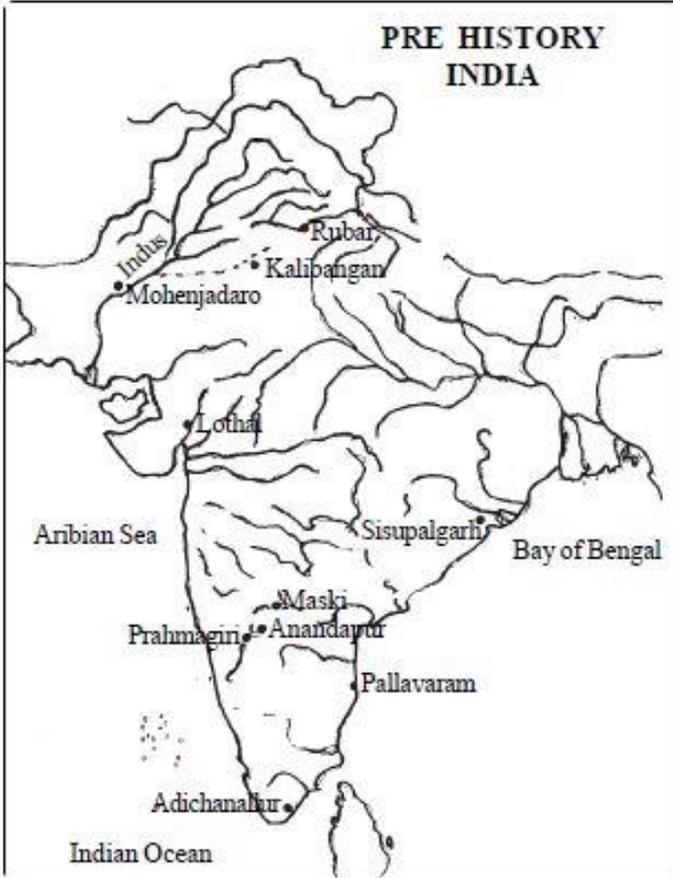


## INDIAN PRE-HISTORY

- The idea of pre-history is barely 200



years old. And so is the word pre-history; it was first used by M. Tournal in 1833.

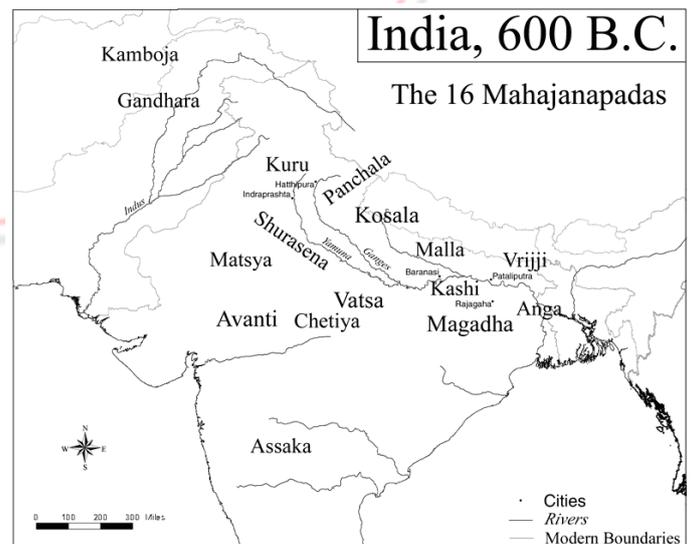
- Dr. Primrose rediscovered Indian pre-history by discovering prehistoric implements (stone knives and arrow heads) in 1842 at a place called Lingsugur in Karnataka.

- Robert Bruce was another person who enriched our knowledge about Indian prehistory when he discovered a large number of prehistoric sites in South India and collected Stone Age artifacts.
- These early efforts could not place India on the prehistoric map of the world.

- Sir Mortimer Wheeler's efforts in 1921, resulted in our knowledge of the entire pre historic culture sequence of India, putting India firmly on the world map of prehistory.

- As regards the early man; no fossils of early man have been found in the entire subcontinent, but their presence is indicated by stone tools dated around 250,000 BC. Earliest traces of human activity in India go back to the second Inter-Glacial period between 400,000 and 200,000 B.C.

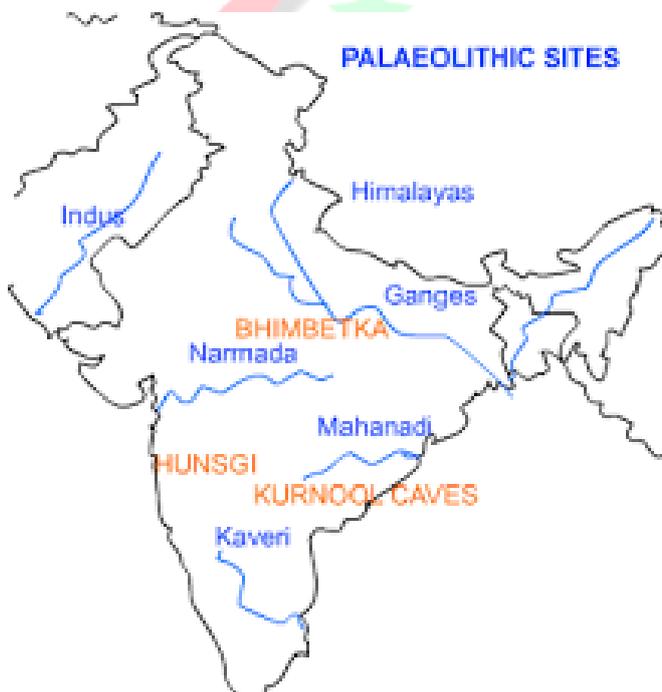
- From their first appearance to around 3000 B.C. humans used only stone tools for different purposes. Based on the tool mining traditions, this period is therefore known as the Stone Age and the entire Stone Age culture has been divided into 3 main stages i.e. Paleolithic (early or Old



- Stone Age), Mesolithic (Middle Stone Age) and Neolithic (New Stone Age).

### Palaeolithic Age (500,000 B.C.–8000 B.C.)

- The Palaeolithic Age commenced from the time when the earliest man learnt the art of making stone tools. The greatest achievement of the earliest man could be traced to his learning as to how to make a first hatchet, the spear and the fire.
- In India, the Palaeolithic Age developed in the Pleistocene period or the Ice Age and was spread in practically all parts of India except the alluvial parts of Ganga and Indus.



- Food gathering and hunting were the main occupations of the people of this phase and Palaeolithic men learnt to use animal skins for wrapping their dead bodies.
- Man during this period used tools of unpolished, undressed rough stones and lived in caves and rock shelters. They had no knowledge of agriculture, fire or pottery of any material and mainly used hand axes, cleavers, choppers, blades, scrapers and burins. Their tools were made of a hard rock called 'quartzite' and hence Palaeolithic men are also called 'Quartzite Men'.

- Homo sapiens first appeared in the last of this phase and the Palaeolithic man belonged to the Negrito race.
- Sir Robert Bruce Foot discovered the first Palaeolithic stone tool in the Indian sub-continent near Madras in 1863 A.D. The discovery of Indian Pre-history got a boost after the Yale-Cambridge expedition in 1935 under De Terra and Patterson.
- The Paleolithic stage has been divided into Lower Palaeolithic (250,000-100,000 B.C.), Middle Palaeolithic (100,000-40,000 B.C.) and Upper Paleolithic stage (40,000-10,000 B.C.) primarily based on tool typology and technology and also according to the nature of change in the climate.
- The tools of the lower Paleolithic stage are mainly hand axes, cleavers, choppers and chopping tools and covered the greater part of the Ice Age. In this period the climate became less humid.
- The middle Paleolithic age tools are mainly based on flake industries.
- The upper Paleolithic stage is characterized by burins and scrapers and a warm and less humid climate.
- Age-wise the lower Paleolithic extended upto 100,000 years ago, middle Paleolithic extended upto 40,000 years ago and upper Paleolithic up to 10,000 BC.
- The Son and the adjacent Belan valley (Mirzapur, UP) provide a sequence of artifacts from lower Paleolithic to Neolithic.
- Situated around Bhimbedka hill, in central India near Hoshangabad on the

Narmada River, the caves and rock shelters have yielded evidence of Paleolithic habitation.

- At Bhimbetka near the Narmada, a series of rockshelters have been excavated from caves. This site lacks in Chopper and Abbevillian hand axes.
- During middle palaeolithic age, Pithecanthropus or Homo erectus evolved. But this cultural stage was dominated by Neanderthal Man.
- The upper Palaeolithic culture belongs to the last phase of the Ice Age. This culture is marked by the appearance of new flint industries and the evolution of Homo sapiens or the modern man.
- At Chopani-Mando in the Belan valley of the Vindhya and the middle part of the Narmada valley, a sequence of occupation from all the three stages of the Paleolithic to Neolithic stage have been found in sequence. Chopani Mando is an important site where fossil animal bones have been found.

### **Mesolithic Era (8000 B.C.–6000 B.C.)**

- Although major changes began to appear around 10,000 B.C. the Mesolithic era seems to have started around 9000 B.C. and 8000 B.C. with the folding up of the Ice Age and continued at certain places till 4000 B.C.
- In this age, climate changes brought about changes in the fauna and flora and made it possible for human beings to move to new areas. Since then there haven't been major changes in the climate.
- The Mesolithic era is characterized by the reduction in the size of well

established tool types from the archaeological point of view with a decrease in size of some artifacts and the presence of a higher proportion of 'geometric' microliths.

- Microliths, first discovered from the Vindhyan rock shelters by C.L. Carlyle in 1867; are the characteristic tools of the era comprising of pointed, crescentic blades, scrapers, etc. all made of stone. These are very small in size with their length varying from 1-8 cm. Blackened blade, core, point, triangle, lunate and trapezoid are the main Mesolithic tools. However some tools used earlier like choppers, burins and scrapers continue.
- The hunting implements are spears with multiple barbs apparently obtained easily by attaching microliths. The crude material is chert, agate, carnelian and quartz.
- Bagor, a Mesolithic site in Rajasthan on the river Kothari is the largest Mesolithic site in India also from where systematic burials of skeletons have been found.
- Tapti, Narmada, Mahi and Sabarmati river basins in Gujarat have yielded many Mesolithic sites.
- Langhnaj in Gujarat is the first discovered site in the arid zone to demonstrate the development of a Mesolithic culture.
- The site of Chopani Mando in Allahabad provides a continuous sequence from late upper Palaeolithic to late Mesolithic stage with crude handmade pottery. Here round hut floors were found.
- In Peninsular India the Mesolithic industry is based on milky quartz. A new

feature in the tool industry is the appearance of 'D' shaped, transverse arrowhead.

- A large number of animal bones were found in the rock-shelters of Adamgarh in Madhya Pradesh which indicate domestication of animals only, not a pastoral economy.

### Lifestyle

- The age represents the hunting-gathering nomadic pastoral stages of human social evolution as the people lived on hunting, fishing and food gathering. At a later stage, they also domesticated animals.

- The people of this age achieved their special adaptation as early as 8000 B.C. which coincides with the same in both Europe and Africa.

- The last phase of this age saw the beginning of plane cultivation.

- The Palaeolithic age does not yield any information about the religious practices of the people but with the Mesolithic age the first archaeological information about them becomes available. The burials and rock paintings give us ideas about the development of religious practices.

- Some Mesolithic sites like Bhimbetka, Adamgarh, Pratapgarh and Mirzapur are famous for their rich art and paintings. Animals are the most frequent subjects of all these paintings with the most frequently represented ones being deer or antelope whereas paintings of tigers and monkeys are rare.

- Animal headed human figures also appear.

- This is also the period when we find

evidence of carefully burying the dead, which shows the beginning of belief in life after death.

### Neolithic Era (6000 B.C.–1000 B.C.)

- In the world context, the Neolithic age began around 9000 B.C. but in the Indian context it began in 7000 B.C. Mehrgarh in Baluchistan is the only site belonging to that period.

- Regular Neolithic attributes have been found from around 5000 B.C. and in South Indian context Neolithic settlements appeared around 2500 B.C.

- The principal features of Neolithic culture are crop cultivation, animal husbandry and settled life. The last two coming into existence in the last phase of Mesolithic culture.

- During this period people depended on stone implements but used stones other than quartzite for making tools which were more lethal, more finished and more polished. The phase is known for grinding and polishing of tools.

- The stone tools can be studied under two groups: (a) Ground and polished stone implements and (b) small and chipped stone tools.

- Ground and polished stone implements are associated with the Neolithic culture because of their links with food-producing stage and domestication of animals.

- Small and chipped stone tools had been continuing from earlier Mesolithic levels which are generally termed as microliths.

- The Neolithic people at certain point of time started making potteries. On this basis Neolithic culture has been divided

into aceramic Neolithic and ceramic Neolithic ages.

- At certain Neolithic levels we get the evidence of use of metal (copper being the earliest metal). Such levels are termed as Chalcolithic level.

- Important sites of this age are Burzahom and Gufkral in J&K (famous for pit dwelling, stone tools and graveyards in houses), Maski, Brahmagiri, Tekkalakota in Karnataka, Paiyampatti in Tamil Nadu, Piklihal and Hallur in Andhra Pradesh, Garo hills in Meghalaya, Chirand and Senuwar in Bihar (known for remarkable bone tools), Amri, Kot diji, etc.

- In Baluchistan, sites of Neolithic age include Kili Ghul Muhammad, Rana Ghundai, Anjira, Siahdamb and Mundigak.

- In the Indus system the most Neolithic site is at Mehrgarh in the Kacchi Plain regarded as the 'bread basket' of Baluchistan. The Neolithic stratum at Mehrgarh seems to have emerged from a locally established Mesolithic substratum.

### Lifestyle

- In the northern Himalayas, the best known Neolithic site is Burzahom in Kashmir where the earliest occupation was characterized pit dwellings with conical roofs. The site also gives evidence of a rectangular chopper of a kind not known in India.

- In Burzahom sometimes dogs and wolves were found buried with their owners.

- Later on, there comes evidence of mud brick houses, copper arrow heads and a

number of burials and graves with goods. This phase also yield a stray painted pot showing a typical early Indus buffalo deity.

- Gufkral, literally 'the cave of the potter' is another important Neolithic site in Kashmir where the earliest site yield pit dwellings without pottery. However in subsequent phases coarse grey pottery was used and a large number of bone tools occur.

- People domesticated sheep, goats and oxen and animal remains of early periods corroborate it.

- Cultivation of wheat, barley, fruits, corn like ragi and horsegram and lentils have been reported from the beginning and between 6000 B.C. and 5000 B.C. there



was a pattern of subsistence based on wheat, barley, sheep, goats and cattle.

- The remains of charred grains of paddy husk and wheat are quite visible at Chirand in Bihar, the hand-made pots as well.

- The people of Kachar Hills of Assam lived in mudwalled houses and their hand-made pots were

decorated with basket impressions.

- Koldhiwa and Mahagara lying south of Allahabad have thrown evidence of many strata of circular huts alongwith a crude handmade pottery. The most interesting find is evidence of rice suggested around 5440 and 4530 B.C. which is the oldest evidence of rice not only in India but also anywhere in the world.

- Instances of earlier cave dwelling have also been discovered with walls decorated of scenes of hunting and dancing.

- Neolithic man also knew the art of making boats and could weave cotton and wool to make cloth.

- In the later phase of the Neolithic stage people led a more settled life and lived in circular and rectangular houses made of mud and reed.

### **Chalcolithic Period**

- The end of the Neolithic period saw the use of metals of which copper was the first. A culture based on the use of stone and copper arrived called the Chalcolithic phase meaning the stone-copper phase.

- The first full-fledged village communities evolved in the Chalcolithic phase which was chronologically antecedents to Harappan people. Rafique Mughal of Pakistan named there settlements as Early nHarappan culture.

- Though some Chalcolithic cultures are contemporary of Harappan and some of pre- Harappan cultures but most Chalcolithic cultures are post-Harappan.

- Though Chalcolithic cultures mostly used stone and copper implements, the Harappans used bronze (an alloy of

copper and tin) on such a scale that Harappan culture is known as a Bronze Age Culture.

- Apart from stone tools, hand axes and other objects made from copperware were also used.

- The evidences of relationship with Afghanistan, Iran and probably Central India and visible at Mehargarh.

- The Chalcolithic culture at many places continued till 700 B.C. and sometime around 1200 B.C. the use of iron seems to have begun in the Chalcolithic level itself. The use of iron subsequently revolutionized the culture making progress and by 800 B.C. a distinct Iron Age came into existence.

- The Chalcolithic people used different types of pottery of which black and red pottery was most popular. It was wheel made and painted with white line design.

- The Chalcolithic people were not acquainted with burnt bricks and generally lived in thatched houses. It was a village economy.

- They venerated the mother goddess and worshipped the bull.

### **Sites**

- Important sites of this stage are spread in Rajasthan, Maharashtra, West Bengal, Bihar, Madhya Pradesh, etc.

- The Chalcolithic culture in Rajasthan is known as Banas culture after the river of the same name and is also known as Ahar culture after the typesite.

- In the Malwa region the important Chalcolithic sites are Nagda, Kayatha, Navdatoli, and Eran. Mud-plastered floors are a prominent feature of Kayatha.

- The Kayatha culture is characterized by a sturdy red-slipped ware painted with designs in chocolate colour, a red painted buff ware and a combed ware bearing incised patterns.
- The Ahar people made a distinctive black-and-red ware decorated with white designs.
- The Malwa ware is rather coarse in fabric, but has a thick buff surface over which designs are made either in red or black.
- The Prabhas and Rangpur wares are both derived from the Harappan, but have a glossy surface due to which they are also called Lustrous Red Ware.
- Jorwe ware too is painted black-on-red but has a matt surface treated with a wash.
- The settlements of Kayatha culture are only a few in number, mostly located on the Chambal and its tributaries. They are relatively small in size and the biggest may be not over two hectares.
- In contrast to small Kayatha culture settlements those of Ahar cultures are big. At least three of them namely Ahar, Balathal and Gilund are of several hectares.
- Stone, mud bricks and mud were used for the construction of houses and other structures.
- Excavations reveal that Balathal was a wellfortified settlement.
- The people of Malwa culture settled mostly on the Narmada and its tributaries. Navdatoli, Eran and Nagada are the three best known settlements of Malwa culture. Navdatoli measures almost 10 hectares

and is one of the largest Chalcolithic settlements.

- It has been seen that some of these sites were fortified and Nagada had even a bastion of mudbricks. Eran similarly had a fortification wall with a moat.
- The Rangpur culture sites are located mostly on Ghelo and Kalubhar rivers in Gujarat.
- The Jorwe settlement is comparatively larger in number.
- Prakash, Daimabad and Inamgaon are some of the best known settlements of this culture. The largest of these is Daimabad which measured 20 hectares.
- From Mesolithic culture onwards, all the culture types coexisted and interacted with each other.

### **Lifestyle**

- The Chalcolithic people built rectangular and circular houses of mud wattle-and-daub. The circular houses were mostly in clusters. These houses and huts had roofs of straw supported on bamboo and wooden rafters. Floors were made of rammed clay and huts were used for storage also.
- People raised cattle as well as cultivated both Kharif and Rabi crops in rotation. Wheat and barley were grown in the area of Malwa. Rice is reported to have been found from Inamgaon and Ahar. These people also cultivated jowar and bajra and so also kulthi ragi, green peas, lentil and green and black grams.
- Religion was an important aspect which interlinked all Chalcolithic cultures. The worship of mother goddess and the bull was in vogue. The bull cult seems to

have been predominant in Malwa during the Ahar period.

- A large number of these both naturalistic as well as stylised lingas have been found from most of the sites of Chalcolithic settlements. The naturalistic ones may have served as votive offerings, but the small stylised ones may have been hung around the neck as the Lingayats do today.

- The Mother Goddess is depicted on a huge storage jar of Malwa culture in an applique design. She is flanked by a woman on the right and a crocodile on the left, by the side of which is represented the shrine.

- Likewise the fiddle-shaped figurines probably resembling Srivatsa, the symbol of Lakshmi, the Goddess of wealth in historical period represent a mother Goddess.

- In a painted design on a pot, a deity is shown with dishevelled hair, recalling Rudra.

- A painting on a jar found from Daimabad shows a deity surrounded by animals and birds such as tigers and peacocks. Some scholars compare it with the 'Shiva Pashupati' depicted on a seal from Mohenjodaro.

- Two figurines from Inamgaon, belonging to late Jorwe culture, are identified as proto-Ganesh, who is worshipped for success.

- Several headless figurines found at Inamgaon have been compared with Goddess Visira of the Mahabharata.

- Fire-worship seems to have been a very widespread phenomenon among the Chalcolithic people of Pre-historic India as fire-altars have been found from a large number of Chalcolithic sites during the course of excavations.

- The occurrence of pots and other funerary objects found along with burials of the Malwa and Jorwe people indicate that people had a belief in life after death.

- The Chalcolithic farmers had made considerable progress in ceramic as well as metal technology. The painted pottery was well made and well fired in kiln, it was fired at a temperature between 500-700°C.

- In metal tools we find axes, chisels, bangles, beads, etc. mostly made of copper. The copper was obtained, perhaps, from the Khetri mines of Rajasthan.

- Gold ornaments were extremely rare and have been found only in the Jorwe culture.

- An ear ornament has been found from Prabhas in the Godavari valley also.

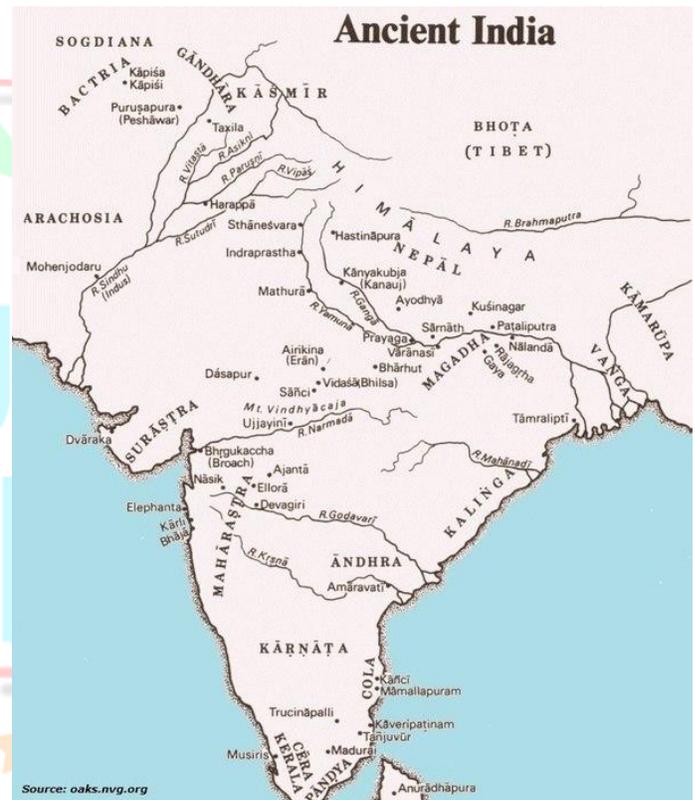
- The find of crucibles and pairs of tongs of copper at Inamgaon in Maharashtra shows the working of goldsmiths.

- Chalcedony drills were used for perforating beads of semi-precious stones.

- Lime was prepared out of Kankar and used for various purposes like painting houses and lining the storage bins, etc.

# INDIAN-HISTORY

The Indian subcontinent, the great landmass of South Asia, is the home of one of the world's oldest and most influential civilizations. In this article, the subcontinent, which for historical purposes is usually called simply "India," is understood to comprise the areas of not only the present-day Republic of India but also the republics of Pakistan (partitioned from India in 1947) and Bangladesh (which formed the eastern part of Pakistan until its independence in 1971). For the histories of these latter two countries since their creation, see Pakistan and Bangladesh. Since early times the Indian subcontinent appears to have provided an attractive habitat for human occupation. Toward the south it is effectively sheltered by wide expanses of ocean, which tended to isolate it culturally in ancient times, while



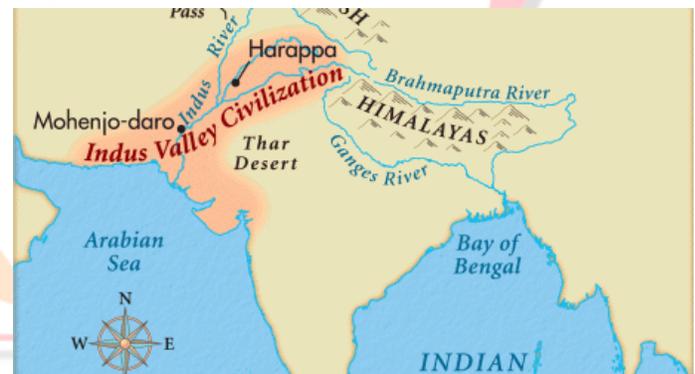
to the north it is protected by the massive ranges of the Himalayas, which also sheltered it from the Arctic winds and the air currents of Central Asia. Only in the northwest and northeast is there easier access by land, and it was through those two sectors that most of the early contacts with the outside world took place. Within the framework of hills and mountains represented by the Indo-Iranian borderlands on the west, the Indo-Myanmar borderlands in the east, and the Himalayas to the north, the subcontinent may in broadest terms be divided into two major divisions: in the north, the basins of the Indus and Ganges (Ganga) rivers (the Indo-Gangetic Plain) and, to the south, the block of Archean rocks that forms the Deccan plateau region. The expansive alluvial plain of the river basins provided the environment and focus for the rise of two great phases of city life: the civilization of the Indus valley, known as the Indus civilization, during the 3rd millennium BCE; and, during the 1st millennium BCE, that of the Ganges. To the south of this zone, and separating it from the peninsula proper, is a belt of hills and forests, running generally from west to east and to this day largely inhabited by tribal people. This belt has played

mainly a negative role throughout Indian history in that it remained relatively thinly populated and did not form the focal point of any of the principal regional cultural developments of South Asia. However, it is traversed by various routes linking the more-attractive areas north and south of it. The Narmada (Narbada) River flows through this belt toward the west, mostly along the Vindhya Range, which has long been regarded as the symbolic boundary between northern and southern India. The northern parts of India represent a series of contrasting regions, each with its own distinctive cultural history and its own distinctive population. In the northwest the valleys of the Baluchistan uplands (now largely in Balochistan, Pak.) are a lowrainfall area, producing mainly wheat and barley and having a low density of population. Its residents, mainly tribal people, are in many respects closely akin to their Iranian neighbours. The adjacent Indus plains are also an area of extremely low rainfall, but the annual flooding of the river in ancient times and the exploitation of its waters by canal irrigation in the modern period have enhanced agricultural productivity, and the population is correspondingly denser than that of Baluchistan. The Indus valley may be divided into three parts: in the north are the plains of the five tributary rivers of the Punjab (Persian: Panjāb, "Five Waters"); in the centre the consolidated waters of the Indus and its tributaries flow through the alluvial plains of Sind; and in the south the waters pass naturally into the Indus delta. East of the latter is the Great Indian, or Thar, Desert, which is in turn bounded on the east by a hill system known as the Aravali Range, the northernmost extent of the Deccan plateau region. Beyond them is the hilly region of Rajasthan and the Malwa Plateau. To the south is the Kathiawar Peninsula, forming both geographically and culturally an extension of Rajasthan. All of these regions have a relatively denser population than the preceding group, but for topographical reasons they have tended to be somewhat isolated, at least during historical times. East of the Punjab and Rajasthan, northern India develops into a series of belts running broadly west to east and following the line of the foothills of the Himalayan ranges in the north. The southern belt consists of a hilly, forested area broken by the numerous escarpments in close association with the Vindhya Range, including the Bhandar, Rewa, and Kaimur plateaus. Between the hills of central India and the Himalayas lies the Ganges River valley proper, constituting an area of high-density population, moderate rainfall, and high agricultural productivity. Archaeology suggests that, from the beginning of the 1st millennium BCE, rice cultivation has played a large part in supporting this population. The Ganges valley divides into three major parts: to the west is the Ganges-Yamuna Doab (the land area that is formed by the confluence of the

two rivers); east of the confluence lies the middle Ganges valley, in which population tends to increase and cultivation of rice predominates; and to the southeast lies the extensive delta of the combined Ganges and Brahmaputra rivers. The Brahmaputra flows from the northeast, rising from the Tibetan Himalayas and emerging from the mountains into the Assam valley, being bounded on the east by the Patkai Bum Range and the Naga Hills and on the south by the Mikir, Khasi, Jaintia, and Garo hills. There is plenty of evidence that influences reached India from the northeast in ancient times, even if they are less prominent than those that arrived from the northwest. Along the Deccan plateau there is a gradual eastward declivity, which dispenses its major river systems—the Mahanadi, Godavari, Krishna, and Kaveri (Cauvery)—into the Bay of Bengal. Rising some 3,000 feet (1,000 metres) or more along the western edge of the Deccan, the escarpment known as the Western Ghats traps the moisture of winds from the Arabian Sea, most notably during the southwest monsoon, creating a tropical monsoon climate along the narrow western littoral and depriving the Deccan of significant precipitation. The absence of snowpack in the south Indian uplands makes the region dependent entirely on rainfall for its streamflow. The arrival of the southwest monsoon in June is thus a pivotal annual event in peninsular culture.

## INDIA FROM THE PALEOLITHIC PERIOD TO THE DECLINE OF THE INDUS CIVILIZATION

The earliest periods of Indian history are known only through reconstructions from archaeological evidence. Since the late 20th century, much new data has emerged, allowing a far fuller reconstruction than was formerly possible. This section will discuss five major periods: (1) the early prehistoric period (before the 8th millennium BCE), (2) the period of the prehistoric agriculturalists and pastoralists (approximately the 8th to the mid-4th millennium BCE), (3) the Early Indus, or Early Harappan, Period (so named for the excavated city of Harappa in eastern Pakistan), witnessing the emergence of the first cities in the Indus River system (c. 3500–2600 BCE), (4) the Indus, or Harappan, civilization (c. 2600–2000 BCE, or perhaps ending as late as 1750 BCE), and (5) the Post-Urban Period, which follows the Indus civilization and precedes the rise of cities in northern India during the second quarter of the 1st



millennium BCE (c. 1750–750 BCE). The materials available for a reconstruction of the history of India prior to the 3rd century BCE are almost entirely the products of archaeological research. Traditional and textual sources, transmitted orally for many centuries, are available from the closing centuries of the 2nd millennium BCE, but their use depends largely on the extent to which any passage can be dated or associated with archaeological evidence. For the rise of civilization in the Indus valley and for contemporary events in other parts of the subcontinent, the evidence of archaeology is still the principal source of information. Even when it becomes possible to read the short inscriptions of the Harappan seals, it is unlikely that they will provide much information to supplement other sources. In those circumstances it is necessary to approach the early history of India largely through the eyes of the archaeologists, and it will be wise to retain a balance between an objective assessment of archaeological data and its synthetic interpretation.

### THE EARLY PREHISTORIC PERIOD

In the mid-19th century, archaeologists in southern India identified hand axes comparable to those of Stone Age Europe. For nearly a century thereafter, evaluation of a burgeoning body of evidence consisted in the attempt to correlate Indian chronologies with the well-documented European and Mediterranean chronologies. As the vast majority of early finds were from surface sites, they long remained without precise dates or cultural contexts. More recently, however, the excavation of numerous cave and dune sites has yielded artifacts in association with organic material that can be dated using the carbon-14 method, and the techniques of thermoluminescent and paleomagnetic analysis now permit dating of pottery fragments and other inorganic materials. Research beginning in the late 20th century has focused on the unique environment of the subcontinent as the context for a cultural evolution analogous to, but not uniform with, that of other regions. Increasing understanding of plate tectonics, to cite one development, has greatly advanced this endeavour. Most outlines of Indian prehistory have employed nomenclature once thought to reflect a worldwide sequence of human cultural evolution. The European concept of the Old Stone Age, or Paleolithic Period (comprising Lower, Middle, and Upper stages), remains useful with regard to South Asia in identifying levels of technology, apart from any universal time line. Similarly, what has been called the Indian Mesolithic Period (Middle Stone Age) corresponds in general typological terms to that of Europe. For the subsequent periods, the designations Neolithic Period (New Stone Age) and Chalcolithic Age (Copper- Stone Age) also are applied, but increasingly, as

archaeology has yielded more-detailed cultural profiles for those periods, scholars have come to emphasize the subsistence bases of early societies—e.g., hunting and gathering, pastoralism, and agriculture. The terms Early Harappan and Harappan (from the site where remains of a major city of the Indus civilization were discovered in 1921) are used primarily in a chronological way but also loosely in a cultural sense, relating respectively to periods or cultures that preceded the appearance of city life in the Indus valley and to the Indus civilization itself.

## THE INDIAN PALEOLITHIC

The oldest artifacts yet found on the subcontinent, marking what may be called the beginning of the Indian Lower Paleolithic, come from the western end of the Shiwalik Range, near Rawalpindi in northern Pakistan. These quartzite pebble tools and flakes date to about two million years ago, according to paleomagnetic analysis, and represent a pre-hand-axe industry of a type that appears to have persisted for an extensive period thereafter. The artifacts are associated with extremely rich sedimentary evidence and fossil fauna, but thus far no correlative hominin (i.e., members of the human lineage) remains have been found. In the same region the earliest hand axes (of the type commonly associated with Acheulean industry) have been dated paleomagnetically to about 500,000 years ago. The Great Indian Desert, straddling what is now the southern half of the India-Pakistan border, supplied significant archaeological materials in the late 20th century. Hand axes found at Didwana, Rajasthan, similar to those from the Shiwalik Range, yield slightly younger dates of about 400,000 years ago. Examination of the desert soil strata and other evidence has revealed a correlation between prevailing climates and the successive levels of technology that constitute the Paleolithic. For example, a prolonged humid phase, as attested by reddish brown soil with a deep profile, appears to have commenced some 140,000 years ago and lasted until about 25,000 years ago, roughly the extent of the Middle Paleolithic Period. During that time the area of the present desert provided a rich environment for hunting. The Rohri Hills, located at the Indus River margins of the desert, contain a group of sites associated with sources of chert, a type of stone that is a principal raw material for making tools and weapons. Evidence surrounding these chert bands—in an alluvial plain otherwise largely devoid of stone —suggests their development as a major factory centre during the Middle Paleolithic. The transition in this same region to a drier climate during the period from about 40,000 to about 25,000 years ago coincides with the onset of the Upper Paleolithic, which lasted until about 15,000 years ago. The basic innovation

marking this stage is the production of parallelsided blades from a prepared core. Also, tools of the Upper Paleolithic exhibit adaptations for working particular materials, such as leather, wood, and bone. The earliest rock paintings yet discovered in the region date to the Upper Paleolithic. Other important Paleolithic sites that have been excavated include those at Hunsgi in Karnataka state, at Sanghao cave in North-West Frontier Province, Pak., and in the Vindhya Range separating the Ganges basin from the Deccan plateau. At the latter, local workers readily identified a weathered Upper Paleolithic limestone carving as a representation of a mother goddess.

## MESOLITHIC HUNTERS

The progressive diminution in the size of stone artifacts that began in the Middle Paleolithic reached its climax in the small parallel-sided blades and microliths of what has been called the Indian Mesolithic. A great proliferation of Mesolithic cultures is evident throughout India, although they are known almost exclusively from surface collections of tools. Cultures of this period exhibited a wide variety of subsistence patterns, including hunting and gathering, fishing, and, at least for part of the period, some herding and small-scale agriculture. It may be inferred from numerous examples that hunting cultures frequently coexisted and interacted with agricultural and pastoral communities. These relationships must have continually varied from region to region as a result of environmental and other factors. Strikingly, such patterns of interaction persisted in the subcontinent throughout the remainder of the prehistoric period and long into the historic, with vestiges still discernible in some areas in the 20th century.

Thus, chronologically, the Mesolithic cultures cover an enormous span. In Sri Lanka several Mesolithic sites have been dated to as early as about 30,000 years ago, the oldest yet recorded for the period in South Asia. At the other end of the subcontinent, in caves of the Hindu Kush in northern Afghanistan, evidence of occupation dating to between 15,000 and 10,000 BCE represents the Epipaleolithic Stage, which may be considered to fall within the Mesolithic. The domestication of sheep and goats is thought to have begun in this region and period. Many of the caves and rock shelters of central India contain rock paintings depicting a variety of subjects, including game animals and such human activities as hunting, honey collecting, and dancing. This art appears to have developed from Upper Paleolithic precursors and reveals much about life in the period. Along with the art have come increasingly clear indications that some of the caves were sites of religious activity.

## THE EARLIEST AGRICULTURALISTS AND PASTORALISTS NEOLITHIC AGRICULTURE IN THE INDUS VALLEY AND BALUCHISTAN

The Indo-Iranian borderlands form the eastern extension of the Iranian plateau and in some ways mirror the environment of the Fertile Crescent (the arc of agricultural lands extending from the Tigris-Euphrates river system to the Nile valley) in the Middle East.

Across the plateau, lines of communication existed from early antiquity, which would suggest a broad parallelism of developments at both the eastern and western extremities. During the late 20th century, knowledge of early settlements on the borders of the Indus system and Baluchistan was revolutionized by excavations at Mehrgarh and elsewhere.



The group of sites at Mehrgarh provides evidence of some five or six thousand years of occupation comprising two major periods, the first from the 8th through the 6th millennium BCE and the second from the 5th through the 4th (and possibly the 3rd) millennium. The earliest evidence occurs in a mound 23 feet (7 metres) deep discovered beneath massive alluvial deposits. Two subphases of Period I are apparent from the mound artifacts. Phase IA, dating to the 8th–7th millennium BCE, was an aceramic (i.e., lacking pottery) Neolithic occupation. The main tools were stone blades, including lunates and triangles, some probably mounted in wooden hafts with bitumen mastic; a relatively small number of ground stone axes have been found. Domestication of wheat and barley apparently reached the area sometime during this phase, as did that of sheep and goats, although the preponderance of gazelle bones among the animal remains suggests continued dependence on hunting. Houses of mud brick date from the beginning of this phase and continue throughout the occupation. Accompaniments to the simple burial of human remains included shell or stone-bead necklaces, baskets, and occasionally young caprids (both sheep and goats) slaughtered for the purpose. Phase 1B, dating to the 7th–6th millennium, is characterized by the emergence of pottery and improvements in agriculture. By the beginning of Phase 1B, cattle (apparently *Bos indicus*, the Indian humped variety) had come to predominate over game animals, as well as over sheep and

goats. A new type of building, the small regular compartments of which identify it almost certainly as a granary, first appeared during this phase and became prevalent in Period II, indicating the frequent occurrence of crop surpluses. Burial took a more elaborate form—a funerary chamber was dug at one end of a pit, and, after inhumation, the chamber was sealed by a mud brick wall. From the latter phase of Period I also come the first small, handmodeled female figurines of unburned clay.

The Period I evidence at Mehrgarh provides a clear picture of an early agricultural settlement exhibiting domestic architecture and a variety of well-established crafts. The use of seashells and of various semiprecious stones, including turquoise and lapis lazuli, indicates the existence of trade networks extending from the coast and perhaps also from Central Asia.

Striking changes characterize Period II. It appears that some major tectonic event took place at the beginning of the period (c. 5500 BCE), causing the deposition of great quantities of silt on the plain, almost completely burying the original mound at Mehrgarh. Nearly all features of the earlier culture persisted, though in altered form. There was an increase in the use of pottery. The granary structures proliferated, sometimes on a larger scale. The remains of several massive brick walls and platforms suggest something approaching monumental architecture. Evidence appears of several new crafts, including the first examples of the use of copper and ivory. The area of the settlement appears to have grown to accommodate an increasing population.

While the settlement at Mehrgarh merits extensive consideration, it should not be perceived as a unique site. There are indications (not yet fully explored) that other equally early sites may exist in other parts of Baluchistan and elsewhere on the Indo-Iranian borderlands.

In the northern parts of the Indus system, the earliest known settlements are substantially later than Mehrgarh. For example, at Sarai Khola (near the ruins of Taxila in the Pakistan Punjab) the earliest occupation dates from the end of the 4th millennium and clearly represents a tradition quite distinct from that of contemporary Sind or Balochistan, with ground stone axes and plain burnished red-brown pottery. The same is the case at Burzahom in the Vale of Kashmir, where deep pit dwellings are associated with ground stone axes, bone tools, and gray burnished pottery. Evidence of the “aceramic Neolithic” stage is reported at Gufkral, another site in the Kashmir region, which has been dated by radiocarbon to the 3rd millennium and later.

## DEVELOPMENTS IN THE GANGES BASIN

In the hills to the south of the Ganges (Ganga) valley, a group of sites has been assigned to the "Vindhya Neolithic"; for at least one of these, Koldihwa, dates as early as the 7th millennium have been reported. The sites contain circular huts made of timber posts and thatch; associated implements and vessels include stone blades, ground stone axes, bone tools, and crude handmade pottery, often bearing the marks of cords or baskets used in shaping the clay. In one case a small cattle pen has been excavated. Rice husks occur, though whether from wild or cultivated varieties remains to be determined. There exists considerable uncertainty about the chronology of these settlements; very few radiocarbon dates penetrate further than the 2nd millennium.

## EARLIEST SETTLEMENTS IN PENINSULAR INDIA

The earliest dates recorded for settlements in peninsular India belong to the opening centuries of the 3rd millennium. A pastoral character dominates the evidence. In the northern parts of Karnataka, the nucleus from which stone-ax-using pastoralists appear to have spread to many parts of the southern peninsula has been located. The earliest radiocarbon dates obtained in this area are from ash mounds formed by the burning on these sites of great masses of cow dung inside cattle pens. These indicate that the earliest settlers were seminomadic and that they had large herds of Brahman (zebu) cattle. The earliest known settlements, which were located at Kodekal and Utnur, date to about 2900 BCE. Other important sites are Brahmagiri and Tekkalkota in Karnataka and Utnur and Nagarajunikonda in Andhra Pradesh. At Tekkalkota three gold ornaments were excavated, indicating exploitation of local ore deposits, but no other metal objects have been found, suggesting a relative scarcity of metals. These early sites produced distinctive burnished gray pottery, smaller quantities of black-on-red painted pottery, stone axes, and bone points, and in some instances evidence of a stone-blade industry. The axes have a generally oval section and triangular form with pointed butts. Among bone remains, those of cattle are in the majority, while those of sheep or goats are also present. Other settlements have been excavated in recent years in this region, but so far they have produced dates from the 2nd millennium, suggesting that the culture continued with little change for many centuries. Stone axes of a generally similar form have been found widely throughout the southern peninsula and may be taken as indications of the spread of pastoralists throughout the region during the 2nd millennium BCE.

## EARLIEST SETTLEMENTS IN EASTERN INDIA

Archaeologists have long postulated the existence of Neolithic settlements in the eastern border regions of South Asia on the basis of widespread collections of ground stone axes

and adzes, often of distinctive forms, comparable to those of Southeast Asia and south China. There is, however, little substantial evidence for the date of these collections or for the culture of the people who made them. Excavations at one site, Sarutaru, near the city of Guwahati, revealed stone axes and shouldered celts (one of the distinctive tool types of the Neolithic) in association with cord- or basket-marked pottery.

## THE RISE OF URBANISM IN THE INDUS VALLEY

From about 5000 BCE, increasing numbers of settlements began to appear throughout the Indo-Iranian borderlands. These, as far as can be judged, were village communities of settled agriculturalists, employing common means of subsistence in the cultivation of wheat, barley, and other crops and in the keeping of cattle, sheep, and goats; there was a broadly common level of technology based on the use of stone for some artifacts and copper and bronze for others. Comparison and contrast of the high-quality painted pottery of the period suggest distinct groupings among the communities. At a somewhat later date, probably toward the middle of the 4th millennium BCE, agricultural settlements began to spread more widely in the Indus valley itself. The earliest of these provide clear links with the cultures along or beyond the western margins of the Indus valley. In the course of time, a remarkable change took place in the form of the Indus settlements, suggesting that some kind of closer interaction was developing, often over considerable distances, and that a process of convergence was under way. This continued for approximately 500 years and can now be identified as

marking a transition toward the full urban society that emerged at Harappa and similar sites about 2600 BCE. For this reason, this stage has been named the Early Harappan, or Early Indus, culture.

## EXTENT AND CHRONOLOGY OF EARLY HARAPPAN CULTURE

It is now clear that sites assignable to the Early Harappan Period extend over an immense area: from the Indus delta in the south, southeastward into Saurashtra; up the Indus valley to western Punjab in the northwest; eastward past Harappa to the Bahawalpur region of Pakistan; and, in the northeast, into the Indian states of Punjab and Haryana. In short, the area of the Early Harappan culture was nearly coextensive with that of the mature Indus civilization. Radiocarbon dating of artifacts from a number of the excavated sites provides a fairly consistent chronological picture. The Early Harappan Period began in the mid-4th millennium BCE and continued until the mid-3rd millennium, when the mature Indus civilization displaced it in many regions. In some regions, notably in Punjab, the mature urban style seems never to have been fully established, and in

these areas the Early Harappan style continued with little or no outward sign of mature Harappan contact until about 2000 BCE.

## PRINCIPAL SITES

One of the most significant features of the Early Harappan settlements is the evidence for a hierarchy among the sites, culminating in a number of substantial walled towns. The first site to be recognized as belonging to the Early Harappan Period was Amri in 1929. In 1948 the British archaeologist Sir Mortimer Wheeler discovered a small deposit of pottery stratified below the remains of the mature Indus city at Harappa. The next site to be excavated with a view to uncovering the Early Harappan Period was Kot Diji (in present-day Sind province, Pakistan). A stone rubble wall surrounded this settlement, which appears to date to about 3000 BCE. An even earlier example is Rehman Dheri, near Dera Ismail Khan, which appears to have achieved its walled status during the last centuries of the 4th millennium. There the roughly rectangular, grid-patterned settlement was surrounded by a massive wall of mud brick. Early Harappan Kalibangan (Kali Banga) in Rajasthan resembled Rehman Dheri in form. It later served as the basis for an expanded settlement of the mature Indus civilization. Still farther east in the eastern Punjab and in Haryana are many other Early Harappan sites. Among them several have been excavated, notably Banawali and Mitathal. Another example of a walled settlement of the period is Tharri in southern Sind. This was probably originally a coastal site, although it is now many miles from the sea. There the surrounding wall and the extant traces of houses are of local stone.

## SUBSISTENCE AND TECHNOLOGY

Many of the excavated sites mentioned above have yet to be fully studied and the findings published, and knowledge of the various features of the life and economy of their inhabitants remains somewhat scanty. All the evidence indicates that the subsistence base of Early Harappan economy remained much as it had already developed at Mehrgarh some two millennia earlier; cattle, sheep, and goats constituted the principal domestic animals, and wheat and barley formed the staple crops. From Kalibangan and several other sites in Bahawalpur and Punjab comes intriguing evidence concerning the use of the plow. At the former site, excavators discovered what appeared to be a plowed field surface preserved beneath buildings from the mature Indus period. The pattern of crisscrossed furrows was virtually identical to that still employed in the region, the wider furrows in one direction being used for taller crops, such as peas, and the narrow perpendicular rows being used for oilseed plants such as those of the genus *Sesamum*

(sesame). From Banawali and sites in the desiccated Sarasvati River valley came terra-cotta models of plows, supporting the earlier interpretation of the field pattern. The evidence for the various Early Harappan crafts and their products also calls for further publication and detail before a firm picture can be obtained. Thus far, only a small number of copper tools have been found, and little can yet be confirmed regarding their sources and manufacture. A number of the settlement sites lie far from any sources of stone, and thus the regular appearance of a stone-blade industry, producing small, plain or serrated blades from prepared stone cores, implies that the raw materials must have been imported, often from considerable distances. The same assumption applies to the larger stones employed as rubbers or grinders, but in the absence of detailed research, no firm conclusions are possible. Related evidence does indicate that some contemporary sites, such as Lewan and Tarakai Qila in the Bannu basin, were large-scale factories, producing many types of tools from carefully selected stones collected and brought in from neighbouring areas. These same sites also appear to have been centres for the manufacture of beads of various semiprecious stones.

## CULTURE AND RELIGION

It may be concluded on the basis of pottery decoration that major changes were taking place in the intellectual life of the whole region during the Early Harappan Period. At a number of sites the pottery bears a variety of incised or painted marks, some superficially resembling script. The significance of these marks is not clear, but most probably they represent owners' marks, applied at the time of manufacture. Although it would be an exaggeration to regard these marks as actual writing, they suggest that the need for a script was beginning to arise.

Among the painted decorations found on the pottery, some appear to carry a distinctly religious symbolism. The clearest instance of this is in the widespread occurrence of the buffalo-head motif, characterized by elongated horns and in some cases sprouting pipal (*Ficus religiosa*) branches or other plant forms. These have been interpreted as representing a "buffalo deity." A painted bowl from Lewan displays a pair of such heads, one a buffalo and the other a *Bos indicus*, each adorned with pipal foliage. Other devices from the painted pottery may also have religious significance, particularly the pipal leaves that occur as independent motifs. Other examples include fish forms and the fish-scale pattern that later appears as a common decoration on the mature Indus pottery. Throughout the region, evidence supports a "convergence" of form and decoration in anticipation of the more conservative Indus style. The remains discussed above,

considered collectively, suggest that four or five millennia of uninterrupted agricultural life in the Indus region set the stage for the final emergence of an indigenous Indus civilization about 2600 BCE. It could also be argued, however, that the substantial Early Harappan walled towns constituted cities. Much research, excavation, and comparative analysis are required before this fertile and provocative period can be understood.

