divinity above all in the sun, in the source of all earthly life and light. The new god filled the king's soul with delight. He changed his own name from Amenhotep, which contained the name of Amon, to Ikhnaton, meaning "Aton is satisfied"; and helping himself with old hymns, and certain monotheistic poems published in the preceding reign. He composed passionate songs to Aton of which this, the longest and the best, is the fairest surviving remnant of Egyptian literature and also the first outstanding expression of monotheism. Ikhnaton conceives his god as belonging to all nations equally, and even names other countries before his own as in Aton's care. This was an astounding advance upon the old tribal deities. Nevertheless, because of its omnipresent, fertilizing beneficence, the sun becomes to Ikhnaton also the Lord of love, the tender nurse that creates the man-child in woman, and fills the Two Lands of Egypt with love.

It is one of the tragedies of history that Ikhnaton, having achieved his elevating vision of universal unity, was not satisfied to let the noble quality of his new religion slowly win the hearts of men. He was unable to think of his truth in relative terms. The thought came to him that other forms of belief and worship were indecent and intolerable. Suddenly he gave orders that the names of all gods but Aton should be erased and chiseled from every public inscription in Egypt; he mutilated his father's name from a hundred monuments to cut from it the word Amon. He declared all creeds but his own illegal, and commanded that all the old temples should be closed. He abandoned Thebes as unclean, and built for himself a beautiful new capital at Akhetaton- City of the Horizon of Aton. Rapidly Thebes decayed as the offices and emoluments of government were taken from it, and Akhetaton became a rich metropolis busy with fresh building and a Renaissance of arts liberated from the priestly bondage of tradition. The joyous spirit expressed in the new religion passed over into its art.

Ikhnaton forbade the artists to make images of Aton, on the lofty ground that the true god has no form, for the rest he left art free, merely asking his favorite artists, Bek, Auta and Nutmose to describe things as they saw them and to forget the conventions of the priests. They took him at his word and represented him as a youth of gentle, almost timid, face and strangely dolichocephalic head. Taking their lead from his vitalistic conception of deity, they painted every form of plant and animal life with loving detail, and with a perfection hardly surpassed in any other place or time. For a while art, which in every generation knows the pangs of hunger and obscurity flourished in abundance and

happiness.

At one blow he had dispossessed and alienated a wealthy and powerful priesthood, and had forbidden the worship of deities made dear by long tradition and belief. He had underestimated the strength of the priests, and he had exaggerated the capacity of the people to understand a natural religion. Behind the scenes the priests plotted and prepared; and in the seclusion of their homes the populace continued to worship their ancient and innumerable gods. A hundred crafts that had depended upon the temples muttered in secret against the heretic. Even in his palace his ministers and generals hated him and prayed for his death.

Meanwhile the young poet lived in simplicity and trust. He had seven daughters, but no son. Into this simple happiness prevailed during his reign, the dependencies of Egypt in the Near East were being invaded by Hittites and other neighboring tribes. The governors appointed by Egypt pleaded for immediate reinforcements. Ikhnaton hesitated; he was not quite sure that the right of conquest warranted him in keeping these states in subjection to Egypt; and he was reluctant to send Egyptians to die on distant fields for so uncertain a cause. When the dependencies saw that they were dealing with a saint, they deposed their Egyptian governors, quietly stopped all payment of tribute, and became to all effects free. Almost in a moment Egypt ceased to be a vast Empire, and shrank back into a little state. Soon the Egyptian treasury, which had for a century depended upon foreign tribute as its mainstay, was empty. Domestic taxation had fallen to a minimum and the working of the gold mines had stopped. Internal administration was in chaos. Ikhnaton found himself penniless and friendless in a world that had seemed all his own. Every colony was in revolt, and every power in Egypt was arrayed against him, waiting for his fall. He was hardly thirty when, in 1362 B.C., he died, broken with the realization of his failure as a ruler and the unworthiness of his race.

Art and Architecture

The greatest element in this civilization was its art. At first the luxury of isolation and peace, and then, under Thutmose III and Rameses II, the spoils of oppression and war, gave to Egypt the opportunity and the means for massive architecture, masculine statuary and a hundred minor arts. The whole theory of progress hesitates before Egyptian art.

Architecture

Architecture was the noblest of the ancient Egyptian arts, because it combined in imposing form mass and duration, beauty and use. It began humbly in the adornment of tombs and the external decoration of homes. Dwellings were mostly of mud with here and there some pretty woodwork and a roof strengthened with the tough and pliable trunks of the palm. Around the house, normally was a wall enclosing a court. From the court steps led to the roof, from this the tenants passed down into the rooms. The well-to-do had private gardens, carefully landscaped; the cities provided public gardens for the poor, and hardly a home but had its ornament of flowers. Inside the house the walls were hung with colored matting, and the floors. Stone for building was too costly for homes; it was a luxury reserved for priests and kings. Even the nobles, ambitious though they were, left the greatest wealth

and the best building materials to the temples. In consequence the palaces that overlooked almost every mile of the river in the days of Amenhotep III crumbled into oblivion, while the abodes of the gods and the tombs of the dead remained.

By the Twelfth Dynasty the pyramid had ceased to be the fashionable form of sepulture. Khnumhotep (ca. 2180 B.C.) chose at Beni-Hasan the quieter form of a colonnade built into the mountainside; and this theme, once established played a thousand variations among the hills on the western slope of the Nile. From the time of the Pyramids to the Temple of Hathor at Denderah i.e., for some three thousand years there rose out of the sands of Egypt such a succession of architectural achievements as no civilization has ever surpassed.

At Karnak and Luxor a set of columns were raised by monarchs from the Twelfth to the Twenty-second Dynasty. At Medinet-El-Iabu (ca. 1300 B.C.) a vast but less distinguished edifice, on whose columns an Arab village rested for centuries. At Abydos the Temple of Scti I, dark and somber in its massive ruins. At Elephantine the little Temple of Khnum (ca. 1400 B.C.) near it the Ramcsseum, another forest of colossal columns and statues reared by the architects and slaves of Rameses II as well as at Philce the lovely Temple of Isis (ca. 240 B.C.) are sample fragments of the many monuments that still adorn the valley of the Nile and attest even in their ruins the strength and courage of the race that reared them. Here the art specimens show grandeur, sublimity, majesty and power with profusion of decorative designs. The Egyptians were the greatest builders in history.

Sculptures, Paintings and Minor Art.

The ancient Egyptians were also the greatest sculptors. Here at the outset is the Sphinx, conveying by its symbolism the leonine quality of some masterful Pharaoh perhaps Khafre- Chephren; it has not only size as some have thought, but character. The cannon-shot of the Mamelukes have broken the nose and shorn the beard, but nevertheless those gigantic features portray with impressive skill the force and dignity, the calm and skeptical maturity, of a natural king. Across those motionless features a subtle smile has hovered for five thousand years. There is nothing finer in the history of sculpture than the diorite statue of Khafre in the Cairo Museum; as ancient to Praxiteles as Praxiteles to us, it nevertheless comes down across fifty centuries almost unhurt by time's rough usages; cut in the most intractable of stones, it passes on to us completely the strength and authority, the willfulness and courage, the sensitivity and intelligence of the King.

In Egypt, except during the reign of the Ptolemies, painting never rose to the status of an independent art; it remained an accessory to architecture, sculpture and relief the painter filled in the outlines carved by the cutting tool. But though subordinate, it was ubiquitous; most statues were painted, all surfaces were colored. It is a perilously subject to time, and lacking the persistence of statuary and building. Very little remains to us of Old Kingdom painting beyond a remarkable picture of six geese from a tomb at Medum; but from this alone we are justified in believing that already in the early dynasties this art, too, had come near to perfection. In the Middle Kingdom we find distemper painting of a delightful decorative effect in the tombs of Ameni and Khnumhotep at Beni-Hasan, and

such excellent examples of the art as the "Gazelles and the Peasants," and the "Cat Watching the Prey"; here again the artist has caught the main point that his creations must move and live. Under the Empire the tombs became a riot of painting. The Egyptian artist had now developed every color in the rainbow, and was anxious to display his skill. On the walls and ceilings of homes, temples, palaces and graves he tried to portray refreshingly the life of the sunny fields' birds in flight through the air, fishes swimming in the sea, beasts of the jungle in their native haunts. Floors were painted to look like transparent pools, and ceilings sought to rival the jewelry of the sky. Around these pictures were borders of geometric or floral design, ranging from a quiet simplicity to the most fascinating complexity.

In the painting, the line is good and the composition poor; the participants in an action, whom we should portray as intermingled, are represented separately in succession; superposition is again preferred to perspective; the stiff formalism and conventions of Egyptian sculpture are the order of the day and do not reveal that enlivening humor and realism which distinguish the later statuary. But through these pictures runs a freshness of conception, a flow of line and execution, a fidelity to the life and movement of natural things, and a joyous exuberance of color and ornament, which make them a delight to the eye and the spirit. With all its shortcomings Egyptian painting would never be surpassed by any Oriental civilization until the middle dynasties of China.

The minor arts were the major art of Egypt. The same skill and energy that had built Karnak and the Pyramids, and had crowded the temples with a populace of stone, devoted itself also to the internal beautification of the home, the adornment of the body, and the development of all the graces of life. Weavers made rugs, tapestries and cushions rich in color and incredibly fine in texture. The relics of Tutenkhamon's tomb have revealed the astonishing luxury of Egyptian furniture and vases that only China would excel. Tables bore costly vessels of silver, gold and bronze, crystal goblets, and sparkling bowls of diorite so finely ground that the light shone through their stone walls. Finally the jewelers of the Middle Kingdom and the Empire brought forth a profusion of precious ornaments seldom surpassed in design and workmanship.

Egyptian religion cooperated with Egyptian wealth to inspire and foster art, and cooperated with Egypt's loss of empire and affluence to ruin it. Religion offered motives, ideas and the inspiration; but it imposed conventions and restraints which bound art so completely to the church that when sincere religion died among the artists, the arts that had lived on it died too. This is the tragedy of almost every civilization that its soul is in its faith, and seldom survives philosophy.

1.2.9. Science and Technology

The scholars of Egypt were mostly priests, who, despite all their superstitions, laid the foundations of Egyptian science. According to their own legends the sciences had been invented some 18,000 B.C. by Thoth, the Egyptian god of wisdom, during his three thousand year-long reign on earth and the most ancient books on science were composed by this learned deity.

Origins of Egyptian Science

At the very outset of recorded Egyptian history we find mathematics highly developed. The design and construction of the Pyramids involved a precision of measurement impossible without considerable mathematical lore. The dependence of Egyptian life upon the fluctuations of the Nile led to careful records and calculations of the rise and recession of the river; surveyors and scribes were continually re-measuring the land whose boundaries had been obliterated by the inundation, and this measuring of the land was evidently the origin of geometry. Nearly all the ancients agreed in ascribing the invention of this science to the Egyptians.

Mathematics, Astronomy and the calendar

The ancient Egyptian used established numerals only fell just short of the decimal system. They had no zero and never reached the idea of expressing all numbers with ten digits. Their idea of multiplication and division tables are as old as the Pyramids. The oldest mathematical treatise known is the Ahmes Papyrus, dating back to 2000-1700 B.C. This refers to mathematical writings five hundred years more ancient than itself. Egyptian geometry measured not only the area of squares, circles and cubes, but also the cubic content of cylinders and spheres.

Regarding Egyptian physics and chemistry we know nothing, and almost as little of Egyptian astronomy. The star-gazers of the temples seem to have conceived the earth as a rectangular box, with mountains at the corners upholding the sky. They made no note of eclipses and were in general less advanced than their Mesopotamian contemporaries. The priests regarded their astronomical studies as an esoteric and mysterious science, which they were reluctant to disclose to the common world. For century after century they kept track of the position and movements of the planets, until their records stretched back for thousands of years. They distinguished between planets and fixed stars, noted in their catalogues stars of the fifth magnitude and charted what they thought were the planetary influences of the heavens on the fortunes of men. From these observations they built the calendar which was to be another of Egypt's greatest gifts to mankind. They began by dividing the year into three seasons of four months each: first, the rise, overflow and recession of the Nile; second, the period of cultivation; and third, the period of harvesting. To each of these months they assigned thirty days, as being the most convenient approximation to the lunar month of twenty-nine and a half days. At the end of the twelfth month they added five days to bring the year into harmony with the river and the sun.

Medical Science.

The glory of Egyptian science was medicine. Like almost everything else in the cultural life of Egypt, it began with the priests, and dripped with evidences of its magical origins. Among the people amulets were more popular than pills as preventive or curative of disease. Disease was to them a possession by devils and was to be treated with incantations. Several papyri devoted to medicine have come down to us. The most valuable of them, named from the Edwin Smith who discovered it, is a roll fifteen feet long dating about 1600 B.C., and going back for its sources to much earlier works; even in its extant form it is the oldest scientific document known to history. It describes forty-

eight cases in clinical surgery, from cranial fractures to injuries of the spine. Each case is treated in logical order, under the heads of provisional diagnosis, examination, diagnosis, prognosis, treatment, and glosses on the terms used.

The Egyptians tried to promote health by public sanitation, by circumcision of males and by teaching the people the frequent use of the enema. In order to prevent sicknesses they look after the health of their body by means of drenches, fasting and emetics, sometimes every day and sometimes at intervals of three or four days. For they say that the larger part of the food taken into the body is superfluous and that it is from this superfluous part that diseases are engendered. Herodotus mentions that the Egyptians purge themselves every month, three days successively, seeking to preserve health by emetics and enemas; for they suppose that all diseases to which men are subject proceed from the food they use.

Decline of Egyptian Civilization

After the death of Tutankhamun, the romantic Rameses II, last of the great Pharaohs, mounted the throne. This handsome and brave monarch, added to his charms by his boyish consciousness of them and his exploits in war, which he never tired of recording, were equaled only by his achievements in love. After brushing aside a brother who had inopportune rights to the throne, he resumed many expeditions to different region such as Nubia and into many Asiatic provinces and extended the Egyptian boundary and replenishes the treasury of Egypt. He had his victories commemorated without undue impartiality on half a hundred walls commissioned a poet to celebrate him in epic verse and rewarded himself with several hundred wives. When he died he left one hundred sons and fifty daughters to testify to his quality by their number and their proportion. He married several of his daughters, so that they too might have splendid children. His offspring were so numerous that they constituted for four hundred years a special class in Egypt, from which, for over a century, her rulers were chosen. He seems to have ruled Egypt well. He built so lavishly that half of the surviving edifices of Egypt are ascribed to his reign. He completed the main hall at Karnak, added to the temple of Luxor, raised his own vast shrine, the Ramesseum, west of the river, finished the great mountain-sanctuary at Abu Simbel, and scattered colossi of himself throughout the land. Commerce flourished under him, both across the Isthmus of Suez and on the Mediterranean. He built another canal from the Nile to the Red Sea, but the shifting sands filled it up soon after his death. He yielded up his life in 1225 B.C., aged ninety, after one of the most remarkable reigns of history. After his death the decline of Egypt began. The following factors are responsible for the collapse of this mighty civilization of Nile.

Growing wealth of the clergy

Throughout the reign of Ramses-II and those of his immediate successors, the spoils of every war, and the lion's share of taxes from the conquered provinces, went to the temples and the priests. This kind of generous gifts to the priestly class by the emperor of Egypt gradually emptied the treasury. When the time came to pay the workmen employed by the state he found his treasury empty More

and more the people starved in order that the gods might eat. Under such a policy it was only a matter of time before the kings would become the servants of the priests. In the reign of the last Ramessid king the High Priest of Amon usurped the throne and ruled as openly supreme; the Empire became a stagnant theocracy in which architecture and superstition flourished, and every other element in the national life decayed. Omens were manipulated to give a divine sanction to every decision of the clergy. The most vital forces of Egypt were sucked dry by the thirst of the gods at the very time when foreign invaders were preparing to sweep down upon all this concentrated wealth. For meanwhile on every frontier trouble brewed.

Decline of Trade and Commerce

The prosperity of the country had come in part from its strategic place on the main line of Mediterranean trade. Its metals and wealth had given it mastery over Libya on the west and over Phoenicia, Syria and Palestine on the north and east. But now at the other end of this trade route in Assyria, Babylon and Persia new nations were growing to maturity and power, were strengthening themselves with invention and enterprise, and were daring to compete in commerce and industry with the self-satisfied and pious Egyptians. The Phoenicians were perfecting the trireme galley, and with it were gradually wresting from Egypt the control of the sea. The Dorians and Achaeans had conquered Crete and the Aegean (ca. 1400 B.C.), and were establishing a commercial empire of their own; trade moved less and less in slow caravans over the difficult and robber-infested mountains and deserts of the Near East; it moved more and more, at less expense and with less loss, in ships that passed through the Black Sea and the Aegean to Troy, Crete and Greece, at last to Carthage, Italy and Spain.

The conquest of Egypt

The nations along the northern shores of the Mediterranean ripened and blossomed, the nations on the southern shores faded and rotted away. Egypt lost her trade, her gold, her power, her art, at last even her pride. One by one her rivals crept down upon her soil, harassed and conquered her and laid her waste. In 954 B.C. the Libyans came in from the western hills and laid about them with fury; in 722 the Ethiopians entered from the south, and avenged their ancient slavery; in 674 the Assyrians swept down from the north and subjected priest-ridden Egypt to tribute. For a time Psamtik, Prince of Sai's, repelled the invaders, and brought Egypt together again under his leadership. During his long reign, and those of his successors, came the "Sai'te Revival" of Egyptian art: the architects and sculptors, poets and scientists of Egypt gathered up the technical and esthetic traditions of their schools, and prepared to lay them at the feet of the Greeks. But in 525 B.C. the Persians under Cambyses crossed Suez, and again put an end to Egyptian independence. In 332 B.C. Alexander sallied out of Asia, and made Egypt a province of Macedon. In 48 B.C. Caesar arrived to capture Egypt's new capital, Alexandria, and to give to Cleopatra the son and heir whom they vainly hoped to crown as the unifying monarch of the greatest empires of antiquity.

Contributions Egyptian civilization

In 30 B.C. Egypt became a province of Rome, and disappeared from history. For a time it flourished

again when saints peopled the desert, and Cyril dragged Hypatia to her death in the streets (415 A.D.). Again when the Moslems conquered it (ca. A.D. 650), built Cairo with the ruins of Memphis and filled it with bright-domed mosques and citadels it revived in a different manner. But these were alien cultures not really Egypt's own, and they too passed away. Today there is a place called Egypt, but the Egyptian people are not masters there. Long since they have been broken by conquest and merged in language and marriage with their Arab conquerors; and the feet of weary pilgrims who travel thousands of miles to find that the Pyramids are merely heaps of stones. Perhaps greatness could grow there again if Asia should once more become rich, and make Egypt the half-way house of the planet's trade.

On all sides gigantic ruins, monuments and tombs, memorials of a savage and titanic energy scattered. And on all sides the hostile, engulfing sands, blown about forever by hot winds and grimly resolved to cover everything in the end. Nevertheless the sands have destroyed only the body of ancient Egypt. Its spirit survives in the lore and memory of our race. The improvement of agriculture, metallurgy, industry and engineering. The apparent invention of glass and linen, of paper and ink, of the calendar and the clock, of geometry and the alphabet. The refinement of dress and ornament, of furniture and dwellings, of society and life. The remarkable development of orderly and peaceful government, of census and post, of primary and secondary education, even of technical training for office and administration. The advancement of writing and literature, of science and medicine. The first clear formulation known to us of individual and public conscience, the first cry for social justice, the first widespread monogamy, the first monotheism, the first essays in moral philosophy; the elevation of architecture, sculpture and the minor arts to a degree of excellence and power never reached before and seldom equaled since. These contributions were not lost, even when their finest exemplars were buried under the desert or overthrown by some convulsion of the globe.

Through the Phoenicians, the Syrians and the Jews, through the Cretans, the Greeks and the Romans, the civilization of Egypt passed down to become part of the cultural heritage of mankind. The effect or remembrance of what Egypt accomplished at the very dawn of history has influence in every nation and every age. "It is even possible," as Faure has said, "that Egypt, through the solidarity, the unity, and the disciplined variety of its artistic products, through the enormous duration and the sustained power of its effort, offers the spectacle of the greatest civilization that has yet appeared on the earth.

Summary

- The narrow strip of land on either side of the river Nile is green and fertile while the western part of North Africa is a desert. The area has hardly any rainfall and except along the Nile, cultivation is difficult in Egypt. It would be entirely a desert but for the Nile it is no wonder that Egypt is called the -Gift of the Nile.
- Regular flood of Nile was an important feature of Egypt. The flood comes when the grounds are parched and when it subsides it leaves a new layer of enriching mud. From

ancient this annual deposit of silt has served as an excellent fertilizer. These natural advantages made Egypt one of the great centres of civilization.

- Historians divide the history of Egypt into three periods: The Old Kingdom, The Middle Kingdom and the New Kingdom. The Old Kingdom is also called the Age of the pyramids. During this period, Memphis, situated near modern Cairo was the capital. The civilization of Egypt with its advances in art, religion and sciences was developed during the period 3000-2000 B.C and during The Middle Kingdom (2000-1750 B.C).
- In the 18th century B.C, Egypt was overrun by invaders called the Hyksos, which came from the east. Their rule was short; soon the Egyptian kings regained their land, and The New Kingdom was founded. Under the New ruling dynasty Egyptian army was reorganized and new tactics of warfare and the horse-drawn chariot were adopted. This enabled the Egyptian kings to conquer many lands.
- The Egyptian king was called the Pharaoh. He had absolute powers. He was also looked upon as God and his statues were put in temples. His deeds and victories were inscribed on temple walls. Next to the Pharaoh came priests, officials, artists and craftsmen. Below these people were the farmers who lived beyond the cities and then came the slaves who were generally the prisoners of war and owned by the king.
- Agriculture was the most important occupation of the people. The rivers fertilized the land every year and the people worked together to build canals to make it possible to grow crops all the round year. Thus they could cultivate a wide area. The chief crops grown were wheat, barley and millet. They also grew dates, figs, apples, peaches and mulberries.
- Like the people of other civilizations, Egyptians also domesticated animals. Goats, dogs, asses, pigs and geese were common. The horse was brought to Egypt by the Hyksos and was used to draw war chariots. Flax was grown in plenty of Egypt. The Egyptian people wore linen garments. During the period of middle kingdom, potter's wheel came into use. They started using metal on a large scale gradually. They made beautiful stone vases and the carpenters of Egypt made beautiful furniture inlaid with ivory and precious stones, which was well preserved in the royal tombs.
- The lavish life of the Egyptians required such luxury products such as incense, oil, silver, timber for building and other things which had to be brought from foreign countries. Internal and foreign trade was controlled by the king. Transport of goods overland was done on pack asses. The Nile was used as a waterway. The Egyptians had also sea-going ships which were used both in war and for peaceful purposes.
- The Egyptians believed that there was a power behind every phenomenon of nature, but the sun was their most important god, worshipped under different names as the creator of

all things. Other Egyptian gods were the kings of other worlds, god of the flood, and the moon god. There are also local gods sometimes represented by symbols such as the hawk, crocodile, jackal and the crow. Priests do not appear to have played an important role in the Egyptian civilization.

- The Egyptians firmly believed in life after death. When a man is alive, they thought has a body and soul. The Egyptians believed that both the body and the soul live though in a different way. So, they took great care in preserving the body of the dead. Such a preserved body was called a mummy. The mummy was put in a wooden box, enclosed in a stone coffin and buried in a tomb. Inside the tomb were preserved all the things the dead person was fond of and used when alive.
- The pyramids were the most remarkable buildings in the ancient Egypt. The most imposing of all is the Great Pyramid of Giza near Cairo. It was built about 2650 B.C by the Pharaoh Cheops (Khufu) of the old kingdom. Since these pyramids were the tombs of the pharaohs, they contained the mummies of the monarchs and also all kinds of precious things they used. The pyramid wall contained a large number of paintings. They give us a wealth of information about the lives of the people, for they depict wars and battles, hunting sense and sacrificial processions and numerous other aspects of everyday life.
- The Egyptian script is known as the hieroglyphic script which means ‘_sacred writing’. It consisted of 24 signs, each of which stood for a single consonant. Vowels were not written. The writers, who constituted an important section of society, wrote with reed pens on the leaves of the plant called ‘_papyrus’ from which we got the word ‘_paper’.
- The Egyptian made significant advances in many fields of knowledge. They developed a decimal system of numeration. Numbers from 1-9 were represented by one sign repeated to give a desire number. For 10 and its multiples, there were different signs.
- The mathematics which the Egyptians developed was quite sufficient for their practical needs, but it was not very systematic. They could calculate the area of a triangle or a rectangle. The measurement of land, the amazing achievements in the art of building and the calendar are evidences of their mathematical skills.
- The crowning achievement of Egyptians was Solar Calendar. After years of observations, the Egyptians found out that the average length of the period between two floods was 365 days. They also observed that a very bright star, Sirius, was the last to appear on the horizon when the flood reached Cairo, and that this happened after every 365 days. These two independent operations led the Egyptians to conclude that a year has 365 days. The year was then divided into 12 months, each of 30 days. The extra 5 days were set apart for the celebration of religious festivals.
- By about 1000 B.C, the great days of Egypt were over. The Pharaoh had to fight for their

very existence against the invaders from the areas to the south of Egypt in Africa or the new powers across the Mediterranean Sea, from Crete and Cyprus. In quick succession Egypt was conquered and became part of the empires of Assyrians, Iranians and Romans.

- Finally with the invasion of Alexander the last ruling dynasty of Ancient Egypt was overthrown.

Key Terms

Artefacts: An object made by workmanship of man
Booty: spoil taken in war
Chronology: science for computing or arranging units of time

Citadel: Fortress on commanding height

Corvee: Doing forced labor for the King

Cosmopolitan: One free from local or regional prejudices

Decipherment: to finding out meaning of an old died script.

Dolichocephalic : A condition where the head is longer than would be expected, relative to the width of the head.

Embalm: To treat a corpse with preservatives in order to slow decay

Estate: Landed property

Evisceration: Process by which a body is emptied of its internal organs

Frankincense: Sweet-smelling gum resin, from a tree, burned as incense

Hieroglyph: Pictorial representation of writing, sacred character

Inscription: Writing embossed on walls or pillars

Legitimise: To hold justifiable

Mastabas: Simple rectangular structures with a single burial chamber used as tombs for ancient Egyptians

Mausoleum: Magnificent tomb

Millennium: One thousand years

Mummification: Ancient Egyptian process of corpse preservation achieved through embalming.

Papyrus: Tall water plant found in northern Africa; kind of paper made from the stem of this plant

Potsherd: Srchaeological term used to describe a fragment of pottery

Scribe: Individual who copies manuscripts and documents

Shaduf: Device used to irrigate fields surrounding the Nile

Sheet-flood: Flood that spreads out on earth surface

Stylus: A kind of writing pen.

Totemism: A system of belief in which each human is thought to have a spiritual connection or a kinship with another physical being, such as an animal or plant.

1.2: Mesopotamia(Sumeria &Babylonia)

Objective

The chapter deals with civilizations in Mesopotamia, the earliest among the ancient river valley civilizations. In Mesopotamia civilization flourished on the banks of river Euphrates and Tigris. The objectives of this unit are to.

- Make you aware about development of civilization in Mesopotamia.
- Provide a brief sketch on the geography, of Mesopotamia.
- Describe the political, economic, social and religious aspects of various phases of Mesopotamian civilization.
- Enumerate the development of Art and Architecture, script and literature and science and technology of Mesopotamia and
- Assess the contribution of Mesopotamia to subsequent human civilization.

Introduction to Civilizations in Mesopotamia

Two rivers flow from the mountains of eastern Turkey, down through Syria and Iraq and finally debouch in to the Persian Gulf. Six thousand years ago, the waters of these rivers provided the lifeblood that allowed the formation of farming settlements. These grew into villages and then cities. It is here in this land urban civilization flourished for a long period of time and bestow the mankind with the first ever farming and commerce, the horse and carriage, the coinage, the industries, the law and government, the drainage systems, the geometry and astronomy, the calendar, clock and zodiac, the alphabet and script, the literature and music, the sculpture and architecture, the religious system, the cosmetics and jewelry, etc or even more need for a civilized society.

Before dealings with the different phases of urban Mesopotamian civilization let's have a brief look into the geography of this region which helps to flourish them. Presently the region is characterized with a desert climate dominating the landscape between the Persian Gulf and the Mediterranean Sea in Southwest Asia. Yet within this dry region lies an arc of land that provides some of the best farming in Southwest Asia. The region's curved shape and the richness of its land led scholars to call it the *Fertile Crescent*.

In the eastern part of the Fertile Crescent, the Tigris and Euphrates rivers flow south- eastward to the Persian Gulf. Between them lies a plain that became known as Mesopotamia, which in Greek means -land between the rivers. The Tigris and Euphrates rivers flooded Mesopotamia at least once a year. As the floodwater receded, it left a thick bed of mud called silt. In this rich, new soil, farmers could plant and harvest enormous quantities of wheat and barley. The surpluses from their harvests allowed villages to grow. People first began to settle and farm in southern Mesopotamia

before 4500 B.C. Gradually the prosperous agriculture accelerated the process of urbanisation and growth of civilisation. In this Fertile Crescent successively three phase of urban civilisation flourished such as the Sumerian, Babylonian and the Assyrian. The civilisation flourished up to the annexation of Babylon by the Achaemenid in the 6th Century B.C and subsequently by Alexander the great in the 4th century B.C. in the subsequent pages we will have a brief discussion on the above mentioned three phases of Mesopotamian civilisation.

Sumerian: Historical & Geographical Background

Modern man first began to settle and introduce farming in southern Mesopotamia before 4500 B.C. It was around 3500 B.C., the people called as Sumerians arrived in Mesopotamia and settled over here. The Sumerians mixed with the local farmers, and their language became dominant in the region. No one knows for sure where the Sumerians came from. Good soil was the advantage that attracted these settlers to the flat, swampy land of Sumer. There were, however, three disadvantages to their new environment. First, the unpredictable flooding of the rivers and arid climatic condition, secondly, the defenceless situation of Sumer and the third, the extremely limited natural resources of Sumer such as stone, wood, and metal must had created problems of scarcity of materials for manufacturing of tools or construction of buildings.

Over a long period of time, the people of Sumer created solutions to deal with these problems. To provide water, they dug irrigation ditches that carried river water to their fields and allowed them to produce a surplus of crops. For defence, they built city walls with mud bricks. Finally, Sumerians traded with the peoples of the mountains and the desert for the products they lacked. Sumerians traded their grain, cloth, and crafted tools for the stone, wood, and metal they needed to make their tools and buildings.

These activities required organization, cooperation, and leadership. It took many people working together, for example, for the Sumerians to construct their large irrigation systems. Leaders were needed to plan the projects and supervise the digging. These projects also created a need for laws to settle disputes over how land and water would be distributed. These leaders and laws were the beginning of organized government.

The Sumerians stand out in history as one of the first groups of people to form a civilization. Five key characteristics set Sumer apart from earlier human societies are advanced cities, specialized workers, complex institutions, record keeping, and advanced technology. All the later peoples who lived in this region of the world built upon the innovations of Sumerian civilization. By 3000 B.C., the Sumerians had built a number of cities, each surrounded by fields of barley and wheat. Although these cities shared the same culture, they developed their own governments, each with its own rulers. Each city and the surrounding land it controlled formed a city-state. A city-state functioned much as an independent country does today. Sumerian city- states included Uruk, Kish, Lagash, Umma, and Ur.

The early history of Mesopotamia is in one aspect the struggle of the non-Semitic peoples of

Sumeria to preserve their independence against the expansion and inroads of the Semites. In the midst of their struggles these varied stocks unconsciously, perhaps unwillingly, cooperated to produce the first extensive civilization known to history, and one of the most creative and unique

Race

Historians are in doubt about the original home land, ethnic origin and the route of immigration of the Sumerians in Mesopotamia. Perhaps they came from central Asia, or the Caucasus, or Armenia, and moved through northern Mesopotamia down the Euphrates and the Tigris along which, as at Ashur, evidences of their earliest culture have been found; perhaps, as the legend says, they sailed in from the Persian Gulf, from Egypt or elsewhere, and slowly made their way up the great rivers; perhaps they came from Susa, among whose relics is an asphalt head bearing all the characteristics of the Sumerian type; perhaps, even, they were of remote Mongolian origin, for there is much in their language that resembles the Mongol speech. The skeletal remains and sculptural reliefs show them as a short and stocky people, with high, straight, non-Semitic nose, slightly receding forehead and downward-sloping eyes. Many wore beards, some were clean-shaven, most of them shaved the upper lip.

The Sumerian Flood

In or about 2300 B.C. the ancient poets and scholars of Sumeria started the reconstruction of their ancient history. The poets wrote legends of a creation, a primitive paradise and a terrible flood that engulfed and destroyed it because of the sin of an ancient king. This tradition of legendary flood passed down into Babylonian and Hebrew tradition, and became part of the Christian creed. In 1929 Professor Woolley, digging into the ruins of Ur, discovered an eight-foot layer of silt and clay; this, if we are to believe him, was deposited during a catastrophic overflow of the Euphrates, which lingered in later memory as the Flood. Beneath that layer were the remains of a pre-diluvian culture that would later be pictured by the poets as a Golden Age.

Polity in Sumeria

The priest-historians of Sumer created a past spacious enough for the development of all the marvels of Sumerian civilization. They formulated lists of their ancient kings, extending the dynasties before the Flood to 4,32,000 years and told such impressive stories of two of these rulers, Tammuz and Gilgamesh, that the latter became the hero of the greatest poem in Babylonian literature, and Tammuz passed down into the pantheon of Babylon and became the Adonis of the Greeks. Perhaps the priests exaggerated a little the antiquity of their civilization. We may loosely judge the age of Sumerian culture by observing that the ruins of Nippur are found to a depth of sixty-six feet, of which almost as many feet extend below the remains of Sargon of Akkad as rise above it to the topmost stratum on this basis Nippur would go back to 5262 B.C. Tenacious dynasties of city-kings seem to have flourished at Kish ca. 4500 B.C., and at Ur ca. 3500 B.C.

From 3000 B.C. onward the clay-tablet records kept by the priests, and found in the ruins of Ur, present a reasonably accurate account of the accessions and coronations, uninterrupted victories and

sublime deaths of the petty kings who ruled the city-states of Ur, Lagash, Uruk, and the rest; the writing of history and the partiality of historians are very ancient things.

This lucid interval was ended normally by one Lugal-zaggisi, who invaded Lagash, overthrew Urukagina and sacked the city at the height of its prosperity. The temples were destroyed, the citizens were massacred in the streets and the statues of the gods were led away in shameful bondage.

Sargon of Akkad

Meanwhile another people of Semitic race had built the kingdom of Akkad under the leadership of Sargon I and had established its capital at Agade some two hundred miles northwest of the Sumerian city-states. His origin was not royal history could find no father for him and no other mother than a temple prostitute. He called himself King of Universal Dominion and ruled a small portion of Mesopotamia. He invaded many cities, captured much booty and killed many men. East and west, north and south the mighty warrior marched conquering Elam washing his weapons in symbolic triumph in the Persian Gulf, crossing western Asia, reaching the Mediterranean, and establishing the first great empire in history. For fifty-five years he ruled, while legends gathered about him and prepared to make him a god. His reign closed with all his empire in revolt. Three sons succeeded him in turn. The third, Naramsin, was a mighty builder, of whose works nothing remains but a memorial slab, recording his victory over an obscure king.

Achievement of Gudea

By the twenty-sixth century B.C. Lagash again flourished under Gudea, an enlightened monarch. His stocky statues are the most prominent remains of Sumerian sculpture. Gudea was honored by his people not as a warrior but as a Sumerian Aurelius, devoted to religion, literature and good works; he built temples, promoted the study of classical antiquities in the spirit of the expeditions that unearthed him, and tempered the strength of the strong in mercy to the weak. One of his inscriptions reveals the policy for which his people worshiped him, after his death, as a god. During seven years the maid servant was the equal of her mistress, the slave walked beside his master, and in my town the weak rested by the side of the strong.

The Golden Age of Ur

Meanwhile Ur of the Chaldees was having one of the most prosperous epochs in its long career from 3,500 B.C. to 700 B.C. Its greatest king, Urengur, brought all western Asia under his pacific sway and proclaimed for all Sumeria the first extensive code of laws in history. The vibrating trade on the Euphrates made Ur prosperous. On account of this prosperity Urengur, beautified his city with temples and built lavishly in the subject cities of Larsa, Uruk and Nippur. His son Dungi continued his work through a reign of fifty eight years, and ruled so wisely that the people deified him as the god who had brought back their ancient Paradise. But soon that glory faded. The warlike Elamites from the East and the rising Amorites from the West swept down upon the leisure, prosperity and peace of Ur, captured its king, and sacked the city with primitive thoroughness.

Elam and Amor ruled Sumeria for two hundred years. Then from the north came the great

Hammurabi, King of Babylon; retook from the Elamites Uruk and Isin; bided his time for twenty-three years; invaded Elam and captured its king; established his sway over Amor and distant Assyria, built an empire of unprecedented power, and disciplined it with a universal law. For many centuries now until the rise of Persia the Semites would rule the Land between the Rivers. Of the Sumerians nothing more is heard and they lost in the ocean of human history. But Sumerian civilization remained. Sumer and Akkad still produced handicraftsmen, poets, artists, sages and saints; the culture of the southern cities passed north along the Euphrates and the Tigris to Babylonia and Assyria as the initial heritage of Mesopotamian civilization.

City states of Sumer: Kings and the Government.

Each city maintained a jealous independence and indulged itself in a private king called Patesi or priest-king. The term priest king indicates by the very word that the government was bound up with religion. By 2800 B.C. the growth of trade made such municipal separatism impossible and generated "empires" in which some dominating personality subjected the cities and their Patesis to his power and wove them into an economic and political unity. The king dwelt in an inaccessible palace, whose two entrances were so narrow as to admit only one person at a time; to the right and left were recesses from which secret guards could examine every visitor, or pounce upon him with daggers. Even the king's temple was private, hidden away in his palace, so that he might perform his religious duties without exposure, or neglect them inconspicuously.

The king went to battle in a chariot, leading an army armed with bows, arrows and spears. The wars were waged frankly for commercial routes and goods. The defeated were customarily sold into slavery or slaughtered on the battlefield. Sometimes a tenth of the prisoners, struggling unsuccessfully in a net were offered as living victims to the thirsty gods. The chauvinistic separatism of the cities stimulated life and art, but led to civic violence and at last destroyed Sumeria.

In the empires social order was maintained through a feudal system. After a successful war the ruler gave tracts of land to his valiant chieftains, and exempted such estates from taxation. These men kept order in their territories, and provided soldiers and supplies for the exploits of the king. The finances of the government were obtained by taxes in kind, stored in royal warehouses, and distributed as pay to officials and employees of the state.

To this system of royal and feudal administration was added a body of law, already rich with precedents when Ur-engur and Dungi codified the statutes of Ur. This was the fountainhead of Hammurabi's famous code. It was cruder and simpler than later legislation, but less severe: where, for example, the Semitic code killed a woman for adultery, the Sumerian code merely allowed the husband to take a second wife and reduce the first to a subordinate position. The law covered commercial as well as sexual relations and regulated all loans and contracts, all buying and selling, all adoptions and bequests. Courts of justice sat in the temples, and the judges were for the most part priests; professional judges presided over a superior court. The best element in this code was a plan for avoiding litigation: every case was first submitted to a public arbitrator whose duty it was to bring

about an amicable settlement without recourse to law. 88 It is a poor civilization from which we may not learn something to improve our own.

Economic Condition of Sumeria

The basis of this civilisation was a soil made fertile by the annual overflow of rivers swollen with the winter rains. The overflow was perilous as well as useful; the Sumerians learned to channel it safely through irrigating canals that ribbed and crossed their land. This irrigation system, dating from 4000 B.C., was one of the great achievements of Sumerian civilization, and certainly its foundation. From these watered fields came abounding crops of corn, barley, spelt, dates, and many vegetables. The plough appeared early, drawn by oxen and already furnished with a tubular seed drill. The gathered harvest was threshed by drawing over it great sledges of wood armed with flint teeth.

The Sumerians made some use of copper and tin, and occasionally mixed them to produce bronze; now and then they went so far as to make large implements of iron. But metal was still a luxury and a rarity. Most Sumerian tools were of flint; some, like the sickles for cutting the barley, were of clay; and certain finer articles, such as needles and awls, used ivory and bone. Weaving was done on a large scale under the supervision of overseers appointed by the king, after the latest fashion of governmentally controlled industry. Houses were made of reeds, usually plastered with an adobe mixture of clay and straw moistened with water and hardened by the sun. Cows, sheep, goats and pigs roamed about the dwelling. Water for drinking was drawn from wells.

Goods were carried chiefly by water. Because of its scarcity stone was brought up the Gulf or down the rivers, and then through numerous canals to the docks of the cities. Land transportation was also there. Here and there in the ruins are business seals bearing indications of traffic with Egypt and Indus Valley of India. There was no coinage yet and trade was normally by barter; but gold and silver were already in use as standards of value, and were often accepted in exchange for goods sometimes in the form of ingots and rings of definite worth, but generally in quantities measured by weight in each transaction. Many of the clay tablets that have brought down to us fragments of Sumerian writing are business documents, revealing a busy commercial life. A system of credit existed by which goods, gold or silver might be borrowed, interest to be paid in the same material as the loan and at rates ranging from 15 to 33% per annum.

Religion and Morality

King Ur-engur proclaimed his code of laws in the name of the great god Shamash, for government had so soon discovered the political utility of heaven. Having been found useful, the gods became innumerable; every city and state, every human activity had some inspiring and disciplinary divinity. Sun-worship was already old when Sumeria began, expressed itself in the cult of Shamash. Nippur built great temples to the god Enlil and his consort Ninlil. Uruk worshiped especially the virgin earth-goddess Innini, known to the Semites of Akkad as Ishtar the loose and versatile Aphrodite-Demeter of the Near East. Kish and Lagash worshiped a Mater Dolorosa, the sorrowful mother goddess Ninkarsag, who, grieved with the unhappiness of men interceded for them with sterner deities.

Ningirsu was the god of irrigation and Abu or Tammuz was the god of vegetation. Even Sin was a god of the Moon; he was represented in human form with a thin crescent above his head. The air was full of spirits beneficent angels, one each as protector to every Sumerian and demons or devils who sought to expel the protective deity and take possession of body and soul.

Most of the gods lived in the temples, where they were provided by the faithful with revenue, food and wives. The tablets of Gudea list the objects which the gods preferred: oxen, goats, sheep, doves, chickens, ducks, fish, dates, figs, cucumbers, butter, oil and cakes. We may judge from this list that the well-to-do Sumerian enjoyed a plentiful cuisine. Originally, it seems, the gods preferred human flesh; but as human morality improved they had to be content with animals. A liturgical tablet found in the Sumerian ruins says, with strange theological sign: "The lamb is the substitute for humanity; he given up a lamb for his life." The priests became the wealthiest and most powerful class in the Sumerian cities. In most matters they were the government; it is difficult to make out to what extent the Patesi was a priest and to what extent a king. Urukagina rose against the clergy, denounced them for their voracity, accused them of taking bribes in their administration of the law and charged that they were levying such taxes upon farmers and fishermen as to rob them of the fruits of their labor. He swept the courts clear for a time of these corrupt officials, and established laws regulating the taxes and fees paid to the temples, protecting the helpless against extortion, and providing against the violent alienation of funds or property. Already the world was old, and well established in its time-honored ways.

Presumably the priests recovered their power when Urukagina died. Even in this early age the great myths of religion were taking form. Since food and tools were placed in the graves with the dead, we may presume that the Sumerians believed in an after-life. They pictured the other world as a dark abode of miserable shadows, to which all the dead descended indiscriminately. They had not yet conceived heaven and hell, eternal reward and punishment; they offered prayer and sacrifice not for "eternal life," but for tangible advantages here on the earth.

The Sumerian Society

In Sumerian society rich and poor were stratified into many classes and gradations. Slavery was highly developed and property rights were already sacred. Between the rich and the poor a middle class took form composed of small-business men, scholars, physicians and priests. Medicine flourished, and had a specific for every disease; but it was still bound up with theology and admitted that sickness, being due to possession by evil spirits, could never be cured without the exorcising of these demons. A calendar of uncertain age and origin divided the year into lunar months, adding a month every three or four years to reconcile the calendar with the seasons and the sun. Each city gave its own names to the months.

The priests transmitted education as well as mythology and doubtless sought to teach as well as to rule, by their myths. To most of the temples were attached schools wherein the clergy instructed boys and girls in writing and arithmetic, formed their habits into patriotism and piety, and prepared some

of them for the high profession of scribe. School tablets survive, encrusted with tables of multiplication and division, square and cube roots and exercises in applied geometry.

Women were attached to every temple some as domestics some as concubines for the gods or their duly constituted representatives on earth. To serve the temples in this way did not seem any disgrace to a Sumerian girl; her father was proud to devote her charms to the alleviation of divine monotony, and celebrated the admission of his daughter to these sacred functions with ceremonial sacrifice, and the presentation of the girl's marriage dowry to the temple.

Marriage was already a complex institution regulated by many laws. The bride kept control of the dowry given her by her father in marriage and though she held it jointly with her husband, she alone determined its inheritance. She exercised equal rights with her husband over their children; and in the absence of the husband and a grown-up son she administered the estate as well as the home. She could engage in business independently of her husband and could keep or dispose of her own slaves. But in all crises the man was lord and master. Under certain conditions he could sell his wife, or hand her over as a slave to pay his debts. Nevertheless, as in most civilizations, the women of the upper classes almost balanced by their luxury and their privileges and the labor and disabilities of their poorer sisters. Cosmetics and jewelry are prominent in the Sumerian tombs.

Letters and Arts

The startling fact in the Sumerian remains is writing. The marvelous art seems already well advanced, fit to express complex thought in commerce, poetry and religion. The oldest inscriptions are on stone and date apparently as far back as 3600 B.C. Towards 3200 B.C. the clay tablet appears, and from that time on the Sumerians seem to have delighted in the great discovery. It is our good fortune that the people of Mesopotamia wrote not upon fragile, ephemeral paper in fading ink, but upon moist clay deftly impressed with the wedge-like point of a stylus. With this malleable material the scribe kept records, executed contracts, drew up official documents, recorded property, judgments and sales, and created a culture in which the stylus became as mighty as the sword. Having completed the writing, the scribe baked the clay tablet with heat or in the sun and made it thereby a manuscript far more durable than paper and only less lasting than stone. This development of cuneiform script was the outstanding contribution of Sumeria to the mankind.

Sumerian writing reads from right to left. The Babylonians were the first people to write from left to right. The linear script as we have seen was apparently a stylized and conventionalized form of the signs and pictures painted or impressed upon primitive Sumerian pottery. Presumably from repetition and rush over centuries of time the original pictures were gradually contracted into signs so unlike the objects which they had once represented that they became the symbols of sounds rather than of things. By 2700 B.C., great libraries had been formed in Sumeria; at Tello, for example, in ruins contemporary with Gudea, Archaeologists discovered a collection of over 30,000 tablets ranged one upon another in neat and logical array. As early as 2000 B.C. Sumerian historians began to reconstruct the past and record the present for the edification of the future; portions of their work

have come down to us not in the original form but as quotations in later Babylonian chronicles. Among the original fragments, a tablet was found at Nippur, bearing the Sumerian prototype of the epic of Gilgamesh, which we shall study later in its developed Babylonian expression.

Temples and Palaces

Behind these apparent beginnings of culture were doubtless many centuries of development, in Samaria and other lands. Nothing has been created, it has only grown. Just as in writing Sumeria seems to have created cuneiform, so in architecture it seems to have created at once the fundamental shapes of home and temple, column, vault and arch. The Sumerian peasant made his cottage by planting reeds in a square, a rectangle or a circle, bending the tops together, and binding them to form an arch, a vault or a dome; this, we surmise, is the simple origin or earliest known appearance, of these architectural forms. Among the ruins of Nippur is an arched drain 5000 years old; in the royal tombs of Ur there are arches that go back to 3500 B.C., and arched doors were common at Ur 2000 B.C.

The richer citizens built palaces hanging on a mound sometimes forty feet above the plain, and made purposely inaccessible except by one path. Since stone was scarce, these palaces were mostly of brick. The plain red surface of the walls was relieved by terracotta decoration in every form spirals, chevrons, triangles, even lozenges and diapers. The inner walls were plastered and painted in simple mural style. The house was built around a central court, which gave shade and some coolness against the Mediterranean sun for the same reason as well as for security. The rooms opened upon this court rather than upon the outer world. Windows were a luxury or perhaps they were not wanted. For the temples stone was imported and adorned with copper entablatures and friezes inlaid with semiprecious material. Usually the most important temple in the city was not only built upon an elevation, but was topped with a ziggurat a tower of three, four or seven stories, surrounded with a winding external stairway and set back at every stage. Here on the heights the loftiest of the city's gods might dwell, and here the government might find a last spiritual and physical citadel against invasion or revolt.

The temples were sometimes decorated with statuary of animals, heroes and gods; figures plain, blunt and powerful, but severely lacking in sculptural finish and grace. Most of the extant statues are of King Gudea, executed resolutely but crudely in resistant diorite. In the ruins of Tell-el- Ubaid, from the early Sumerian period, a copper statuette of a bull was found much abused by the centuries but still full of life and bovine complacency. A cow's head in silver from the grave of Queen Shub-ad at Ur is a masterpiece that suggests a developed art too much despoiled by time to permit of our giving it its due.

Of the pottery one may not speak so leniently. Perhaps time misleads our judgment by having preserved the worst; perhaps there were many pieces as well carved as the alabaster vessels discovered at Eridu but for the most part Sumerian pottery, though turned on the wheel is mere earthenware, and cannot compare with the vases of Elam. Better work was done by the goldsmiths.

Vessels of gold tasteful in design and delicate in finish have been found in the earliest graves at Ur, some as old as 4000 B.C. The ruins have given us a great number of cylindrical seals mostly made of precious metal or stone with reliefs carefully carved upon a square inch or two of surface. These seem to have served the Sumerians in place of signature and indicate a refinement of life and manners disturbing to our naive conception of progress as a continuous rise of man through the unfortunate cultures of the past to the unrivaled zenith of today.

The oldest written records known to us are Sumerian; this, which may be a whim of circumstance, a sport of mortality, does not prove that the first civilization was Sumerian. Statuettes and other remains akin to those of Sumeria have been found at Ashur and Samarra, in what became Assyria; we do not know whether this early culture came from Sumeria or passed to it along the Tigris. The code of Hammurabi resembles that of Ur-engur and Dungi, but we cannot be sure that it was evolved from it rather than from some predecessor ancestral to them both. It is only probable, not certain, that the civilizations of Babylonia and Assyria were derived from or fertilized by that of Sumer and Akkad. The gods and myths of Babylon and Nineveh are in many cases modifications or developments of Sumerian theology; and the languages of these later cultures bear the same relationship to Samaria.

Babylonian

Looking at the site of ancient Babylon today no one would suspect that these hot and dreary wastes along the Euphrates were once the rich and powerful capital of a civilization that almost created astronomy, added richly to the progress of medicine, established the science of language, prepared the first great codes of law, taught the Greeks the rudiments of mathematics, physics and philosophy, gave the Jews the mythology which they gave to the world and passed on to the Arabs part of that scientific and architectural lore. The same Tigris and Euphrates rivers that watered Sumeria and Akkad also in subsequent period nourished the Hanging Gardens of Babylon. As in Egypt the Nile, so here the Tigris and the Euphrates provided for thousands of miles an avenue of commerce and in their southern reaches springtime inundations that helped the peasant to fertilize his soil. Through the abundance of the rivers and the labour of many generations of men, Babylonia became the Eden of Semitic legend, the garden and granary of western Asia.

Early Polity: Hammurabi

Historically and ethnically Babylonia was a product of the union of the Akkadians and the Sumerians. Their mating generated the Babylonian type in which the Akkadian Semitic strain proved dominant. Their warfare ended in the triumph of Akkad and the establishment of Babylon as the capital of all lower Mesopotamia. At the outset of this history stands the powerful figure of Hammurabi (2123-2081 B.C.) conqueror and lawgiver through a reign of forty-three years. Ancient seals and inscriptions transmit him to us partially a youth full of fire and genius, a very whirlwind in battle, who crushes all rebels, cuts his enemies into pieces, marches over inaccessible mountains and never loses in any war. Under him the petty warring states of the lower valley were forced into unity

and peace and disciplined into order and security by an historic code of laws.

The Code of Hammurabi was unearthed at Susa in 1902, beautifully engraved upon a diorite cylinder that had been carried from Babylon to Elam as a trophy of war. This legislation was a gift from Heaven. One side of the cylinder shows the King receiving the laws from Shamash, the Sun-god himself. This ancient origin combined with Babylonian circumstance to give the Code a composite and heterogeneous character. It begins with compliments to the gods but takes no further notice of them in its astonishingly secular legislation. It mingles the most enlightened laws with the most barbarous punishments, and sets the primitive trial by ordeal alongside elaborate judicial procedures and a discriminating attempt to limit marital tyranny. All in all, these 285 laws, arranged almost scientifically under the headings of personal property, real estate, trade and business, the family, injuries and labour, form a code more advanced and civilized than that of Assyria a thousand and more years later.

This unifying legislation was one of Hammurabi's accomplishments. At his command a great canal was dug between Kish and the Persian Gulf, thereby irrigating a large area of land and protecting the cities of the south from the destructive floods of Tigris. Despite the secular quality of his laws Hammurabi was clever enough to gild his authority with the approval of the gods. He built temples as well as forts, and pleased the clergy by constructing at Babylon a gigantic sanctuary for Marduk and a massive granary to store up wheat for gods and priests. These and similar gifts were an astute investment, from which he expected steady returns in the respectful obedience of the people. From their taxes he financed the forces of law and order and had enough left over to beautify his capital. Palaces and temples rose in Babylon, a bridge spanned the Euphrates to let the city spread itself along both banks, ships manned with ninety men plied up and down the river. Two thousand years before Christ Babylon was already one of the richest cities that history had yet known.

The people were of Semitic appearance, dark in hair and features. The common dress for both man and women was a white linen cloth reaching to the feet. In the women it left one shoulder bare and in the men it was enlarged with mantle and robe. As wealth grew the people developed a taste for colour and dyed for themselves garments of different colours. The bare feet of the Sumerian period gave way to shapely sandals and the male head in Hammurabi's time was swathed in turbans. Women wore necklaces, bracelets and amulets and strings of beads in their carefully coiffure hair. The men flourished walking-sticks with carved heads and carried on their girdles the prettily designed seals with which they attested their letters and documents. The priests wore tall conical caps to conceal their humanity.

It is almost a law of history that the same wealth that generates a civilization announces its decay. Wealth produces ease as well as art. It softens a people to the ways of luxury and peace and invites invasion from stronger arms and hungrier mouths. On the eastern boundary of the new state a hardy tribe of mountaineers the Kassites looked with envy upon the riches of Babylon. Very soon after Hammurabi's death they invaded the land plundered it, retreated, raided it again and again and finally

settled down in it as conquerors and rulers, which resulted in the origin of aristocracies in later Babylonian culture.

The Kassite Domination

The Kassites a people of non-Semitic stock perhaps descendants of European immigrants from Neolithic days. Their victory over Semitic Babylon represented one more swing of the racial pendulum in western Asia. For several centuries Babylonia lived in an ethnic and political chaos that put a stop to the development of science and art. They were expelled after almost six centuries of rule as disruptive as the similar sway of the Hyksos in Egypt. The disorder continued for four hundred years more under obscure Babylonian rulers to until the rising power of Assyria in the north stretched down its hand and brought Babylonia under the kings of Nineveh. When Babylon rebelled, Sennacherib destroyed it almost completely but the friendly despotism of Esarhaddon restored it to prosperity and culture. The rise of the Medes weakened Assyria and with their help Nabopolassar liberated Babylonia set up an independent dynasty and leave this second Babylonian kingdom to his son Nebuchadrezzar II, villain of the vengeful and legendary Book of Daniel.

Days of Babylonian Glory: King Nebuchadrezzar

Nebuchadrezzar was the most powerful ruler of his time in the Near East and the greatest warrior, statesman and builder in all the succession of Babylonian kings after Hammurabi. When Egypt conspired with Assyria to reduce Babylonia to vassalage again, Nebuchadrezzar met the Egyptian hosts at Carchemish (on the upper reaches of the Euphrates) and almost annihilated them. Palestine and Syria then fell easily under his sway and Babylonian merchants controlled all the trade that flowed across western Asia from the Persian Gulf to the Mediterranean Sea.

Nebuchadrezzar again beautify the city of Babylon and patronise the priests. He resisted the temptation to be merely a conqueror. He venture out occasionally to teach his subjects the virtues of submission but for the most part he stayed at home making Babylon the unrivalled capital of the Near East and the largest and most magnificent metropolis of the ancient world. Nabopolassar had laid plans for the reconstruction of the city; Nebuchadrezzar used his long reign of forty-three years to carry them to completion. Through the centre of the town ran the palm-fringed Euphrates, busy with commerce and spanned by a handsome bridge. Practically all the better buildings were of brick as stone was rare in Mesopotamia. The bricks were often faced with enamelled tiles of brilliant blue, yellow or white, adorned with animal and other figures in glazed relief, which remain to this day supreme in their kind. Nearly all the bricks so far recovered from the site of Babylon bear the proud inscription "I am Nebuchadrezzar, King of Babylon."

In its glorious days in the city of Babylon there was a mountain of masonry an immense and lofty ziggurat, rising in seven stages of gleaming enamel to a height of 650 feet, crowned with a shrine containing a massive table of solid gold and an ornate bed on which each night some woman slept to await the pleasure of the god. This structure taller than the pyramids of Egypt was probably the "Tower of Babel" of Hebraic myth. South of the ziggurat stood the gigantic Temple of Marduk,

tutelary deity of Babylon. Around and below this temple the city spread itself out in a few wide and brilliant avenues crossed by crowded canals and narrow winding streets alive, no doubt with traffic and markets and scented with garbage and humanity.

Connecting the temples was a spacious way, paved with asphalt covered bricks and overlaid with flags of limestone and red breccias. This broad avenue was flanked with walls of coloured tile, on which stood out, in low relief, one hundred and twenty brightly enamelled lions roaring to keep the impious away. At one end of the Sacred Way rose the magnificent Ishtar Gate a massive double portal of resplendent tiles, adorned with enamelled flowers and animals of admirable colour, vitality and line.

Six hundred yards north of the "Tower of Babel" raised a mound called Kasr on which Nebuchadrezzar built the most imposing of his palaces. At its centre situated his principal dwelling palace. The walls of finely made yellow brick, the floors of white and mottled sandstone; reliefs of vivid blue glaze adorned the surfaces and gigantic basalt lions guarded the entrance of his palace. Nearby, supported on a succession of superimposed circular colonnades were the famous Hanging Gardens which the Greeks included among the Seven Wonders of the World. The gallant Nebuchadrezzar had built them for one of his wives, the daughter of Cyaxares, King of the Medes. This princess, unaccustomed to the hot sun and dust of Babylon pined for the greenness of her native hills. The topmost terrace was covered with rich soil to the depth of many feet providing space and nourishment not merely for varied flowers and plants but for the largest and most deep-rooted trees. Hydraulic engines concealed in the columns and manned by shifts of slaves carried water from the Euphrates to the highest tier of the gardens. Here seventy-five feet above the ground in the cool shade of tall trees and surrounded by exotic shrubs and fragrant flowers, the ladies of the royal harem walked unveiled, secure from the common eye. While in the plains and streets below the common man and woman ploughed, wove, built, carried burdens and reproduced their kind. This was the city of Babylon in the days of her glory as described by Herodotus, the father of History.

Babylonian Economy

The fertile soil of this civilisation was ploughed by tenants or by slaves; some of it by peasant proprietors. The waters of the rising rivers were not allowed to flood the land as in Egypt; on the contrary, every farm was protected from the inundation by ridges of earth, some of which can still be seen today. The overflow was guided into a complex network of canals or stored into reservoirs, from which it was sluiced into the fields as needed or raised over the ridges by shadufs buckets lifted and lowered on a pivoted and revolving pole. Nebuchadrezzar distinguished his reign by building many canals and gathering the surplus waters of the overflow into a reservoir one hundred and forty miles in circumference, which nourished by its outlets vast areas of land. The land produced a variety of cereals and pulses, great orchards of fruits and nuts, and above all, the date. From this beneficent mixture of sun and soil the Babylonians made bread, honey, cake and other delicacies. They mixed it with meal to make one of their most sustaining foods. Meat was rare and costly, but fish from

the great streams found their way into the poorest mouths.

Some inhabitant sustained their life by mining copper, lead, iron, silver and gold from the earth. Tools, which had still been of stone in the days of Hammurabi, began to be made of bronze then of iron and the art of casting metal appeared. Textiles were woven of cotton and wool; stuffs were dyed and embroidered with such skill that these tissues became one of the most valued exports of Babylonia. As far back as we can go in Mesopotamian history we find the weaver's loom and the potter's wheel; these were almost the only machines. Buildings were mostly of clay mixed with straw; or bricks still soft and moist were placed one upon the other and allowed to dry into a solid wall cemented by the sun.

During the heydays of Babylonian civilisation trades multiplied and became diversified and skilled, and as early as Hammurabi industry was organized into guilds of masters and apprentices. Local transport used wheeled carts drawn by asses. The horse is first mentioned in Babylonian records about 2100 B.C., With this new means of locomotion and carriage, trade expanded from local to foreign commerce; Babylon grew wealthy as the commercial hub of the Near East, and the nations of the ancient Mediterranean world were drawn into closer contact for good and ill. Nebuchadrezzar facilitated trade by improving the highways. Countless caravans brought to the bazaars and shops of Babylon the products of half the world.

Government in Mesopotamia never succeeded in establishing such economic order as that which the Pharaohs achieved in Egypt. Commerce was harassed with a multiplicity of dangers and tolls. It was safer, where possible, to take the great national highway the Euphrates, which Nebuchadrezzar had made navigable from the Persian Gulf to Thapsacus. His campaigns in Arabia and his subjugation of Tyre opened up to Babylonian commerce the Indian and Mediterranean Seas but these opportunities were only partially explored. For on the open sea as in the mountain passes and the desert wastes risk beset the merchant at every hour. Vessels were large but reefs were many and treacherous at any moment pirates might board the ships, robbed the merchandise and enslave or kill the crew. The merchants reimbursed themselves for such losses by restricting their honesty to the necessities of each situation.

These difficult transactions were made easier by a well-developed system of finance. The Babylonians had no coinage but even before Hammurabi they used besides barley and corn ingots of gold and silver as standards of value and mediums of exchange. The metal was unstamped, and was weighed at each transaction. Loans were made in goods or currency but at a high rate of interest, fixed by the state at 20% per annum for loans of money and 33% for loans in kind. Even these rates were exceeded by lenders who could hire clever scribes to circumvent the law. There were no banks but certain powerful families carried on from generation to generation the business of lending money. They dealt also in real estate and financed industrial enterprises. Persons who had funds on deposit with such men could pay their obligations by written drafts. The priests also made loans particularly to finance the sowing and reaping of the crops.

It was essentially a commercial civilization. Most of the documents that have come down from it are of a business character sale, loans, contracts, partnerships, commissions, exchanges, bequests, agreements, promissory notes etc. We find in these tablets abundant evidence of wealth and a certain materialistic spirit that managed like some later civilizations to reconcile piety with greed.

Slavery in Babylon

We see in the literature many signs of a busy and prosperous life but we find also at every turn reminders of the slavery that underlies all cultures. The most interesting contracts of sale from the age of Nebuchadnezzar are those that have to do with slaves. They were recruited from captives taken in battle from slave-raids carried out upon foreign states by marauding Bedouins and from the reproductive enthusiasm of the slaves themselves. Most of the physical work in the towns was done by them including nearly all of the personal service. Female slaves were completely at the mercy of their purchaser, and were expected to provide him with bed as well as board. It was understood that he would breed through them a copious supply of children and those slaves who were not so treated felt themselves neglected and dishonoured. The slave and all his belongings were his master's property: he might be sold or pledged for debt; he might be put to death if his master thought him less lucrative alive than dead. If he ran away no one could legally keep him and a reward was fixed for his capture. On the other hand the slave's master paid his doctor's fees and kept him moderately alive through illness, slack employment and old age. He might marry a free woman and his children by her would be free; half his property, in such a case, went on his death to his family. He might be set up in business by his master and retain part of the profits with which he might then buy his freedom or his master might liberate him for exceptional or long and faithful service. But only a few slaves achieved such freedom. The rest consoled themselves with a high birth-rate, until they became more numerous than the free. A great slave-class moved like a swelling subterranean river underneath the Babylonian state.

The Law: Code of Hammurabi

Economic character of Babylonian society necessitated a monarchy supported by commercial wealth or feudal privilege, and protected by the judicious distribution of legal violence. A landed aristocracy gradually displaced by a commercial plutocracy helped to maintain social control and served as an intermediary between people and king. Within the limits of this arbitrary rule the government was carried on by central and local lords or administrators appointed by the king. These were advised and checked by provincial or municipal assemblies of

elders or notables who managed to maintain even under Assyrian domination a proud measure of local self-government.

Every administrator and usually the king himself acknowledged the guidance and authority of that great body of law which had been given form under Hammurabi, and had maintained its substance, despite every change of circumstance and detail through fifteen centuries. The legal development was from supernatural to secular sanctions, from severity to lenience and from physical to financial penalties. In the earlier days judges were priests and to the end of Babylonian history the courts were for the most part located in the temples. In the days of Hammurabi secular courts responsible only to the government were replacing the judgment-seats presided over by the clergy.

Penology began with the law of equivalent retaliation. If a man knocked out an eye or a tooth or broke a limb of a patrician precisely the same was to be done to him. If a house collapsed and killed the purchaser the architect or builder must die, if the accident killed the buyer's son, the son of the architect or builder must die. Gradually these punishments in kind were replaced by awards of damages; a payment of money was permitted as an alternative to the physical retaliation, and later the fine became the sole punishment. The penalty varied not merely with the gravity of the offense but with the rank of the offender and the victim. A member of the aristocracy was subject to severe penalties for the same crime than a man of the people but an offense against such an aristocrat was a costly extravagance. In such rough ways, through thousands of years, those traditions and habits of order and self-restraint were established which became part of the unconscious basis of civilization.

Within certain limits the state regulated prices, wages and fees. What the surgeon might charge was established by law; and wages were fixed by the Code of Hammurabi for builders, brick makers, tailors, stonemasons, carpenters, boatmen, herdsmen and labourers. The law of inheritance made the man's children, rather than his wife, his natural and direct heirs. The widow received her dowry and her wedding-gift, and remained head of the household as long as she lived. The sons inherited equally, and in this way the largest estates were soon re-divided and the concentration of wealth was in some measure checked.

There is no evidence of lawyers in Babylonia, except for priests who might serve as notaries and the scribe who would write for pay anything from a will to final judgement. The plaintiff preferred his own plea without the luxury of terminology. Litigation was discouraged. The very first law of the Code reads with almost illegal simplicity: If a man bring an accusation against a man and charge him with a crime but cannot prove it the accuser shall be put to death. There are signs of bribery and of tampering with witnesses. A court of appeals staffed by "the King's Judges," sat at Babylon and a final appeal might be carried to the king himself. There was nothing in the Code about the rights of the individual against the state. But articles 22-24

provided if not political at least economic protection. If a man practise brigandage and be captured that man shall be put to death. If the brigand be not captured the man who has been robbed shall in the presence of the god make an itemized statement of his loss, and the city and governor within whose province and jurisdiction the robbery was committed shall compensate him for whatever was lost.

Religion in Babylon

The power of the king was limited not only by the law and the aristocracy but by the clergy. Technically the king was merely the agent of the city god. Taxation was in the name of the god, and found its way directly or deviously into the temple treasuries. The king was not really king in the eyes of the people until he was invested with royal authority by the priests and conducted the image of Marduk in solemn procession through the streets. In these ceremonies the monarch was dressed as a priest, symbolizing the union of church and state and perhaps the priestly origin of the kingship. Even the mighty Hammurabi received his laws from the god. From the Patesis or priest-governors of Sumeria to the religious coronation of Nebuchadrezzar, Babylonia remained in effect a theocratic state, always under the dominance of the priests.

The wealth of the temples grew from generation to generation as the uneasy rich shared their dividends with the gods. The kings, built the temples equipped them with furniture, food and slaves, donate to them land and assigned to them an annual income from the state. When the army won a battle the first share of the captives and the spoils went to the temples. Certain lands were required to pay to the temples yearly tribute; if they failed, the temples could shut out on them; and in this way the lands usually came into possession by the priests.

As the priests could not directly use or consume this wealth, they turned it into productive or investment capital and became the greatest agriculturists, manufacturers and financiers of the nation. Not only did they hold vast tracts of land; they owned a great number of slaves or controlled hundreds of labourers, who were hired out to other employers or worked for the temples in their diverse trades from the playing of music to the brewing of beer.

The Gods in Babylonia were numerous. Every town had its tutelary divinity. The gods were not aloof from men; most of them lived on earth in the temples ate with a hearty appetite and through night-time visits to pious women gave unexpected children to the busy citizens of Babylon. Oldest of all were the astronomic gods: Anu, the immovable firmament, Shamash, the sun, Nannar, the moon and Bel or Baal, the earth into whose bosom all Babylonians returned after death. Every family had household gods to whom prayers were said and libations poured each morning and night; every individual had a protective divinity.

Nevertheless the Babylonian derived no satisfaction from the idea of personal immortality. Most bodies were buried in vaults, a few were cremated and their remains were preserved in urns. The dead body was not embalmed but professional mourners washed and perfumed it, clad it presentably, darkened its eyelids, put rings upon its fingers and provided it with a change of linen. If the corpse

was that of a woman it was equipped with scent bottles, combs, cosmetic pencils, and eye-paint to preserve its fragrance and complexion in the nether world.

The usual offering was food and drink. A frequent sacrifice on Babylonian altars was the lamb. In general to the Babylonian religion meant correct ritual rather than the good life. To do one's duty to the god one had to offer proper sacrifice to the temples and recite the appropriate prayers. To participate in or reverently to attend long and solemn processions, to anoint the idols with sweet-scented oils, to burn incense before them, clothe them with rich vestments or adorn them with jewellery, to offer up the virginity of their daughters in the great festival of Ishtar; to put food and drink before the gods, and to be generous to the priests these were the essential works of the devout Babylonian soul.

Some of the finest literary relics of the Babylonians are prayers that breathe a profound and sincere piety. The surviving literature abounds in hymns full of that passionate self abasement. Such psalms and hymns were sung sometimes by the priests. Like all the religious literature of Babylon they were written in the ancient Sumerian language, which served the Babylonian and Assyrian.

For the Babylonian sin was no mere theoretical state of the soul. Like sickness it was the possession of the body by a demon that might destroy it. Everywhere in the Babylonian view these hostile demons loitered, they hid in strange crannies, slipped through doors or even through bolts and sockets and jumped upon their victims in the form of illness or madness whenever some sin had withdrawn for a moment the beneficent guardianship of the gods. Protection against these demons was provided by the use of magic amulets, talismans and kindred charms; images of the gods, carried on the body, would usually suffice to frighten the devils away. Never was a civilization richer in superstitions. Every turn of chance from the anomalies of birth to the varieties of death received a popular, sometimes an official and sacerdotal interpretation in magical or supernatural terms. Every movement of the rivers, every aspect of the stars, every dream, every unusual performance of man or beast, revealed the future to the properly instructed Babylonian. The fate of a king could be forecast by observing the movements of a dog. This religion, with all its failings, probably helped to urge the common Babylonian into some measure of decency and civic obedience. For the whole of Babylon was a sink of iniquity and a scandalous example of luxurious laxity to all the ancient world. Even Alexander, who was not above dying of drinking, was shocked by the morals of Babylon.

The Position of Women in Babylon

Various classes of prostitutes lived within the temple precincts. Some of them plied their trade there and amassed great fortunes. Sacred prostitution continued in Babylonia until abolished by Constantine (ca. 325 A.D.). Alongside it in the wine-shops kept by women secular prostitution flourished. In general the Babylonians were allowed considerable premarital experience. It was considered permissible for men and women to form unlicensed unions. Legal marriage was arranged by the parents and was sanctioned by an exchange of gifts obviously descended from marriage by purchase. Babylonian marriage seems to have been as monogamous and faithful as in Hindu of India.

Premarital freedom was followed by the rigid enforcement of marital fidelity. The adulterous wife and her paramour according to the Code were drowned unless the husband in his mercy preferred to let his wife off by turning her almost naked into the streets. Childlessness, adultery, incompatibility or careless management of the household might satisfy the law as ground for granting the man a divorce.

In general the position of woman in Babylonia was lower than in Egypt. To carry out her many functions she had to be free to go about in public very much like the man. She could own property, enjoy its income, sell and buy, inherit and bequeath. Some women kept shops, and carried on commerce; some even became scribes, indicating that girls as well as boys might receive an education. But the Semitic practice of giving almost limitless power to the oldest male of the family won out against any matriarchal tendencies that may have existed in prehistoric Mesopotamia. Among the lower classes they were maternity machines, and if they had no dowry they were little more than slaves. The worship of Ishtar suggests a certain reverence for woman and motherhood. Subsequently morals grew negligent when the temples grew rich and the citizens of Babylon, wedded to delight, bore with equanimity the subjection of their city by the Kassites, the Assyrians, the Persians, and the Greeks.

Letter and Literature

Babylonia has left us an adequate heritage of literature as compared with Egypt. Its gifts were in commerce and law. Scribes were numerous in cosmopolitan Babylon. The Babylonians wrote in cuneiform upon tablets of damp clay, with a stylus. When the tablets were filled they dried and baked them into durable manuscripts of brick. If the thing written was a letter it was dusted with powder and then wrapped in a clay envelope stamped with the sender's cylinder seal. Tablets in jars classified and arranged on shelves filled numerous libraries in the temples and palaces of Babylonia. These Babylonian libraries are lost; but one of the greatest of them that of Borsippa was copied and preserved in the library of Ashurbanipal, whose 30,000 tablets are the main source of our knowledge of Babylonian life.

The decipherment of Babylonian script baffled students for centuries. It was in 1835, Henry Rawlinson, a British diplomatic officer stationed in Persia, deciphered the famous trilingual inscription of Darius I at Behistun in modern Iran. He found it three hundred feet high on an almost inaccessible rock at Behistun in the mountains of Media, where Darius-I had caused his carvers to engrave a record of his wars and victories in three languages old Persian, Assyrian, and Babylonian. The Babylonian language was a Semitic development of the old tongues of Sumeria and Akkad. It was written in characters originally Sumerian, but the vocabulary diverged in time into a language so different from Sumerian that the Babylonians had to compose dictionaries and grammars to transmit the old classic and sacerdotal tongue of Sumeria to young scholars and priests. In Babylonian, as in Sumerian, the characters represented not letters but syllables; Babylon never achieved an alphabet of its own but remained content with a "syllabary" of some three hundred signs. The Babylonians

looked upon letters as a device for facilitating business. They did not spend much of their clay upon literature. Official chroniclers recorded the piety and conquests of the kings, the vicissitudes of each temple, and the important events in the career of each city.

Twelve broken tablets found in Ashurbanipal's library, now displayed in the British Museum form the most fascinating relic of Mesopotamian literature the Epic of Gilgamesh. Like the Iliad it is an accretion of loosely connected stories, some of which go back to Sumeria 3000

B.C. Part of it is the Babylonian account of the Flood. Gilgamesh was a legendary ruler of Uruk or Erech, a descendant of the Shamash-napishtim who had survived the Deluge and had never died.

Babylonian Art

A keen aesthetic sense survived to some degree the Babylonian absorption in commercial life, epicurean recreation and compensatory piety may be seen in the chance relics of the minor arts. Patiently glazed tiles, glittering stones, finely wrought bronze, iron, silver and gold, delicate embroideries, soft rugs and richly dyed robes, luxurious tapestries, pedestal tables, beds and chairs, these lent grace, if not dignity or final worth to Babylonian civilization.

Painting was purely subsidiary. It decorated walls and statuary but made no attempt to become an independent art. We do not find among Babylonian ruins any paintings that glorified the Egyptian tombs or such frescoes as adorned the palaces of Crete. Babylonian sculpture remained similarly undeveloped and was apparently stiffened into an early death by conventions derived from Sumeria and enforced by the priests. All the faces portrayed are one face, all the kings have the same thick and muscular frame and all the captives are cast in one mould. Very little Babylonian statuary survives and that without excuse.

Babylonian architecture hardly rises to more than a few feet above the sands. There are no carved or painted representations among the relics to show us clearly the form and structure of palaces and temples. Houses were built of dried mud or among the rich of brick. They seldom knew windows and their doors opened not upon the narrow street but upon an interior court shaded from the sun. The temple was raised upon foundations level with the roofs of the houses whose life it was to dominate; usually it was an enormous square of tiled masonry built like the houses around a court. In this court most of the religious ceremonies were performed. Near the temple in most cases rose a ziggurat a tower of superimposed and diminishing cubical stories surrounded by external stairs. Its uses were partly religious, as a lofty shrine for the god partly astronomic as an observatory from which the priests could watch the all-revealing stars. Here and there among the ruins are vaults and arches forms derived from Sumeria, negligently used and unconscious of their destiny. Decoration interior and exterior was almost confined to enamelling some of the brick surfaces with bright glazes of yellow, blue, white and red with occasional tiled figures of animals or plants. In this way ceramics became the most characteristic art of the ancient Near East. The very cheapness of brick corrupted Babylonian design with such materials it was easy to achieve size and difficult to compass beauty.

Babylonian Science

Being merchants, the Babylonians were more likely to achieve successes in science than in art. Commerce created mathematics and united with religion to beget astronomy. The priests of Mesopotamia unconsciously laid the foundations of those sciences. Babylonian mathematics rested on a division of the circle into 360 degrees and of the year into 360 days. On this basis it developed a system of calculation by sixties, which became the parent of later systems of reckoning by twelve. Computation was made easier by tables which showed not only multiplication and division but the halves, quarters, thirds, squares and cubes of the basic numbers. Geometry advanced to the measurement of complex and irregular areas.

Astronomy was the special science of the Babylonians. For which they were famous throughout the ancient world. Here again magic was the mother of science. The Babylonians studied the stars not so much to chart the courses of caravans and ships, as to divine the future fates of men. They were astrologers first and astronomers afterward. Every planet was a god, interested and vital in the affairs of men: Jupiter was Marduk, Mercury was Nabu, Mars was Nergal, the sun was Shamash, the moon was Sin, Saturn was Ninib and Venus was Ishtar. Every movement of every star determined or forecast some terrestrial event of the Babylonian.

Out of astrologic observation and charting of stars astronomy developed slowly. As far back as 2000 B.C. the Babylonians had made accurate records of the rising and setting of the planet Venus. They had fixed the position of various stars and were slowly mapping the sky. Under Nebuchadrezzar, astronomic progress was resumed; the priest-scientists plotted the orbits of sun and moon noted their conjunctions and eclipses, calculated the courses of the planets and made the first clear distinction between a planet and a star. They determined the dates of winter and summer solstices, of vernal and autumnal equinoxes and following the lead of the Sumerians divided the ecliptic into the twelve signs of the Zodiac. They measured time by a water-clock and a sun-dial and these seem to have been not merely developed but invented by them. They divided the year into twelve lunar months, six having thirty days, six twenty-nine with a total 354 days in all. They added a thirteenth month occasionally to harmonize the calendar with the seasons. The month was divided into four weeks according to the four phases of the moon. An attempt was made to establish a more convenient calendar by dividing the month into six weeks of five days, but the phases of the moon proved more effective than the conveniences of men. The day was divided into twelve hours and each of these hours was divided into thirty minutes so that the Babylonian minute had the feminine quality of being four times as long as its name might suggest.

The dependence of Babylonian science upon religion had a more stagnant effect in medicine than in astronomy. It was not so much the obscurantism of the priests that held the science back as the superstition of the people. Already by the time of Hammurabi the art of healing had separated itself in some measure from the domain and domination of the clergy. A regular profession of physician had been established with fees and penalties fixed by law. But this almost secularized science found itself helpless before the demand of the people for supernatural diagnosis and magical cures.

Decline of Babylon

The Babylonians were the people listened lovingly to their priests and crowded the temples to seek favours of the gods. The marvel is that they were so long loyal to a religion that offered them so little consolation. Tradition and the Book of Daniel tell how Nebuchadnezzar after a long reign of uninterrupted victory and prosperity, after beautifying his city with roads and palaces and erecting fifty-four temples to the gods fell into a strange insanity thought himself a beast walked on all fours and ate grass. For four years his name disappears from the history and governmental records of Babylonia; it reappears for a moment and then in 562 B.C., he passes away.

Within thirty years after his death his empire crumbled to pieces. Nabonidus, who held the throne for seventeen years, preferred archaeology to government and devoted himself to excavating the antiquities of Sumeria while his own realm was going to ruin. The army fell into disorder; business men forgot love of country in the sublime internationalism of finance. The people busy with trade and pleasure unlearned the arts of war. The priests usurped more and more of the royal power and fattened their treasuries with wealth that tempted invasion and conquest. When Cyrus and his disciplined Persians stood at the gates, the anticlerical of Babylon connived to open the city to him and welcomed his enlightened domination. For two centuries Persia ruled Babylonia as part of the greatest empire that history had yet known. Then the exuberant Alexander came, captured the unresisting capital conquered all the Near East and drank himself to death in the palace of Nebuchadnezzar.

The civilization of Babylonia was not as fruitful for humanity as Egypt's not as varied and profound as India's and not as fine and mature as China's. And yet it was from Babylonia that those fascinating legends came which through the literary artistry of the Jews became an inseparable portion of Europe's religious lore. It was from Babylonia, rather than from Egypt that the nomadic Greeks brought to their city-state and then to Rome and to ourselves the foundations of mathematics, astronomy, medicine, grammar, lexicography, archaeology, history and philosophy. The Greek names for the metals and the constellations, for weights and measures, for musical instruments and many drugs, are translations, sometimes mere transliterations, of Babylonian names. Babylonian architecture through the ziggurat led to the towers of Muslim mosques and campaniles of medieval art. The laws of Hammurabi became for all ancient societies a legacy comparable to Rome's gift of order and government to the modern world. Through Assyria's conquest of Babylon, her appropriation of the ancient city's culture and her dissemination of that culture throughout her wide empire, through the long Captivity of the Jews and the great influence upon them of Babylonian life and thought, through the Persian and Greek conquests which opened with unprecedented fullness and freedom all the roads of communication and trade between Babylon and the rising cities of Ionia, Asia Minor and Greece through these and many other ways the civilization of the Land between the Rivers passed down into the cultural endowment of our race.

Assyrian

Meanwhile, three hundred miles north of Babylon, another civilization had appeared. Forced to maintain a hard military life by the mountain tribes always threatening it on every side, it had in time overcome its assailants, had conquered its parent cities in Elam, Sumeria, Akkad and Babylonia, had mastered Phoenicia and Egypt and had for two centuries dominated the Near East with brutal power. Sumeria was to Babylonia and Babylonia to Assyria. The first created a civilization, the second developed it to its height, the third inherited it, added little to it, protected it and transmitted it as a dying gift to the encompassing and victorious barbarians. For barbarism is always around civilization, amid it and beneath it, ready to engulf it by arms or mass migration or unchecked fertility. The new state grew about four cities fed by the waters or tributaries of the Tigris: Ashur, which is now Kala'at-Sherghat; Arbela, which is Irbil; Kalakh, which is Nimrud; and Nineveh, which is Kuyunjik just across the river from oily Mosul.

The god Ashur gave his name to a city and finally to all Assyria. There the earliest of the nation's kings had their residence, until its exposure to the heat of the desert and the attacks of the neighbouring Babylonians led Ashur's rulers to build a secondary capital in cooler Nineveh named also after a god, Nina, the Ishtar of Assyria. Here, in the heyday of Ashurbanipal, 300,000 people lived, and all the western Orient came to pay tribute to the Universal King.

The population was a mixture of Semites from the civilized south (Babylonia and Akkadia) with non-Semitic tribes from the west (probably of Hittite or Mitannian affinity) and Kurdish mountaineers from the Caucasus. They took their common language and their arts from Sumeria, but modified them later into an almost undistinguishable similarity to the language and arts of Babylonia. Their circumstances, however, forbade them to indulge in the effeminate ease of Babylon. From beginning to end they were a race of warriors, mighty in muscle and courage, abounding in proud hair and beard, standing straight, stern and stolid on their monuments and bestriding with tremendous feet the east-Mediterranean world. Their history is one of kings and slaves, wars and conquests, bloody victories and sudden defeat. The early kings once mere tributary to the south took advantage of the Kassite domination of Babylonia to establish their independence and soon one of them adorned himself with that title which all the monarchs of Assyria were to display: "King of Universal Reign." Out of the dull dynasties of these forgotten potentates certain figures emerge whose deeds illuminate the development of their country.

Political History

While Babylonia was still in the darkness of the Kassite era, Shalmaneser I brought the little city-states of the north under one rule, and made Kalakh his capital. But the first great name in Assyrian history is Tiglath-Pileser I. He was a mighty hunter he hunted nations as well as animals. In every direction he led his armies, conquering the Hittites, the Armenians and forty other nations, capturing Babylon and frightening Egypt into sending him anxious gifts. With the proceeds of his conquests he

built temples to the Assyrian gods and goddesses. Then Babylon revolted, defeated his armies, pillaged his temples and carried his gods into Babylonian captivity. Tiglath-Pileser died of shame.

His reign was a symbol of all Assyrian history: death and taxes, first for Assyria's neighbours, then for herself. Ashurnasirpal II conquered a dozen petty states, brought much booty home from the wars, cut out with his own hand the eyes of princely captives, enjoyed his harem, and passed respectably away. Shalmaneser III carried these conquests as far as Damascus; fought costly battles, killing 16,000 Syrians in one engagement; built temples, levied tribute and was deposed by his son in a violent revolution. Sammuamat ruled as queen-mother for three years and provided a fragile historical basis for the Greek legend of Semiramis half goddess and half queen, great general, great engineer and great statesman so attractively detailed by Diodorus the Sicilian. Tiglath-Pileser III gathered new armies, re-conquered Armenia, overran Syria and Babylonia, made vassal cities of Damascus, Samaria and Babylon, extended the rule of Assyria from the Caucasus to Egypt, tired of war, became an excellent administrator, built many temples and palaces, held his empire together with an iron hand, and died peacefully in bed. Sargon II, an officer in the army, made himself king led his troops in person, and took in every engagement the most dangerous post; defeated Elam and Egypt, re-conquered Babylonia, and received the homage of the Jews, the Philistines, even of the Cypriote Greeks; ruled his empire well, encouraged arts and letters, handicrafts and trade, and died in a victorious battle that definitely preserved Assyria from invasion by the wild Cimmerian hordes.

His son Sennacherib put down revolts in the distant provinces adjoining the Persian Gulf, attacked Jerusalem and Egypt without success, sacked eighty-nine cities and 820 villages, captured 7,200 horses, 80,000 oxen, 800,000 sheep, and 208,000 prisoners. The official historian, on his life, did not understate these figures. Then, irritated by the prejudice of Babylon in favour of freedom, he besieged it, took it, and burned it to the ground; killed the inhabitant, plundered the temples and palaces and Gods of Babylon were chopped to pieces. With the spoils of his conquests and plunder Sennacherib rebuilt Nineveh, changed the courses of rivers to protect it, reclaimed waste lands with the vigour of countries suffering from an agricultural surplus, and was assassinated by his sons while piously mumbling his prayers.

Another son, Esarhaddon, snatched the throne from his blood-stained brothers, invaded Egypt to punish her for supporting Syrian revolts, made her an Assyrian province, amazed western Asia with his long triumphal progress from Memphis to Nineveh, dragging endless booty in his train; established Assyria in unprecedented prosperity as master of the whole Near Eastern world. He delighted Babylonia by freeing and honouring its captive gods and rebuilding its shattered capital. Then, conciliated Elam by feeding its famine-stricken people in an act of international beneficence almost without parallel in the ancient world; and died on the way to suppress a revolt in Egypt, after giving his empire the kindest rule in its half-barbarous history.

His successor, Ashurbanipal (the Sardanapalus of the Greeks), reaped the fruits of Esarhaddon's sowing. During his long reign Assyria reached the climax of its wealth and prestige. After him his

country was ruined by forty years of intermittent war and finally fell into exhaustion and decay and ended its career hardly a decade after Ashurbanipal's death. He was not merely a conqueror is proved by his munificence as a builder and as a patron of letters and the arts. He commissioned innumerable scribes to secure and copy for him all the classics of Sumerian and Babylonian literature, and gathered these copies in his library at Nineveh, where modern scholarship found them almost intact after twenty-five centuries of time had flowed over them.

Assyrian Government

The government of Ashurbanipal which ruled Assyria, Babylonia, Armenia, Media, Palestine, Syria, Phoenicia, Sumeria, Elam and Egypt was without doubt the most extensive administrative organization yet seen in the Mediterranean or Near Eastern world. Only Hammurabi and Thutmose III had approached it and Persia alone would equal it before the coming of Alexander. In some ways it was a liberal empire. Its larger cities retained considerable local autonomy, and each nation in it was left its own religion, law and ruler, provided it paid its tribute promptly. In so loose an organization every weakening of the central power was bound to produce rebellions, or, at the best, a certain tributary negligence, so that the subject states had to be conquered again and again. To avoid these recurrent rebellions Tiglath-Pileser III established the characteristic Assyrian policy of deporting conquered populations to alien habitats, where, mingling with the natives, they might lose their unity and identity and have less opportunity to rebel. Revolts came nevertheless, and Assyria had to keep herself always ready for war.

The army was therefore the most vital part of the government. Assyria recognized frankly that government is the nationalization of force, and her chief contributions to progress were in the art of war. Chariots, cavalry, infantry and sappers were organized into flexible formations. Iron-working had grown to the point of encasing the warrior with armour to a degree of stiffness rivalling a medieval knight. Even the archers and pike men wore copper or iron helmets, padded loin-cloths, enormous shields and a leather skirt covered with metal scales. The weapons were arrows, lances, cutlasses, maces, clubs, slings and battleaxes. The nobility fought from chariots in the van of the battle, and the king, in his royal chariot, usually led them in person. Ashurnasirpal introduced the use of cavalry as an aid to the chariots, and this innovation proved decisive in many engagements. Soldiers were rewarded for every severed head they brought in from the field, so that the aftermath of a victory generally witnessed the wholesale decapitation of fallen foes. Scribes stood by to count the number of prisoners taken and killed by each soldier and divided the booty accordingly. The king, if time permitted presided at the slaughter.

Next to the army the chief reliance of the monarch was upon the church, and he paid lavishly for the support of the priests. The formal head of the state was by concerted fiction the god Ashur. All pronouncements were in his name, all laws were edicts of his divine will, all taxes were collected for his treasury, all campaigns were fought to furnish him with spoils and glory. The king had himself described as a god, usually an incarnation of Shamash, the sun. The religion of Assyria, like its

language, its science and its arts, was imported from Sumeria and Babylonia, with occasional adaptations to the needs of a military state.

Assyrian law was distinguished by a martial ruthlessness. Punishment ranged from public exhibition to forced labour, twenty to a hundred lashes, the slitting of nose and ears, castration, pulling out the tongue, gouging out the eyes, impalement and beheading. Adultery, rape and some forms of theft were considered capital crimes. Trial by ordeal was occasionally employed. In general Assyrian law was less secular and more primitive than the Babylonian Code of Hammurabi, which apparently preceded it in time.

Local administration carried out originally by feudal barons, fell in the course of time into the hands of provincial prefects or governors appointed by the king. The prefects were expected to collect taxes. Royal spies kept watch on these prefects and their aides and informed the king concerning the state of the nation. All in all, the Assyrian government was primarily an instrument of war. For war was often more profitable than peace; it cemented discipline, intensified patriotism, strengthened the royal power, and brought abundant spoils and slaves for the enrichment and service of the capital. Hence Assyrian history is largely a picture of cities sacked and villages or fields laid waste.

The occurrence of repeated violence, not only forced the subject provinces to rise into repeatedly revolt, but within the royal palace or family itself violence again and again attempted to upset what violence had established and maintained. At or near the end of almost every reign some disturbance broke out over the succession to the throne; the aging monarch saw conspiracies forming around him, and in several cases he was hastened to his end by murder. And finally repeated violent activities led the civilisation to decline.

Assyrian life

The economic life of Assyria same like that of Babylonia, for in many ways the two countries were merely the north and south of one civilization. The southern kingdom was more commercial, the northern more agricultural; rich Babylonians were usually merchants, rich Assyrians were most often landed gentry actively supervising great estates. The same rivers flooded and nourished the land and the same method of ridges and canals controlled the overflow. The same irrigation technology raised the water from ever deeper beds to fields sown with the same wheat and barley, millet and sesame. The same industries supported the life of the towns; the same system of weights and measures governed the exchange of goods and though Nineveh and her sister capitals were too far north to be great centres of commerce, the wealth brought to them by Assyria's sovereigns filled them with handicrafts and trade. Metal was mined or imported in new abundance, and towards 700 B.C. iron replaced bronze as the basic metal of industry and armament. Metal was cast, glass was blown, textiles were dyed, earthenware was enamelled, and houses were well equipped in Nineveh. Industry and trade were financed in part by private bankers, who charged 25% for loans. Lead, copper, silver and gold served as currency; and about 700 B.C. Sennacherib minted silver into half-shekel pieces one of our earliest examples of an official coinage.

The people fell into five classes: patricians or nobles; craftsmen or master artisans, organized in guilds and including the professions as well as the trades; the unskilled but free workmen and peasants of town and village. Serfs bound to the soil on great estates and slaves captured in war or attached for debt, compelled to announce their status by pierced ears and shaven head, and performing most of the menial labour everywhere.

Like all military states, Assyria encouraged a high birth rate by its moral code and its laws. Abortion was a capital crime. Though women rose to considerable power through marriage and intrigue, their position was lower than in Babylonia. Wives were not allowed to go out in public unveiled. Prostitution was accepted as inevitable, and was regulated by the state. The king had a varied harem. For the rest the law of matrimony was as in Babylonia, except that marriage was often by simple purchase and in many cases the wife lived in her father's house, visited occasionally by her husband.

In all departments of Assyrian life we meet with a patriarchal sternness natural to a people that lived by conquest, and in every sense on the border of barbarism. The Assyrians seemed to find satisfaction or a necessary tutelage for their sons in torturing captives in all the methods of cruelties. Religion apparently did nothing to mollify this tendency to brutality and violence. It had less influence with the government than in Babylonia and took its cue from the needs and tastes of the kings. Ashur, the national deity was a solar god, warlike and merciless to his enemies. His people believed that he took a divine satisfaction in the execution of prisoners before his shrine. The essential function of Assyrian religion was to train the future citizen to a patriotic docility and to teach him the art of wheedling favours out of the gods by magic and sacrifice. The only religious texts that survive from Assyria are exorcisms and omens. Long lists of omens have come down to us in which the inevitable results of every manner of event are given and methods of avoiding them are prescribed.

In such an atmosphere the only science that flourished was that of war. Assyrian medicine was merely Babylonian medicine; Assyrian astronomy was merely Babylonian astrology, where the stars were studied chiefly with a view to divination. There was no evidence of philosophical speculation and no secular attempt to explain the world. Assyrian philologists made lists of plants, probably for the use of medicine and thereby contributed moderately to establish botany.

The tablets recording the deeds of the kings, must be accorded the honour of being among the oldest extant forms of historiography. They were in the early years mere chronicles, registering royal victories, and admitting of no defeats. They became, in later days, embellished and literary accounts of the important events of the reign. The clearest title of Assyria to a place in a history of civilization was its libraries. That of Ashurbanipal contained 30,000 clay tablets, classified and catalogued, each tablet bearing an easily identifiable tag. A large number of the tablets are copies of undated older works, of which earlier forms are being constantly discovered. The avowed purpose of Ashurbanipal's library was to preserve the literature of Babylonia from oblivion.

Assyrian Art and Architecture

At last, in the field of art, Assyria equalled her preceptor Babylonia, and in bas-relief surpassed her. Stimulated by the influx of wealth into Ashur, Kalakh and Nineveh, artists and artisans began to produce for nobles and their ladies, for kings and palaces, for priests and temples jewels of every description, cast metal as skilfully designed and finely wrought as on the great gates at Balawat, and luxurious furniture of richly carved and costly woods strengthened with metal and inlaid with gold, silver, bronze, or precious stones. Pottery was poorly developed, and music, like so much else, was merely imported from Babylon. Tempera painting in bright colours under a thin glaze became one of the characteristic arts of Assyria, from which it passed to its perfection in Persia. Painting, as always in the ancient East, was a secondary and dependent art.

In the heyday of Sargon II, Sennacherib, Esarhaddon and Ashurbanipal, and presumably through their lavish patronage, the art of bas-relief was patronised. The human figures in Assyrian reliefs are stiff and coarse and all alike as if some perfect model had insisted on being reproduced forever. All the men have the same massive heads, the same brush of whiskers, the same stout bellies, the same invisible necks; even the gods are these same Assyrians in very slight disguise. The representation of natural objects in the reliefs is stylized and crude. The forms are heavy, the outlines are hard, the muscles are exaggerated and there is no other attempt at perspective than the placing of the distant in the upper half of the picture on the same scale as the foreground presented below. Gradually, however the guild of sculptors under Sennacherib learned to offset these defects with a boldly realistic portrayal, a technical finish, and above all a vivid perception of action, which, in the field of animal sculpture have never been surpassed.

As for Assyrian architecture how can we estimate its excellence when nothing remains of it but ruins almost level with the sand. The Assyrian aimed not at beauty but at grandeur and sought it by mass design. Following the traditions of Mesopotamian art, Assyrian architecture adopted brick as its basic material but went its own way by facing it more lavishly with stone. It inherited the arch and the vault from the south, developed them and made some experiments in columns which led the way to the vaulted Ionic capitals of the Persians and the Greeks. The palaces squatted over great areas of ground, and were wisely limited to two or three stories in height. Ordinarily they were designed as a series of halls and chambers enclosing a quiet and shaded court. The portals of the royal residences were guarded with monstrous stone animals, the entrance hall was lined with historical reliefs and statuary, the floors were paved with alabaster slabs, the walls were hung with costly tapestries or panelled with precious woods and bordered with elegant mouldings. The roofs were reinforced with massive beams, sometimes covered with leaf of silver or gold, and the ceilings were often painted with representations of natural scenery. The worst commentary on Assyrian architecture lies in the fact that within sixty years after Esarhaddon had finished his palace it was crumbling into ruins.

Decline of the Assyria

Legend says Ashurbanipal, himself set fire to his own palace and perished in the flames rests on the authority of the marvel-loving Ctesias. His death was in any case a symbol and an omen; soon

Assyria too was to die and from causes of which Ashurbanipal had been a part. For the economic vitality of Assyria had been derived too rashly from abroad. It depended upon profitable conquests bringing in riches and trade; at any moment it could be ended with a decisive defeat. Gradually the qualities of body and character that had helped to make the Assyrian armies invincible were weakened by the very victories that they won. In each victory it was the strongest and bravest died, while the infirm and cautious survived to multiply their kind. The extent of her conquests had helped to weaken her; not only had they depopulated her fields to feed insatiate Mars, but they had brought into Assyria, as captives, millions of destitute aliens who bred with the fertility of the hopeless, destroyed all national unity of character and blood and became by their growing numbers a hostile and disintegrating force in the very midst of the conquerors. More and more the army itself was filled by these men of other lands, while semi- barbarous marauders harassed every border, and exhausted the resources of the country in an endless defence of its unnatural frontiers. Ashurbanipal died in 626 B.C. Fourteen years later an army of Babylonians under Nabopolassar united with an army of Medes under Cyaxares and a horde of Scythians from the Caucasus and with amazing ease and swiftness captured the citadels of the north. Nineveh was laid waste as ruthlessly and completely as her kings had once ravaged Susa and Babylon. The city was put to the torch, the population was slaughtered or enslaved and the palace so recently built by Ashurbanipal was sacked and destroyed. At one blow Assyria disappeared from history. Nothing remained of her except certain tactics and weapons of war, certain volute capitals of semi-ionic columns and certain methods of provincial administration that passed down to Persia, Macedon and Rome.

Summary

- Mesopotamia, the land between the rivers, derives its name and existence from the rivers Tigris and Euphrates. These two rivers created the Fertile Crescent in the midst of surrounding inhospitable territory. The space we call Mesopotamia is roughly the same as that of the modern country of Iraq.
- About ten thousand years ago, the people of this area began the agricultural revolution. Instead of hunting and gathering their food, they domesticated plants and animals, beginning with the sheep. They lived in houses built from reeds or mud-brick, grouped in villages where they tended their crops. They built granaries to store their grain, and they began developing a token system to record trade and accounts.
- Between 3500 and 3000, the civilization of Southern Mesopotamia underwent a sudden growth and change, centered in the cities of Ur and Uruk. People clustered into fewer, but larger, locations and the plough, potter's wheel and the introduction of bronze can be seen as responses to the demands of a more intensive economic life, and also as causes of increased complexity in that life. In this same period came the beginnings of writing, metrological systems and arithmetic.

- The main part of the third millennium, now called the Early Dynastic period, saw the gradual development of Sumerian civilization, based on numerous city states. The Sumerians lived in a complex, unpredictable and frequently hostile environment. They had to contend with floods, droughts, storms, dust, heat, disease and death. They strove to uncover order and organization in the world to overcome feelings of futility and powerlessness.
- The Early Dynastic period was brought to an end when Sargon (2334-2279) created the world's first empire, stretching the length and breadth of the Fertile Crescent. The impact of Sargon's unification of Sumer and Akkad resonated down through the history of Mesopotamia for the next two thousand years. The Sargonic empire lasted for almost a hundred and fifty years, before it fell to insurrections and invasions.
- Sumerian culture and civilization experienced a remarkable renaissance during the reign of Third Dynasty. There was peace and prosperity throughout the land, the legal system was strengthened, the calendar was revised, metrology simplified, agriculture revived, and towns and temples were rebuilt, the most imposing of the latter being the ziggurat at Ur.
- The Ur III Empire lasted for over a century (2112-2004) before falling to the violent incursions of nomadic Amorites. With the fall of Ur went Sumerian civilization for ever. The language of Sumerian was retained as an ever more abstruse, recondite and literary ornament of the civilized elites, but as a living tongue, it was dead, to be replaced by Akkadian.
- The next couple of hundred years was another turbulent time during which the cities of Isin and Larsa vied for supremacy in the south, while Mari and Assur grew to prominence in the north. Assur was the principal city of the Assyrians, of whom we will hear more later. Also in the south was the city of Babylon.
- At the beginning of the eighteenth century, the ruler of Babylon was one Hammurabi (1792-1750). In short order he conquered and unified the whole of Mesopotamia, and Babylon became its greatest city. From this time the great bulk of mathematical tablets come. During this period the literate elites, the scribes, the doctors, the teachers of language, literature and mathematics emerged as distinct professional groups, rather than just being priests or administrators.
- In about 1600, while Egypt was falling to the Hyksos invasion, Mesopotamia was faced with troublesome northern neighbors. The Hittites, under Mursilis, captured and plundered Babylon, but they did not stay and hold the territory. Into the vacuum thus created came the Kassites from the Zagros mountains to the northeast. The Kassite rule of

Babylon lasted for four hundred years, some of which were quite peaceful, but it left little trace.

- The next empire to arise in Mesopotamia came from a different quarter, the Assyrians in the northeast. The Assyrians lived in a narrow strip of land surrounded by enemies. While the mass movements all around them had brought down one nation after another, the Assyrians had held onto their territory, and indeed, kept one dynasty for over two hundred years. They had matured as a people, and built up a fearsome military reputation. From this base and background, they emerged to conquer the whole of Mesopotamia and hold it for three hundred difficult years.
- With the Assyrians came an increased emphasis on celestial divination, providing a new occupation for Babylonian scholars. The Babylonians took to making long lists of astronomical observations and in time, this led to the development of mathematical astronomy, which used arithmetical schemes to produce extremely detailed tables of predictions of astronomical phenomena.
- The last of the great Neo-Assyrian kings, Assurbanipal (669-627), collected a vast library at his palace at Nineveh. In 1849, this library was rediscovered by the British archaeologist, Sir Henry Layard, and the modern discipline of Assyriology was born.
- Assurbanipal ruled over the Assyrian empire at its peak. In the abrupt way that characterizes Mesopotamian history, his empire outlived him by less than twenty years. It was followed by a brief period of Babylonian hegemony before Babylon in turn fell to the Persians, former nomads who ruled until Alexander conquered the known world. But this is to bring us into modern times.

1.3: China

Objectives

In this chapter we intended providing you an insight into the civilisation that flourished in China during the Bronze Age. Yangtze and Yellow river provide suitable conditions for transition of the early agricultural societies to the stage of civilisation in China. The yellow river civilisation of China continuously flourished for a long time and in the present time also its influence is strongly visible in traditional Chinese societies. This chapter will discuss various aspects of ancient Chinese civilisations. By the end of this chapter the learners would be able to:

- know about the major geographic zone and their influence on ancient Chinese civilisation.
- learn the the social, political, economic and cultural system of this civilisation, the common and unique features and the chronological sequence in which these social and economic changes under successive ruling dynasties.
- describe the development of religious beliefs and various sects in ancient China and
- discuss the scientific and technological advancement of Chinese civilisations etc

Introduction

In ancient China, civilization developed much like it did in Mesopotamia, Egypt and the Indus Valley. But while these other civilizations grew side by side, knew of each other and had trade relationships in between them, Chinese civilization developed independently, with very little influence from the cultures to the west. An urban civilization did not emerge in China until about 2000 BC, about a thousand years later than in Mesopotamia, but it emerged as a large and highly developed kingdom.

The dynamic and rich civilization of the Chinese flourished at the eastern end of mainland China. Eastern China is a vast watershed drained by two large river systems which rise on the Tibetan plateau and Kunlun Mountains and flow eastward to the Pacific. The Yellow river traverses the north China plain. The Yangtze and its valley lie to the south. Smaller rivers and valleys converge on present-day Canton. The climate in the south is semi-tropical and monsoon-drenched. China has been protected by the Gobi Desert in the north, the Tibetan plateau and Pamir and Himalaya mountains in the west, the forests of Southeast Asia in the South and the Pacific Ocean in the east. From the Shang Dynasty in 1700 BC to the Ching (Qing) Dynasty (1644-1912 AD) there were twenty four dynasties ruled over this vast stretch of land in the Chinese mainland.

With a dense population from early times, the Chinese have achieved high levels of productivity and exported many sought-after goods such as iron, porcelain, and silk. With a common language, paper to print it on, and a varied and distinctive cuisine, the people have been rightfully proud of their cohesive and distinctive culture. They have traditionally viewed themselves as living in –The Middle Kingdom – that is, the centre of the known world, but have sometimes seen neighbours and outsiders as "barbarians" from whom they demanded tribute.

Because of the constrain of space and time in this chapter we will not be discussing the complete history of China but would focus on some main aspects of the ancient Chinese history. This chapter will also discuss the state, society, culture and religion in the ancient China.

Growth of Civilisation in China: From Prehistory to Civilisation

Like in Mesopotamia, Egypt, and the Indus River valley, civilization in China developed around a great river. The Yellow River carried floodwater and sediment to the land around it, making the area incredibly fertile and thus an excellent place for the Stone Age inhabitants of the area to experiment with agriculture. While the Yellow River was the main cradle of Chinese civilization, people also settled around other rivers, such as the Huai and the Yangtze. By around 4000 BC, villages began to appear. They cultivated a number of crops, but most important was a grain called millet. Besides millet, they also cultivate soybeans, wheat, hemp and Rice. Although Rice was cultivated in this period, but it was not yet the important staple that it would later become in the Chinese diet. The Neolithic Chinese domesticated animals such as pigs, dogs, and chickens. Silk production, through the domestication of silk worms, probably also began in this early period.

The earliest cultivators lived in wattle-and-daub pit dwellings with wooden support posts and sunken,

plastered floors. Their villages were located in isolated clearings along slopes of river valleys. Archaeological finds of weapons and remains of earthen walls suggest tribal warfare between villages. Little is known of the religion of these people, although some evidence suggests the worship of ancestral spirits. They practiced divination by applying heat to a hole drilled in the shoulder bone of a steer or the under shell of a tortoise and then interpreting the resulting cracks in the bone. They buried their dead in cemeteries with jars of food. Tribal leaders wore rings and beads of jade.

During the Neolithic period in China, there were multiple groups of people, mostly around the Yellow River, with separate emerging cultures. Some of these various cultures include the Yangshao culture (4800 to 3000 BC), the Majiayao culture (3800 to 2000 BC), the Dawenkou culture (4300 to 2400 BC), the Qijia culture (2200 to 1800 BC), and the Longshan culture (2600 to 2000 BC). Over time, they influenced each other more and more and pottery, art, and artifacts recovered by archaeologists show greater homogenization as time went on. By 2000 BC a more unified Chinese culture was developing, and there is also evidence of urbanism and the use of early writing among the Chinese. All of this took place about a thousand years later than in Mesopotamia, Egypt, and the Indus River valley.

Chinese mythology tells a different story. It holds that the universe was created by Pangu, after which the Three Sovereigns and Five Emperors, a series of legendary sage emperors and heroes (such as the Yellow Emperor), helped create man and taught the ancient Chinese to speak, use fire, build houses, farm, and make clothing. While these events are mythological, at the root of them may lie ancient memories of very early kings and rulers who emerged among the prehistoric Chinese. According to these myths, the last of the great Five Emperors left his throne to Yu the Great, who founded China's first dynasty, the Xia (or Hsia) dynasty. Yu supposedly began the practice of passing power from father to son, which was the necessary step for the creation of a dynasty. According to mythology, his ancestors ruled China for nearly five hundred years, until the last Xia king became corrupt and cruel. This led to his overthrow by Tang, who founded a new dynasty, the Shang dynasty.

There is much debate among scholars about how much of this mythology is true. Many argue that the Zhou (Chou) dynasty, which ruled China much later, invented the idea of the Xia dynasty. It was necessary because the Zhou created the idea of the Mandate of Heaven, which states that there could only be one legitimate ruler of China at one time. This meant that the various small states that comprised Neolithic and Bronze Age China, and which had probably been forgotten, were not useful for their concept of history. They had to create the idea that China had always had one ruler and thus they created the idea of an ancient Xia dynasty. Also, since the Zhou had overthrown the legitimate Shang dynasty, they wanted to connect themselves to a more ancient line of kings, so they invented the Xia and gave them a history of ruling the country before the Shang.

However, the Xia dynasty may not be a complete fabrication. Archaeologists have discovered advanced Bronze Age culture in China, which they call the Erlitou culture. Its capital, Erlitou, was a huge city around 2000 BC, with two possible palaces, a drainage system and what seems to have

been a very high population. This may be the people referred to in Chinese mythology as the Xia. In addition, for a long time it was believed that the later Shang dynasty may also have been purely mythological, until archaeology proved that it had been real.

Indeed, while the existence of the Shang dynasty was still in doubt, at the start of the twentieth century scholars realized that objects being sold by Chinese merchants as –dragon bones, which were crushed to make a traditional Chinese medicine consumed to treat a variety of ailments, were actually important pieces of historical evidence called oracle bones. Oracle bones are pieces of bone or turtle shell used by the ancient Chinese, especially Chinese kings, in attempts to predict the future. The ancient kings would inscribe their name and the date on the bone, along with a question. They would then heat the bone until it cracked and then interpret the shape of the crack, which was believed to provide an answer to their question. Shang rulers long thought to be merely mythological figures had carved their names onto such oracle bones, attesting to their actual existence.

Archaeologists have also found ancient cities that correspond with the Shang dynasty. A city at Zhengzhou appears to have been a Shang capital and it contained palaces, workshops, and city walls. Another important but slightly later Shang city that has been excavated is Anyang.

This site yielded large numbers of oracle bones, which describe the travels of eleven named kings, and the names of these kings and the order of their reigns match traditional lists of Shang kings. This was the decisive period when a truly Chinese culture emerged, a culture that would continue to thrive and evolve, and which considers itself continuous up to the modern day. In the subsequent paragraphs this chapter will discuss the early ruling dynasties of Chinese civilization in brief.

Dynastic Rule in China

The first three dynasties to rule China were the Xia (or Hsia) dynasty, the Shang dynasty, and the Zhou (or Chou) dynasty. They did not yet rule the huge area that makes up modern China, but they controlled a massive swath of territory around the Yellow River. While the first Chinese emperors did not rule until China was unified under the later Qin (Ch'in) dynasty, in this early period China was ruled by kings. For the most part, there was only one king at a time, who effectively ruled of all of China. Under the Zhou dynasty, however, the power of the kings weakened and many powerful men called themselves –kings at the same time, as they vied for control of the country. It was only at this point that there emerged the concept of a Chinese emperor, or *Huangdi* (a term that had previously been used for the mythological leaders who were said to have ruled China at the beginning of time), who would rule over all these various kings. In the above section in brief we have discussed about the Xia dynasty, let's have a brief look in to the various aspects of the Shang and Zhou Dynasty and the subsequent history of Chinese civilization.

Shang Dynasty

While scholars still debate whether the Xia dynasty-according to traditional legends the first Chinese dynasty-actually existed or not but almost no one doubts anymore that the Shang dynasty existed and ruled China during its Bronze Age. Thus, the Shang dynasty is generally considered China's first

historical dynasty. It was under the Shang that writing first emerged among the Chinese, making it the beginning of the historical China. The Shang ruled from around 1600 to 1046 BC.

The Discovery of the Shang: The Oracle Bones

For a long time, scholars doubted that the Shang dynasty ever actually existed. It was only with the discovery of the Shang oracle bones, pieces of bone or shell used for divination, that it was confirmed that the Shang dynasty really did exist. After this, archaeologists started searching out Shang sites, and in the middle of the twentieth century began to excavate Shang cities.

Both archaeology and oracle bones are important sources of evidence about the Shang dynasty. The oracle bones are especially useful, as they provide the bulk of the writing we have about the Shang. The king or professional diviners employed by the king would carve the name of the king and the date onto the bones, and write questions such as -Will we win the upcoming battle?! or -How many soldiers should we commit to the battle?! Such questions reveal a great deal about what was important to Shang society. Many of the oracle bones ask questions about war, harvests, and childbirth. Once the question was inscribed in the oracle bone, the bone was heated until it cracked. The cracks were then interpreted, and on the other side of the bone the king or diviner would write his interpretation of the crack. Later, they would record on the bone whether the prediction came true. These interpretations and verifications present even more information about the Shang. In addition, the names on the bones verify the reigns of historic Shang rulers long thought to be legendary.

Shang Writing

The inscriptions on Shang oracle bones are the oldest surviving form of Chinese writing. The writing on the oracle bones shows evidence of complex development, indicating that the written language had been around for a long time before the first evidence of it appears. In fact, we can read the writing on the oracle bones because the language was already very similar to the modern Chinese writing system. Unfortunately, however, there are only few examples of Shang writing outside of the oracle bones. There are some inscriptions on bronze objects but most documents, such as government paperwork, receipts, and books, were written on bamboo strips and silk. These decomposed long ago and are lost to us forever.

Shang Cities

According to legend, the Shang dynasty was founded when Cheng Tang overthrew the evil last king of the Xia dynasty. Tang supposedly founded a new capital for his dynasty at a town called Shang, near modern-day Zhengzhou. It seems to have functioned as a sacred capital, where the most sacred temples and religious objects were housed.

However, the effective capital of the kingdom moved from city to city, as different kings ruled from different cities, probably as a result of regional power struggles within the kingdom. The last and most important of these was a city called Yin, near modern-day Anyang, which acted as capital for the last 300 years or so of the dynasty, from about 1400 to 1046 BC. Anyang was a huge city, about 2,400 hectares in size. It was spread out in a multitude of different sectors, each one more like an

individual village. Anyang also had an extensive cemetery with thousands of graves of what seem to have been nobles, along with eleven particularly large tombs, which may have belonged to the eleven Shang kings, who apparently ruled from Anyang. All of the kings' tombs were looted long ago, but some smaller graves escaped looting long enough for archaeologists to excavate, and even these small graves were filled with enormous numbers of jade, bronze and bone objects. They point to the enormous wealth of the rulers of the city, and many of the tombs would have required huge numbers of laborers in order to construct. These aristocratic tombs were also surrounded by the bodies of human sacrifices, sometimes just skulls, and the bones of human sacrifices have also been found inside of the tombs of Shang elites.

Shang Religion

The human sacrifices found in Shang cities, particularly in the tombs of powerful Shang figures, indicate that they believed their servants would continue to serve them in the afterlife. For this reason, when a Shang aristocrat or ruler died, his or her servants would be killed and buried with the aristocrat. Alternatively, human sacrifices may have been enemy warriors captured in battle.

For the Shang, what a person was buried with was important because they believed that a person would live on in the afterlife and take along the things they were buried with. The Shang believed the dead had great powers, and they worshipped their ancestors. They believed that failing to properly do this would mean that the ancestors would remove their protection from the living, allowing disaster to strike. People who lived under the Shang would consult their ancestors through oracle bones to seek their approval for any major decision and to learn about their future success in harvesting, hunting, or battle. They believed that the ancestors could confer good fortune in these things, and in order to appease the ancestors they made offerings of food and drink.

In addition to their ancestors, the Shang worshipped a supreme god called Shangdi, who ruled over lesser gods who embodied the sun, the moon, the wind, the rain, and other natural forces and places. Nonetheless, they believed that Shangdi was distant from man, and for the most part Shangdi could only be reached through the worship of their ancestors. Shang kings, however, believed they could communicate with Shangdi, and many oracle bones seek out his approval for the decisions of the kings.

Shang Technology

Since the Shang ruled China during its Bronze Age, perhaps the most important technology at the time was bronze casting. They cast bronze objects by creating molds out of clay, carving a design into the clay, and then pouring molten bronze into the mold. They allowed the bronze to cool and then broke the clay off, revealing a completed bronze object.

The upper class had the most access to bronze, and they used it for ceremonial objects, such as ritual vessels used to make offerings to the ancestors. Bronze objects were also buried in the tombs of Shang elite. The Shang government also used bronze for military weapons such as swords and spearheads. Bronze weapons gave the Shang a distinct advantage over their enemies. Another

military technology that allowed the Shang to excel at war was the chariot. Under the Shang, the Chinese domesticated the horse. The horse would still have been too small to ride at the time, but the Chinese gradually developed the chariot, which harnessed the power of the horse. The chariot was a devastating weapon in battle, and it also allowed Shang soldiers to move vast distances with great speed.

These military technologies were important, because it seems that the Shang were constantly at war. A significant portion of oracle bones used by Shang kings were concerned with battle-how many men to commit, whether the king could expect victory, etc. These armies pushed the borders of the Shang kingdom further and brought back with them precious resources and prisoners of war, who could be enslaved or used for human sacrifice. The oracle bones also show a deep concern about the barbarians living outside the empire, who were a constant threat to the safety and stability of the kingdom, and the military had to be constantly ready to fight them.

End of the Shang

The Shang dynasty was overthrown in 1046 BC by the Zhou (Chou). The Zhou were a subject people living in the western part of the kingdom. Supposedly, they rebelled against the last kings of the Shang and overthrew them. The Zhou founded a new dynasty. Under their rule, they moved away from worship of Shangdi in favor of Tian (heaven). They created the idea of the Mandate of Heaven. According to this idea, there could be only one legitimate ruler of China at a time, and this king reigned with the approval of heaven. A king could, however, lose the approval of heaven, which would result in his downfall. The Zhou claimed that the Shang kings had become immoral, that because of their excessive drinking, luxuriant living and cruelty, the Shang had lost heaven's approval of their rule. The Zhou dynasty claimed to be replacing the Shang and they would rule China for the next eight hundred years.

The Zhou Dynasty

To the west of the area of Shang rule, in the valley of the Wei River, a tributary of the Yellow River, lived the Zhou people. Culturally closer to the Neolithic black-pottery people, they were less civilized and more warlike than the Shang. References to the Zhou in the Shang oracle bones indicate that the Shang had relations with them- sometimes friendly, sometimes hostile. According to the traditional historical record, the last Shang kings were weak, cruel, and tyrannical.

By 1047 B.C.E., they had been debilitated by campaigns against nomads in the north and rebellious tribes in the east. Taking advantage of this opportunity, the Zhou made alliances with disaffected city-states and swept in, conquering the Shang. In most respects, the Zhou continued the Shang pattern of life and rule. The agrarian-based city-state continued to be the basic unit of society, and it is estimated that there were about 200 of them in the eighth century B.C.E. The Zhou social hierarchy was not unlike that of the Shang, with kings and lords at the top, officials and warriors below them, and peasants and slaves at the bottom. Slaves served primarily as domestic servants. The Zhou assimilated Shang culture, continuing without interruption the development of China's ideographic

writing. The Zhou also maintained the practice of casting bronze ceremonial vessels, but their vessels lack the fineness that set the Shang above the rest of the Bronze Age world. King Wu, the leader of the Zhou (Chou), overthrew the last king of the Shang Dynasty. King Wu died shortly after this victory, but his family, the Ji, would rule China for the next few centuries. Their dynasty is known as the Zhou Dynasty.

The Mandate of Heaven

After overthrowing the Shang Dynasty, the Zhou propagated a new concept known as the Mandate of Heaven. The Mandate of Heaven became the ideological basis of Zhou rule, and an important part of Chinese political philosophy for many centuries. The Mandate of Heaven explained why the Zhou kings had authority to rule China and why they were justified in deposing the Shang dynasty. The Mandate held that there could only be one legitimate ruler of China at one time and that such a king reigned with the approval of heaven. A king could, however, lose the approval of heaven, which would result in that king being overthrown. Since the Shang kings had become immoral—because of their excessive drinking, luxuriant living and cruelty—they had lost heaven's approval of their rule. Thus the Zhou rebellion, according to the idea, took place with the approval of heaven, because heaven had removed supreme power from the Shang and bestowed it upon the Zhou.

Western Zhou

After his death, King Wu was succeeded by his son Cheng, but power remained in the hands of a regent, the Duke of Zhou. The Duke of Zhou defeated rebellions and established the Zhou Dynasty firmly in power at their capital of Fenghao on the Wei River (near modern-day Xi'an) in western China. The period in which the Zhou held undisputed power over China is known as the Western Zhou period. A number of important innovations took place in this period. The Zhou moved away from worship of Shangdi, the supreme god under the Shang, in favor of Tian (heaven). New advances in irrigation allowed more intensive farming, which in turn allowed the lands of China to sustain larger populations. Lands were farmed by peasants, who were controlled by the feudal system, the development of which was one of the most important innovations of this period.

After the Duke of Zhou stamped out local rebellions, he gave large holdings of land to nobles and generals who had proved loyal. These lands were similar to medieval fiefs in that they belonged to nobles, who in turn were under the authority of the king. This feudal system was known as the *fengjian* system, and allowed the Zhou to govern the huge expanse of China's territory by giving regional power to nobles who would rule their lands in the name of the king. The land would be passed down within the family of the nobles, and the nobles could grant control of parts of their lands to lesser nobles in exchange for service and loyalty.

When the Duke of Zhou stepped down as the adviser and regent of King Cheng, China was united and at peace, leading to years of prosperity. This strong and prosperous state only lasted for about seventy-five years. Slowly, over time, the central power of the Zhou monarchs weakened. The lords of the fiefs originally bestowed by the Zhou came to equal the kings in wealth and power. The old

bonds of loyalty weakened and the lords of the fiefs actively competed with the Zhou kings for power. These fiefs became largely independent, and known as individual states. In 711 BC, a rebellious noble, the Marquess of Shen, joined forces with invading barbarians, known as the Quanrong, to defeat the Zhou King You. Supposedly none of the nobles came to the king's defense. The last Zhou King was killed and the Zhou capital was sacked by the barbarians. This brought an end to the Western Zhou period.

Eastern Zhou: Spring and Autumn Period

With this disaster, the capital was moved east to Chengzhou, near modern-day Luoyang, and the Zhou abandoned the western regions. Thus, this period is known as the Eastern Zhou period. The new kings of the Zhou continued to lose power and their authority became limited to the area around the capital. They were still the nominal kings of China, but in reality the local nobles ruled their own lands as kings in all but name. China had split up into a patchwork of small states, with the Zhou king as ceremonial leader but having no real power. The Mandate of Heaven, which specified that there could only be one supreme leader of China, was widely accepted, so no one overthrew the Zhou Dynasty. However, the dynasty simply became irrelevant. In the meantime, many of the local nobles went to war with each other as they vied for power.

Though there are a total of 148 states mentioned in historical sources in this period, four states-Qi, Qin, Jin, and Chu-dominated China in the early Eastern Zhou period. They constantly changed alliances as they vied for control. China was nearly always at war. Despite political fragmentation, this was also a period of great intellectual development in China. The Spring and Autumn period, the first half of the Eastern Zhou period, is named after the *Spring and Autumn Annals*, an important Chinese history text which narrated events on a year by year basis. This marks the beginning of China's recorded history, and we can rely on written sources, instead of legend, from this time on. The Spring and Autumn period was also the time of the Hundred Schools of Thought-the golden age of Chinese philosophy. This was the period in which some of the most important Chinese philosophers lived, many of whom were patronized by the rulers of the small states that dominated China.

Perhaps foremost among these philosophers was Confucius. He looked back on the Western Zhou period, with its strong centralized state, as an ideal. He was pragmatic, and sought to reform the existing government, encouraging a system of mutual duty between superiors and inferiors. Confucius stressed tradition and believed that an individual should strive to be virtuous and good mannered and to fit into his place in society.

Another important philosopher in this period was Laozi, who founded Daoism (Taoism). It is uncertain if Laozi actually existed, but the philosophy attributed to him certainly developed during this time. Daoism advocated that the individual should follow the way (*dao*) of the universe and act in accordance with nature. Daoism stressed passivity and *wu wei*-that is, non- action. Daoism was strictly individualistic, as opposed to Confucianism, which advocated acting as society expected.

Although Confucianism and Daoism are the most enduring Chinese philosophies to this day, even more important in this early period was a lesser-known philosophy called Legalism, which held that humans are inherently bad and need to be kept in line by a strong state. According to Legalism, the state was everything, far more important than the individual. While Legalism held that laws should be clear and public, and that everyone should be subject to the law, it also contended that rulers had supreme power and must use secret techniques and tactics to remain in power. Legalism was generally in competition with Confucianism, which advocated a just and reciprocal relationship between the state and its subjects.

Another major competitor with Confucianism was the philosophy of Mohism, developed by Mozi during the Spring and Autumn period. Mohism advocated universal love—that is, deep concern for all people. It held that all were equal, and that power should be based not on ancestry or tradition, but on merit. Developing in a period of constant rivalry between states, Mohists were opposed to offensive warfare, believing that it was the cause of many of the contemporary problems in China, and many adherents of the philosophy traveled widely, offering their services to defend any state that was being attacked by another.

The Spring and Autumn Period is generally held to have come to an end when the state of Jin, one of the most powerful at the time, collapsed. The state broke up into three smaller states: Han, Wei, and Zhao. About the same time, the state of Yue (a new state) became powerful. Thus, with seven rival states—Han, Wei, Zhao, Yue, Chu, Qi, and Qin—China entered a period known as the Warring States period, as each state fought for complete control. In the middle of all this, the Zhou kings could only look on, powerless. The Zhou kings continued to hold the Mandate of Heaven, and thus acted as the sacred rulers of China, but by the Warring States period the rulers of the independent states had begun to use the title of king (*wang*).

Eastern Zhou: Warring States Period

The Warring States period gets its name from a history, called *Strategies of the Warring States*, written about the period during the later Han Dynasty. The seven major Chinese states were in constant competition in this period. Since none of the states wanted any one rival to become too powerful, if one state became very strong, the others would join forces against it, so no state could achieve dominance. This led to nearly 250 years of inconclusive warfare. In this period, warfare became larger and larger in scale. Expensive chariots became less useful, while the invention of the crossbow (which was cheap to make and required little training) meant that masses of expendable infantry became more desirable. As a result, peasants were conscripted into the military more often. This period also saw the widespread adoption of iron tools and weapons, which were significantly stronger than their bronze counterparts. Thus, the Warring States period is the time when China fully entered the Iron Age. The Warring States period also saw the further development of the philosophical movements that originated in the Hundred Schools of Thought of the Spring and Autumn period. Mencius further developed Confucian philosophy, expanding upon its doctrines.

Daoism, Mohism, Legalism and other philosophies that had their earliest origins in the Spring and Autumn period became more developed. It was also in this period that archaic writing gave way to a far more recognizable form of Chinese script.

Though the military rivalries and alliances in the Warring States period were complex and ever changing, over time the Qin state slowly emerged as the most powerful. Qin was in the western-most part of China, controlling the area where the old Western Zhou capital had been. In 249 BC, the Zhou line died out, leaving no more kings to hold the Mandate of Heaven. However, within less than thirty years of this event, the Qin state led by Ying Zheng (later known as Qin Shi Huang) would conquer all its rivals, and by 221 BC united China once more. With the Zhou gone, Ying Zheng claimed the Mandate of Heaven and created a new dynasty, the Qin Dynasty. Instead of taking on the title of king, however, he bestowed upon himself a far grander title- Emperor of China.

The Imperial Era of China

Though China was nominally ruled by the Zhou kings for centuries, in reality, from 711 BC to 221 BC, a period of nearly 500 years, China was divided between rival kingdoms ruled by various warlords. Though this period saw the birth of many important aspects of Chinese culture, such as philosophy, literature and scientific discoveries, it was also a very difficult time, as China struggled with disunity and constant fighting. The rise of the Qin Dynasty in 221 BC united China for the first time in centuries and began the imperial era of Chinese history. From this period, rulers of China called themselves *Huangdi*-emperors and ruled a much expanded and more centralized Chinese state. The Qin Dynasty hardly outlasted its first emperor, Qin Shi Huang, but the imperial system created by the Qin dynasty established the form in which China would be ruled for the next two millennia. The Qin Dynasty was followed by the Han Dynasty, which continued many of the Qin policies, while modifying some of the harsher aspects of the previous dynasty with Confucian ideals of government. Built on such an imperial model, the Han Dynasty ruled China for over four hundred years.

The Qin Dynasty

Emerging from the chaos of the Warring States period, the Qin (or Ch'in) Dynasty conquered its rivals and unified the country. The Qin dynasty was one of the shortest in all of Chinese history. It lasted only about fifteen years. But it was one of the most important dynasties, because it united China for the first time in centuries as a single state-in many ways.

Foundations of the Unification

The forces that allowed the Qin to grow from a small state to a power that dominated China had developed before the first Qin emperor was born. The state started out as a fief in the west bestowed by King Ping, the first of the Eastern Zhou kings, from the lands around the old Zhou capital in the west. As one of the powerful states of the time, Qin competed with its rivals during the Eastern Zhou period. But for centuries it was just one of several states, none of which could overpower the others. Qin was home to perhaps the strongest traditions of Legalism, however, which advocated the importance of the state at the expense of the individual. Rooted in Legalist philosophy, the Qin were

known for being ruthless and ignoring gentlemanly etiquette and proper battlefield protocol in order to win at all costs. Perhaps one of the most important figures in building the Qin state into a force capable of dominating China was the Legalist statesman Shang Yang. In the fourth century BC he became the adviser to the Qin king and from this position embarked on a number of reforms. As a Legalist, he believed that all people should be loyal foremost to the state, and enacted laws to force subjects of the kingdom to act in ways that helped the state. He forced them to marry early, have many children and produce certain quotas of food. He discouraged commerce in favor of agriculture. Most importantly, he stripped the nobility of power, and centralized authority in the king. Thus, the independent and disloyal nobility that had plagued the Zhou would not pose a problem. Ironically, Shang Yang was executed for suspicion of disloyalty to the state, the very crime he most ardently opposed. Nonetheless, his reforms were kept in place, and they meant that the Qin state was the most centralized and efficient of all the Chinese states. By 246 BC, when Ying Zheng ascended the throne, the state of Qin was the most powerful state in China and had already begun to conquer its neighbors. Under Ying Zheng, who was assisted by his cunning adviser Li Si, the remaining states of China would be rapidly subdued and integrated into the expanding Qin Empire.

The First Emperor of China

By 221 BC, Ying Zheng had completed his conquest of China. With the entire country under his rule, he claimed the Mandate of Heaven and ruled over all China. Instead of taking the traditional title of king (*wang*), Ying Zheng claimed a loftier title, *Huangdi*, which is usually translated as -Emperor. *Huangdi* was previously a title reserved for the ancient, semi-divine rulers of China from the legendary past, and the title had connotations of divinity, literally meaning -Holy Emperor. Ying Zheng was above a king and he is henceforth known by his new name-Qin Shi Huang, or First Qin Emperor.

With the firm Legalist roots of the Qin Dynasty, Qin Shi Huang presented himself as the unchallenged leader of China and ruled as a totalitarian autocrat. All schools of philosophy besides Legalism were suppressed. Qin Shi Huang's adviser, Li Si, advised the emperor to burn all books that were not beneficial to maintaining Qin power. Philosophical texts were destroyed, especially Confucian texts, as well as historical works that covered any history that was not about the Qin state. Later, Qin Shi Huang ordered scholars of non-Legalist philosophical schools to be buried alive, supposedly in revenge for being deceived by a pair of alchemists, but perhaps also to unite China under Legalist thought. Qin Shi Huang's burning of books and execution of philosophers marks the end of the Hundred Schools of Thought. The philosophy of Mohism was completely wiped out.

Qin Shi Huang instituted a number of grand building projects. After inconclusive warfare with the pastoralist nomad tribes that lived to the north of China, Qin Shi Huang had a large defensive wall built in the north. This wall served as the foundation from which, in later centuries, the Great Wall of China would eventually be built. Qin Shi Huang also ordered the construction of the Lingqu canal, a massive, man-made waterway that connected the Xiang and the Li Rivers and allowed the emperor to

more easily transport soldiers and supplies. Thousands of workers died in order to quickly create such building projects, but this was in line with Legalist philosophy, which held that the interest of the state was worth the lives of its subjects. With the guidance of Li Si, Qin Shi Huang set about standardizing weights and measures, creating a single currency, and expanding roads and other methods of travel and communication. A standardized system of writing was created for all of China, and the burning of books helped eliminate the old, outdated scripts. Everything in the kingdom was standardized, down to the approved size of a chariot's axle. Qin Shi Huang and Li Si also continued to weaken the nobility, to keep them from becoming too powerful, as had happened under the Zhou. In place of the nobility, they developed an organized bureaucracy, all under the authority of the emperor. The bureaucrats carried out the emperor's will, and they were rewarded with influence, but not land.

The Collapse of the Qin

The most obvious weakness of the Qin Empire centered on Qin Shi Huang, was that it was his authority and personality that kept China unified. He survived numerous assassination attempts but his death, and the disintegration of his empire was a major threat. Perhaps he worried about this, for he started to become obsessed with finding ways to prolong his life and achieve immortality. He employed alchemists and sorcerers and went on journeys with his court in search of a life-giving elixir. In the end, his desire to live forever is what killed him. He died ingesting a poisonous concoction in hopes that it would give him immortality.

Perhaps the greatest building project of Qin Shi Huang was the one built for his death. Before he died, he had created a massive tomb for himself on Mount Li, near modern-day Xi'an, and after he died and was buried there. The tomb was filled with thousands upon thousands of life-sized (or larger) terracotta soldiers, meant to guard the emperor in his afterlife. This terracotta army, which was armed with real weapons, had been long forgotten when it was rediscovered in the twentieth century. After Qin Shi Huang died in 210 BC, his death was initially kept secret by Li Si and Zhao Gao, the emperor's chief eunuch. They knew the empire would fragment on news of Qin Shi Huang's death. Qin Shi Huang's eldest son and heir apparent, Fusu, had been sent off to fight a campaign in the north, because he had argued with his father about executing scholars. Li Si and Zhao Gao knew that they could not control Fusu, so they quickly took steps to make Qin Shi Huang's younger son, Huhai, emperor. Fusu was killed, and Huhai was made the new emperor-called Qin Er Huang, the Second Qin Emperor- before anyone really knew what happened.

Li Si and Zhao Gao started fighting over power. Subsequently, Zhao Gao managed to get Li Si, along with his entire family, executed. He forced the new, young emperor to do as he said, but his orders ended up being cruel and inefficient. With people angry at Emperor Qin Er Huang's mismanagement, and claiming that Fusu should have been emperor, a number of rebellions broke out. The states of Chu and Han, which had been conquered by Qin Shi Huang, declared themselves independent once more, and sought to overthrow the Qin Dynasty. Although initially in denial, Qin Er Huang soon had

to face the fact that the empire was slipping from his hands. He tried to blame Zhao Gao and remove him but Zhao Gao had the loyalty of the soldiers and forced Qin Er Huang to kill himself.

The new emperor, Ziyang, finally executed Zhao Gao, but by then the rebellions had grown too powerful. Ziyang tried to negotiate with the rebels by declaring himself one king among many but the rebels had no reason to agree to this. The armies of Chu attacked and defeated Ziyang and he was killed. Within a year, the Qin capital of Xianyang was destroyed, and the Qin Dynasty was no more.

Despite Qin Shi Huang's boast that his dynasty would last 10,000 generations, it survived only fifteen years. But that fifteen-year period was of immense importance to Chinese history. It saw a standardization and unification of Chinese society that enabled the Chinese to think of themselves as members of a single kingdom. It also proved that one dynasty could effectively rule all of China. Though the fall of the Qin Dynasty plunged the state into civil war, it was not long before others learned from these lessons and unified China under a more enduring dynasty. The Han Dynasty, which soon replaced the Qin, would rule for over four hundred years and usher in the golden age of ancient China.

The Han Dynasty

The short-lived Qin Dynasty was succeeded by one of the most important and long-lasting dynasties in all of Chinese history: the Han Dynasty. The Han ruled China from 206 BC– 220 AD, roughly the same time as the Roman Empire ruled the entire Mediterranean world, and like the Romans, the Han Dynasty ushered in a period of peace and prosperity during which progress and cultural development took place.

The Birth of a New Dynasty

The Qin Dynasty did not last four years after the death of its founder, Qin Shi Huang. After the first emperor's death, intrigue at the court and incompetent leadership gave rise to rebellion, which led to the collapse of the dynasty, followed by more rebellion throughout China. One of the rebels was Liu Bang. A man from a peasant background, he achieved a minor provincial rank and was escorting prisoners to work on the tomb of Qin Shi Huang when some of the prisoners escaped. Knowing that his failure to prevent the escapes meant he would be executed by the merciless Qin rulers, Liu Bang became a fugitive and leader of one of the many bands of rebels fighting the Qin. Through luck and victories over Qin soldiers, Liu Bang eventually acquired control over lands. He defeated the last Qin king in battle, and became king of the old state of Han.

Though eighteen separate kingdoms had declared their independence from the Qin, after the fall of the dynasty the states of Han and Chu were the two most powerful and all the other states formed coalitions around one or the other. In the Chu-Han contention, a four-year civil war prevailed in China. The state of Han, under the leadership of Liu Bang, fought against Chu for control of China and in the end Han emerged victorious. Liu Bang reunified China by 202 BC, and was declared *Huangdi*, the new emperor of China and founded the Han Dynasty. From that point on he was known as Emperor Gaozu. Though he was born a mere peasant, Gaozu established one of the great empires

in history. Unlike Qin Shi Huang's dynasty, which did not last long after him, Gaozu's dynasty lived on for over four centuries and saw the height of ancient Chinese power and culture.

The Western Han

The Han Dynasty, under Emperor Gaozu and his successors, established themselves in a new capital, Chang'an, in western China. They largely continued the policies of the Qin, and did not differ significantly from the Qin in how they governed China. Like the Qin, they continued to expand the bureaucracy and encouraged a centralized state. There were, however, minor differences between the two dynasties, and it was perhaps these differences that allowed the Han to rule so much longer than the Qin. First, the Han were more interested in the lives of the Chinese masses, in the wellbeing of their subjects. The Han promoted Confucianism, which had been persecuted by the Qin, in order to promote harmony among the classes.

However, the Han faced many challenges. After his victory over Chu, Emperor Gaozu rewarded his prominent supporters with grants of land to be ruled as fiefs. This started the same danger that brought down the Zhou Dynasty. Powerful local lords controlling their own petty kingdoms. Gaozu soon replaced these lords with members of his family, in hopes that his family would be loyal and govern these far flung territories in the name of the emperor. Still, these local kings began minting their own coins, making their own laws, levying their own taxes, maintaining their own armies and soon they saw little need to listen to the emperors in Chang'an. Several rebellions broke out against the Han dynasty, the most serious being the Rebellion of the Seven States. Nonetheless, the Han emperors were able to put down these rebellions; they defeated the most prominent warrior-landlords, and they gradually reduced the power of the small kingdoms.

Besides these internal threats, another major danger to the Han was the external threat of the barbarians. The most dangerous barbarians in this period were the Xiongnu (Hsiung-nu), or Huns, a nomadic-pastoralist warrior people from the Eurasian steppe. The Han Dynasty was able to face these threats and survive because of a strong centralized state. The state was funded primarily by a poll tax (a set tax on every individual) and land taxes (a portion of the harvest). This meant that the prosperity of the agricultural estates determined the prosperity of the Han government. It was in the Han period that the Chinese system of class hierarchy became well developed. This hierarchy, called the *-four occupations*, gave aristocratic scholars (called *shi*) the highest status, followed by farmers (who were precious to the state, both because they produced food and paid the land tax), followed by craftsmen and artisans, and finally merchants at the bottom of society (because, according to the thinking of the time, they did not produce anything, they merely sold what others produced).

Perhaps the most important early Han emperor was Emperor Wu of Han (141–87 BC), the seventh emperor of the Han Dynasty. During his fifty-four year reign, the Han Dynasty reached its height. The Xiongnu were driven back and the borders were pushed farther than ever before, roughly doubling the size of the empire. As the Chinese pushed farther west, trade contacts were established with Persia, India, and the Roman Empire. At home, Emperor Wu attempted to weaken the authority

of the regional aristocracy by giving more authority to handpicked governors drawn from the *shi* class.

Emperor Wu centered the state on Confucian teachings. Although the first few Han emperors promoted Confucianism along with Daoism and Legalism, Emperor Wu promoted Confucianism exclusively, abandoning state support for other philosophies. The Confucian ideals that order and harmony were the result of good government and that social harmony depended on each person accepting his social position helped legitimize the state and make people more willing to accept state power over them. At the same time, these ideals encouraged the state to act justly toward its people. From the time of Emperor Wu on, the Han Dynasty accepted Confucianism as the state philosophy.

In another important move, Emperor Wu created civil-service examinations, in which potential government officials were tested on their knowledge of the Confucian classics. The exams were designed to ensure that bureaucrats would be chosen for their intelligence, instead of their birth or connections. While the civil-service exams would not be the most important factor in selecting officials until after the Han Dynasty, Emperor Wu's program was an important first step. In addition, by making the Confucian classics the subject of the exams, Emperor Wu ensured that these texts would remain the most important Chinese texts for centuries to come.

Finally, Emperor Wu reformed the Chinese economy. Although merchants had the lowest status in classical China, some had grown exceedingly rich by selling salt and iron, which were produced by peasants who would otherwise farm and thus be subject to the land tax. Emperor Wu nationalized the salt and iron industries, but avoided unrest and inefficiency by employing the former businessmen as government officials in charge of the industries. Emperor Wu also promoted officials who were experts in agriculture, and initiated reforms that made farming more efficient.

The Eastern Han

In the meanwhile some important political incidents happened in China. Rebellion and political chaos briefly brought down the Han Dynasty from 9 to 25 AD. Wang Mang, who ruled as regent to the young Emperor, overthrew the child emperor and claimed that the Han Dynasty had lost the divine support of the Mandate of Heaven. He proclaimed his own new dynasty, the Xin Dynasty. Wang Mang attempted a number of radical reforms, such as introducing new forms of currency, outlawing slavery and a return to old models of land distribution. A series of major floods on the Yellow River, displaced thousands of peasants, which caused massive unrest. A rebel army called the Chimei (—Red Eyebrows) developed out of the peasantry and they defeated Wang Mang's armies, and stormed the capital of Chang'an. They killed Wang Mang and put their own puppet ruler on the throne.

Meanwhile, in the east a member of the Han royal family, Liu Xiu, later known as Emperor Guangwu (r. 25-57 AD), was declared emperor and ruled from Luoyang. He defeated the Chimei rebels, and then went on to defeat rival warlords, thus reunifying China under the Han Dynasty. Since

Emperor Guangwu and his successors kept the capital at Luoyang, his reign is considered the beginning of the Eastern Han period. Under Emperor Guangwu, the empire was strengthened and reunified. Areas that had fallen away from Chinese control (such as Korea and Vietnam) were reconquered and the Xiongnu Confederation, which had grown strong during China's period of instability, was pacified. Emperor Guangwu was succeeded by Emperor Ming and then Emperor Zhang. The Rule of Ming and Zhang, as it is called, is remembered for being an era of prosperity. Taxes were reduced, Confucian ideals were encouraged, and the emperors appointed able administrators. It was also in this period that paper-one of China's most important inventions-emerged. Though early forms of paper had existed for centuries, around 100 AD the Chinese eunuch Cai Lun perfected the papermaking process. With paper, Chinese texts could circulate on a durable and relatively inexpensive medium, instead of on clay, silk, or bamboo, as before. This allowed Chinese texts to become more readily available and encouraged learning. Another important invention of this time was porcelain, which also had existed in previous forms for centuries but was perfected in the Eastern Han period, allowing for durable, high quality, and attractive ceramic ware.

The Fall of the Han

After Emperor Zhang's death in 88 AD, corrupt officials increasingly gained control of the state, while family feuds tore the dynasty apart. The emperors became more and more dependent on their officials. Eunuchs became increasingly powerful at court and Chinese histories have asserted that their thirst for money and power, and their willingness to sow dissention, fatally weakened the Han. At the same time, as the power of the emperor weakened, military commanders acted more independently and tried to secure power for themselves. Often the eunuchs and the generals competed for influence and position.

In 184 AD, two major Daoist rebellions-the Yellow Turban Rebellion and the Five Pecks of Rice Rebellion-broke out. In order to fight these rebellions and in an attempt to avoid further rebellions, the Emperor gave much wider powers to military commanders, giving them control over their own provinces. These military commanders ended up using their provinces and their armies for their own ends in a long power struggle.

In 189 AD, at the capital, Luoyang, the general He Jin became embroiled in a power struggle with the court eunuchs for control of the emperor. He Jin plotted to kill all the eunuchs, but the eunuchs found out and killed him. In response, He Jin's soldiers massacred all of the court eunuchs. With a power vacuum and political chaos in the capital, the general Dong Zhou marched on the city, deposed the reigning emperor and raised his own puppet emperor, Emperor Xian. Xian would be the last emperor of the Han Dynasty.

Dong Zhou ruled the state through the young Emperor Xian, but eventually he became too arrogant in his use of power. A number of other generals, ruling from their provinces, rebelled. Soon, they harbored plans of ruling their provinces as their own kingdoms, free from the authority of Dong Zhou or the emperor. Dong Zhou was eventually assassinated, and Emperor Xian fell under the control of

another warlord, Cao Cao. Cao Cao ruled over Emperor

Xian just as Dong Zhou had, and Cao Cao wanted to reunite the Han Empire by defeating the rebellious warlords. He came close to succeeding over the course of a twelve-year war of reconquest. In the end, however, Cao Cao was defeated in 208 AD at the Battle of Red Cliffs, an important turning point in history. With this defeat, all hope that the Han Empire would be reunited disappeared. When Cao Cao died in 220 AD, Emperor Xian abdicated the throne, claiming that he had lost the Mandate of Heaven. He gave the throne to Cao Cao's son, Cao Pi. With this act, the Han Dynasty was no more. Since many did not accept Cao Pi as the new emperor, China splintered into three kingdoms ruled by warlords. This marks the beginning of the Three Kingdoms period of Chinese history.

When the Han Dynasty collapsed in 220 AD, no one was powerful enough to reunify China under a single emperor. The result was the era of the Three Kingdoms. These three kingdoms (Wei, Shu, and Wu) battled for control in a long series of wars. This was one of the bloodiest periods of Chinese history, but it also has long been romanticized and remembered as a time of chivalry and honor. China was briefly reunified by the Jin Dynasty from 265 to 420 AD, but early in the fourth century, nomadic tribes overwhelmed the northern borders. In 311 AD, the capital, Luoyang, was captured by the invaders, and little more than a hundred years later the dynasty was no more. China was once again divided into a patchwork of independent kingdoms. It would take more than a century for another dynasty to reunite China under imperial rule but by that time China had passed from the ancient to the medieval era.

The Chinese Polity

The social and political order of ancient China was one of the most stable and most highly organised among the old world civilisations. It would not be wrong to say that seldom have so many people over such a wide geographical area been bound together by a single political structure and set of social and cultural norms, values and traditions, for such a length of time. The capacity of this order to withstand the shocks of civil war, natural calamities and alien invasion and to accommodate significant social and economic development and growth of population, was truly remarkable. Because of its unusual stability, continuity and sophistication, no student of world history and civilization can afford to be ignorant of the political structure and social system of traditional China, or of the ideological and spiritual outlook on which these were based. In the subsequent paragraphs, we will only discuss the main features of the Imperial State of ancient China.

Polity in ancient China has been characterised in many different ways. It has been called a form of "*oriental despotism*", or a *bureaucratic society*. While none of these characterisations by themselves is adequate, in the course of reading this section you will find that they all refer to various key features of China's traditional polity that distinguish it most clearly from other river valley civilisations.

The State

Perhaps the most remarkable product of Chinese civilization was the Imperial State. With a tradition of more than 2000 years, and lasting in basically unchanged form for nearly 1000 years. Its iron frame held China together as a single political unit through most of its recorded history down to modern times. Presiding over it was the Emperor, the –Son of Heaven whose authority and prestige was acknowledged by peoples even outside China’s administrative boundaries. However its most distinctive feature was rule through a highly structured bureaucracy or elite corps of officials, the so-called *mandarins*, who were in the main recruited through a system of examinations based on scholarship.

This state came into being in a recognisable form in 221 B.C., when the ruler of Qin, one of the many feudal states competing for supremacy at that time, unified China and proclaimed himself the First Emperor. For the first time, the entire realm was divided into standard administrative units and ruled directly by the Emperor through his officials. Although this system underwent substantial modifications under later dynasties and even collapsed altogether for a period of three and a half centuries after the fall of the Han dynasty (around 220 A.D.), it remained the norm and the basic pattern of governing in ancient China.

The Scope of the Chinese Empire

One of the basic tensions in the Chinese Empire was the contradiction between its universalist self-image and the actual territorial limits of its administrative power. Being the pre- eminent power in East Asia and separated by natural barriers such as formidable mountains, desert wasteland and seas from any other power comparable in size and strength, it was natural that the Chinese considered their Empire to be inclusive of –all under Heaven (*Tian Xia*). The Emperor of China was seen not just as the ruler of those provinces directly governed by him, but as a benevolent authority presiding over peoples far and near. This image was reinforced by the theory and practice of the so-called *tribute system*, in which envoys of a wide variety of non- Chinese states arrived more or less regularly at the Imperial court to pay their respects to the Emperor bearing gifts that were considered a form of tribute.

The net result was that the boundary between what constituted China and what China was outside China was never as clearly demarcated as it would have been, say, in Europe, or as it is in modern times. For the most part, the pattern was as follows: the Emperor directly ruled over a core area of about 18 provinces through a bureaucracy. Regions around the periphery continued to govern themselves according to their own systems, and were by and large left to themselves as long as they did not pose a threat to or openly challenge the authority of the Chinese Emperor. In certain periods under a particularly ambitious Emperor, the political and military power of the Chinese Empire was extended into these regions to the west and north. At other times, it was the rulers of these regions who took advantage of conditions of crisis or decay in China proper and who invaded the Chinese Empire either fully or in part.

The Emperor

The basic function and responsibility of the Emperor in China was to maintain order-both the political-social order and also the natural order of things. In the first sense, the Emperor was the supreme civil and military head. All officials were directly appointed by him and were directly accountable to him. In all periods, severe punishments could be and were often imposed on officials who fell out of favour with the Emperor. He was expected to personally go through the staggering number of documents and proposals put before him on all matters connected with government, and to take decisions on those. He was the supreme lawmaker and the final court of appeal in all cases. He also commanded the armed forces. The Emperors made sure that military power was highly centralised and no regional warlords were allowed to emerge. He was also, in a significant sense, the cultural head of his people, and great importance was attached to his role as the patron of learning and art.

For these reasons, the political system in China has been characterised as a despotism or autocracy. There were, however, some restraints on the arbitrariness of an Emperor. In the first place, because of the great veneration paid to ancestors, the Emperor could not be seen as acting contrary to the precedent set by the Emperors before him, particularly those of his own ruling house. Secondly, there was a tradition of high officials criticising an Emperor who strayed from the accepted norms, and the Emperors were expected to respect their words or at least let them speak without punishment. There was even a specific group of officials known as the censors whose job was to criticise the Emperor when they thought it necessary.

The cosmological role ascribed to the Emperor also put some restraints on his freedom of action. The Emperor was considered to be the intermediary between Heaven and Earth. Not only was he held responsible for maintaining order among men, but he was also held responsible for maintaining the natural order of things. Unusual natural disturbances, such as major earthquakes, floods, the appearance of comets, and so on, were interpreted as omens that all was not well on earth and that the Emperor was failing in his duties. Very often, natural disasters went hand in hand with social and political unrest, resulting in widespread belief that the Emperor had lost the

-Mandate given to him by Heaven to rule and that his subjects were justified in rebelling against him. The Emperor may have been the -Son of Heaven!; but unlike in some other ancient societies, the special relationship with Heaven was not enjoyed by the *individual* who was the Emperor, but was the prerogative of the institution-in other words, whoever occupied the imperial throne was considered to be the Son of Heaven and to enjoy Heaven's Mandate. All Emperors and ruling houses were thus aware of the impermanence of their position, and the theory of the *Mandate of Heaven* was often skilfully manipulated by their advisors and officials to get an Emperor to adopt a particular course of action or to change his ways.

The Bureaucracy

Throughout its long history, China was subjected to as much warfare, internal rebellion, foreign invasions, and changes of the ruling house, as any other society. In spite of these unrest there was an unusual stability of its unified imperial state and of the institutions that were part of it. And the factor behind this stability was the tradition of rule by an established, centrally- directed bureaucracy, that survived even the most violent upheavals.

Over the course of a long period, the bureaucracy in China acquired its own distinctive method and style of functioning, its own elaborate set of rules governing recruitment, promotion, transfer and even appearance and behaviour. Individually, a bureaucrat or official could be treated most arbitrarily by his Emperor and even be put to death. But collectively, the imperial bureaucracy survived even the most tyrannical Emperors, and no Emperor could rule without their expertise in managing the affairs of a realm as vast and complex as China.

The bureaucrats were indeed –experts, but they were experts in the management of men and human affairs in general and by and large were not technocrats with specialised knowledge of certain subjects. They presided over the key posts in the administration. The civil administration in China was divided into the central and the provincial administration. At the Centre, the highest officials were those who directly dealt with the Emperor—the officials of the Grand Secretariat, and later, of the Grand Council. The routine business of state was divided between the Six Boards, dealing with civil appointments, revenue, rites, war, punishments and public works. The provinces were headed by governors or governors-general, below whom were the officials in charge of circuits, prefectures and districts. Newly appointed officials usually began by presiding over the administration of a district, and worked their way up the provincial administration or else were appointed to work in one of the Six Boards in the capital.

By far the most distinctive feature of the Chinese bureaucracy was its method of recruitment. The majority of officials were recruited through a series of gruelling examinations that tested the candidates' mastery of Confucian scholarship. Examinations were open to all males, irrespective of their background, and were conducted with absolute impartiality, with the identity of the candidate unknown to the examiner. Except for years of acute political crisis, they were held regularly once every three years. Preparation for the exams often took twenty years of a man's life, but success at the examinations conferred such immense social prestige on the candidate, besides making him eligible for office, that the entire educated class considered success at the examinations their highest aspiration. Since only exceptionally able and well- educated persons succeeded in passing the examinations, the government of imperial China has sometimes been called a meritocracy, in which only the most talented and competent persons were given the opportunity to govern. However, it must be remembered that the examinations tested only the mastery of the Confucian classics and the literary style of the candidates.

Just as the Emperor needed his officials in order to rule, the officialdom needed the Emperor to set in motion and preside over the examination system that legitimised their position. However, tension

between the Emperor and his bureaucrats was a recurrent theme in China's history. Emperors constantly sought to control the bureaucrats and prevent them from becoming too powerful. Various regulations, such as that which forbade an official from serving in his own district or another which prevented him from remaining at one post for more than three years, were clearly designed to curb the powers of the bureaucrats. Apart from this, Emperors tended to resort to various means, such as the use of spies or eunuchs, to bypass regular official channels. Overall, however, the two institutions of Emperor and bureaucracy worked closely together, and it is this that accounts for the stability and longevity of the imperial Chinese state. The prestige of the bureaucracy also helped to establish the tradition of *civilian rule* as being preferable to military rule in China. At the same time, bureaucratic rule was inherently conservative. While officials were trained to be careful in discharging their duties, innovation was by and large discouraged, and most officials tended to literally -rule by the book. This worked well much of the time, but had grave implications for the bureaucracy's ability to function when faced with crisis or challenges of an unprecedented nature.

Chinese society

Social order and harmony were highly valued in China, and each social group knew what was expected of them, and how to behave with other groups. In this section, we will explore ancient China's social structure, and the roles and daily life of key groups in Chinese society.

The Social Hierarchy in China

Ancient China's society was dominated by loyalty to the family unit. The group was more important than the individual. Like most ancient societies, China had a strict social hierarchy. At the top were the wealthy and privileged - the emperor and imperial family. Next came the scholars, eunuchs and officials (shi). This social class arose in order to provide the large number of educated officials needed to govern an empire the size of China. In spite of their wealth, merchants were not next in line in the social hierarchy. That place was held by peasants and farmers (nong), who were considered more socially important, as they provided the food for all in the community. Next in line were the artisans and craftsmen (gong) who created items for general use and beauty. The merchants (shang), whose only role was to make money, were last on the list.

The emperors

The rulers at the top of ancient China's social structure were powerful family groups, as in ancient Egypt. A period ruled by the same family is known as a **dynasty**, and China was ruled by a series of dynasties for almost 4000 years. From 221 bc, when China was united under Qin Shi Huang Di, China's rulers were emperors. The personality of the emperor, his intelligence and energy (or lack of it) had a major influence on the age. Often, a dynasty ended because the ruler was corrupt, cruel or weak. That ruler had a problem if there was flood, famine or defeat in war. The people would see this as a sign from heaven that the emperor (the 'son of heaven') no longer had divine permission to rule. This idea is known as the **mandate of heaven**. At these times, it was considered natural that the people should rebel, and that a new dynasty would be installed.

Scholars and eunuchs

The civil scholars were the administrators who ran the day-to-day government of the empire. Scholars had to pass rigorous examinations (open to men only) and were schooled in the teachings of Confucius. During some of the later Chinese dynasties, power struggles developed in the court of the emperor between the civil scholars and the eunuchs. Eunuchs were originally part of the emperor's palace staff to guard his many wives. Boys were brought up specifically to be eunuchs. As children, they had their testicles removed to ensure that they would not pose a sexual threat to the emperor's wives. Living in the palace, they became close to the imperial family and some eunuchs gained great political influence. They became the political rivals of the civil scholars, and both competed for influence in the emperor's decisions. Hostility from scholars also came from their resentment of the eunuchs' influence without having gone through the rigorous examinations. Eunuchs generally came from poorer, uneducated backgrounds.

Records were kept by civil scholars, who also wrote the histories of ancient China. Generally, the result was praise for other civil scholars, while eunuchs were often depicted as evil and dishonest, and were blamed for periods of bad government. Many of the surviving historical accounts dealing with the eunuchs are biased. This is another example of why historians must always read their sources carefully and look for potential bias in historical reports.

Peasant farmers

Peasant farmers in ancient China were poor, but their role and work ethic were highly respected. They worked hard to provide the country's people with food. Planting and harvesting rice, in particular, is back-breaking work. By contrast, wealthier merchants were seen to contribute very little to society. Land in ancient China was owned by the emperor or nobles. Farmers could live on the land in return for working it. They also had to pay heavy taxes (in the form of produce, such as rice), and provide other services such as serving in the army or labouring on building projects and in salt mines.

Chinese civilization first arose on the basis of settled agricultural communities in the North China plain. The bulk of Chinese society consisted of peasants. From early times these tillers of the soil were not serfs but had the status of freeholders who were obliged to pay taxes directly to the state. Over time, however, the burdens of paying taxes, dealing with greedy government agents and living from diminishing plots of land caused increasing numbers of peasants to become rent-paying tenants on the lands of big landowners. As tenants, they continued to be intensely exploited, with rents in some areas amounting to half of the harvest.

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and provide other services such as serving in the army or labouring on building projects and in salt mines.

Artisans and craftsmen

At various times in China's long history, its arts and crafts led the world, particularly in the Song and Ming dynasties. Craftsmen were not always rich but they were generally held in higher regard than merchants and traders. They were respected for their skills and the quality of their products. From the time of the Han Dynasty, Chinese craftsmen produced porcelain. Chinese porcelain became so well-known that in many English-speaking countries, porcelain plates and cups have always been referred to as 'china'. Chinese craftsmen also produced silk and invented and produced a range of other important manufactured goods, including, paper and the printing press.

Merchants

The merchant class included traders, animal breeders and moneylenders. They were a wealthy group, but were considered the lowest social class in ancient China. People believed that they did not contribute to the whole society but worked only for their own gain. Some merchants would buy land to farm to improve their social status.

Role of Women in Ancient China

Ancient China was very much a male-dominated society. The family name and family line could only be carried on by sons. A woman and her family would always hope for a 'good' pregnancy where the newborn would be a boy. During the Han Dynasty, a well-educated woman named Ban Zhao wrote a text called *Lessons for Women*. The lessons were based on the idea that women should always obey the

men, and their own wishes would take second place to those of men. They included this set of rules:

- As young girls, women were first meant to obey their fathers.
- As grown women, they were then meant to obey their husbands.
- As widows in later life women were meant to obey their sons.
- In ancient China, it was felt that the best age for a girl to marry was 16. Once a couple was married, there were seven acceptable reasons why a man could divorce his wife
- disobedience – a woman had to obey her husband and her parents-in-law
- infertility – a woman was obliged to have children, especially boys
- adultery – a woman had to be faithful to her husband
- jealousy – a woman could not act in a jealous manner
- illness – if a woman had an incurable illness, her husband could find a new wife
- theft – if she stole anything, her husband could demand that she leave him

Women had more respect in families where their work was important to the survival and prosperity of the family group. In peasant families, women earned respect as workers, although they were still subordinate to men. In richer families, women were seen more as servants and even playthings for men. The status of women in wealthy families is evident in the introduction of foot binding for

women from the time of the Song Dynasty.

Marriage in Ancient China

A wedding was arranged by parents in an effort to advance themselves socially, politically, or financially. In traditional Chinese society a girl married into her husband's family and gave up all contact with her own parents. A bride was subservient to everyone in the new household but especially to her husband's mother, for whom she worked without rest. Wife and mother-in-law were jealous rivals for the affection of the husband and son. Publicly a husband and wife were indifferent toward each other, never openly acknowledging the existence of the other. In private the wife would have to struggle to win her husband's respect, and only through her grown sons did she have any real hope of security. No wonder she then exhibited little affection toward her son's bride, and the cycle repeated itself.

Everyday Life in Ancient China

The daily experiences of people in ancient China depended on whether they were male or female, wealthy or poor, and whether they had the opportunity to receive an education. It also depended on where they lived, considering the range of climates and geographical features across China; and when they lived, considering the long span of China's ancient history. However, some generalisations can be made about everyday life in Chinese society.

1. Family and Clan

The basic unit of Chinese society was the family or household rather than the individual. This was so even in government records and tax registers. The Chinese family was patriarchal, with a strict hierarchy of relationships. Filial piety, or obedience to one's parents, was one of the cardinal social virtues. This was reinforced by the practice of venerating one's ancestors, a very important tradition in Chinese society.

The average size of the family in China was not big, particularly among the peasantry. But the ideal of the large joint family, presided over by the family patriarch and with all the sons and their families living under one roof, was cherished and implemented where feasible particularly among the upper class. Even where all members did not live together, kinship links were zealously maintained. This accounted for the typically Chinese phenomenon of large clans, consisting of all those who could trace their kinship with each other through the male line. Clans had certain definite functions in the society. Clan members jointly observed rituals, administered common property such as burial plots and ancestral halls, looked after the welfare of members in need, sponsored the education of talented younger males, settled disputes among themselves, maintained genealogies, imparted moral-ethical training and education to younger members and enforced discipline. Clans often transcended class lines, containing both wealthier and poorer members, but the existence of clans nevertheless did not mitigate the class divisions in the society as a whole. In theory, the State approved of large and well-knit families. Families were where people were taught the qualities of obedience, loyalty and respect for hierarchy – all qualities which the imperial government liked to see among its subjects. Families

could also be expected to keep in check deviant tendencies among its members, and thus helped the State to maintain order. However, in practice, the State was also wary of clans emerging as rival centres of power, and kept a close watch on the activities and behaviour of the more powerful clans.

2.3.10.4.2. Lifestyles of the Chinese

Although many emperors lived in constant fear of traitors, they enjoyed a pampered life of great luxury. Food was plentiful, as were priceless treasures and beautiful embroidered or painted silk garments. It was not unusual for emperors to have several wives and concubines.

Nobles and their families also led very privileged lives. Their palaces were likely to be two storeys or more, and have bathrooms and beds. The price paid for such wealth and comfort was total obedience to the emperor. Leisure time might be spent drinking tea or rice wine while playing board games or being entertained by dancers and musicians. Music, thought to have special powers, was a regular part of palace life. Instruments included bronze bells, chimes, harps, flutes, drums and a stringed instrument called a zither.

The poor were mostly the peasant farmers. They wore simple clothing that was practical for farm work, made out of hemp or cotton in summer and wool in winter. Farmers typically lived in single-storey mud-brick huts with straw roofs. Usually there was only one room and sanitation was poor. Like the farmers of ancient Egypt, they used a device similar to a shaduf to raise water from rivers and canals. Very few could afford an ox or horse to help them plough the fields, so much of the work had to be done by hand.

Growing up in ancient China

In farming villages, girls and boys would work – planting and harvesting in the fields, feeding animals and looking after younger brothers and sisters. Girls in poorer households would spend their childhood learning to cook, weave cloth and help around the house. Boys who could be spared from the fields would be educated in village schools or in a town. They would learn to read and write, compose essays and poetry, and spend many hours memorising the teachings of Confucius. This was their preparation for the rigorous examinations to become a scholar, with a new life as a government official if they passed. Poorer boys could also increase their social status by becoming a eunuch in the emperor's court. Boys from wealthy families were educated at home by a tutor.

Although education was valued in ancient China, for much of its history the Chinese did not think it was important to educate women. In earlier dynasties, girls were not typically educated. But later, in the 6th century A.D, Buddhist temples established schools for boys and girls. Here they learned to read and write, and learn about Buddhist ideas. Much later, during the Ming Dynasty, many women in wealthy households did learn to read and write.

Food and diet

In southern China, rice was the staple crop. It was eaten as a food and it was made into wine. In the cooler, drier north, millet (a type of grain) and sorghum (a cereal grass) were harvested. Wheat took much longer to become part of the Chinese diet. It was not until about 1500 years ago that it became

a popular food, second only to rice.

Meat was costly and only a common dish for the wealthy. For the less wealthy, meat was eaten only on special occasions. Normally, the daily diet was simple: grains such as wheat, millet or rice mixed with soy beans, vegetables and sometimes fish. Chopsticks were used as an eating utensil in ancient China, possibly since Stone Age times. They were made from bamboo, ivory or bones. In wealthy households, they were made of precious metals.

Fresh water was stored in communal wells, and cooking was done in the open. Because timber was in short supply in many parts of China, food was typically chopped into smaller pieces, as they are in stir fries today, which needed less heat to cook quickly and therefore less fuel.

The diet of people in ancient China was also influenced by their beliefs. For example, some forms of Buddhism forbade eating meat so their protein came from foods such as soy bean curd (tofu). Eating habits were also linked with Daoist beliefs about the balance in nature, the yin and yang. Foods were categorised as ‘heating’ or ‘cooling’, and were eaten and combined in ways that were thought to preserve a balance in the body. Tea has been drunk in China for over 2000 years. It was first drunk for medicinal qualities, and become more of a social tradition from the time of the Tang Dynasty.

Martial arts

Martial arts or kung fu can be traced back to the Xia Dynasty, and was originally a self-defence and combat technique practised by the military. ‘Kung fu’ can be translated as ‘skill achieved through hard work’. Confucius considered martial arts to be one of the ideal practices, and his influence spread the practice of martial arts outside of the military.

Different schools and styles of martial arts developed over time, influenced by other aspects of Chinese culture such as religious beliefs. Martial arts took in the Daoist belief in striving for a balance of yin and yang. Kung fu masters of martial arts strive to keep opposites in balance-fast and slow, sharp and gentle, loud and soft- and learn to use the chi (the energy force of the universe).

One of the most famous styles of kung fu originated from a travelling Buddhist monk from India. Legend has it that he reached the Shaolin temple (a Buddhist monastery) soon after it was established in the 5th century ad. He taught martial arts to the monks to improve their health, and the temple and its warrior monks have been famous throughout China ever since. In later dynasties, weapons and fighting techniques were modified so that kung fu became a common activity, as a sport or exercise. Various forms are now practised in China and around the world.

The Religious Tradition

The prevalence of religion in ancient China is one of the most debated subjects among historians, sociologists and anthropologists. On the one hand, by far the most influential and dominant belief system of the Chinese was Confucianism, which was totally unconcerned about questions such as the existence of God or an afterlife, and which had a pronounced this-worldly orientation. China also lacked a tradition of a strong, centrally organised religion or priesthood. On the other hand, no one can deny the Chinese fascination with the supernatural, or the proliferation of gods, goddesses and

spirits who were venerated with great devotion by Chinese from all walks of life in countless temples and shrines in every corner of the land. The Chinese had both a profound moral tradition, as well as a rich tradition of religious worship, but their most important moral and ethical beliefs did not *derive* from an organised religion.

In this section, we will discuss some of the early religion prevailed during most ancient period. This sections also discuss Confucianism, Taoism and Buddhism in China and their influence in the society and culture of ancient China.

Early Chinese Religion

During the Bronze Age (2205-256 BC) in China, the Chinese worshipped many gods and spirits.

One of the most important deities during the Shang Dynasty was Ti. Ti means "Deity Above," or "the Lord on High." He was believed to punish people who offended him and reward those who pleased him.

Ti was in charge of all the gods and spirits in the pantheon. The Chinese had spirit gods that represented things found in nature, from specific mountains and streams to the stars in the sky. There were also two gods of the earth, "the God of the Soil," and "Sovereign Earth." They were subject to Ti.

Ti had a royal court in heaven made up of all of the worthy ancestors who had died. These ancestors served Ti and helped him govern. The Chinese worshipped their ancestors, who acted as intermediaries between the gods and humanity. They believed that after death, they would experience a celestial court life very much like the court life they lived on earth. Some of the kings of the first dynasties wanted to bring their servants and officials with them to the afterlife to ensure that their quality of life would be the same. Accordingly, servants and officials were often sacrificed at the funerals of their lords. For example, the Count Wu, who lived during the Ch'in Dynasty (256-206 BC), ordered 66 people sacrificed at his funeral.

Only the noble Chinese who died could become objects of worship. This meant that only the nobility had ancestors to whom they could pray, while the dead of the poor were simply forgotten. However, the Chinese saw worship not as an individual exercise, but one performed for the good of the entire society. For this reason, the poor also enjoyed the benefits of the ancestors' intercession.

The ancient Chinese also had people on earth who acted as mediums for communication between the divine and human beings. Among these intermediaries were priests, who did a number of jobs, from reading prayers to conducting sacrifices or funerals. Priests were highly specialized. Some knew the specific ceremonies performed for hunters before leaving on an expedition. Other priests knew ceremonies for sacrificing to a certain god.

Another type of intermediary in ancient Chinese religion was the augur. An augur asked questions of the gods on behalf of humans, and then used various techniques of divination, such as oracle bones, to find the answers. The augur would ask a question about the future, such as how the harvest would

turn out or who was going to win a battle. He would then punch holes in certain places of a tortoise shell or the shoulder-bone from an ox. Then the bone was held over a fire for a short time, until the bone cracked from the heat. Ink was rubbed on the bone to make the cracks more evident, and allow the augur to read the pattern and discern the god's answer.

During the early stages of their religion, the Chinese developed the concept of the Tao or nature.

All things found in nature contained two conflicting forces, the yin and the yang. Objects that contained more yin, a female force, were characteristically passive, dark, and cold. To the Chinese, the moon had more yin than yang. Objects that contained more yang, the male force, were hot and full of light like the sun. The yin and the yang were concepts that were carried over into the ideologies of Taoism and Confucianism.

Confucianism

The term Confucianism refers to the teachings of the philosopher Confucius who lived in the 6th century BC. Living in an age of great turbulence and the breakdown of social and political institutions, Confucius' primary concern was to find a way out of the chaos and to restore order and moral values. The centre-piece of his philosophy was the notion that this could be achieved if truly moral men were to emerge. Such men were not born with the right moral qualities, however, but actively cultivated these through education and the observance of rites, propriety and proper relationships. The cardinal relationships in society were considered to be those between parents and child, sovereign and subject, husband and wife, elder brother and younger brother—all relationships between superiors and inferiors – and between friends. Confucius stressed the supreme importance of certain qualities, such as benevolence, filial piety, loyalty, sincerity, and so on. If the right men were in charge of all affairs, Confucius believed, then peace and harmony and virtue would be restored in the society.

Even during his lifetime, Confucius gathered around him a number of devoted disciples. But it is with the adoption of the teachings of Confucius and his school as the official orthodoxy several centuries later, from the time of the Han dynasty (203 B.C. to 220 A.D.), that Confucianism became an all-pervasive influence. It moulded the behaviour and thinking of Chinese and reinforced their key institutions in various significant ways. In the first place, it lent a positive, or pro-active, element to the Chinese outlook. The solution to man's problems lay not in escape from earthly life or the denial of desires, but in actively cultivating the right qualities and rectifying things on this earth. Secondly, It placed great emphasis on education and on public service. The upright scholar-official was the model of the Confucian gentleman. Thirdly, it stressed the need for order and performance of one's social and public duties. This made it a most suitable philosophy to reinforce the imperial State. Fourthly, it accepted hierarchy in the social order and preached the need for obedience and submission to authority, equating the relationship of a sovereign to his subject with that of parent to child. Finally, by stressing the notion of rule based on -virtue or moral authority rather than

military power or rules and regulations, it worked to temper or soften the harsher aspects of imperial power, and reinforced the tradition of civilian rule.

Religious Traditions Associated with Confucianism

Confucius himself was hardly concerned with notions of God or an afterlife. Nevertheless, Confucianism as it grew developed a cosmology and metaphysics, some elements of which were derived from ancient pre-Confucian religious traditions, and some of which developed later, partly as a response to the challenge posed by Buddhism and Taoism. The practice of *ancestor worship*, observed by Chinese from all walks of life was an ancient Confucian tradition. The memory of ancestors was kept alive in numerous tangible ways,

through various forms of veneration. Apart from this was the notion of *Heaven* and of *Fate*. It was believed that Heaven determined destiny on all matters ranging from affairs of State to the most personal aspects of an individual's life. However, because Heaven, Earth and Man were considered to part of a single trilogy, the actions of men were considered capable of influencing the course imposed on them by Heaven. Trying to predict or understand what Heaven had in store for men, or the practice of *divination*, was another feature of the Chinese religious tradition. The concept of *Yin* and *Yang*, or the unity of negative and positive elements, and of the *Five Elements*, were also part of the Confucian belief system.

Taoism

The concept of Tao existed in China since the early stages of its religious development. Tao is literally translated as "the path" or "the way." The term has no conclusive definition, but refers to a wide force in nature and is considered the source of all things. Taoism developed around the same time as Confucianism. According to legends, the most consequential Taoist writing was composed by Lao-tzu. Lao-tzu was born c. 600 BC and later became a librarian for the royal court in Loyang. He was wise enough to see that the Chou Dynasty was nearing its downfall, so he packed up his things and headed west. As he approached the boundary of Chinese territory, a border guard stopped Lao-Tzu and asked him to write down his wisdoms. Lao-Tzu obliged him by writing a book. Then the sage left China for good. This book, which scholars possess today, contains profound sayings written in a simple style.

Taoism in its purist form calls the follower to pursue Tao. This means that he or she should not try to alter nature or force it to do something it was not meant to do. Instead, a follower must remain inactive and avoid making plans. For example, actions considered contrary to Tao included building a house or damming a river. It was also against Tao to deny the good nature of humanity. This meant that the artificial rules made by Confucianism were unnecessary. Most Taoists were members of the educated elite. However, some of the less educated classes learned about Taoism and altered it somewhat. Their beliefs included more magic and alchemy than the purest form of Taoism.

Undoubtedly, the great variety of gods and goddesses and spirits in the Chinese pantheon and the rich tradition of religious worship, owed its origins not to Confucianism but to the influence of Taoism.

Taoism began roughly in the same period that Confucius lived, as a simple mystical philosophy put forward by its founder, Lao Zi. In contrast with Confucianism, Taoism was not concerned with the affairs of society or the State or moral values, but with the exact opposite-with Nature, with spontaneity and a whimsical attitude towards life. However, as it evolved, Taoism took on a variety of elements, including a pantheon of gods and a group of priests which helped it to spread among the masses, though it never became an organised religion on the lines of Buddhism. It exerted a profound influence on Chinese poetry and painting, with their lyrical quality and recurrent theme of man in Nature. Among the scholar official class, it offered a kind of philosophical retreat from the rigidity as well as the unending cares and responsibilities of social and public life. It was often said that a scholar-official was a Confucian when in office and a Taoist when out of office.

Buddhism

Buddhism was absorbed gradually into China after its first introduction from India around the 1st century A.D. Its influence peaked in the 5th to 8th centuries A.D., when it enjoyed the patronage of Chinese rulers, and the Buddhist *sangha* became very powerful. Both Buddhism and Taoism gained ground precisely in those periods when the imperial system was in severe crisis and when Confucianism, as the ideology of the imperial system, suffered from a loss of credibility. In particular, Mahayana Buddhism, with its profound philosophy about the nature of suffering in this world, and its uplifting concept of compassion and salvation for mankind through sacrifice, filled a philosophical and spiritual need among Chinese in this period in a way that Confucianism could not. In the centuries of political chaos and mass dislocation that followed the breakup of the Han dynasty, the Buddhist *sangha* that extended beyond the confines of the family and the State provided a vital form of social integration.

Some General Characteristics of Religion in China

So far as important features of religion in ancient China is concerned following are noteworthy. Religion in ancient China was very eclectic. In other words, as it was practised by the people, the different religious traditions were not considered mutually exclusive. An individual could follow Confucianism, Taoism and later Buddhism without feeling the need to identify himself with one only. This permitted different traditions to remain in the background, but not disappear completely, when another tradition was on the rise. Full-fledged religious wars among groups of people were almost non-existent.

The State in general tolerated different religious faiths, and persecuted them only when it was feared that they were becoming rival centres of power or were undermining established social norms. Rarely were persecutions unleashed on the grounds of doctrinal heresy alone. Thus, the 3 or 4 major instances of persecution of Buddhism usually resulted in the disbanding of the monasteries and their lands, and the return of monks and nuns to lay life, rather than in wholesale extermination or reconversion. The moral dimension of Chinese deities was not strong. Rather, gods and goddesses were worshipped because of their believed power to help or harm an individual or group.

Science and Technology of Ancient China

Education was available only to a privileged few in ancient China. However, the Qin and Han periods still saw dramatic developments in science and technology. Many technological and scientific inventions and developments were brought about in ancient China. These technological inventions were way before the whole world started using them. So far as science and technologies in ancient period of China under discussion is concerned, the Chinese achieved some remarkable steps in medicine, astronomy, navigation and metallurgical advancement and many more. This section will discuss these advancements in brief in the subsequent paragraphs.

Metallurgy

Like other river valley civilisation, ancient Chinese also have knowledge regarding casting of Bronze and Iron. While bronze was the most advanced mode of technology throughout the late Shang and early Zhou, sometime during the sixth century B.C., China developed iron technology. The spread of iron technology improved agricultural techniques and yields, thus making greater populations possible, and also improved technologies of war. It is possible to trace many of the differences between Chinese social patterns of the Spring and Autumn period and those of the Warring States era to the entrance of China into the Iron Age. For example, the abandonment of chariot warfare and the mobilization of huge infantry forces grew in part from the availability of iron weaponry, and in fact this type of transition in warfare is linked to the advent of the Iron Age in societies other than China. Ancient China developed both wrought (hammered) and cast iron processes. From an early date, perhaps about 500 B.C., the bellows-driven smelter became common. Large forges equipped with a line of bellows could drive temperatures extremely high, allowing advances in iron technology which placed China from one to two millennia in advance of European technologies, which employed relatively brittle wrought iron until a much later date. Sophisticated experimentation resulted in an ability to forge steel, which was used in the highest quality weaponry, such as famous swords from the states of Han and Chu, the colorful names of which appear periodically in contemporary accounts.

Iron mine technology was also very advanced. Likely sites were identified by land configurations and iron-related surface minerals. Perpendicular shafts were driven up to 150 feet down, with horizontal shafts, supported by wood-beam frameworks, dug at various levels. Systems of ropes and pulleys allowed the ore to be raised to the surface, and other debris was lifted to higher, exhausted shafts, where it was deposited as fill to stabilize the mine and to facilitate proper air flow. During the Warring States period, virtually every state possessed domestic mines and ironworks, where weaponry and agricultural tools, such as spades, adzes, hoes, and so forth, were manufactured.

Astronomy

Early Chinese astronomers learned that the year was slightly longer than 365 days. Han dynasty astronomers further refined these calculations. In 28 B.C. astronomers in China first observed sunspots; Europeans did not make similar observations until the A.D. 1600s. Sometime before A.D.

100 Chinese astronomers built instruments to track the movements of planets.

Medical Sciences

Chinese scholars, especially the Daoists, were very interested in chemistry. They discovered substances for dyeing cloth and glazing pottery. They also developed medicines based on herbs and minerals. Perhaps the most widely known Chinese contribution to medicine is the therapy known as acupuncture. Its development stemmed from the Daoist belief that good health depends on the movement of life-force energy through the body. Illness or pain results when something interferes with that movement. In acupuncture the doctor inserts needles into certain points of the body to enable the life-force energy to move properly. Some modern researchers believe that these needle insertion points may have less electrical resistance than other parts of the body and thus may affect the nervous system. Medicine in China was a characteristic mixture of empirical wisdom and popular superstition. It had its beginnings before recorded history, and produced great physicians long before Hippocrates. Already under the Chous the state held yearly examinations for admission to medical practice, and fixed the salaries of the successful applicants according to their showing in the tests. In the fourth century before Christ a Chinese governor ordered a careful dissection and anatomical study of forty beheaded criminals; but the results were lost in theoretical discussion, and dissection stopped. Chang Chung-ning, in the second century, wrote treatises on dietetics and fevers, which remained standard texts for a thousand years. In the third century Hua-Tu wrote a volume on surgery, and made operations popular by inventing a wine which produced a general anaesthesia; it is one of the stupidities of history that the formula for mixing this drink has been lost. About 300 A.D. Wang Shu-ho wrote a celebrated treatise on the pulse." Towards the beginning of the sixth century T'ao Hung-ching composed an extensive description of the 730 drugs used in Chinese medicine; and a hundred years later Ch'ao Yuan-fang wrote a classic on the diseases of women and children. In ancient China soap was a rare luxury, but lice and vermin were easily secured. The simpler Chinese learned to itch and scratch with Confucian equanimity. Medical science made no ascertainable progress from Shih Huangti to the Dowager. European medicine invaded China as an annex to Christianity; but the sick natives, until our own time, confined their use of it to surgery and for the rest preferred their own physicians and their ancient herbs.

Magnetic Compass

About 2000 years ago, the Chinese noted that a magnetic rock (a lodestone) always pointed the same way (north–south) when suspended or floated. It was then discovered that by rubbing fine metal pointers on a lodestone, its magnetic properties were transferred to the pointers. It is unknown when this knowledge was used to create the first magnetic compass. However, it is thought that the concept had been brought to Europe by the 10th century A.D, through Arab traders and the Silk Road. Until then, consulting the stars was the only way of working out directions at sea.

As mentioned above, compass was one of the most important technological developments in ancient

China, as it promoted and aided exploration that was initiated by Chinese rulers. The development of compass made China the first imperial power in the world. Chinese empire indeed was termed as an imperial power till the end of monarchy in China and the royal place was also known as Imperial Palace. Origins of manufacturing compass can be traced to 4th century BC, China. The book titled *Book of the Devil Valley Master* aptly describes the property of lodestone, the lodestone makes iron come or rather it attracts iron. Lodestone was the first material that was used to make the compass in China.

The first properly developed compass that was made from lodestone probably appeared during Song dynasty. Records survived from the dynasty dated 1040-44 AD, describes the device made from lodestone as a direction finder. This device or rather the first compass made from lodestone, was shaped like a small fish and was kept on a piece of wood, floating in a bowl of water. Official records from the Song dynasty describe it as a "fish-shaped stone pointing to south". Chinese explorers used this compass for many centuries, facilitating trade with far off lands bringing prosperity to Chinese merchants. The compass was also widely used in land explorations. Chinese writers describe it as an orientation in obscurity of night.

The compass is of much greater antiquity. If we may believe Chinese historians, it was invented by the Duke of Chou in the reign of the Emperor Cheng Wang (1115-1078 B.C.) to guide certain foreign ambassadors back to their home lands; the Duke, we are told, presented the embassy with five chariots each equipped with a "south-pointing needle. Very probably the magnetic properties of the lodestone were known to ancient China, but the use of it was confined to orienting temples. The magnetic needle was described in the *Sung-shu*, an historical work of the fifth century A.D., and was attributed by the author to the astronomer Chang Heng (139 A.D.), who, however, had only rediscovered what China had known before. The oldest mention of the needle as useful for mariners occurs in a work of the early twelfth century, which ascribes this use of it to foreign probably Arab navigators plying between Sumatra and Canton.

Paper Making and Printing

The exact era or dynasty, during which the Chinese invented technology of paper manufacturing, is uncertain. But the technology certainly led to many more advancements as it facilitated scholars, philosophers and writers of Chinese civilization. Paper that was invented in ancient China was not only used as a medium of writing, but creative Chinese innovators also used it as a raw material for manufacturing bags as well as paper currency. History of paper making can be traced to Han dynasty, which ruled from 202 BC to 220 AD, when court official Cai Lun set to the task of making paper. He deployed mulberry fibres, waste material such as old rags and hemp waste. He also made use of fishing nets to bind the materials together. Some archaeological findings however, suggest that paper in ancient China may have been invented during the 8th century BC. Initially this crude form of paper was not used for writing. It was deployed as a means of wrapping and padding. By the end of 3rd century AD, it had become a popular medium of writing, and by 6th century it was even used as

toilet papers. Paper was first produced in about 150 B.C. The earliest paper was made from fishing nets, hemp, old rags, and tree bark. By the middle of the A.D. 700s, the use of paper had spread throughout Central Asia and the Middle East, where it replaced papyrus as the main writing material. The invention of printing is regarded as one of the most important inventions, due to the fact that it made books cheaper. Cheaper books ensured an educated society. Many dynasties, courtiers and scholars from ancient China contributed to the development of printing press. Printing technology started evolving from sometime around 868 BC, with the printing of the first printed book *the Diamond Sutra*. The book was printed with the help of the wood block printing. It had become a very advanced technology by the end of the Song dynasty. Writer Shen Kuo, who was also a courtier of Songs, promoted the use of printing for the spread of knowledge. Bi Sheng, who was an artisan, invented the movable ceramic printing. Inventors like Hua Sui also attempted to invent the metal castings and rollers for movable printing.

Gunpowder

Although a late discovery and not coming under the period under discussion, one of the few destructive inventions of ancient Chinese civilization was that of gunpowder. Discovery of gunpowder led to invention of firearms and revolutionized battlefields in Asian Continent. Chinese alchemists, who were searching for an elixir of life, accidentally discovered the explosive property of gunpowder, sometime around 9th century AD. By the end of the 10th century Asian powers had introduced grenades, crude bombs and firearms on battlefields. Use of cannons and bigger fire arms also became prevalent. Among the technologies of ancient China, gunpowder and firearms is regarded as most useful, popular and also most destructive.

Besides the above mentioned inventions and discoveries the ancient Chinese also to their credit have some other scientific innovation such as the first seismograph (to detect earthquakes), made by the astronomer Zhang Heng, (ad 78–139)and was named as *Houfeng Didong Yi*, who is also said to have been the first to use a grid system on maps. The Chinese innovate the knowledge of silk weaving, manufactured wooden wheel barrow, created rudder on their lighter boats, manufactured mechanical clocks six centuries earlier than in Europe, produced matches, umbrellas and kites.

Thus, the Chinese invented a seismograph that registered even the faintest of earthquakes. They also invented paper, which was first produced and used in China in or about 150 B.C. and had spread throughout Central Asia and the Middle East, where it replaced papyrus as the main writing material. The Chinese also invented the sundial, the water clock, and the process of printing. Many more inventors and scientists have played significant roles in development of many different technologies of ancient China. The Chinese have displayed their technological capabilities in many other disciplines like manufacture of arms, agriculture, textile industry, civil engineering, medicine and even archaeology. Many of these technologies have been lost with advancement of time.

Estimates of the Chinese Civilisation

The intellectual discovery of China was one of the achievements of the Enlightenment. As Diderot

wrote of the Chinese, -these peoples are superior to all other Asiatics in antiquity, art, intellect, wisdom, policy, and in their taste for philosophy. And Voltaire said -The body of this empire has existed four thousand years, without having undergone any sensible alteration in its laws, customs, language, or even in its fashions of apparel. The organization of this empire is in truth the best that the world has ever seen." This respect of scholars has survived closer acquaintance and in some contemporary observers it has reached the pitch of humble admiration. Will Durant while introducing the Chinese civilisation in his monumental work on the Oriental Heritage remarked that -like most other peoples of the earth the Chinese consider themselves the most polished and civilized of all nations. Perhaps they are right, despite their political corruption and chaos, their backward science and sweated industry, their odorous cities and offal-strewn fields, their floods and famines, their apathy and cruelty, their poverty and superstition, their reckless breeding and suicidal wars, their slaughters and ignominious defeats. For behind this dark surface that now appears to the alien eye is one of the oldest and richest of living civilizations: a tradition of poetry reaching as far back as 1700 B.C.; a long record of philosophy idealistic and yet practical, profound and yet intelligible; a mastery of ceramics and painting unequalled in their kind; an easy perfection, rivalled only by the Japanese, in all the minor arts; the most effective morality to be found among the peoples of any time; a social organization that has held together more human beings, and has endured through more centuries, than any other known to history; a form of government which, until the Revolution destroyed it, was almost the ideal of philosophers; a society that was civilized when Greece was inhabited by barbarians, that saw the rise and fall of Babylonia and Assyria, Persia and Judea, Athens and Rome, Venice and Spain, and may yet survive when those Balkans called Europe have reverted to darkness and savagery.¶

Thus, while estimating the isolated civilisation of China we can say that most perfect type of humanity as a normal phenomenon has been elaborated in ancient China and China has created the highest universal culture of being hitherto known and the greatness of Chinese civilisation visible in all circumstances.

Summary

- China was a vast country of great diversity, and it is not easy to make generalisations about its traditions and institutions. These were by no means stagnant, and evolved considerably over the course of her long history. Nevertheless, one cannot help being struck by the remarkable continuity and coherence of its traditions and institutions, and the way in which they interacted with and reinforced each other.
- An agrarian society composed of closely knit families and lineages formed the basis of one of the most sophisticated and powerful empires of the pre-modern world. The social structure and political power were closely intertwined. The Confucian ethical system pervaded both the family and the imperial system, while other great religious traditions

lent richness and diversity to the cultural and spiritual life. This entire complex civilization lasted right through to the early 20th century when it was finally brought down by a combination of internal decay and external pressures.

- Chinese civilization developed around major rivers, especially the Yellow River. Like in Mesopotamia, Egypt, and the Indus River valley, the people of the Neolithic period who lived there domesticated plants and animals.
- By 2000 BC, cities developed in China, and the various cultures of the area began to merge into a larger, more unified Chinese culture.
- We know a great deal about prehistoric China through Chinese mythology, but we cannot tell how much of this is true and how much is fiction.
- The first two Chinese dynasties were the Xia (Hsia) and the Shang. At one point these were both believed to be purely mythological, but discoveries have revealed that the Shang really did exist. It is still unknown if the Xia were real.
- While the Shang were once believed to be mythological, it is now accepted that they were a historical dynasty who ruled China from 1600 to 1046 BC. The most important sources of information about them are archaeology and questions written on oracle bones. Oracle bones tend to ask questions about warfare, harvests, and childbearing.
- The earliest Chinese writing we have comes from the Shang dynasty, though it was already in an advanced form by this period, suggesting that it had been developing for a long time before then. Even most Shang writing, which would have been recorded on bamboo strips and silk, has been lost.
- Shang cities were incredibly large and show significant social stratification. Rich tombs of the elite have been found, and they include human sacrifices.
- Shang religion was centered on ancestor worship and veneration of the Supreme Being, called Shangdi.
- Shang technology, especially bronze weapons and the use of horses and chariots, gave the Shang a military edge over their enemies.
- The Shang dynasty was overthrown around 1046 BC by the Zhou, who replaced them as rulers of China.
- The Zhou Dynasty overthrew the Shang Dynasty, and developed the Mandate of Heaven. This justified their deposition of the Shang because it held that although there could be only one ruler of China, if such a ruler became corrupt he would be overthrown.
- Under the Zhou, the *fengjian* system developed, in which nobles were given land to rule in a feudalistic manner, governing their own fiefs under the authority of the king. As the power of the Zhou kings weakened, the nobles who ruled their own fiefs became increasingly independent, as these fiefs turned into small states.

- In 711 BC, a rebellion by a noble combined with a barbarian invasion overthrew the Zhou king. Though the Zhou Dynasty survived, it moved its capital eastward. This was the end of the Western Zhou period, and the beginning of the Eastern Zhou period, when the Zhou kings became little more than powerless figureheads.
- The first part of the Eastern Zhou period was the Spring and Autumn period. This period saw warfare between the small Chinese states, but also the blossoming of Chinese philosophy in the Hundred Schools of Thought.
- Some of the most important philosophies to develop in the Eastern Zhou period were Confucianism, Mohism, Daoism, and Legalism.
- The second part of the Eastern Zhou period was the Warring States period, which saw intense warfare between the seven surviving Chinese states. In 221 BC, the Qin emerged victorious, defeating the other states and unifying China once more.
- The state of Qin was rooted in Legalist philosophy, and the reforms of the Legalist statesman Shang Yang, including encouragement of agriculture and a weakening of the nobility, helped make Qin the most powerful state at the end of the Warring States period. Under Ying Zheng and his adviser Li Si, the Qin state conquered the other Chinese states. Ying Zheng declared himself emperor (*Huangdi*) and changed his name to Qin Shi Huang. This marks the beginning of the Qin Dynasty.
- Qin Shi Huang, with the help of Li Si, centralized the state, imposed standard weights and measures, standard writing, and improved travel and communication. They created a loyal bureaucracy. However, Qin Shi Huang's rule was autocratic, and he had books burned and scholars killed in an attempt to impose Legalist thought.
- After the death of Qin Shi Huang, the Qin Dynasty collapsed, lasting only fifteen years. Nonetheless, its unification of China served as an example, and China was soon to be reunified by the Han.
- The Han Dynasty was founded by Liu Bang, who became known as Emperor Gaozu after he defeated the Chu in a struggle for control of China.
- The Han had to deal with disloyal aristocrats and nomadic invaders, but a strong centralized state aided them in weathering these challenges.
- The Han continued many Qin policies, such as a strong bureaucracy and a centralized state, but the Han were more concerned for their subjects, and Emperor Wu's adoption of Confucianism as the state ideology helped create bonds between the people and the government.
- Under Emperor Wu, China reached its farthest territorial extent up to that point, and his reforms helped the empire thrive.
- Later, civil unrest and a brief usurpation by Wang Mang caused the Han to move their

capital from Chang'an to Luoyang. This marks the start of the Eastern Han period.

- The Eastern Han period was one of prosperity and progress, during which important innovations were made, such as in paper and porcelain production. Nonetheless, by the second century AD, the Han began to decline.
- By the end of the second century AD, weak emperors under the control of eunuchs and powerful independent warlords fractured the empire. The warlord Cao Cao attempted to reunify China under the Han, but he was defeated in 208 AD at the Battle of Red Cliffs. This marks the end of the Han Dynasty and the beginning of the Three Kingdoms period.

Exercises

1. How the bureaucracy in China was unique? What role did it play in running the state?
2. How would you describe the social hierarchy of classical China?
3. Describe the historical origins, central ideas, and spread of major religious and philosophical traditions of Confucianism in ancient China.
4. Compare and Contrast Confucianism and Daoism.
5. What was the impact of the Warring States period?
6. What was the great advantage of the Chinese written language?
7. How did the Zhou Dynasty justify their overthrow of the Shang?
8. What is the significance of Oracle Bones?
9. Describe ancestor worship's importance during the Shang period.\
10. Write short notes on
 - a. Spread of Buddhism in China
 - b. Family in China

Unit-IV

Ancient Greece

Objective

In this chapter we intend providing you an insight into the early Greek civilisations. The various phases of cultures flourished in Greek speaking landmass in or around the Mediterranean and their contribution to the human history will be dealt here. This civilisation is also known as the classical civilisation. By the end of this chapter you would be able to:

- assess the role of geography for shaping the early Greek civilisation.
 - know about the major phases of Greek civilisations, such as those of Minoan, the Mycenaean, the Dark Age and the Classical period of Greek history.
 - have an idea on the social, political, economic and cultural system of all the phases of Greek civilisations.
- regarding development of Athenian democracy and subsequent political history of Greece.
 - Learn the philosophical development in Greece and to assess the contribution of Greek to the mankind.

Introduction

In ancient times, Greece was not a united country. It was a collection of separate lands where Greek-speaking people lived. By 3000 B.C., the Minoans lived on the large Greek island of Crete. The Minoans created an elegant civilization that had great power in the Mediterranean world. At the same time, people from the plains along the Black Sea and Anatolia migrated and settled in mainland Greece. Greece was unique in that it was the centre of a great civilization but did not develop into an empire or even a territorially large political state. The historical experience of Greece therefore needs to be examined from the point of view of its distinctiveness.

Circa 500 BC marks the beginning of the classical age of Greece, the most glorious phase of ancient Greek civilization. The classical age lasted from c. 500 BC to the Macedonian conquest of the Greek states in 338 BC. The classical age represented the culmination of a long historical process during which the foundations of Greek civilization were laid. By about 2000 BC the large island of Crete in Greece had emerged as the centre of the first Bronze Age civilization in Europe. This was the Minoan civilization which flourished between 2000 and 1400 BC.

In this chapter first we will discuss the geographical spread of the Greek Civilization. This would be followed by a chronological development of Greek civilization in two major sections i.e. i) Early Greek Civilization and ii) Archaic and Classical Period. The former has three main ages the Minoan Civilization, the Mycenaean Civilization and the Dark Age. The latter has been discussed together in one section. In this section we have discuss specific developments and features of whole period. The most important feature of the period is conflict of landed aristocracy with peasants, and transition to democracy. As a whole the chapter will

deals with the famous Athenian democracy, the glorious Greek culture and society. In end a brief account of the development of philosophical thought in Greece would be provided.

Geographical Features

Before we proceed to inspect the evolution of Greek civilization it would be useful to outline the geographical features of Greece. It should be noted that when we speak of ancient Greece we are referring to an area that was much larger than the present-day state of Greece. The Greek world in antiquity encompassed western Anatolia, Thrace, the islands of the Aegean Sea, Crete, Cyprus, mainland Greece, southern Italy and Sicily.

Ancient Greece consisted mainly of a mountainous peninsula jutting out into the Mediterranean Sea. It also included about 2,000 islands in the Aegean and Ionian seas. Lands on the eastern edge of the Aegean were also part of ancient Greece. The region's physical geography directly shaped Greek traditions and customs.

The sea shaped Greek civilization just as rivers shaped the ancient civilizations of Egypt, the Fertile Crescent, India, and China. In one sense, the Greeks did not live *on* a land but *around* a sea. Greeks rarely had to travel more than 85 miles to reach the coastline. The Aegean Sea, the Ionian Sea, and the neighboring Black Sea were important transportation routes for the Greek people. These seaways linked most parts of Greece. As the Greeks became skilled sailors, sea travel connected Greece with other societies. Sea travel and trade were also important because Greece lacked natural resources, such as timber, precious metals, and usable farmland. The Aegean Sea was the geographical nucleus of the ancient Greek world. In the Aegean Sea itself there are a large number of islands of varying sizes. Off the west coast of Anatolia are some large islands such as Lemnos, Lesbos, Chios, Samos and Rhodes. Then there is a group of islands concentrated in the southern Aegean. The islands of this group are collectively called the Cyclades. The large rectangular island of Crete is situated south of the Peloponnese and the Cyclades. It may be mentioned here that Greek settlers had also colonized some areas of southern Italy and Sicily. These settlers are collectively referred to as Western Greeks. Rugged mountains covered about three-fourths of ancient Greece. The mountain chains ran mainly from northwest to southeast along the Balkan Peninsula. Mountains divided the land into a number of different regions. This significantly influenced Greek political life. Instead of a single government, the Greeks developed small, independent communities within each little valley and its surrounding mountains. Most Greeks gave their loyalty to these local communities. In ancient times, the uneven terrain also made land transportation difficult. Of the few roads that existed, most were little more than dirt paths. It often took travelers several days to complete a journey that might take a few hours today. Much of the land itself was stony, and only a small part of it was arable, or suitable for farming. Tiny but fertile valleys covered about one-fourth of Greece. The small streams that watered these valleys were not suitable for large-scale irrigation projects. With so little fertile farmland or fresh water for irrigation, Greece was never able to support a large population. Historians estimate that no more than a few million people lived in ancient Greece at any given time. Even this small

population could not expect the land to support a life of luxury. A desire for more living space, grassland for raising livestock, and adequate farmland may have been factors that motivated the Greeks to seek new sites for colonies.

Climate of Greece was the third important environmental influence on Greek civilization. Greece has a varied climate, with temperatures averaging 48 degrees Fahrenheit in the winter and 80 degrees Fahrenheit in the summer. In ancient times, these moderate temperatures supported an outdoor life for many Greek citizens. Men spent much of their leisure time at outdoor public events. They met often to discuss public issues, exchange news, and take an active part in civic life.

The early Greek Civilizations

As mentioned above the Bronze Age Greek Civilizations would be discussed in three parts the Minoan Civilization, Mycenaean Civilization and the Dark Age.

The Minoan Civilization

In the chronology of ancient Greece the Minoan Civilization can be considered as the first Bronze Age civilization of the region. The civilization emerged towards the end of third millennium BC and flourished till around 1400 BC. The civilization came to light in the early 20th century through the efforts of Sir Arthur Evans who excavated the ruins of this civilisation. This was named after the legendary king Minos of the Crete mythology. The ruins are available in a number of towns the most prominent being Knossos, Phaistos and Mallia. It seems that palaces were the most prominent structures in these centres. Besides being centres of political authority the palaces were also centres of economic activity.

We know of the Minoans only through their ruins. Splendid as they are, with their remarkable architectural logic, their hypnotic art, and the richness of cultural artifacts, they spoke a language we don't understand and the Minoans had developed writing. The script remains undeciphered. It has been named Linear 'A'. It seems to have been used for trade and exchange. So the voices of the Minoans, their stories, their history as they understood it, are lost to us. They built magnificent palace centers at Knossos, Phaistos, and Kato Zakros; these palaces seem to have dominated Cretan society. We have no idea what language they spoke, but they certainly spoke a non- Hellenic language and probably spoke a non-Indo- European language.

All archaeological evidence suggests that the Cretan states of the first half of the second millennium BC were bureaucratic monarchies. While the government was dominated by priests and while the monarch seemed to have some religious functions, the principle role of the monarch seemed to be that of "chief entrepreneur," of the Cretan state. In order to facilitate trade, the Cretans and their Aegean relatives developed the most advanced navy that had ever been seen up until then. While scholars earlier believed that Crete must have been a "thalosso-crazy," that is, a "sea power," that view has been seriously challenged. The Cretans probably did not develop a military and navy, as did the Egyptians, but concentrated solely on trade and mercantilism. They did build what looks like warships, but it seems that these warships were most likely mercantile ships with the capability of

defense against pirates.

Their trade was extensive. The Egyptians were highly familiar with the Cretans, who even appear in Egyptian art. Cretan artifacts turn up all over Asia Minor, and they seem to have been involved in trade with the tribal clans living on the Greek mainland. Sheep rearing and wool production were main produce of rural economy. Wheat, grapes and olives were main agricultural products. The goods were brought from rural areas to the cities for redistribution and trade. It seems that the Minoans had trading links with Egypt, Anatolia, the Lebanese Coast, Cyprus and Aegean through the sea routes.

The Cretans seem to be the only people in the ancient world that would construct multi- room buildings for a large part of society including even the poorest people. The Cretans were the first to build a plumbing system in their buildings (a technology that was forgotten when Cretan society collapsed). And Cretan society seems to be the first "leisure" society in existence, in which a large part of human activity focused on leisure activities, such as sports. The most popular sports were boxing and bull-jumping. Women actively participated in both of these sports. The immense concentration of wealth in such a small population led to an explosion of visual arts, as well. Unlike the bulk of the ancient world, the Minoans developed a visual culture that seems to have been solely oriented around visual pleasure, rather than visual utility, political, religious, or otherwise.

The concentration of wealth produced another singular phenomenon in the ancient world: social equality. In general, the move to urbanization is a traumatic move. Society ceases to be organized around kinship lines and begins to be organized around "class," that is, economic function. This always means social inequality, as the more "professional" classes (usually bureaucrats) enjoy more privileges and wealth. In Crete, however, the wealth seems to have been spread pretty liberally. In the excavated city of Gournia, we can discern easily the "poor" parts of town; even there, however, people are living in four, five, and six room houses. So life was pretty good for just about everyone. In addition, there seems to have been no inequality along gender lines, although we cannot fully construct the gender relations in ancient Crete. The architecture of the palaces and cities have one more singularity. Unlike any other major cities or palaces, the palaces and towns of the Cretans seem to have no defensive works whatsoever throughout much of their history.

Women also seem to have participated in every occupation and trade available to men. The rapid growth of industry on Crete included skilled craftswomen and entrepreneurs, and the large, top-heavy bureaucracy and priesthood seems to have been equally staffed with women. In fact, the priesthood was dominated by women. Although the palace kings were male, the society itself does not seem to have been patriarchal. Evidence from Cretan-derived settlements on Asia Minor suggests that Cretan society was matrilineal, that is, kinship descent was reckoned through the mother. We live in a patrilineal society; we spell out our descent on our father's side—that's why we take our father's last name and not our mother's last name. While we can't be sure that Cretan society was matrilineal, it is a compelling conclusion since the religion was goddess- oriented.

The downfall of the Cretans was a slow and painful process as near as we can tell. After five centuries of prosperity, the palace centers were destroyed by an earthquake in 1400 BC. The cataclysm may have been more serious. Natural calamities, triggered by a major volcanic eruption in the southern Aegean, might have caused its sudden collapse. The eruption itself would have produced tidal waves that would have destroyed all the palaces and cities on the northern coast of Crete, including Knossos. Whatever happened, the Minoans, weakened by this catastrophe, seem to have been conquered by the Mycenaean, who, influenced by the Aegean civilizations, had developed their own civilization on the Greek mainland. We know the Mycenaean control the show after 1500 BC because a new style of writing dominates Cretan culture sometime between 1500 and 1400 BC. Called "Linear B" script, this writing is conclusively an early form of Greek, but it employs the earlier script (Linear A) of the Minoans.

The Mycenaean Civilization

The Mycenaean civilization succeeded the Minoan of Crete and was a product of mainland Greece. This civilization, which flourished between c. 1600 and 1200 BC, came to light as a result of the pioneering excavations of famous archaeologist Heinrich Schliemann. The civilization is named after the site of Mycenae situated in the north-western corner of the Peloponnese. Mycenae was located in southern Greece on a steep, rocky ridge and surrounded by a protective wall more than 20 feet thick. The fortified city of Mycenae could withstand almost any attack. From Mycenae, a warrior-king ruled the surrounding villages and farms. Strong rulers controlled the areas around other Mycenaean cities, such as Tiryns and Athens. These kings dominated Greece from about 1600 to 1100 B.C. Other major Mycenaean sites are Tiryns, Pylos, Thebes, Orchomenos and Knossos.

Sometime after 1500 B.C., through either trade or war, the Mycenaean came into contact with the Minoan civilization. From their contact with the Minoans, the Mycenaean saw the value of seaborne trade. Mycenaean traders soon sailed throughout the eastern Mediterranean, making stops at Aegean islands, coastal towns in Anatolia, and ports in Syria, Egypt, Italy, and Crete. The Minoans also influenced the Mycenaean in other ways. The Mycenaean adapted the Minoan writing system to the Greek language and decorated vases with Minoan designs. The Minoan influenced culture of Mycenae formed the core of Greek religious practice, art, politics, and literature. Indeed, Western civilization has its roots in these two early Mediterranean civilizations.

When we speak of the Mycenaean we are not referring to a single political entity but several distinct settlements which formed separate states. These states were ruled by warrior chiefs. The chiefs usually bore the royal title wanax (oranax) and ruled over their territories from fortified palace complexes which dominated the Mycenaean urban centres. A powerful warrior aristocracy and an elaborate bureaucracy constituted the ruling elite. The fortified palace complexes exercised extensive control over the respective economies of the Mycenaean states through centralized bureaucratic structures. This bureaucracy regulated virtually every aspect of the economy. The Mycenaean's had an extensive foreign trade. Oil, pottery and textiles were their main exports. They imported gold,

copper and tin. Society was highly stratified with the ruling elite having access to a large surplus. The Mycenaean chiefs were buried in large beehive shaped tombs (*tholoi*) or in large chamber tombs. The resources that would have to be mobilized for constructing these tombs, as well as the fine craftsmanship of the objects found in them, leave us in no doubt as to the wealth possessed by many of the Mycenaean chiefs/kings.

The Mycenaean have left behind abundant written records which provide us with details about the role played by the palaces in the economy. The Mycenaean's evolved a script which is referred to as the Linear B script. The Linear B script was deciphered in 1952 by Michael Ventris. Ventris found that the language of the script was an early version of the Greek language. The Mycenaean's were among the earliest Greek-speaking people to settle in the peninsula. The Greeks were a branch of the Indo-European people and their migrations must be viewed in the context of the tribal movements of the third millennium BC. The language of the Mycenaean's was somewhat different from that spoken by later Greek settlers and is labelled by scholars as 'proto-Greek'. This is the language of the Linear B script.

The Linear B records that have survived are mainly in the form of clay tablets. They are invariably inventories or accounts and contain no references to political history or religious practices. They were obviously compiled by palace officials to keep track of the surprisingly large number of transactions that the palace had to undertake in order to regulate a wide range of economic activities. The fact that the script exhibits a great deal of uniformity throughout the Mycenaean area shows that the bureaucracy, or at least the professional scribes, were drawn from a close-knit group with links extending over several parts of the peninsula.

During the 1200s B.C., the Mycenaean fought a ten-year war against Troy, an independent trading city located in Anatolia. According to legend, a Greek army besieged and destroyed Troy because a Trojan prince had kidnapped Helen, the beautiful wife of a Greek king. For many years, historians thought that the legendary stories told of the Trojan War were totally fictional. However, excavations conducted in northwestern Turkey during the 1870s by German archaeologist Heinrich Schliemann suggested that the stories of the Trojan War might have been based on real cities, people, and events. Further archaeological studies conducted in the 20th century support Schliemann's findings. Although the exact nature of the Trojan War remains unclear, this attack on Troy was almost certainly one of the last Mycenaean battle campaigns.

The Mycenaean civilization lasted till c. 1200 BC. Another round of tribal migrations coincided with the simultaneous collapse of Bronze Age civilizations in the eastern Mediterranean by 1200 BC. In the traditional periodization of ancient Greek history the four centuries from 1200 to 800 BC are referred to as the Dark Age. Mycenaean cities went into decline, the Linear B script disappeared and trade was disrupted. It was traditionally believed that Dorian invasions (Dorians were a Greek-speaking tribe which settled in the southern Peloponnese where Sparta is located) were responsible for the destruction of the Mycenaean civilization, although this picture has now been completely

revised. Source material for this period is rather scanty. Hence the use of the term ‘Dark Age’ for this period.

The Dark Age

The Dark Age lasted for nearly four centuries, coming to an end in c. 800 BC. The significance of this date is that around this time two great Greek epics, *Iliad* and *Odyssey* were written. Their composition is attributed to a poet by the name of Homer. These epics mark a turning point in Greek history. With *Iliad* and *Odyssey* written records are once again available for ancient Greece after a long gap. Apart from their great literary merit, these epics are a very rich historical source. The two works are part of the tradition of epic poetry. The main theme of *Iliad* is the war of a coalition of Greek states against the state of Troy (the ruins of ancient Troy are located in the north-western corner of Anatolia). According to the story narrated in the epic this war, known as the Trojan war, lasted for ten years. *Odyssey* recounts the adventures encountered by Odysseus, one of the heroes of the war, on his homeward journey after the conclusion of the campaign. The epics give us some idea about various aspects of contemporary religion, mythology, beliefs, food habits and dress.

Scholars earlier held the view that *Iliad* and *Odyssey* were inspired by events which had taken place in the Mycenaean age and spoke about that period. There can be no doubt that some of the stories in these epics are derived from the Mycenaean era. They show an awareness of an earlier civilization in which great heroes, kings and warriors lived. It was therefore thought that the Homeric epics were essentially a portrayal of Mycenaean society. The reinterpretation of these poems, particularly in the light of the more exhaustive archaeological evidence, has allowed scholars to view *Iliad* and *Odyssey* as compositions of the Dark Age. The actual details of everyday life contained in them relate to the closing phase of the Dark Age and these indicate a break with the Mycenaean social formation.

Historians now divide the Dark Age into two sub-periods: i) 1200 to 1050 BC and ii) 1050 to 800 BC. In the first sub-period Mycenaean urban centres declined and there are signs of extensive depopulation. The archaeological evidence reveals a sharp decline in population between 1300 and 1100 BC. Settlements are fewer and are smaller in size. Tribal migrations, at times violent, were also taking place in this period. The Mycenaean economy based on centralized regulation by the palace bureaucracy collapsed around 1200 BC. With it written records in the Linear B script also disappeared. Long distance trade was disrupted making it difficult to procure copper and tin for producing bronze objects. The reasons for this kind of widespread disintegration are still not clear and continue to be debated by scholars.

A little before 1000 BC a new economy and social structure began to emerge in Greece. By this time tribal migrations had resulted in Greek speaking people occupying the entire peninsula. Simultaneously the Aegean islands and the western coast of Anatolia were incorporated in the Greek linguistic zone. Southern Italy was also in the process of being colonized. The major Greek dialects evolved in this period. There were three major dialects: Ionic, which included the sub-dialect Attic spoken in Athens; Doric; and Aeolic. A significant feature of this period was the introduction and

dissemination of iron technology from c. 1000 BC onwards. This period marks the transition to the iron age. The origins of iron technology remain obscure. However the archaeological evidence that has accumulated over the years indicates that Anatolia and northern Mesopotamia pioneered the use of this metal. It is not difficult to explain the rapid advance of iron in Greece once the technology became available. The people of the area had to depend wholly on imports for their supplies of copper and tin. The decline of eastern Mediterranean trade after 1200 BC created problems for Greek metallurgy because the supply of copper and tin could not be maintained. The introduction of iron offered a viable alternative. Since Greece had adequate deposits of iron ore the Greek states with their limited resources would have preferred the use of this metal rather than exchange their meagre surpluses for imported copper and tin. Iron technology became one of the factors that contributed to the recovery which took place in the period between 1050 and 800 BC.

The end of the Dark Age saw the revival of writing in Greece. We have seen that the Linear B script had already disappeared with the collapse of Mycenaean civilization. When the Greeks began using a script towards the end of the Dark Age it was a new script. This script was borrowed from the Phoenicians. The Phoenicians had evolved a script (c. 1500 BC) which was based on the phonetic principle. The symbols in this script stood for different sounds, i.e. it was an alphabetic script. The Greeks adopted the Phoenician script and modified it to suit their language. The Homeric epics were written in the new Greek alphabet.

Greek society as reflected in the Homeric epics was very different from that of the Mycenaean period. It was simpler, largely self-sufficient with little trade or exchange, and did not have powerful kings. During the Dorian period, Greek civilization experienced decline. However, two things changed life in Greece. First, Dorians and Mycenaeans alike began to identify less with the culture of their ancestors and more with the local area where they lived. Second, by the end of this period, the method of governing areas had changed from tribal or clan control to more formal governments-the city-states. In these circumstances in the latter half of the Dark Age the Greeks were divided into a large number of petty-states. These states were ruled by kings or chiefs with limited authority. They had to share political power with other members of the elite. In many states, such as Athens, monarchical rule had come to an end by the beginning of the Archaic Period and was replaced by oligarchical political structures.

The Archaic and Classical Period

The Dark Age is followed by a period known as the archaic period (C.800 – 500 BC). In this period the foundations of classical Greek Civilization were laid. The period from 500 BC to 338 BC is generally referred as the classical age of Greece. A number of important changes take place in archaic and classical period. However, the division into these two periods is not always very sharp and there is lot of overlapping and continuity in various aspects of society, economy and culture. This is one broad period of ancient Greece. In the subsequent paragraphs the developments and institutions of the whole period would be analysed.

Conflict of Landed Aristocracy and Peasantry: Reforms Start

The Archaic Period (c. 800-500 BC) witnessed an intense conflict between the landed aristocracy and the peasantry throughout Greece. The origins of this struggle may be traced to the latter half of the Dark Age when landowning aristocrats occupied a strong position in the society. Between c. 800 and 600 BC the landed aristocracy consolidated its hold over land and the political structures of the Greek states. This led to the impoverishment of the small landholders. In their desperation the small landholders put up a tough fight against the aristocracy. The constant upheavals caused by this struggle reached a point of crisis by c. 600 BC. Sections of the aristocracy realized that unless some way was found out of the crisis their own prosperity would be threatened. Consequently they were forced to initiate reforms which incorporated concessions to the peasants.

In this juncture many reforms were undertaken at Athens. The evidence from Athens is supplemented by references to other states and shows that similar historical developments were taking place in large parts of Greece. In 594 BC the Athenians resorted to the solution of nominating an arbitrator, named Solon, to carry out reforms. On the basis of a consensus Solon was vested with wide ranging powers for a specified duration. The most radical reform of Solon was the abolition of debt bondage. This had emerged as one of the most serious problems faced by the peasantry. Impoverished peasants, who often small holdings had located in difficult terrain such as hillsides, had to take loans from wealthy landowners. When poor peasants failed to repay their debts they were forced into bondage. Laws pertaining to repayment of loans had stringent provisions which required a person who was unable to pay back a loan to accept bondage to the creditor. Peasants were thus simultaneously being deprived of their land and were being reduced to the status of slaves. The major demands of the peasantry were redistribution of land and abolition of debt bondage. The abolition of debt bondage under Solon implied that henceforth Athenian free peasants could not be enslaved if they failed to repay their loans. The existing debt of the peasants was cancelled.

However, Solon did not carry out redistribution of land. He did, however, introduce changes in the political system which gave ordinary Athenians the right to participate in government. The abolition of debt bondage prevented the enslavement of the impoverished peasants, but in the absence of land reforms the aristocracy continued to possess a disproportionately large share of cultivable land. After 594 BC there was a shortage of rural labour. The big landowners, who required labour to cultivate their large holdings, solved this problem by increasingly employing slaves brought from outside.

Not surprisingly there were fresh upheavals in Athens within a few decades of Solon's reforms. Similar conditions prevailed in other states where incomplete reforms or no reforms had taken place. In these disturbed conditions some political leaders carried out a series of coups and assumed dictatorial powers in their respective states. This development completely altered the nature of governance in a large number of Greek states. The events at Athens typify the process. Peisistratus was the person responsible for the coup at Athens. He first attempted to seize power in 561, but was unsuccessful and had to flee from the city. He eventually managed to succeed in

545 BC. Peisistratus installed himself as supreme ruler of the city, setting aside existing constitutional arrangements and defying oligarchical institutions.

What was emerging was a new form of government for which contemporaries used the term ‘_tyranny’. Rulers like Peisistratus who had usurped power in this manner were called ‘_tyrants’. A significant aspect of Greek tyranny was that it had considerable popular support, mainly from among the impoverished peasantry and from groups which had accumulated wealth through trade but had traditionally no access to political power. When Peisistratus seized power he took over public wastelands that had been occupied by the aristocracy and distributed these among the small or dispossessed peasants. He also confiscated the property of some of the rich landowners who had gone into exile following the establishment of tyranny and gave these to needy farmers. The policies pursued by Peisistratus had a twofold outcome. First, the position of the peasantry was stabilized. Second, the monopoly of the entrenched landed aristocracy over the political structure was broken. Peisistratus died in 527 BC. He was succeeded by his son Hippias. This appeared to be an attempt to transform tyranny into dynastic rule and caused much resentment among the people. In any case, the historical relevance of tyranny was now over. In 510 BC Hippias was overthrown. This date marks the beginning of classical democracy at Greece.

Transition to Democracy

In the Classical Period, and subsequently, the Greeks referred to the age of tyranny with intense dislike. Yet it should be borne in mind that tyranny speeded up the transition from oligarchical rule to democracy. The tyrants helped to undermine the institutions through which the aristocracy has so far exercised political power. This phenomenon was not confined to Athens alone. At Corinth the tyrant Periander came to power c. 600 BC. A little before Periander, Cypselus had overthrown the Bacchidae--the ruling aristocratic group at Corinth. We also have information about other tyrants. Polycrates became tyrant of Samos c. 545 BC and Lygdamis seized power at Naxos around the same time.

The tyrants were instrumental in doing away with the traditional hereditary basis of political power. The Greek aristocracies were close-knit hereditary elites. They enjoyed power not merely because of their wealth but more significantly by virtue of their birth. The aristocratic families automatically held all executive, judicial, and military positions. That is why we refer to the political structures of the Greek states during the Archaic Period as being oligarchical in nature. The tyrants struck at the roots of this oligarchical control, thereby creating conditions for the transition to democracy. During the course of the Archaic Period a number of Greek states evolved into democracies. Some of the earliest democracies that we have information about were those of Chios and Megara where democratic institutions had come into existence around c. 600 BC.

Even though the degree of democratization varied from state to state, it would not be incorrect to say that in Greece by the beginning of the Classical Period common people participated in the political process to a much greater degree than what we find in other contemporary societies. This was a

fundamentally new system of government, especially for societies with class differentiation. *Polis* was the term most frequently used to denote those political entities in ancient Greece which had some aspects of democratic functioning. The forms of government of the various *polis* (plural *poleis*) ranged from purely oligarchical on the one hand, to the mature democracy of Athens on the other. In between stood the states, probably the majority, with elements of oligarchy combined in varying proportions. The states about which we have information do not show any homogeneity in the structure of the *polis*. Athens and Sparta had emerged as the two leading *poleis* in Greece by the beginning of the Classical Period. The historical evidence is also quite uneven. While we have many details about Athens, and to a lesser extent Sparta, contemporary sources tell us very little about important democracies such as Corinth and Syracuse.

The *polis* was territorially a small political entity. The size of the population was also relatively small. Given the constraints of ancient society, democracy would not have been functional had the *polis* been large either territorially or in terms of its inhabitants. This point needs to be emphasized because Greek democracy was a direct democracy. In modern democracy the people choose their representatives who then legislate and govern on their behalf. In ancient Greece, democracy implied participation by all the citizens in the basic organ of the democratic system, namely the assembly.

The concept of citizenship was a restricted one. Only the indigenous, native, residents of a *polis* (and their descendants) were recognized as citizens. Citizenship rights did not extend to all inhabitants, not even all the free inhabitants. Firstly, women were excluded. Only male adults enjoyed the privilege of being citizens in the political sense. Secondly, all those who were not original residents of the *polis*, or were considered outsiders for some reason or the other (e.g. if they were a conquered community and had been deprived of their political rights), did not form part of the citizen body. In Sparta the free non-citizens were called *perioikoi*; at Athens they were known as metics (*metoikoi*). Many of the traders settled at Athens were metics. Of course slaves had no rights whatsoever.

One should add here that only citizens could own land. There was also a close link between citizenship rights and military service. The Greek states did not maintain standing armies of professional soldiers. To a large extent this was because they lacked the resources for financing such an army. All free adult males of the community were expected to render military service. In other words, the citizens were simultaneously soldiers. Citizens had to equip themselves with their fighting gear out of their own resources, something that was possible only if they possessed some land. The backbone of the Greek armies was the hoplite infantry (foot- soldiers). The overwhelming majority of the hoplites were small and middle farmers. We could say that Greek armies were essentially armies of peasant-citizens.

The citizens of the Greek *polis* could exercise their right to participate and vote in the assembly, which was the basic right of citizenship, by personally attending the meetings of the assembly. One had to actually go to the meetings of the assembly, usually held in some open space in the city-centre, in order to exercise this right. Such a conception of democracy would have been unworkable if the

respective Greek states possessed a big area or a large population. The actual task of governance was carried out through a smaller body, the council. With the decline of monarchy, real power had passed into the hands of oligarchical councils dominated by the hereditary landed elite.

Given its nature and large size the assembly could not meet very frequently. Even when it met it could only debate and vote on few issues. This gave the council wide ranging authority for intervening in the functioning of the assembly. Usually the council convened the assembly (unless dates were traditionally fixed), prepared its agenda, and guided its sessions. To some extent this was intended to be a check on the assembly. The council was a very powerful body in most states and though in many cases its membership was monopolized by the landed aristocracy yet at least at Athens it had become genuinely representative by c. 500 BC.

Athens has a special significance in any discussion on Greek democracy due to the scope of its accomplishment. Moreover, our knowledge about the political structure of Athens is more extensive than that of other states. It may be stated at the outset that in terms of the development of its democratic structure Athens was an exception rather than the rule in ancient Greece. We have already stated that Solon made changes in the political system which gave ordinary Athenians the right to participate in the government. His reforms (594 BC) represent an important stage in the evolution of Athenian democracy. Solon revived the Athenian assembly which had not met for a long time and had ceased to function. He simultaneously constituted a new Athenian council called the *boule*. This council had four hundred members and it superseded the old oligarchical council. The old Athenian council, called Aeropagus, was an organ of the aristocracy. Membership of the latter body was traditionally monopolized by a hereditary elite known as the *Eupatridae*⁶. The Aeropagus was not abolished, but its functions were curtailed till eventually it ceased to play an important role. The *boule* now became the main centre of political power. Membership of the *boule* was based on property qualifications and not on hereditary right, which in itself was an innovation.

Solon divided the Athenian citizens into four classes. The property or wealth possessed by a citizen determined the class in which he was placed. Right at the top were the *pentacosiomedimni*, who possessed land which yielded at least 500 *medimnoi* (a unit for measuring the quantity of grain) of wheat, or its equivalent value in wine or oil. Next were the citizens whose land yielded at least 300 *medimnoi* (*hippeis*). The third category was that of owners of land yielding at least 200 *medimnoi*. Those belonging to this class were called the *zeugitai*. The *zeugitai* were small and middle peasants who also constituted the main strength of the Athenian hoplite infantry and could not therefore be easily ignored. Right at the bottom were the *thetes* who had property yielding less than 200 *medimnoi*. The *thetes* were the poor peasantry. We can see that political participation was intimately tied up with landownership and the amount of land owned by a citizen determined his place within the political structure.

Membership of the *boule* was open only to the first three classes. The impoverished sections, i.e. the *thetes* were excluded from the council. In other words the council was essentially a body of the rich

and middle peasantry. Qualifications for public offices corresponded to the four-fold class division. The first two classes held the principal political and military offices. The *zeugitai* held minor offices. The *thetes* only had the right to participate in the meetings of the assembly.

After the overthrow of Hippias in 510 BC the political structure was further reformed. The crucial democratic reforms at the beginning of the classical period are attributed to Cleisthenes, who for some years was the most important political figure at Athens following the end of tyranny. A brief outline of some of the key political events in Greece during the Classical Period might be useful for a better understanding of the evolution of the political structure of Athens in this era.

Conflict with Persia: Formation of Delian League

Greek history in the latter half of the sixth century BC has to be viewed against the backdrop of the westward expansion of the Persian empire. Persian expansion into western Anatolia, the Aegean and mainland Greece coincided with the phase of tyranny and the beginning of the Classical period at Athens. Between c. 500 and 480 BC the states of the Greek peninsula were locked in a fierce contest with the Achaemenids. Sparta was at this time the foremost military power on land. Athens was the main naval power, though it also had a fairly strong army. The Athenians had built a strong navy which played a leading role in the conflict with Persia. Themistocles was the architect of Athenian naval strength. The Greeks pooled together their resources under the leadership of Athens and Sparta in order to resist the Persian onslaught.

Whereas the decisive battles of Salamis (480 BC) and Plataea (479 BC) had halted the Persian advance into the Aegean Sea, the threat of further Persian campaigns still remained. The Greek states were aware of the need to pool together resources on a long-term basis to thwart further invasions. No state had the capacity to fight the Persians entirely on its own. On the Peloponnese there was a strong military alliance under the leadership of Sparta. With this arrangement the Peloponnesians were better placed to defend themselves. The problem was much more serious for the Aegean islands and the coastal states since they had no such mechanism. It was as a solution to this problem that Athens, after Salamis and Plataea, took the initiative to form a confederation of states under its own leadership (487 BC). This confederacy has come to be known as the Delian League. The Delian League derived its name from the island of Delos where the common treasury of the confederacy was located. The primary objective of forming this confederacy was to maintain a strong navy in the Aegean Sea. The members of the Delian League made regular contributions for this purpose.

Once the Persian threat receded, the Athenians transformed the character of the League. They used their dominant position within the League to utilize its resources for promoting its own interests. From a voluntary confederation the Delian League gradually became an empire ruled by the Athenians. The contributions to the League now became enforced tribute payable to Athens. The wealth that the empire, and control over the Aegean Sea, brought to Athens was crucial for sustaining its democratic institutions in the Classical Period and keeping discontent in check.

Having established its hegemony over the Aegean, Athens tried to expand its empire by including the

Peloponnesians in it. This brought it into conflict with Sparta. A prolonged military contest between the two states ensued. This is known as the Peloponnesian War which lasted from 431 to 404 BC. By 404 BC Athens had been defeated by Sparta and its navy was destroyed. For several decades after that Sparta remained the major Greek power, though it was subsequently challenged by Thebes. The conflicts among the Greek states after the Peloponnesian War gave the Persians an opportunity to interfere in their affairs, and thus to become politically dominant in Greece.

Democratic Political Structure: Emergence of Deme

The hundred years between the overthrow of Hippias and the defeat of Athens in the Peloponnesian war witnessed the growth of a highly evolved democratic political structure at Athens. This structure owed a lot to the initiatives of Cleisthenes (c. 507 BC). Athenian citizens had been traditionally divided into four Ionian tribes. These traced their descent from the tribes or clans which had originally settled in Attica. Following the political reforms of Solon, each tribe sent one hundred members to the *boule*. Cleisthenes did away with the kinship principle for grouping the citizens, and replaced it with ten residential tribes or *phylai*. These new *phylai* were based on a radically new concept. The *phyle* to which a citizen belonged was determined by the place where he resided and not by his kinship ties.

The primary unit of the democratic structure established by Cleisthenes was the *deme*. Every citizen was first and foremost a member of a particular deme. The deme was the smallest geographical unit into which the *polis* of Athens was divided for political purposes. There were 139 demes in all. The demes were responsible for maintaining registers of citizens. They had their own local elected governments, including an assembly and officials. The local governments were headed by the *demarchos*. Cleisthenes reformed the *boule* as well. The strength of the council was raised from four hundred to five hundred members. Fifty members were selected from each of the ten *phylai*. Membership of the *boule* was thrown open to all citizens, including *thetes*. Any citizen over the age of thirty was eligible for membership of the *boule*. The main executive and military officials of the *polis* were the *archons*. Ever since monarchy had come to an end in Athens the *archons* had been the chief executive and military officers. Throughout the Archaic Period the aristocracy had monopolized these posts. During the Classical Period the archonship was gradually made an elective post and it became possible for ordinary citizens to hold these positions. Despite its limitations, Athenian democracy was an outstanding achievement.

Slave Labour

A distinctive feature of ancient Greek civilization was the widespread use of slave labour in various sectors of the economy. There is evidence of the presence of large numbers of slaves in other ancient civilizations, such as those of Egypt, Mesopotamia, Persia and the Hittites. The Mesopotamian and Hittite law codes indicate that institutionalized slavery existed in these civilizations. However the scale of slavery was qualitatively different in ancient Greece. Here for the first time in history slave labour was used extensively for production. The initial pool of slaves was formed of prisoners of war.

This source was supplemented from within the community by those who were enslaved due to their inability to pay loans (debt bondage). Nevertheless wars brought captive slaves in much larger numbers. The earliest slaves in Greece, as in other societies, were women. Women slaves formed a significant portion of the workforce in Mycenaean palaces. For example, the palace at Pylos had at least 550 women engaged in textile production. In the Linear B tablets the term used for slaves is *doeri*. The Homeric epics also contain numerous references to women being enslaved during wars.

By the Archaic and Classical Periods slaves were to be found in every sector of production, especially in mining, handicrafts and agriculture. Some historians are of the view that the role of slavery in Greek agriculture has been exaggerated and that the agrarian economy depended mainly on the peasantry and free labour.

At the end of the Dark Age Sparta was already using slave labour on a scale that was unprecedented. Sparta had annexed the territory of Messenia located in the southern Peloponnese and had converted the entire population of this area into slaves. The Spartans introduced a peculiar form of slavery called 'helotry'. Helots were slaves who were owned collectively by the entire Spartan community. Agricultural land in Messenia was divided into holdings called *kleroi* and allotted to Spartan citizens. These holdings, along with the land already possessed by the Spartans, were cultivated with the labour of helots. Since there was considerable social differentiation in Sparta, the *kleroi* were not distributed equitably. The aristocracy got a much bigger share.

The distribution of helots was regulated by the state. The state assigned a certain number of slaves to each family depending upon its requirements for labour. Moreover, they were allowed to maintain family ties. The children born to the helots had the same status as their parents.

This meant that Sparta was able to meet its requirements of slave labour from among the Messenians for several generations. It should not be assumed that helotry was a more humane form of slavery as some scholars have suggested. Helotry was a more primitive form of slavery which in turn reflected the relative backwardness of Spartan economy. Private property was not fully developed in Sparta and there were many tribal survivals in its social organization. Helotry was prevalent in other Greek states as well, as for instance in Thessaly, Crete and Argos. In other parts of Greece privately owned slaves increasingly became a typical feature of Greek society and economy. Several terms were used to describe such slaves, the most common being *doulos*.

In Athens slaves were mostly privately owned. These slaves were regarded as property and bought and sold in the market as commodities. The prosperity of Athens during the Classical Period rested on the expansion of slave labour. Historians have offered figures for Athenian slaves during the fifth century BC ranging from 60,000 to 110,000. It has been estimated that of these, nearly 20,000 to 30,000 worked in the Athenian silver mines. Besides agriculture and mining, slaves dominated handicraft production and were engaged in various kinds of domestic and menial work. It is necessary to emphasize that while there was slave labour in every sector of the economy, free labour was also to be found in all types of production.

Development of Philosophical Thought

The ancient Greece may be credited with a very rich intellectual contribution. Due to constraints of space it would not be possible for us to go into detailed analysis of the Greek philosophical tradition. We intend to familiarise you with some basic factual information on the philosophical thought that developed in Greece. Their intellectual tradition touched many aspects of human society and knowledge. History, Philosophy, Mathematics and Medicine were some of the main areas influenced by the ideas of the Greek thinkers. The development of democratic traditions in Greece helped in creating an environment conducive to intellectual discourse and growth.

The Ionian School of thought (c. 600 BC) was one of the earliest philosophic tradition. Thales, Anaximandes and Anazemenes were the main proponents of this school. They were mainly concerned with the basic elements of nature (air, water earth) and their driving force. Pythagoras, an outstanding thinker believed in the transmigration of the soul and laid emphasis on achieving harmony for the soul. He was involved with the study of nature, musical scale and mathematics. However, he is most famous for his geometrical theorem which states that, in a right angled triangle, the square of the length of the hypotenuse is equal to the sum of the squares of the other two sides. Hippocrates was one of the outstanding thinker of the classical period in the area of medicine. He gave medicine a scientific foundation replacing magical cures. He believed in treating diseases by diagnosing on the basis of examining the symptoms scientifically.

Herodotus (c.484-425) is called ‘the father of history’ for giving it a distinct identity as a branch of knowledge. History which was treated as a mix of facts, fiction, myths, legends, fables and anecdotes was given a new meaning based on authentic facts and their verification. He wrote detailed accounts of Persian wars. He widely travelled and gathered information about various countries. He always verified and evaluated his information before writing his accounts.

Socrates, Plato and Aristotle are considered as the most towering thinkers of the classical Greek Philosophy. Socrates (469 - 399 BC) is credited with a shift from thinking about nature to thinking about the nature of human existence. The refinement of various categories of philosophy was his major contribution. His student Plato (427-347 B.C.) established an academy at Athens and taught philosophy. He is regarded as an ‘idealist’. He argued that things have no independent existence outside our minds and believed that experience is unreal, only ideas are real. He influenced later Arab and Western thought in a big way. Plato’s disciple Aristotle (384- 322 B.C) held ideas which were different from those of his teacher. He disagreed with Plato’s view that experience was unnecessary to understand reality. He was a keen student of Science and studied plants and animals. Both Plato and Aristotle were opposed to the idea of involving masses in all decision making processes. They held the view that people have a limited role to play in the government. This was, to some extent, a reflection of the thinking of the elite in Athens who believed in curtailing democratic rights.

The End of the Classical Period

The Classical Period came to an end in 338 BC when the Macedonians subjugated the *poleis* of the

Greek peninsula and the Aegean Sea. Macedonia, just as other regions located north of mainland Greece, had been a relatively backward area. Using improved military techniques and the resources of the Macedonian plains, king Philip II (382-336 BC) created an empire which eventually included the Greek states of the peninsula and the Aegean. In 338 BC Philip defeated the Greek city-states at Chaeronea and placed them under Macedonian rule. With the Macedonian conquest the era of the *polis* came to an end. As a political entity the *polis* ceased to exist after 338 BC. Philip II was succeeded in 336 BC by his son Alexander the Great who founded a vast empire.

Alexander launched a massive expansionist programme following his accession. His primary aim was to destroy Persian power in West Asia so as to consolidate Macedonian rule over the entire region. By 330 BC Alexander had conquered the Persian empire after defeating the last of the Achaemenid emperors (Darius III). His subsequent campaigns brought him to the banks of the Indus. Alexander died at Babylon in 323 BC. The eastward expansion of the Macedonian empire under Alexander had made Anatolia, Syria, Mesopotamia, Egypt, Iran, Afghanistan and some parts of Central Asia and northwest India, Macedonian-ruled territories. Following the death of Alexander some of the outlying regions of the empire were lost but the greater part of Alexander's territories remained under Macedonian control.

Alexander had left no heir to his vast empire and had made no arrangements for appointing a successor. A bitter power struggle among his leading officials and military commanders (referred to as the *Diadochi* or successors) broke out after his death. This struggle lasted almost till 275 BC. The empire was eventually partitioned among three of the *Diadochi*- Seleucus, Ptolemy and Antigonus. The dynasties of these successors ruled over their respective portions of the empire: the Seleucids in Iran, Mesopotamia and Syria; the Ptolemies in Egypt; and the Antigonids in Macedonia. The period from the death of Alexander and the founding of the Seleucid, Ptolemaic and Antigonid empires down to the time when Rome became the supreme power in the eastern Mediterranean (c. 300 to 30 BC) is referred to as the Hellenistic age. The successor states which came into existence as a result of the division of Alexander's empire are called Hellenistic kingdoms. The Hellenistic kingdoms were governed by a Macedonian/Greek ruling elite and Greek became the official language of Iran, West Asia, Egypt and the eastern Mediterranean. Greek also became the chief language of intellectual discourse in this area. The Hellenistic kingdoms created conditions for disseminating the accomplishments of classical Greek civilization over a large part of West Asia and in Egypt. Since the Asian and north African territories of the Hellenistic kingdoms were centres of grand ancient civilizations, the Greek ruling classes of these empires adopted several customs of their subjects. This gave rise to a dynamic cultural tradition which may be conveniently labelled as Hellenistic civilization.

Contribution of Greek Culture

Ancient Greeks made many influential contributions to western civilization such as in the areas of philosophy, art and architecture, and math and science.

In philosophy, Greek philosophers were great thinkers who were determined to seek truth to a certain subject or question no matter where it led them. Three famous philosophers includes Socrates, Aristotle, and Plato. Socrates, who lived from around 470 to 399 B.C. believed that life was not worth living unless it was examined and the truth about life was sought out. He also believed that there had to be certain standards for justice and punishment. In order to solve problems in life, Socrates invented a method for solving these problems called the Socratic Method. In the world today this method is commonly known as the Scientific method and is used widely in the area of science.

Plato, a student of Socrates, believed that society is like one big family and that if one person in a society needed help in some sort of way, the whole society should be there to help. Plato also had many democratic ideas which he expressed through the book, *The Republic*. Lastly, Aristotle, who lived in Greece from around 384 to 322 B.C., was a philosopher who believed strongly that human reason was very important. He says that a life guided by human reason is superior to any other and that someone's ability to reason distinguishes them from anyone else. Many other ideas came from philosophers and two of these includes the thought that divine power ruled the universe and that human desire is dangerous and should be controlled. These ideas along with the ideas of human reasoning, standards for justice, and a democracy are still used in modern world, therefore showing Greece's influence and contribution.

Another area of Greek achievement is theatre. Plays began to become important in ancient Greece and two types of plays which were written and performed were comedies and tragedies. A comedy in ancient Greece was usually a play that marked or made fun of a certain topic, person, or group of people. One famous comedy writer was Aristophanes. He wrote the plays *The Birds* and *Lysistrata*. Tragedy in ancient Greece usually dealt with a moral or social issue, human suffering, and almost always ended in disaster. Three famous Greek tragedy writers are Aeschylus, Euripides, and Sophocles. Aeschylus wrote the play *The Oresteia*, Euripides wrote the play *Medea*, and Sophocles wrote the plays *Oedipus the King* and *Antigone*. The ideas of comedies and tragedies are used in western civilization except expanded and twisted around a little. A lot of famous play writers today are also inspired by the works of play writers from ancient Greece.

The most important areas of Greek achievement were math and science. They achieved all kinds of things in the areas of psychology, astronomy, geometry, biology, physics, and medicine. In astronomy they formulated the ideas that the sun was 300 times larger than the earth, the universe was composed of atoms, and they calculated the true size of the earth. Someone greatly involved in astronomy was Aristotle. In geometry, ancient Greeks found the value of pi, and a man named Euclid, who wrote the book *Elements* around 300 B.C., theorized that if two straight lines cut one another, the vertical, or opposite, angles shall be equal. In physics, the lever and pulley was invented along with a force pump which eventually evolved into a steam engine. Important people in this area were Archimedes and Pythagoras who were two of the many influential Greek citizens. Ancient

Greece has definitely made many influential contributions to western civilization.

Not only to the Western Civilisation but also to the mankind as a whole the Greek Civilisation gives many things from state craft to warfare, philosophy and religion such as writing/art Phoenician, the polis (city-state), the rise of democracy, sovereign, intellectual inheritances, *sophrosyn* (moderation, self-control), *hubris* (pride, arrogance, unbridled ambition), Greek, Philosophy, Sophists, Socrates (470-399 B.C.), Plato (427-347 B.C.), ideas of Aristotle (384-322 B.C.) doctrine of the mean , medicine, Hippocrates, the writing of history, Herodotus (484?-425? B.C.) and Thucydides (460-400? B.C) etc.

Summary

- The Greece in its 2000 years of ancient history was a centre of great civilization but did not develop into an empire.
- The early phase of Greek civilisation up to c.800 B.C is marked by the development of Minoan, Mycenaean and Dark Ages.
- The Archaic and classical periods witnessed some significant social and political developments. Conflict of peasantry and landed aristocracy and subsequent transition to Greek democracy were important changes.
- The period between 500 BC and 480 BC witnessed regular conflict with Persian empire. As a result attempts were made in Greek states to pool together their resources to face the external aggressions. Confederacy so formed came to be known as Delian League.
- During classical period democratic political structures got strengthened with the formation of Deme.
- Extensive use of slave labour in various sectors of production was one of the unique features of Greek history during the classical period.
- The unit also provided a brief account of the development of philosophical thought in particular contributions of Herodotus, Socrates, Plato and Aristotle.
- The last section of the chapter discusses the end of the classical period of Greek history with the death of Alexander.
- Finally, the chapter describe in brief various contributions of Greek Civilisation to the subsequent human history.

Exercises

1. Give a brief account of the early Greek Civilizations.
2. Discuss in brief the nature of conflict of aristocracy with peasantry and how it culminated in the establishment of democracy.
3. How does an aristocracy differ from an oligarchy?
4. What contributions did Solon and Cleisthenes make to the development of Athenian democracy?

5. What were the main features of the institution of slavery in ancient Greece?
6. Write in brief about the ideas of ancient Greek philosophers.
7. Assess the importance of colonisation to the development of the Greek world.
8. Assess the significance of Solon's reforms for Athenian democracy.

Key Terms

Archons:	Executive and military officials of the polis in Greek civilisation.
Boule:	An Athenian assembly consisting four hundred members.
Demarchos:	Local government head during Greek civilisation.
Kleroi:	A lot of land distributed to each citizen in Ancient Greece.
Metoikoi:	A resident alien, one who did not have citizen during ancient Greece.
Oligarchical:	A Government by a few, especially by a small fraction of persons or families.
Patrilineal:	A system whereby one belong to his/her father's lineage in terms of inheritance.
Pentacosiomedimni:	Top class of citizens set out by the Politician Solon in ancient Greece.
Phylai:	A citizen in ancient Greece.
Polis:	literally means city in Greek.
Thetes:	The lowest of Solon's four property classes in ancient Greece.
Tholoi:	A beehive-shaped stone tomb of Mycenaean Greece, roofed by corbeling and usually built into the side of a hill.
Wanax:	A local monarch in the Mycenaean world.
Zeugitai:	Members of the third census division created by Solon's constitutional reforms in ancient Athens

Suggested Reading

- Austin, M. M., *The Hellenistic World from Alexander to the Roman Conquest*, Cambridge, 1981
- Badian, E., (ed.) *Ancient Society and Institutions. Studies presented to Victor Ehrenberg*. Oxford, 1966.
- Badian, E., *Studies in Greek and Roman History*. Oxford, 1964.
- Bury, J. B., Barber, E. A., Bevan, E. and Tarn, W. W. *The Hellenistic Age*, Cambridge, 1923.
- Cary, M., *A History of the Greek World from 323 to 146 B.C.* Ed. 2. London- New York, 1951.
- Hopkins, K., *Conquerors and Slaves*. Cambridge, 1978. • Larsen, J. A. O., *Representative Government in Greek and Roman History*, Berkeley-Los, Angeles, 1955,

- Lloyd, G. E. R., *Ancient Worlds Modern Reflections: Philosophical Perspectives on Greek and Chinese Science and Culture*, Oxford: Oxford University Press, 2006.
- Pritchett, W. K., *Studies in Ancient Greek Topography*, 3 vols, Berkeley-Los Angeles, 1965.
- Rostovtzeff, M., *The Social and Economic History of the Hellenistic World*, 3 vols, Ed. 2.
Oxford, 1953,

