
UNIT 2 HISTORY AND DEVELOPMENT

Structure

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Learning Objectives



Once you have studied this unit, you should be able to:

- understand the role of “Three Age System” in Archaeology;
- demonstrate the relationship between “time scale” and “periodisation”;
- interpret the role of institutions and individuals in developing Prehistory and protohistoric studies in India; and
- analyse the problems in “Pre and Protohistory of India”.

2.1 INTRODUCTION

The emergence of Archaeology as an academic discipline was preceded by a long antiquarian stage. This stage can be traced back to the works of early Chinese and Arab historians and to the historical treatises, written during the time of Italian Renaissance. Chinese historians like Ouyang Xiu (1007–1072) and Shen Kuo (1031–1095) made important contributions in this field. They wrote about ancient rubbings on stone and metal as well as about different manufacturing techniques of goods in ancient China. Muslim historians of the medieval period also showed keen interest in material remains of the Near East. A few scholars of Egyptology like Abdul Latif al-Baghdadi knew about ancient Egyptian monuments and developed certain techniques of excavating ancient remains (El Daly 2005).

Since the fourteenth century, historians of Europe were utilising inscriptions, coins and medals for extracting information about the unknown past. In the fifteenth century, new societies and museums emerged as nuclei of researches on the ancient Greco-Roman world. There was a direct shift of focus from the theological interpretation of human past of earlier church historians to a humanist approach during the Renaissance. Notables among these initiatives were the

collections of Nicolao Nicoli, Lorenzo de Medici of Florence and Capitoline museum, established by Pope Sixtus IV (Sreedharan 2004). Among these historians Flavio Biondo (1388-1463 AD) was one of the first antiquarians who extensively used material remains of Rome to write his book on Roman History (*ibid.*). This period is characterised by a tendency – to be known later as antiquarianism. Similar researches were carried out in the Age of Enlightenment which also generated important concepts of geology and anthropology. These antiquarian pursuits developed some of the basic components of the modern archaeological methods in Europe. European scholars from the Sixteenth to Eighteenth Century made significant contributions in structuring the discipline of modern Archaeology. William Camden was one among these early researchers who played a key role in founding the Society of Antiquaries in London in 1707 (Trigger 1989:47). Other notable antiquarians of this period were John Aubrey, Johan Winckelmann, William Stuckeley from Europe and Thomas Jefferson of North America.

Systematic research in Archaeology started a little later in the Scandinavian countries. Kings Christian IV of Denmark and Gustavus II Adolphus of Sweden encouraged the scholars to reconstruct the history of their respective countries from ancient records which included ancient relics and monuments (Trigger 1989:49). Johan Bure, a Swedish civil servant and Ole Worm, a Danish medical doctor, documented a large number of material remains from the past. New museums grew out of these collections and one such museum, based on Ole's collection, was opened to the public in the 1680s (Trigger 1989:49).

All these activities generated a strong belief in the power of human agency. The Scientific Revolution in Europe further strengthened these trends of anthropocentricity and proved to be beneficial to the growth of archaeology as a modern scientific discipline. Similarly, archaeology profited greatly from the works of early geologists who ensured a departure from the popular beliefs in the Biblical theories of recent human origin and their theories were supported by studies on stratigraphical succession. The role of geology was crucial in developing the concept of Relative Time i.e. the succession of historical events in respect of one another (Leet *et al.* 1982). The Three- Age system reflects this idea of Relative Time for understanding human history. Now we will consider how the Three-Age system was formulated.

2.2 THREE-AGE SYSTEM

The Three-Age system is a method of classification of material remains of human past into a chronological order and is based upon the idea of progress in technology. It is rooted in the writings of the Enlightenment period. In fact this notion of progress in human history can be traced in the writings of still earlier periods. An ancient scholar from China belonging to Eastern Zhou Period (c.770-221) had talked about such a scheme in his poem (Renfrew and Bahn 2005:265). He talked about four different stages of technological progression, namely, the age of stone, jade, bronze and iron. Similar ideas were put forward by the Roman poet Lucretius of the 1st century BC in his poem called *De Rerum Natura* (*ibid.*). Such concepts were presented by many scholars of the seventeenth century Europe, who were puzzled by the stone tools, then known as elf-shots or thunderbolts (*ibid.* 264). Michel Mercati, a sixteenth century scholar of Italy and

Antoine de Jussieu (1723) of France studied these so-called “thunderbolts” and declared that these objects were from a period when iron was not in use (*ibid.*). However, these early attempts towards the description and classification of the increasing collections of antiquarian remains were based more on intuitions than on logical arguments.

The Three-Age system was established on strong grounds by Christian Jurgensen Thomsen of Denmark. Thomsen was the son of a wealthy merchant of Copenhagen and was born in 1788. He studied in Paris and undertook the assignment of arranging Scandinavian and Roman coins after his return from France (Trigger 1989: 74). Probably this system of arrangement - on the basis of relative dating - influenced his methods for classifying prehistoric antiquities later. Another important influence on Thomsen was the evolutionary approach of his time. This was a politically turbulent time for Denmark which suffered great losses at the hands of the British in 1801 and again in 1807 (Trigger 1989:274). These calamities encouraged the Danes to devote their times to restore the past glories of their country. In 1807, a Danish Royal Commission for the Preservation and Collection of Antiquities was established and Thomsen was invited to arrange its collection in 1816 (Trigger 1989:275).

Thomsen took up the task of cataloguing and describing the typological attributes of all objects found in the collection. As we noted in Unit 1, Thomsen’s work was influenced by evolutionary ideas of the Age of Enlightenment including the use of stone before metals. The evidence of classical and Biblical texts also suggested that bronze was in use before iron. He also took into account the use of similar tools and implements in the rural life of Denmark. However there was a problem in this scheme of classification. Thomsen was aware that a few of these stone tools were in use even during the metal ages. Therefore it was needed to segregate the stone tools of the Stone Age and the stone tools from the metal ages. Thomsen depended too on ‘closed finds’ or objects which were found in association with each other, in a single context or from a same grave (Trigger 1989: 276). He divided these antiquities into different categories on the basis of the material, shape as well as decorations found on them. Thomsen was not satisfied with his classification only but proceeded to examine the contexts from where these objects were reportedly found. He could differentiate the objects of Bronze Age from those of the Iron Age on the basis of such a typological analysis – a crude form of seriation (Trigger 1989:276).

Box 1: Seriation

Seriation is a method of arranging material objects, assemblages or sites into a linear sequence on the basis of the degree of similarities found in them. The earliest exponent of the method was Christian Jurgensen Thomsen, followed by a better effort of G.O. Montelius (1885). Sir Flinders Petrie was the first archaeologist to apply the method in analysing excavated materials from the pre-dynastic period of Egypt (1899) (Shaw and Jameson 1999:519-20). Petrie depended on the concept of ‘occurrence’ of ‘incidence’ (presence or absence of an object) whereas modern seriation technique depends more on the concepts of ‘frequency’ or ‘abundance’ (changing frequencies of a smaller number of artifacts). Various computer applications are now being used for seriation.

This approach allowed him to assign all associated objects, found with stone tools, like glass objects or pottery, to a particular age. The Museum of Northern Antiquities, where Thomsen worked, was opened to the public in 1819 and his researches were published in a book called *Ledartraad til Nordisk Oldkyndighed* (Guide Book to Scandinavian Antiquity) in 1836. The Three-Age system was stratigraphically verified by the excavations of J.J. Worsaae (Renfrew and Bahn 2005:266).

The Three-Age system is an important conceptual method for dating the antiquities without depending on written records. It formed the basis for prehistoric chronology. It was rapidly adopted in museums across Europe and became the source for further internal subdivisions and regional variations. Such internal subdivisions were important for concepts like periodisation in the field of History and Archaeology

2.3 DIVISIONS AND PERIODISATION

In this present section we will try to understand the meanings of ‘division’ and ‘periodisation’. The word ‘division’ actually denotes temporal division whereas periodisation indicates further internal ordering. Temporal division of the human past and its further periodisation were an indirect outcome of the efforts towards classification of the objects and their arrangement in a sequential order. In this respect archaeologists derived inspiration from the writings of philosophers, geologists and biologists.

It is important to note that time itself has no provision to divide itself or to mark its progress. Systems of measuring time are actually dependent on human thoughts and are basically relative in nature. For example, there is no particular natural event or phenomenon to declare the end of a century or the starting of a new one. It is we, the human beings, who mark passage of time through different activities. Even our days and nights are dependant on rotations of celestial objects and these are not always uniform in duration. Actually, we are calculating certain activities of these objects in relation to each other and not time. We can only experience the continuous flow of time. In the next passage we will try to understand the concept of Relative Time with these pre-conditions in mind.

Relative time is a system of temporal division to establish the sequence of events in history. In other words, it is a system to establish the priority or posteriority of events in respect to one another. Concepts of *change*, *variability*, *continuity* and *direction* are important to determine relative time. We experience time through varied activities and changes in these activities. However, these activities do not define time but only indicate occurrence of events in relation to one another. All activities have specific temporal structures such as the shooting of an arrow is a unidirectional event in time as against death or birth which is cyclic (events Gamble 2001:133). However, these activities do not define time but only indicate occurrence of events in relation to one another. These notions underly the idea of relative chronology is connected with all of these concepts as mentioned above.

For analytical purposes the entire human past has been divided into different ages on the basis of these activities, ideas of change, concepts of progress and variability in objects. Material remains are considered as proofs of these actions which mark time. The biggest contribution of the geologists and archaeologists

to human knowledge is the realisation of the immense length of time. But human beings are not capable of imagining this immense length of time through our intellect and we require crystallisation of it into several smaller temporal divisions – guided by the ideas of ‘contemporaneity’ and ‘time averaging’ (Gamble 2001:137). In other words, we assign a block of time to different actions – happening over different spaces. Such temporal divisions of human past were influenced by works of philosophers such as Giambattista Vico (1725). Vico (1725) opined that certain periods of history share same general characters and similar periods recur in the same order (Sreedharan 2000:102). These ideas became useful in creating temporal divisions of human past.

The entire range of material remains constituting the archaeological record belongs to three broad temporal divisions, namely, Prehistory, Protohistory and Historical period. Historical Age is further divided into Ancient, Medieval and Modern. The Prehistoric Age deals with a period marked by the absence of written records whereas the Historical Age is noted by the emergence of writing techniques. The Protohistoric Age is falling between these two and is known for technological developments along with trade and commerce but conspicuous by the absence of writing. It is important to note here that these ages do not show uniformity either in terms of chronological duration or in terms of geographical boundaries. Periodisation is a process of subdividing these macro divisions of time into smaller units, depending on certain commonly accepted parameters which mainly refer to typo-technological developments in human society. We have already noticed how Thomsen divided the human past into three ages on the basis of typo-technology of material remains. His works were further refined by J.J. Worsaae (1851). Worsaae realised that the Stone Age could be divided further into Early and Late phases where the latter marks the advent of pottery and polished stone tools (Renfrew and Bahn 2005:267). The British archaeologist Sir John Lubbock (1865) divided the Stone Age into ‘Palaeolithic’ and ‘Neolithic’ stages.

It has already been mentioned that, as facilitated by a series of excavations done in French caves by Lartet and others and also recognition of changes in the technology and typology of stone implements, the Palaeolithic dated to the Pleistocene was divided into Lower, Middle and Upper stages. Gabriel de Mortillet (1821) recognised substages within these stages (e.g. Acheulian, Mousterian, Aurignacian etc.). Also an intermediate phase called the Mesolithic, characterised by microlithic technology and dated to the early part of the Holocene period, was recognised between the Palaeolithic and Mesolithic stages.

Slowly the use of technological criteria (changes in the technology and typology of implements) for dividing preliterate past came under stress and new meanings involving socio-economic and other factors began to be ascribed to terms like Palaeolithic and Neolithic. Gordon Childe introduced the terms savagery, barbarism and civilization to characterise the Palaeolithic, Neolithic and Bronze Age, respectively. Robert Braidwood introduced phrases like the eras of initial hunting and gathering, intensified hunting and intensified collecting to mark changes within the Palaeolithic and Megalithic phases.

2.4 ANTIQUARIAN INITIATIVES IN PREHISTORIC RESEARCHES

Prehistoric researches in India are mainly associated with the Europeans and their arrival in the subcontinent. The first antiquarians of the country were the

surveyors, who collected numerous artifacts during the courses of their field works in different regions of India (Singh 2004:2).

Different institutions and individuals played significant roles in prehistoric researches in India. One important institution in this field is the Asiatic Society of Bengal. The society was established in 1784 by Sir William Jones. Though the society devoted a significant amount of its time towards the advancement of historical studies, but its contribution towards the publication of important researches in the field of Prehistory can not be ignored.

2.5 DEVELOPMENT OF PREHISTORIC STUDIES

In a paper published in the Proceedings of the Asiatic Society of Bengal V. Ball draws attention to the fact that a few British antiquarians like Captain Abbot had reported the finding of agate splinters from Narmada valley as early as in 1845 (Chakrabarti 2006:1). Similar findings were also reported from Lingsugur in Karnataka 1847(*ibid.*). In 1861, H. P. Le Mesurier found polished stone implements and microliths from Bundelkhand, which was followed by similar findings by W. Theobald in 1862 (Chakrabarti 2006:2). Theobald also mentioned the discovery of chert cores and flakes from Port Blair by Major Houghton. No doubt, credit should be given to these antiquarians for recognising these objects as creations of human beings. However, Robert Bruce Foote is generally credited with the first discovery of Palaeolithic implements in India. On 30th May, 1863, Foote found a few Palaeolithic implements from a gravel pit at Pallavaram, near Madras (Chennai). He is rightly called the father of Indian Prehistory.

Prehistoric researches in India can be divided into three periods: Phase I (1863-1900), Phase II (1900-1950) (Chakrabarti 2006: 2) and Phase III (1950 - till date). The first period is marked by individual efforts, whereas the second period is known for the institutional involvements. The third phase is characterised by the application of absolute dating methods and other advanced techniques and methods for studying the prehistoric remains.

2.5.1 Phase I

During this period, a large number of individuals participated in discovering prehistoric remains. In September 1863, Foote reported his findings of stone tools from Attirampakkam and a few of them were *in situ* (Chakrabarti 2006:2). Next year, he reported another cache of Palaeoliths from Pallavaram where also T. Oldham found similar tools *in situ* (Chakrabarti 2006:2). Foote's collections were displayed in an exhibition at the Asiatic Society of Bengal in 1864. In the same year and the following, several discoveries of Stone Age tools were reported by J.D. Swiney, W. Theobald, W. King, Messieurs Cornish, Fraser, Robinson and V. Ball from Jabalpur, Madras, Bengal and Myanmar.

In 1865 W. Blanford and S.B. Wyne discovered a stone tool along with shells. A comprehensive report on these findings was published in the Proceedings of the Asiatic Society of Bengal in 1867. Blanford discovered a large number of microliths in southern M.P and Nagpur region and was able to notice their similarities with their counterparts in Europe. He interpreted them as representing the tool-kit of hunting and fishing communities (Chakrabarti 2006:3). Blanford also commented that the makers of the stone tools found by Wyne, lived during

the period of extinct animals whose fossils were found in the sediments of the Narmada and the Godavari (*ibid.*).

W. King was among the pioneers in analysing the contexts of his findings from Andhra Pradesh (Chakrabarti 2006:3). The efforts of King should also be noted for his analysis of functionality of these tools. Ball wrote in this period that the Palaeolithic industry of India extended up to Bengal and this technology was not available in the North Eastern provinces. After 1867, Foote carried out extensive surveys in Andhra Pradesh, Karnataka and Tamil Nadu, and after his retirement, in Gujarat. Three of his major reports were published in 1866, 1873 and in 1880 (Chakrabarti 2006:2) where he discussed about the history of his discoveries and also gave detailed descriptions of tools, raw materials and their contexts. Foote also commented on the causes of widespread dispersal of Stone Age groups.

Foote's work in the Kurnool caves of Andhra Pradesh, constitutes an important chapter of this period. He found bone implements here which he compared with the Magdalenian tools of Upper Palaeolithic Europe. The later part of Foote's life was devoted to the Neolithic findings from Karnataka and geology of Gujarat. He reported on stone tools and associated fossiliferous deposits from the Sabarmati river. He published two catalogues on his collections in 1914 and 1916, which were later acquired by the Government Museum of Madras (Chakrabarti 2006:4).

In Northwestern Frontier and Sind, Blanford, Theobald and C. Swynnerton made important discoveries. In 1875 Blanford suggested that the cores from the Indus region were different from the ones found in the nearby hills. In eastern India, Neolithic celts were reported from Assam in 1867 and again in 1870. Ball continued his surveys in Bengal, Bihar and Orissa but his observations on these findings do not stand modern scrutiny (Chakrabarti 2006:4).

This period is also crucial for rock art researches in India. A.C.L. Carlleyle of Archaeological Survey of India worked extensively in the Vindhyan region. One of the most important discoveries by Carlleyle was cited by V. A. Smith in his 1906 paper. Smith quoted Carlleyle in this article on the latter's findings of Mesolithic artifacts as well as rock paintings in rock shelters of Sohagighat of Rewa district, Madhya Pradesh (Smith 1906). This discovery was made in the winter season of 1867-68 (Smith 1906). In 1883, J. Cockburn found similar paintings in Mirzapur district and published an account of his discoveries in 1899. However, Cockburn believed that not all of these paintings can be assigned to the Stone Age (See Box 2).

Box 2: Rock Art

The term 'rock art' covers all forms of artistic activity on rock. Its principal categories are pictograph (application of pigments), petroglyphs (motifs carved into rocks) and engravings besides other forms like petroforms and geoglyphs. The discovery of rock paintings in Sohagighat by A.C.L. Carlleyle in 1867-8 and his assigning them to a remote past represent one of the earliest discoveries of rock art in the world. In 1879, Marcelo Sanz De Sautuola discovered bison figures on the ceilings of Altamira, in Spain and found that these are similar in style to the figurines in Upper Palaeolithic portable art. This brought about a significant change in our understanding of rock art in the world.

2.5.2 Phase II

This phase of prehistoric research in India is marked by synthesizing efforts, participation of several institutions as well as efforts towards palaeo-environmental reconstructions. A large number of Indian scholars participated in prehistoric researches in this period. One of the earliest synthesizing efforts can be found in the article of V.A. Smith (1906). In 1923, P. Mitra published his book called *Prehistoric India*. In 1931, H.C. Dasgupta published a bibliography of prehistoric antiquities (Chakrabarti 2006:6). In 1930, L.A. Cammiade and M.C. Burkitt published their studies on prehistoric antiquities from the Nallamalai Hills of Andhra Pradesh. Based upon their relative positions in river stratigraphy, Cammiade and Burkitt divided their collections of stone tools into four series corresponding to Lower, Middle and Upper Palaeolithic and Mesolithic, respectively. The first series is dominated by quartzite handaxes. In the next series, flake tools are predominant which were made on quartzite, chalcedony and sandstone. Tools from the next series mainly comprised blades and burins made on siliceous stones and the last series shows the dominance of microliths. Burkitt and Cammiade assigned the river sediments in which stone tools were found to different periods of aggradation and erosion, connected with wet and dry periods of climate.

K.R.U Todd's publication on the Palaeolithic industries of Bombay followed a scheme similar to that of Cammiade and Burkitt (Chakrabarti 2006:7). In 1935, Yale and Cambridge Universities sent a joint expedition to the Potwar Plateau and the Indus and Narmada Valleys to reconstruct the Pleistocene sequence and associated human remains in these regions. The expedition was led by H. de Terra and T.T. Paterson. They published their report in 1939. Based upon their fieldwork in the Soan valley of modern Pakistan, de Terra and Paterson recognised a sequence of five terraces which they correlated with glaciations from the Kashmir valley. Further they also proposed a multi-phase Stone Age sequence called the Soan culture sequence. However, many objections were raised to these stratigraphical and cultural reconstructions by the later work of British Archaeological Mission in the 1980s.

Among the Indian scholars who made significant contributions to prehistory during this period, mention should be made of V.D. Krishnaswami who carried out researches in Madras, N.K. Bose and D. Sen who worked in Orissa and H.D. Sankalia who carried out field work in Gujarat. Sankalia excavated the Mesolithic site of Langhnaj in Gujarat and Krishnaswami published his findings in *Ancient India* (Vol.3) (Chakrabarti 2006:7). Similarly, the publication of F.E. Zeuners book entitled *Stone Age and Pleistocene Chronology in Gujarat* (1950) made important contributions to our understanding of alluvial stratigraphy of the rivers in the Deccan and Gujarat and its palaeoclimatic implications.

2.5.3 Phase III

This phase witnessed many important developments in Indian prehistoric studies. H.D.Sankalia's explorations at Nevasa on the Pravara in Maharashtra led to the reconstruction of an elaborate stratigraphical-cum-cultural sequence in 1956. In the next two decades this served as a model for a number of field investigations in Godavari, Narmada, Mahanadi and other river valleys of different parts of peninsular India. Universities also initiated Stone Age research in their respective areas. Indeed prehistory emerged as an important branch of Indian archaeology.

The role of earth science got firmly established, particularly geology for establishing the stratigraphical contexts of cultural horizons and their palaeoclimatic implications.

This phase also witnessed the use of absolute dating techniques such as radiocarbon, uranium, thorium, potassium-argon, electron spin resonances, palaeomagnetism etc. V.N.Misra's excavation at 16 R dune at Didwana in Rajasthan revealed a full sequence of Stone Age cultures with many absolute dates. The sites of Riwat (Pakistan) and Uttarbaini (Jammu) in Siwalik hills have an antiquity of more than two million years. Likewise the Acheulian sites of Isampur and Attirampakkam in South India have been dated to 1.2 and 1.5 million years. Likewise, absolute dates are available for Middle and Upper Palaeolithic and Mesolithic sites, the details of which will be provided in respective units later.

Human skeletal remains from Palaeolithic deposits are scarce in India. Only a small number of hominid remains of the Pleistocene period are known as yet. Kennedy (cited by Chakrabarti 2006:10) mentions the finding of a human skull from the Upper Palaeolithic deposit of Bhimbetka by V. S. Wakankar. A hominid skull cap dating to Middle or late Pleistocene has been reported from Hathnora, M.P (Chakrabarti 2006:10).

Box 3: Hathnora Hominid Fossil

On 5th December, 1982, Arun Sonakia of Geological Survey of India found a hominid skull cap from Hathnora, 22 km North West of Hoshangabad in Madhya Pradesh. This skull cap was found embedded in the basal conglomerate horizon of Narmada. Only the right half of the skull long with the left parietal bone has survived. The first report was published in 1984 which was followed by further reports from 1985 onwards. The deposit containing the skull also yielded mammalian fossils and late Acheulian tools. Badam *et al.* (cited by Chakrabarti 2006:11) suggested that the fossil probably represents an *archaic form of Homo sapiens*.

A fourth development of this phase concerns the shift of focus from the secondary sites associated with river gravels and silts to primary sites where the Stone Age groups made stone tools and carried out their various other life-activities (Paddayya, 1978). For this purpose it was felt necessary to go away from major rivers to interior areas free from floods and other disturbances and hence likely to preserve sites in their original condition. Also it was felt necessary to organise field research in terms of a regional framework and not single, isolated sites. In other words, emphasis began to be laid on the use of settlement system perspective aimed at an anthropological or processual understanding of Stone Age cultures. Against this perspective fresh field studies were taken up in different parts of India. Excavations were conducted at Palaeolithic sites like Chirki-Nevasa, Morgaon, Hunsgi and Isampur, Attirampakkam, Paisra, Bhimbetka and Didwana in Rajasthan. Also excavations were made at Mesolithic sites like Langhanaj, Bagor and Tilwara, and Damdama and other sites in the Ganga valley.

For promoting this processual understanding of Stone Age cultures, more systematic bioarchaeological and geoarchaeological surveys were undertaken in these areas. Ethnoarchaeology is another major research strategy that was adopted

for this purpose. Hunter-gatherer groups like the Chenchus, Yanadis, Pardhis and Musahars have been studied from this point of view by V.N.Misra and M.L.K.Murty and others.

2.6 DEVELOPMENT OF PROTOHISTORIC STUDIES

We have earlier noted that protohistory in India covers the time period between the end of the Mesolithic phase and the early historical period. As such it covers three major cultural stages viz. the Indus civilization and its later variants; the Neolithic-Chalcolithic cultures known from different parts of the sub continent; the Iron Age cultures preceding the Early Historical. The total time span covered by the protohistoric period is of the order of four to five thousand years.

The Discovery of the Harappan or Indus civilization stretched the story of Indian history backwards by 3000 years. In 1921, Daya Ram Sahni recovered two pictographic seals from Harappa similar to those unearthed by Cunningham in 1856. But their exact significance was realised in the next season when R.D. Banerjee started excavating Mohenjodaro. In 1924, the antiquities from both these sites were examined by Sir John Marshall; he announced the discovery of this new Bronze Age civilization in *Illustrated London News* (Roy 1961). Soon further excavations were conducted at both these sites by Sahni, Marshall, M.S. Vats and others. The discovery of Harappan civilization brought to light a highly sophisticated Bronze Age culture, characterised by elaborate town planning and monumental architecture, civic amenities, trade and commerce, sophisticated system of weights and measurements systems as well as an unknown script.

During the entire decade of 1920s, new Harappan settlements were brought to light at Lahumjodaro, Limujunejo, Chanhudaro etc. by Hargreaves, K.N. Dikhshit, N.G. Majumdar and others (Roy 1961: 109-110). From 1925 onwards, officers of the Archaeological Survey of India began to discover Chalcolithic settlements as well as Harappan settlements from Sind and Baluchistan region almost every year. In 1926, Majumdar unearthed the traces of Jhukar culture. From 1926 to 1928, Sir Aurel Stein surveyed Baluchistan and discovered a large number of Chalcolithic and pre-Harappan settlements. Important sites among these were Rana Ghundai, Periano Ghundai, Kulli, Mehi, Nundara, Sukhtagendor and Shahi Tump (Roy 1961: 109). Between the years 1929-31 N.G.Majumdar discovered Ali Murad, Amri, Lohri, Pandi Wahi. Excavations at Harappa were continued by Vats till 1931 and these were restarted in 1940. Between 1929 and 1935, Vats discovered Rugar and Rangpur, two other Harappan sites from India (Ray 1961:118).

In 1944, R.E.M. Wheeler surveyed Harappa again and resumed excavation in 1946. Wheeler succeeded in establishing a proper stratigraphic sequence at Harappa and brought to light a post-Harappan culture called Cemetery H (Ray 1961:127). Despite these numerous discoveries of Harappan settlements, at the time of partition, there wasn't a single important Harappan site in India. So A. Ghosh of the Archaeological Survey of India undertook a systematic survey of the Ghaggar basin in Rajasthan from 1952 onwards. He discovered a large number of Harappan settlements in Rajasthan, Punjab and Haryana. During this survey Ghosh discovered the famous Harappan site of Kalibangan. Then onwards every

year new Harappan sites have been reported from Punjab, Haryana, Rajasthan, Western Uttar Pradesh, Gujarat and Maharashtra. Now it is realised that this civilization was spread over an area measuring 1500 x 1200 sq.km. (Dhavalikar 1997: 8). Such in brief is the history of discovery of Harappan civilization.

The second major aspect of protohistoric past concerns the development of early agropastoral cultures covered by sites which are variously called Neolithic or Chalcolithic or Neolithic–Chalcolithic, depending on the use or lack of copper. It is true that even before Independence sporadic discoveries of polished stone tools were made in south India, Bihar and Jharkhand, and Northeast India. Due to lack of any excavated evidence these sites could not be placed in a proper cultural context. It was Wheeler's excavation at Brahmagiri in South India in 1946 which stratigraphically exposed Neolithic levels below Iron Age megalithic strata. Still much of the Indian landscape presented a blank appearance, so much so that in 1948 Mortimer Wheeler bemoaned that a Dark Age existed between the end of the Indus civilization and the beginning of the early historical period.

A major achievement of post independence archaeology in India lies in the fact that the so-called Dark Age has now been filled up with about a dozen major cultures representing the early agropastoral stage. These are spread across the whole country and are dated to the third and second millennia B.C. Their main characteristics include settled village life, crop cultivation, animal husbandry, burial practices and various crafts like ceramics and stone-tool making. The credit for discovering these cultures goes to the Archaeological survey of India, state departments and various universities.

The major Neolithic cultures are located in South India, Kashmir Valley, North central Vindhya, Bihar and Orissa and North eastern India. The principal Chalcolithic Cultures are the Savalola, Malwa and Jorwe cultures of the Deccan, Kayatha and Malwa cultures of central India. Banas culture of Rajasthan, and the Black-and-Red and Ochre-Coloured Pottery cultures of the Ganga valley. In fact, the emergence of agropastoral way of life in the subcontinent stretches beyond third millennia B.C. The Mehrgarh excavations in Baluchistan take the antiquity of wheat and barley cultivation and cattle and sheep/goat domestication to the 6th–7th millennia B.C. Likewise the recent excavations at Lahuradewa in eastern U.P. reveal that paddy cultivation or intensive exploration goes back to 6th – 7th millennium B.C.

Now let us briefly note the investigations with reference to the Iron Age. For about two centuries various kinds of megalithic monuments (stone circles, dolmens, cists, umbrella stones etc.) have been reported from various parts of Peninsular India. These yielded, apart from other cultural materials, a variety of iron objects. In the middle of the 19th century Meadows Taylor even excavated some of the stone circles in the Deccan. But it was Wheeler's excavation at Brahmagiri which exposed Iron Age megalithic levels below the remains of the Early Historical Period.

After Independence many more megalithic sites were excavated in Vidarbha region of Maharashtra and various parts of South India. These have given evidence of various burial practices with rich grave goods. Hallur excavation in Karnataka has given a date of about 1100 B.C. for commencement of iron technology. More recently excavations at Malhar in Ganga valley have pushed back the

antiquity of iron to 1500 B.C. Excavations by S.B.Deo at Naikund in Vidarbha have made it possible to reconstruct the whole process of iron smelting.

2.7 SUMMARY

Proceeding from our Unit 1 on account of the definition of archaeology as a science of the archaeological record; its three main divisions; and both conceptual and methodological developments, we have gone one step further in this unit and considered the criteria adopted for dividing prehistoric time into main periods and stages. We then noted the main stages in the development of both Prehistoric and Protohistoric studies in India. With this background we will consider in the next unit how archaeology is intimately related to various natural and social sciences.

Suggested Reading

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Useful Links

The Archaeological Survey of India: <http://www.asi.nic.in>

Harappa : <http://www.harappa.com>

Sample Questions

- 1) Critically evaluate the importance of Three-Age system in the development of archaeological studies in the Old World.
- 2) What are the main stages in the development of Prehistoric studies in India.
- 3) Describe how Protohistoric studies progressed in India.



Teacher professional development and classroom resources across the curriculum. MENU.Â This unit examines how these contacts began the phenomenon now known as the Columbian Exchange, profoundly altering the way of life of peoples around the globe. Themes. Early encounters between Native Americans, Europeans, and Africans expanded existing trade practices, uniting previously isolated regions and initiating the Columbian Exchange.