UNIT 10 CHALCOLITHIC AND EARLY IRON AGE-I

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10.0 OBJECTIVES

In Block 2, you have learnt about the antecedent stages and various aspects of Harappan culture and society. You have also read about its geographical spread and the reasons for its decline and diffusion. In this unit we shall learn about the post-Harappan, Chalcolithic, and early Iron Age Cultures of northern, western, central and eastern India. After reading this unit you will be able to know about:

- the geographical location and the adaptation of the people to local conditions,
- the kind of houses they lived in, the varieties of food they grew and the kinds of tools and implements they used,
- the varieties of potteries used by them,
- the kinds of religious beliefs they had, and
- the changes occurring during the early Iron age.

10.1 INTRODUCTION

By the second millennium B.C. several regional cultures sprang up in different parts of the Indian subcontinent. These were non-urban, non-Harappan and were characterized by the use of stone and copper tools. Hence, these cultures are termed as chalcolithic cultures.

The chalcolithic cultures are identified on the basis of their geographical location. Thus, we have:

- the Banas culture (located in the Banas basin) in Rajasthan,
- Kayatha culture (type site Kayatha on the bank of river Kalisindh, an affluent of the Chambal) and represented by other sites in central India (in the Narmada, Tapi and Mahi valleys),
- Malwa culture (Malwa, and extending into other parts of Madhya Pradesh and Maharashtra), and
- the Jorwe culture (Maharashtra).
As type sites of these cultures have been excavated we have been able to form a detailed idea about such dimensions of them as:

- pattern of settlement,
- pattern of economy,
- mortuary practices, and
- religious beliefs.

In addition to cultural material of this phase, found at excavated sites, in parts of Uttar Pradesh, Haryana, Rajasthan, Bihar, West Bengal, Orissa and Karnataka are found catches of copper/bronze objects. As these have been found in hoards (about a thousand objects altogether from 85 sites in the above mentioned states) these sites were thought to represent a distinct Copper Hoard culture. At Saipai (Etawah Distt.) a site in Uttar Pradesh, a copper harpoon has been found in association with a pottery known as Ochre Coloured Pottery (OCP). Though some of the other Copper Hoard sites have yielded OCP, the copper objects are not found in direct association with OCP. As more than a hundred sites have yielded this characteristic pottery in the Ganga-Yamuna doab, these sites are described as belonging to the OCP culture. The OCP culture is succeeded by Black and Red Ware (BRW) and Painted Grey Ware (PGW) cultures, which are distinguished by diagnostic pottery types. In North India, there is a distinct concentration of Painted Grey Ware sites in Haryana and Upper Ganga Valley, of which 30 have been excavated. Iron makes its appearance in the Painted Grey Ware culture, and in the ensuing phase, known as the Northern Black Polished Ware (NBP) culture, its use becomes more widespread. Starting from the sixth century B.C. we also see the beginnings of urbanisation.

Terms like BRW culture, PGW culture and NBP culture need to be clarified here. These cultures are described by the pottery types only because that particular pottery happens to be a distinctive feature of that culture though there may be many other aspects of that culture. The pottery type is used only to give an identity or name to a specific culture. For example in a particular region where Painted Grey Ware is found the culture of that site is described as PGW culture.

To understand the cultural developments after the decline of Harappan Civilization we should begin with Northern India, especially the Ganga-Yamuna doab.

**10.2 OCHRE COLOURED POTTERY CULTURE**

A new pottery type was discovered in trial excavations conducted in 1950 at Bisauli (Badaun district) and Rajpur Parsu (Bijnor district) in Uttar Pradesh, both of them being Copper Hoard sites. This pottery is made of medium grained clay, underfired and has a wash of ochre (which has a tendency to rub off) ranging from orange to red. Hence, those sites associated with this ware are ascribed to Ochre Coloured Pottery culture (OCP culture). So far more than 100 sites which extend from Mayapur in Saharanpur district to Saipai in Etawah district (U.P.) have been discovered.

Ochre Coloured Pottery sites are generally located on river banks. These sites are small in size and the mounds have a low height at many of the sites (e.g. Bahadarabad, Bisauli, Rajpur Parsu, Saipai). This indicates a relatively short duration of these settlements. The distance between settlements varies from 5 km to 8 km. At some of the OCP sites (e.g. Ambkheri, Baheria, Bahadarabad, Jhinjhana, Lal Qila, Atranjikhera, Saipai) excavations have revealed no signs of regular habitation. At Hastinapura and Ahichchhatra there is a break in occupation between the OCP culture and the succeeding PGW culture, while at Atranjikhera the OCP settlements are succeeded by Black and Red Ware Pottery.

The material remains of OCP culture are mostly in the form of pottery. These consist of jars (including storage jars), bowls, ring-footed bowls, flasks, handled pots, miniature pots, basins spouts, etc.
The other objects comprise terracotta bangles; beads of terracotta and carnelian; terracotta animal figurines and cart wheels with a central knob; stone querns and pestles; and bone points. A copper harpoon has been found in the OCP stratum at Saipai.

Not much evidence is available regarding structures. From the evidence recorded at Lal Qila, which is scanty, it is known that floors were made of rammed earth. The structures consisted of wattle and daub houses. This is suggested on the basis of burnt mud plaster and mud clods with reed and bamboo impressions being found at Lal Qila.

Archaeobotanical remains recovered at Atranjikhera and related to this culture indicate that rice, barley, gram and kesari were grown. On the basis of similarity in pottery types some scholars believe that the OCP represented a degenerated form of the late Harappan pottery.

On the basis of Thermoluminescence dates obtained from OCP pottery, the culture has been ascribed to 2000 B.C. to 1500 B.C.

10.3 THE PROBLEMS OF COPPER HOARDS

The first discovery of a copper object (a copper harpoon) that belonged to the Copper Hoard culture was made as early as 1822 at a place called Bithur in Kanpur district. Since then nearly one thousand copper objects have been found in hards, from 85 sites.

<table>
<thead>
<tr>
<th>STATE</th>
<th>NUMBER OF SITES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haryana</td>
<td>5</td>
</tr>
<tr>
<td>Rajasthan</td>
<td>6</td>
</tr>
<tr>
<td>Uttar Pradesh</td>
<td>33</td>
</tr>
<tr>
<td>Bihar</td>
<td>19</td>
</tr>
<tr>
<td>West Bengal</td>
<td>6</td>
</tr>
<tr>
<td>Orissa</td>
<td>7</td>
</tr>
<tr>
<td>Madhya Pradesh</td>
<td>8</td>
</tr>
<tr>
<td>Karnataaka</td>
<td>1</td>
</tr>
</tbody>
</table>

It is possible that copper hoard objects have been found in other states like Gujarat and Andhra Pradesh, but have not yet been properly reported.

The copper objects found in a hoard range from 1 to 47 excepting at Gungeria in Madhya Pradesh where a single hoard contained 424 objects. These Copper Hoards came to light while ploughing a field, digging a canal or making a road, i.e. all of them were accidental discoveries. It is only at Saipai, that a copper harpoon was found in excavation in a stratum associated with OCP.

These copper objects are classified into several types. The main types are (a) celts, (b) rings, (c) harpoons, (d) antennae swords, (e) hooked swords, (f) anthropomorphs and (g) double axes.

Considering the occurrence of a copper harpoon in association with the OCP at Saipai, and the fact that Copper Hoards have been found at other OCP sites (though not in a direct archaeological association) they can be related to the OCP culture. In this way the period of the Copper Hoards can also be ascribed to 2000 B.C. to 1500 B.C.
Check Your Progress 1

1) Discuss in about ten lines the main characteristics of the OCP culture.

2) Which of the statement is right or wrong? Mark (√) or (X).
   a) OCP sites are located in Mountains.
   b) The material remains of OCP culture are mainly structures.
   c) The period of Copper Hoards is 2500 B.C.
   d) Most of the Copper Hoards found were accidental discoveries.
Copper hoard objects. 1. harpoon; 2. hook sword; 3. sword; 4. Antenna sword; 5,6. celts; 7. double axe; 8. bar cellt; 9. shouldered axe; 10. anthropomorph.

10.4 BLACK AND RED WARE CULTURE

Excavations at Atranjikhera in the early 1960s revealed a distinct horizon,
sandwiched between OCP and PGW levels. This horizon has a characteristic pottery called Black and Red Ware (BRW). A similar stratigraphic sequence has been discovered in the 1970s at Jodhpura and Noh in Rajasthan. But at Ahichchhatra, Hastinapura and Alamgirpur BRW is found associated with PGW.

**Pottery**: The characteristic features of this pottery are the black colour inside and near the rim on outside, and red colour, over the rest of the body. This colour combination, it is believed, has been produced by inverted firing. The pottery is mostly wheel turned, though some pots are also handmade. It is made of fine clay and has a fine fabric with thin walls. Black and Red Ware pottery with paintings has also been found at sites in Rajasthan, Madhya Pradesh, Bihar and West Bengal. But in the BRW of the doab area there is absence of paintings.

**Other Objects**: In the excavations at Atranjikhera have been found fragments of stones, waste flakes, chips; cores of quartz, chalcedony, agate and carnelian; one bead each of carnelian, shell and copper; a copper ring; and a fragment of comb made of bone. No stone or metal tools have been found. Jodhpura has yielded a bone spike. From Noh shapeless piece of iron, a terracotta bead and a bone spike have been discovered.

**BRW in the Doab and Other Regions**: Some scholars see affinities between the BRW of Atranjikhera and Gilund and Ahar of southern Rajasthan on the basis of a comparison of fabric, texture and burnishing. But there are differences as well as in the shape and designs of the potteries found in these areas.

- The important feature of doab BRW (also of that at Noh) is its plain surface, devoid of any paintings. The BRW found at Gilund and Ahar, on the other hand, is painted in white on black surface.
- There are also typological differences. The painted BRW from Ahar has pronounced carinated concave sides, and the fabric is coarse. The plain BRW of the doab has no carination, and the fabric is fine.
- The dish with featureless rim and concave sides present in large numbers in the BRW of the doab is absent at Ahar and Gilund.
- Bowls with spouts and dish-on-stand present at Ahar and Gilund have not been found in the doab sites.

It is important to note that Black and Red Ware with some variation from region to region has a wide distribution. It occurs from Rupar in the north to Adichanallur in the south, and from Amra and Lakhabinval in the west to Pandu-Rajar-Dhibi in the east. It also covers a vast time span: from 2400 B.C. to the early centuries of the Christian era.

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**10.5 PAINTED GREY WARE CULTURE**

Since the first discovery of Painted Grey Ware (PGW) at Ahichchhatra in 1946, a huge number of sites have been brought to light in different parts of north India. Out of these 30 sites have been excavated. Some of the well known excavated sites are Rupar (Punjab), Bhagwanpura (Haryana), Noh (Rajasthan) Alamgirpur, Ahichchhatra, Hastinapura, Atranjikhera, Jakhara and Mathura (all in Uttar Pradesh).

The concentration of PGW sites is in the Indo-Gangetic divide (Haryana), Sutlej basin and the upper Ganga plains. Settlements are located along river banks. The average distance from one site to the other is about 10 km. to 12 km. though in some cases it is also 5 km. The settlements at these sites are mostly small villages (1 to 4 hectares) with the exception of Bhukari (Ambala district, Haryana) which is an extensive settlement covering 96,193 sq.m. Let us examine the various objects that are found associated with the PGW culture:

i) **Pottery**: Pottery is wheel made, out of well lavigated clay and has a thin core:

- It has a smooth surface, grey to ash-grey in colour.
- It is painted in black and sometimes in a deep chocolate colour on the outer as well as inner surface.
- It has nearly 42 designs and the most common types are bowls and dishes.
ii) **Structures:** The houses and other structures were of wattle and daub. This is indicated by the occurrence of patches of burnt earth, mud bricks, burnt bricks, mud platforms and mud plaster pieces with reed and bamboo impressions in the excavations at Ahichchhatra, Hastinapura, Atranjikhera and Jakhera. Excavations at Bhagwanpura (Haryana) site revealed different structural phases. Post holes in the first phase indicate circular and rectangular huts. In the second phase, one house has 13 rooms with a corridor between the two sets of rooms. This house also has a courtyard.

iii) **Other Objects:** A variety of objects made out of copper, iron, glass and bone were found in excavations. These consist of axes, chisels, fish hooks and arrowheads. Spearheads are made only of iron. Among the agricultural implements, only a sickle and a hoe, made of iron have been found at Jakhera.
Evolution of Early Indian Society: 2000 B.C. to 1000 B.C.

Iron objects are found at all the sites except Hastinapura. Atranjikhera alone has yielded 135 objects, a furnace, iron slag close to the surface, and a pair of tongs. At Jodhpura there is evidence of two furnaces. It has been suggested that iron ore was procured from other regions.

The people were fond of ornaments. Beads of terracotta, agate, jasper, carnelian, chalcedony, lapis lazuli, glass and bone have been found. Two glass bangles were found at Hastinapura and copper bangles have been found at Jakhera. Terracotta objects comprise human (male and female) and animal (bull and horse) figures, discs, balls, potter's stamps, etc.

iv) Crops and Animal Remains: Evidence of cultivated crops is available only at Hastinapura and Atranjikhera. At the former site, remains of only rice were found and the latter has yielded the remains of wheat and barley. Bones of horse, cattle, pig, goat and deer have been found at Hastinapura, Allahpura and Atranjikhera. These include both wild as well as domesticated animals.

v) Trade Practices and Linkages: Beads made of a variety of semi-precious stones (like agate, jasper, carnelian, chalcedony, lapis lazuli) are found at different PGW sites in the doab. None of these stones, as raw material, are available in the doab. These items could have been obtained by trade. Agate and chalcedony are found in Kashmir, Gujarat and Madhya Pradesh whereas lapis lazuli is to be found in Badakshan province in Afghanistan. Thus, the people inhabiting the PGW sites must have obtained these stones through trade or exchange with these regions.

Certain parallels in shape and size have been found between the PGW and potteries found in north-western India. Specially the Grey ware found in association with iron seems to indicate some links with the PGW cultures.

Check Your Progress 2
1) What are the characteristic features of BRW? Discuss in about ten lines the difference of the BRW found in various regions.
2) On what basis we can say that the people inhabiting the PGW sites had trade links with other regions? Answer in about five lines.

10.6 NORTHERN BLACK POLISHED WARE CULTURE

Like the preceding cultures the Northern Black Polished Ware culture is identified by its distinctive pottery. This ware was first discovered at Taxila in 1930 and because of its black lustre its discoverer then took it as 'Greek Black Ware'. Since then nearly 1500 NBP sites have come to light. They expand from Taxila and Udgram in the north-west to Talmuk in east Bengal and Amravati (Andhra Pradesh) in the south. Out of these about 74 have been excavated.

Important Excavated NBP Sites

<table>
<thead>
<tr>
<th>Name of Site</th>
<th>Name of State in which the site is located</th>
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<tbody>
<tr>
<td>Ropar</td>
<td>Punjab</td>
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<tr>
<td>Raja-Karna-ka-Qila</td>
<td>Haryana</td>
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<tr>
<td>Jodhpura</td>
<td>Northern</td>
</tr>
<tr>
<td>Noh</td>
<td>Rajasthan</td>
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<tr>
<td>Ahichchhatra</td>
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<tr>
<td>Hastinapura</td>
<td>Uttar Pradesh</td>
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<tr>
<td>Atranjikhera</td>
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<tr>
<td>Kausambi</td>
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<tr>
<td>Sravasti</td>
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<td>Vaisali</td>
<td></td>
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<tr>
<td>Patliputra</td>
<td>Bihar</td>
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<tr>
<td>Sonepur</td>
<td></td>
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<tr>
<td>Chandraketugarh</td>
<td>West Bengal</td>
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</tbody>
</table>

The excavations have revealed that:
- at several sites NBP Ware culture succeeded PGW levels, and
- at some sites NBP succeeded BRW, and NBP is succeeded by Red Slipped Ware.

On the basis of the kind of pottery frequency and associated objects it has been suggested that two phases can be distinguished in the NBP Ware Culture.

**Phase I:** This phase is also referred to as the predefence phase. This is characterized by a predominance of NBP Ware and presence of shreds of BRW and PGW, though in meagre quantities. In this phase there is an absence of punch marked coins and burnt brick structures, which signify a higher level of development. This phase is represented in Atranjikhera, Sravasti and Prahladpur.

**Phase II:** Pottery specimens belonging to BRW and PGW are not found in this phase. NBP Ware is of poor quality (thicker in fabric) and is found in smaller numbers. A coarse grey ware comes into greater use. Punch marked coins and burnt bricks make their first appearance. This phase is represented in Hastinapura, Atranjikhera, Sravasti II and Prahladpur.
Taking into account the similarities between NBP and PGW some scholars have suggested that the former is a refined form of the latter, and that the difference between the two appears to be confined only to the surface treatment. This has been proved through chemical analysis carried out on PGW, BRW and NBPW.

As the concentration of NBPW is in eastern Uttar Pradesh and Bihar, it is held that its origin lies somewhere in this region. It spread beyond the Ganga plains in later times, and such a spread is attributed to the activities of Buddhist monks and traders.

10.6.1 Structures

From the excavations at Hastinapura, Atranjikhera and Kausambi it becomes evident that during this period building activities began on a large scale and that cities began to emerge.

BRW, PGW, and the NBP ware cultures

Excellent evidence of the settlement layout was unearthed at Kausambi. Here were found houses and tombs with brick Zajes or Gors and brick hats. Such houses and tombs seem to be restricted to the period just before 200 B.C. and suggest a very peculiar and specialized type of settlement. It is believed that the fashion of houses and tombs may be due to the influence of Buddhist monks and traders.
600 B.C. was relaid several times (varying in width between 5.5m and 2.5m) and continued to function upto 300 A.D. Houses were made of burnt bricks, and use of timber in house construction is evidenced by the post-holes and sockets for door jambs. The roofs of houses were covered with tiles. The rooms were square as well as rectangular. All this indicates a fairly planned building activity. This is further demonstrated from excavations at Hastinapura which have revealed an elaborate drainage system.

Some of the settlements were fortified with a mud or brick wall and moats were constructed encircling the fortification. The fortification wall at Kausambi had guard rooms, towers and gates at regular intervals.
An important question to be asked here is do these structures tell us anything about the social or political life in that period? They do. For example:

- the fortifications signify defensive measures against invasion and speak of political tensions,
- the drainage system, not only indicates the concern of the people towards hygiene but also the advance they had made in this regard, and
- large buildings like the fortifications require that a large number of people participate in construction activities. This might need an authority to mobilise the workers.

10.6.2 Pottery

The most characteristic feature of NBP Ware is its glossy surface. It is turned on a fast wheel and is made of well levigated clay. The core of the pottery in some cases is as thin as 1.5mm. In addition to the glossy black surface, the NBP Ware is also found in golden, silver, white, pinkish, steel blue, chocolate and brown colours. The recovery of rivetted pots (i.e. made by joining broken pieces) from some sites (e.g. Ropar, Sonepur) indicates how valuable the NBP Ware was. This along with the presence of other pottery types leads us to assume that NBP was a luxury ware not accessible to everybody and suggests to us that in the society in which NBP Ware was used society was divided into unequal groups.

Though NBP ware is generally unpainted, some painted shreds to occur. Painting is done using yellow and light vermilion colours. The common designs are simple bands, wavy lines, dots, concentric and intersecting circles, semi-circles, arches and loops. The most common pottery shapes are bowls are different kinds of dishes.

10.6.3 Other Objects

Several kinds of tools, weapons, ornaments and other objects made of copper, iron, gold, silver, stone, glass and bone have been recovered from NBP Ware sites. They reveal the technological progress achieved during this period which is further corroborated by early Buddhist texts, which mention a number of arts and crafts. The Jatakas refer to about 18 guilds, for instance, those of workers in wood, metal, stone, precious and semi-precious stones, ivory textiles, etc.

The copper objects found at many sites consist of chisels, knives, borers, pins, needles, antimony rods, nail parers, ferrules, reels and bangles.

Iron objects not only preponderate but also exhibit a great variety in form when compared to the PGW period. The site of Kausambi alone has yielded 1,115 iron objects from deposits dating between Ca.800 B.C. to 550 A.D. These consist of:

a) Agricultural implements like hoes and sickles, and tools of craftsman such as axes, adzes, chisels and screw rods.

b) Weapons like arrowheads, javelinheads and spearheads.

c) Miscellaneous objects which include knives, handles of different kinds, hooks, nails, rivets, fishplates, rings and miniature bells.

Silver punch-marked coins have been found from the middle phase of NBP culture. These indicate a possible shift from barter system to a system of exchange of goods through metallic currency.
10.6.4 Ornements

Beads made of semi-precious stones, glass, clay, copper shell and bone are most commonly found. The usual shapes are circular, spherical, biconical, cylindrical, barrel and square. Some beads are also etched. A single bead of gold is known from Kausambi IB (Ca. 300 B.C.).

Among the other ornaments are bangles made of terracotta, faince, glass, shell, stone and copper; finger rings of copper, iron, horn and clay; and pendants of terracotta, agate and carnelian. All these finds tell us about the:

- use of ornaments in that society
- existence of specialised craftsmen to make them
10.6.5 Terracotta Figurines

These comprise human and animal figurines and miscellaneous objects.

Human figures, in most cases, are cast in moulds. Male figurines are usually plain excepting a few with a head dress. Female figurines have elaborate head dress, ear ornaments necklaces and girdles.

Animal figurines are hand modelled but well executed. These consist of horse, bull, ram and elephant.

The miscellaneous terracotta objects are toy carts, simple and animal headed gamesman; discs, balls, fleshrubbers and potter’s stamps. At a later stage of this culture are found seals and sealings bearing inscriptions in Brahmi script. All these finds tell us a lot about the people who inhabited these sites. For example, toy carts tell us that carts were used as means of transportation.

10.6.6 Subsistence Economy and Trade

Archaeobotanical remains indicate that rice, wheat, barley, millet, pea and black gram were cultivated. And the animal remains found from some of the sites suggest dependence on cattle, sheep, goat, pig and fish.

In the occurrence of a diverse variety of beads, found to be common at several sites, is seen evidence of trade. On this basis it has been suggested that trade links existed between Taxila, Hastinapura, Ahichchhara, Sravasti and Kausambi during Ca. 600 B.C. to 200 B.C. Such a view is strengthened by the references made in Buddhist texts to trade guilds, and the caravans of camels, horses, mules, oxen and buffalos. Between the 6th and 3rd centuries B.C. there was trade between India and countries to the west. The main items of export were textiles, spices, and probably finished goods of iron and steel. From the Arthasastra (Book-II) it would appear that the state not only exercised control over trade but also had a monopoly over industries like gold, copper, iron, lead, tin, silver, diamond, gems and precious stones.

Check Your Progress 3

1) From where does NBP Ware culture get its name? Answer in three lines.

2) Which of the following statements are right or wrong. Mark (✓) or (✗).
   a) NBP was a luxury ware.
   b) It has been suggested that the NBP culture had four phases.
   c) Literary evidence supports the archaeologists conclusions of trading activities during NBP period.
   d) None of the NBP settlements had fortification.

10.7 CHALCOLITHIC CULTURES OF WESTERN, CENTRAL AND EASTERN INDIA

There were several local chalcolithic early farming cultures in western, central and eastern India which flourished during the second and first millennia B.C. These cultures were basically village settlements and they shared certain common elements. The distinctive features of these cultures are:

- painted pottery, which is mostly black-on-red, and
- a highly specialized stone blade/flake industry of siliceous stones.

Copper was known but its use was on a limited scale as the metal was scarce. The
settlements consisted of circular and rectangular huts and in some cases pit dwellings are also known. The economy was based on farming and animal husbandry. These cultures are named after their type sites.

Chalcolithic Cultures

<table>
<thead>
<tr>
<th>Name of the Culture</th>
<th>Period</th>
</tr>
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<tbody>
<tr>
<td>Kayatha</td>
<td>2000 – 1800 B.C.</td>
</tr>
<tr>
<td>Ahar or Banas</td>
<td>2000 – 1400 B.C.</td>
</tr>
<tr>
<td>Savalda</td>
<td>2000 – 1800 B.C.</td>
</tr>
<tr>
<td>Malwa</td>
<td>1700 – 1200 B.C.</td>
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<tr>
<td></td>
<td>in Central India and</td>
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<tr>
<td></td>
<td>1700 – 1400 B.C. in Maharashtra.</td>
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<tr>
<td>Prabhas</td>
<td>1800 – 1500 B.C.</td>
</tr>
<tr>
<td>Rangapur</td>
<td>1400 – 700 B.C.</td>
</tr>
<tr>
<td>Chirand</td>
<td>1500 – 750 B.C.</td>
</tr>
</tbody>
</table>

In the Tapi Valley of Maharashtra, Late Harappan non-urban habitations (about 50) are known (1800 – 1600 B.C.). The excavations at Daimabad have shown that the Late Harappans moved further south into the Pravara Valley (Maharashtra).

The Kayatha culture is named after the site of Kayatha (25 km. east of Ujjain) located on the bank of the Kalisindh, and affluent of the river Chambal. The Ahar or
Banak culture is named after the river Banas and its type site is Ahar (Udaipur in Rajasthan). More than 50 sites of this culture are known in the valleys of Banas and Berach in south-east Rajasthan. The type site of Savalda culture is Savalda (Dhulia district, Maharashtra). It is mostly confined to the Tapi valley but the evidence from Daimabad suggests that it reached up to the Pravara valley. The Malwa culture was discovered in the excavations at Maheshwar and Navadatoli (Nimar district, Madhya Pradesh) on the banks of Narmada. This culture is so named as a large number of sites were brought to light in the Malwa region. The Malwa people began to migrate to Maharashtra around Ca. 1600 B.C., and several settlements have been discovered in the Tapi, Godavari and Bhima valleys. Prakash (Dhulia district), Daimabad (Ahmednagar district) and Inamgaon (Pune district) were the most extensive settlements of the Malwa culture in Maharashtra. The Prabhas and Rangpur cultures, respectively, are known after the type sites Prabhas Patan and Rangpur in Gujarat. The type site of Jorwa culture is Jorwe (Ahmednagar district) in Maharashtra. Extensive occupations of the Jorwe culture succeed the Malwa culture at Prakash, Daimabad and Inamgaon.

Stone and Copper using agricultural communities have been reported from eastern India too. In northern Bihar at a place called Chirand remains of an ancient village settlement have been found. People lived in small houses made of bamboo and mud plaster. They ate rice and fish and hunted many wild animals. They too used black and red ware pottery. Similar kinds of settlements have been reported from Sahgaura in Gorakhpur (U.P.) and Sonpur in Gaya (Bihar) where people seen to have grown wheat and barley also. In West Bengal the sites of Pandu-Rajar-dhilu in the Burdwan district and Mahisdal in the Birbhum district have yielded similar evidences. All these settlements have been dated between 1500 to 750 B.C.

Let us examine the various characteristics of these cultures.

10.7.1 Pottery: Diagnostic Features

We will briefly review the pottery of these chalcolithic cultures.

The Kayatha ware is characterized by three fabrics:
- a thick and sturdy red slipped ware painted with designs in dark brown;
- a red painted buff ware (this ware is thin with a fine fabric); and
- a combed ware having incised patterns, and generally without a slip.

The majority of the pots of the sturdy red slipped ware have a ring base. The ring base recalls the pre-Harappan Sothi types.

Sothi culture (in Rajasthan) is known from several sites in the valley of Ghaggar (Sarasvati) which have yielded a pottery that is akin to the pre-Harappan pottery of Kalibangan.

There are seven kinds of wares in Ahar pottery but its most characteristic type is the black and red ware painted in white. The Savalda culture is characterised by a black-on-red painted pottery which is decorated with naturalistic designs such as birds, animals and fishes.

The Malwa ware is to some extent coarse in fabric and has a thick buff slip over which patterns are executed in black or dark brown colour.

The Prabhas and Rangpur wares are both derived from the Harappan black-on-red painted ware, but since the latter has a gloss it is referred to as the lustrous Red Ware.

The Jorwe Ware is painted black-on-red, and has a matt surface treated with a red wash.

In addition to these characteristic forms, all these cultures have other associated wares which are mostly red or grey. The pottery is wheel made but there are also hand made forms. The pottery shapes which are usual to these cultures are bowls, basins, globular jars with concave necks, dishes, lotas (a small pot with a carinated
A distinctive feature of the Malwa pottery is seen in the series of small goblets on solid pedestals; and the distinctive forms of the Jorwe culture are carinated bowls, spouted jars with flaring mouths, and high necked globular vases.

**Pottery of Malwa culture**

### 10.7.2 Economy

A greater part of the region in which these chalcolithic cultures flourished is the zone of black cotton soil. The climate is semi-arid and the rainfall varies between 400 to 1000 mm. The mainstay of the economy of these chalcolithic cultures was subsistence agriculture and stock-raising. Dependence on wild game and other food sources such as fish is also suggested by some general sites.
i) Cultivated Crops: Carbonized remains of seeds recovered in the excavations at some of the sites indicate that a variety of crops were raised by these farming communities. The main crops were barley, wheat, rice, bajra, jowar, lentil, horsegram, haycinth bean, grass pea, pea, black gram and green gram.

Other plants utilized were Jamun, Behada, wild date, ber, Myrobalan etc.

Barley was the principal cereal during this period. Evidence from Inamgaon suggests the practice of crop rotation, harvesting of summer and winter crops, and artificial irrigation. A massive embankment (240 m long and 2.40 m wide) was built at Inamgaon during Early Jorwe period (Ca. 1400 - 1000 B.C.) to divert the flood water through a channel (200 m long, 4m wide and 3.5 m deep).

That the black cotton soil was ploughed for farming operations is suggested by the find of an ard (Prototype of the ploughshare) made from the shoulder bone of cattle at Walki (not very far from Inamgaon).

ii) Animals: The excavations have revealed evidences of both domesticated as well as wild animals.

i) The domesticated animals during the chalcolithic period were cattle, sheep, goat, dog, pig, horse. The bones of cattle and sheep/goat predominate at most of the sites. The cut and chop marks on the bones of these animal indicate that they were slaughtered for food. Age determination of these bones has indicated that most of the animals were slaughtered when they were young (ranging from three months to three years in age).

ii) The wild species found are black buck, four horned antelope, Niligai, barasingha, sambar, chital, wild buffalo, and one horned rhinoceros.
Bones of fish, waterfowl, turtle and rodents have also been found at some of the sites. Bones of marine fish species have been found at Inamgaon and the source of these fish could be either Kalyan or Mahad, the nearest creek ports, 200 km. west of Inamgaon.

The charred bones of both the domestic and wild species indicate that they were cooked in open fire.

10.7.3 Houses and Habitations

Let us briefly examine the housing patterns of these cultures. Rectangular and circular houses with mud walls and thatched roofs are the most common types, though there are variations in house sizes from site to site.

i) Most of the houses of the Savalda culture were single roomed rectangular houses but there are some with two or three rooms. Ahar people built houses on plinths made of schist. Walls were built on these plinths with mud or mud brick and the walls were decorated with quartz cobbles; and floors were made of burnt clay or clay mixed with river gravels.

ii) The sizes of the Ahar houses ranged between 7m × 5m and 3m × 3m, and the longest house measured more than 10m in length. Bigger houses had partition walls, and chulahs (hearths) and quartzite saddle querns in the kitchen.

iii) The Malwa settlements such as those found at Navadatoli, Parkash, Daimabad and Inamgaon were quite large. Evidence at Inamgaon suggests that some kind of planning was adopted in the laying out of the settlement. Of the 20 and odd houses exposed at Inamgaon, the majority were aligned in a roughly east-west orientation. Though these houses were built close to each other, they had an intervening space of about 1-2m in between which might have served as a lane. These houses at Inamgaon were large (7m × 5m) rectangular structures with a
Evolution of Early Indian Society: 2000 B.C. to 1000 B.C.

iv) A significant feature of the Jorwe culture (of which more than 200 sites are known so far, though the majority of them can be classified as villages ranging from 1 to 4 ha.) is the presence of a large centre in each region. These centres are Prakash, Daimabad and Inamgaon, respectively in the valleys of Tapi, Godavari and Bhima. The Jorwe settlement at Daimabad was the largest, covering an area from more than 30 hectares. Prakash and Inamgaon cover about 5 ha. each.

v) A noteworthy feature of the Jorwe (both Early and Late) settlement at Inamgaon is that the houses of the artisans such as the potter, the goldsmith, the lapidary, the ivory-carver etc. were located on the western periphery of the principal habitation area, whereas those of well-to-do farmers were in the central part. The size of the artisans houses is smaller than those of the well-to-do. Both these aspects i.e. the position and size of houses demonstrate social differentiation in terms of a lower position for artisans in the society.

Interestingly enough, some of these chalcolithic sites have fortification walls around the settlement. For example Eran and Nagda (Madhya Pradesh) of the Malwa Culture, and Inamgaon (during Jorwe period) have a fortified mud wall with stone rubble bastions and ditch around the habitation.

At Inamgaon has been noticed a change in house types from Early Jorwe (1400 - 1000 B.C.) to late Jorwe period (1000 - 700 B.C.):

The Early Jorwe houses were large rectangular structures with low mud walls (about 30 cm. high) surrounded by wattle-and-daub constructions. These houses were laid out in rows with their longer axis in a roughly east-west orientation. These houses have an open space in between (approximately 1.5m wide) which might have served as a road or lane. The Late Jorwe houses on the other hand depict a picture of poverty. Large rectangular huts were no more built, and instead there were small round huts (with a low mud wall) in clusters of three or four. The pit silos were replaced by a fourlegged storage jar supported on four flat stones.

The overall evidence indicates that this shift from Early Jorwe to Late Jorwe was due to decline in agriculture as a result of drop in rainfall. Investigations in western and central India have disclosed that at the close of the second millennium B.C. there was a drastic climatic change in this region that led to increasing aridity forcing the people to resort to a semi-nomadic existence. This conclusion is based on calculations of percentages of animal bones found from different phases. It seems that increasing aridity during the Late Jorwe period led to the decline of agriculture, and economy based on farming changed over to sheep/goat pastoralism.

10.7.4 Other Characteristics

All these cultures are characterized by a stone blade/flake industry based on siliceous stones such as chalcedony, chert, jasper and agate. The tools include long parallel sided blades, blunted back blades, serrated blades, pen knives, lunates, triangles and trapezes. Some of these blade tools have a shine on the sharp edge suggesting that they were used for harvesting.

Polished stone axes, which are typical of the Neolithic-Chalcolithic cultures of Karnataka-Andhra, have also been found at some of these sites, though they are not
Copper objects consist of flat axes or celts with convex cutting edges, arrowheads, spearheads, chisels, fish hooks, mid-ribbed swords, blades, bangles, rings and beads. Among the finds at Kayatha, one pot contained 28 copper bangles. Some of these objects like the axe were cast in mould, while others were hammered to shape.

The most prolific item among the ornaments are beads made of carnelian, jasper, chalcedony, agate, shell, etc.

A necklace made of 40,000 microbeads of steatite has been found in a pot belonging to the Kayatha culture. At Inamgaon were found beads of gold and ivory, a spiral ear ring of gold and anklets of copper.

Terracotta objects are found frequently at majority of these sites. These are in the form of human and animal figurines. The stylized terracotta bulls (which are mostly miniature sized) found in the Chalcolithic levels at Kayatha, some with a prominent hump, some with horns twisted backward, and some with the horns projecting forward horizontally, are of special interest. Considering the occurrence of numerous terracotta bull figurines at several of these Chalcolithic sites it can be suggested that bull was a sacred animal, though the possibility that some of them could have been toys cannot be ruled out.

**The Daimabad Hoard:** By a chance discovery, four objects on the top of the mound (below which is a deposit, 1.2m thick belonging to the Jorwe period) came to light at Daimabad. These are massive, all solid cast, and weigh over 60 kg:

i) **Elephant:** This is the heaviest (25 cm in height X 27 cm in length), and stands on a cast copper platform with four brackets beneath, pierced, to take axles.

ii) **Rhinoceros:** This is a slightly smaller, and also stands on a cast platform. The brackets contain two solid copper axles with cast wheels attached. This rhinoceros recalls the one inscribed on the Indus seals.

iii) **Two Wheeled Chariot with a Rider:** The chariot is attached by a long pole to the yoked oxen which stand on two cast copper strips, but there are no brackets for wheels. The chariot has two uprights supporting a cross-bar behind which the rider stands. This piece has no parallels.

iv) **Buffalo:** This also has wheels and axle in position. This has some parallels in the figures of buffalos in both terracotta and case copper or bronze found from Mohenjodaro. The copper of the Daimabad hoard compares with that of other copper objects found in excavations, and spectrometric analysis of this metal has revealed that it is unalloyed by tin or other metals. According to one view the Daimabad hoard is datable to the Late Harappan period (Ca. 1600 - 1300 B.C.). Another suggestion is that they could probably belong to the same technological group as the Kallur hoard.
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Copper Chariot, Daimabod Hoard

Copper Buffalo, Daimabod Hoard

10.7.5 Religion/Belief Systems

The finds in the excavations also shed light on the religious practices and beliefs of the people.

i) Mother Goddesses: That these Chalcolithic communities had a belief in the mother goddess, and worshipped her, is attested by the finding of female figures of clay (both baked or unbaked). These female figures are both with heads and without heads. From the lower levels of occupation (dated to the middle of second millennium B.C.) at Nevasa, comes a large headless female figure, which is made without clearly showing physical features. Inamgaon has also yielded similar terracotta female figurines, which show no physical features except breasts.

Evidence for the worship of the mother goddess has been recorded in the excavations of an Early Jorwe house (1300 B.C.) at Inamgaon. Here buried under the floor in a corner, was found an oval shaped clay receptacle with a clay lid. Inside this receptacle was found a headless female figurine having large pendant breasts and also a bull figurine. These female figurines, including the one from Inamgaon point to the worship of the goddess of fertility. These figurines (especially the headless ones), according to one suggestion, may represent the goddess Sakambhari (of the early historic period), the goddess of vegetative fertility, who was worshipped for warding off draughts.

ii) Gods: Male figurines are rare in the Chalcolithic settlements. It has been suggested that the male figurines of clay (two of them being unbaked, and one baked) found in the Late Jorwe levels (1000 - 700 B.C.) at Inamgaon may possibly be identified as gods.

In this context a painted jar of Malwa period (1600 B.C.) is considered to be of some religious significance. This pot has two panels. In the upper panel is painted a scene depicting a human figure wearing a garment of twigs covering the loin, and is surrounded by stylized animals such as stag, deer, peacocks etc. The lower panel shows springing tigers or panthers, which are also stylized. This vessel, richly decorated with elaborate paintings, was probably meant for some ritualistic use. Likewise, finds of solid cast copper elephant, buffalo etc. at Daimabad could have religious functions.

ii) Burial Practices: Disposal of the dead by burial was a common custom. Adults as well as children were usually buried in a north-south orientation; the head towards the north and the legs towards the south. Adults were, in a majority of cases, buried in an extended position, whereas children were buried in urn-burials—either in single pots or, more often, in two pots—placed horizontally mouth-to-mouth in a pit.
Adults, and also children, were buried in a pit which was dug into the house floor, and rarely in the courtyard of the house. It is interesting to note that during the Jorwe period, in the case of adults, the portion below the ankle was purposely chopped off. These practices like burying the dead within the precincts of the house, and chopping off the feet could possibly suggest a belief in which the dead were restrained from turning into ghosts, who could become malevolent.

The adult burials in several cases contain offerings (grave goods) which are usually two pots, or sometimes more in number. One adult burial of the Late Jorwe period contained fifteen pots. It was also common to bury the dead with personal ornaments. In an adult burial of the Late Jorwe period, a large copper ornament was found near the neck of the skeleton. A child in a twin urn-burial of the same period had a necklace consisting of twelve beads of copper and red jasper alternately.

The Jorwe period has also disclosed some unusual burials at Inamgaon. Here has been found a four legged urn-burial made of unbaked clay, and its southern face resembles a human body. This urn (80 cm. in height and 50 cm. in width), which has a wide mouth with a featureless rim, contained the skeleton of a male, of about 30 to 40 years old, in a sitting posture. In this case, the portion below the ankle is not chopped off. The burial offerings were a spouted pot with the painting of a boat design having long oars. What this boat design reminds one is the present day Hindu belief that the departed soul has to cross waters in a ferry to reach the heavenly abode. This person who was given such an elaborate burial could be:

- of high status, or
- the ruling chief of the settlement, or
- belonging to a social group that practised a different kind of burial.

10.7.6 Social Organisation

In the chalcolithic culture regions, a study of the distribution pattern of the sites seems to suggest that these sites were of two types, one type representing regional centres and the other type representing village settlements. This difference, or hierarchy, has been taken to suggest that some form of administrative organisation was present in the chalcolithic cultures. This also suggests that the chalcolithic social organisation was characterised by ranking. The presence of an administrative authority is further supported by existence of public structures such as fortifications, rampart and moat, granaries, the embankment and canals (well documented at Inamgaon) etc. found at different sites.

Seen in the larger context of the post-Harappan developments, these chalcolithic cultures betray discernible influences of the Harappan culture, though in a residual form. All the same, they are marked by strong regional elements, and also display trade links and cultural contacts between each other.

These metal-using farming communities which flourished in the second millennium B.C. disappeared around the first millennium B.C. (excepting Late Jorwe which continued till 700 B.C.). One possible reason attributed for such a decay (on the basis of analyses of soil sample overlying these Chalcolithic horizons) was increasing aridity and unfavourable climatic conditions. Many of these settlements in the Godavari, Tapi and other valleys were deserted, and were reoccupied after a gap of six or five centuries in fifth-fourth centuries B.C., heralded by urbanisation.

Check Your Progress 4
1) Which of the following statements are right (√) or wrong (X).
   a) Chalcolithic Cultures of Western and Central India were city settlements.
   b) Carbonized remains of seeds found in excavations indicate the variety of crops raised by the people.
   c) The smaller size of artisan’s house at Inamgaon demonstrates social differentiation.
   d) There is no evidence of mother goddess worship.
   e) At certain sites urns were used for burials.
2) What are the characteristics of Malwa settlements? Answer in about ten lines.

3) Discuss in about five lines the characteristics of Daimabad Hoard.

10.8 LET US SUM UP

By about 2000 B.C. agricultural communities came into existence in different parts of India. These agriculturists used tools and implements made of stone and copper. In North India these communities used various kinds of potteries like the OCP and BRW. A variety of copper tools have also been discovered. In Central India and Maharashtra Black soil zone excavations have shown the existence of the Kayatha, Malwa and Jorwe cultures. By about 750 B.C. many of these agricultural communities adopted iron technology. The chalcolithic communities showed distinct variations in their pottery tradition. The iron age potteries called the PGW and the NBPW were used over a larger area. During this period there was greater interaction among various communities and a transition towards urbanisation was taking place.

The finds at the sites belonging to different cultures give detailed information about settlement patterns, trade links, types of tools and ornaments and religious beliefs etc.

10.9 KEY WORDS

Archeobotany: Study of the remains of plants.
Arthashastra: A book traditionally attributed to Kautilya the minister of Chandragupta who ruled in the fourth-third centuries B.C.
Brahmi Script: The earliest known script of historical India. Ashoka’s inscription were written in the same script. Most of modern Indian scripts like Tamil, Devanagri etc. are derived from it.
Chalcolithic: Refers to communities which used copper and stone tools.
Jatakas: Stories relating to the previous births of the Buddha.
Mound: Remains left by people of the past which look like heaped up embankment on the relief.
Pit Dwelling: A practice of making homes beneath the surface of the earth. Dwelling spaces used to be dug beneath the floor.
Punch Marked Coins: Coins made of copper and silver which came to be used around the sixth-fifth century B.C. They are the earliest known coins of India.

Mortuary Practice: The practice of the disposed of the dead.

Thermoluminescence Dating: A scientific method of dating ceramic material.

Type Site: The site where a particular culture was first identified.

10.10 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress 1
1) Your answer should include the kind of pottery and its features; structures; crops; area of this culture etc. See Sec. 10.2.
2) a) × b) × c) × d).

Check Your Progress 2
1) Your answer should include the colour of the pottery, its making technique and the difference in BRW of different regions like the doab BRW is of plain surface while Gilund and Ahar BRW is painted etc. See Sec. 10.4.
2) Here take for example the kind of semi-precious stones found. Since these were not available locally they were obtained through trade. See Sec. 10.5.

Check Your Progress 3
1) NBP Ware Culture got its name from the distinctive pottery type which is associated with this period. See Sec. 10.6.
2) a) √ b) × c) √ d) ×

Check Your Progress 4
1) a) √ b) × c) √ d) × e) √
2) There are quite large settlements, with evidence of layout planning. You should mention their planning and other features like Oval fire pits, deep pit sites etc. See Sub-sec. 10.7.3.
3) This was a chance discovery. Mention the objects and their characteristics. See Sub-sec. 10.7.4.