
UNIT 9 PREHISTORIC TYPOLOGY*

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Learning Objectives

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

- Identify tools belonging to different prehistoric cultural periods;
- Differentiate between two sets of tools;
- Discuss how and in what manner the tools were used by prehistoric people; and
- Find out the gradual change in typo-technology as a result of changes in environment and human culture.

9.0 INTRODUCTION

When we study prehistoric tools many questions come to our mind. Why do we study Stone Age tools? How many are there? What is the need to study them?

The answer is very simple. A proper discussion on tools and implements used by prehistoric people can reveal many things about the past. For instance, it can tell us about the changes that occurred in the material culture of prehistoric people in terms of technique, use of raw material, and even in terms of usage. These in the long run can help us recreate not only material aspects of culture but also certain intangible aspects of their culture.

The study of different types of tools is mainly aimed at establishing the different tool-making techniques practiced by prehistoric people at different places in the initial phases

of their cultural development. However, for the later periods a typological study helps to identify diffusion, contact and migration of different traditions of the past cultures. As such, certain very clear-cut structural or morphological definitions have been made to classify the various kinds of tools coming from all ages. It does not in any way mean that the tools found from all over the world have to confirm to any of these defined typologies. This is mainly because prehistoric people worked according to their own plans and necessities without having anything to do with our present attempt of defining some common kinds. As a result within a typology many stylistic variations are noted and, as a rule, they are described on the basis of specific characteristics. For instance, the word handaxe stands for a defined typology. But if one finds a handaxe with some peculiarity which one wants to describe, one can always record it as triangular handaxe, or peariform, or such other types (Bhattacharya, 1972).

One important point to be kept in mind as we discuss tool classifications is that they are related to the various stone tool making technologies such as percussion, pressure flaking, and grinding. Therefore the discussion of these stone artifacts cannot be done in isolation and they have to be studied together with tool technology.

Check Your Progress

1) What are the two kinds of specimens archaeologists usually excavate?

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9.1 CLASSIFYING TOOLS INTO TYPES

Before we discuss the different common typologies of artifacts, it is important to briefly understand what classification means. Archaeologists usually excavate two kinds of specimens: artifacts and ecofacts. Artifacts are the material remains of cultural activities such as stone tools, weapons, ornaments, house remains etc. As a general rule, archaeologists identify ecofacts, whereas artifacts are usually classified.

Archaeology's basic unit of classification is a *type*. Artifact type is an abstract form, created to facilitate analysis. The most basic type is however the *morphological type*, coined by Julian Steward in 1954. This is also called the *descriptive type* designed to reflect overall appearance of an artifact. Length, width, weight, material, colour, and volume are some attributes designed to define such a type. The primary function of this type is descriptive in nature, to convey the appearance of artifacts or set of artifacts. When considering morphological criteria within these groups, several attributes have to be taken into consideration, such as, weight, sharpness, length, width, thickness, pattern of flaking etc.

9.1.1 Some Key Concepts

Before we classify the artifacts of the Stone Age, some key concepts need to be defined and elaborated.

- i) **Artifacts:** Artifacts refer to humanly manufactured or modified objects. These are objects that are deliberately shaped by humans and thus it includes a variety of

implements made from different raw materials such as wood, bone, shell, stone, metal as well as clay.

- ii) **Assemblage:** This refers to a set of artifacts, not necessarily of the same type, recovered from a specific archaeological context. Distinct groups of artifacts from different assemblages can be categorized as an industry. Distinctive assemblages or industries which recur in different contexts are often taken to be indicators of a specific culture.
- iii) **Industry:** When several artifacts are found of the same age at a site they constitute an assemblage. When such assemblages recur at several sites, they are called industry. They at times are characterized by a particular technology, technological style or morphology and are drawn from different but contextually related assemblages.
- iv) **Tradition:** This term is used to describe a set of industries that are technologically or aesthetically similar enough to imply underlying cultural or historical connection. It is used to describe a set of industries across time, so that, in effect, a tradition forms the genealogy of a given industry (Shaw & Jameson, 2002).

Check Your Progress

2) What do you understand by an assemblage while studying artifacts?

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9.2 PALAEOOLITHIC STONE TOOLS

The Stone Age existed at a time in human prehistory when the Pleistocene and early Holocene geological epochs took place. Thus this is a cultural period which encompasses a time span over millions of years and which witnessed changes in tool technology. Referring to a time when stone tools were in use, this period can be grouped into three major groups – Palaeolithic, Mesolithic and Neolithic. Depending on typo-technology of tools used, economic activities, and other cultural features, the Palaeolithic can again be divided into Lower Palaeolithic, Middle Palaeolithic and Upper Palaeolithic.

9.2.1 Lower Palaeolithic

Some of the important lower Palaeolithic tools include the following:

- A) **Pebble Tools:** The term literally refers to all tools made on pebble. In usual practice, it applies to a variety of choppers, scrapers and handaxes, where working edge is made by block-on-block technique (See Figure 1). These tools are big and massive and characteristic of lower Palaeolithic culture of South East Asia (such as Burma), North West India (such as Sohan) and East Africa.

Two types of pebble tools are normally seen: Chopper and Chopping

- i) Choppers are unifacially flaked large massive tools.
- ii) Choppings are similar to the choppers except that they are bifacially flaked.

The term *Chopper-Chopping* was suggested by H. L. Movius in 1944 when he analysed Palaeolithic tools from India. These tools are used for chopping, scraping and clearing purposes.

- B) **Biface/Handaxe:** These are bifacially flaked core tools, with thick and heavy butt end and thin tapering pointed working end (Figure 1). They are also called *bifaces* and *coup-de-pong*. Boucher de Perthes, a French prehistorian was the first to find handaxes, following which they were discovered in Europe, Africa, Asia and most particularly in India.

In terms of its use, the pointed end was probably used for digging, while the sides were used for cutting or splitting. Because of their multifarious functions, they are also called *multi-purpose tools*.

On the basis of methods of manufacture, handaxes are placed under three traditions: Chellian, Abbevillian and Acheulian based on the evidence found in France. These traditions are indicative of their development through various stages:

- i) **Chellian-Abbevillian Handaxe:** These are tools crude in nature and flaked from the upper and lower surfaces. These handaxes are irregular in outline with zig-zag working end. The name is given after type sites, Chelles, located on the junction of rivers Seine and Marne in France; and Abbeville, on Somme River in France. The technique of manufacture was likely block-on-block or stone hammer technique.
- ii) **Acheulian Handaxe:** In St Acheul in Somme valley, France, Boucher-de-Perthes discovered very symmetrical handaxes in 1836. Regular in outline, beautiful to look at, these were worked by removing thin flakes from both surfaces. In cross-section, they were biconvex. They could have been produced by a light cylindrical hammer made of wood, bone or stone.

Some types of Acheulian handaxe include the following:

- a) **Peariform:** As the name suggests this is a specific kind of handaxe and resembles the shape of a pear and not just any kind of handaxe which may have a pear-like shape. It is a short heavy handaxe with rather a rounded off point at the working end.
 - b) **Ovate:** This is an advanced variety of handaxe which is oval in shape. The tool though biconvex in profile is rather thin and symmetrical. The working end and the lateral borders continue in the form of a ridge across the butt-end.
 - c) **Cordiform:** This handaxe is so named because of its similarity with the shape of the heart. The butt-end is well-rounded and curves gently into the sides to meet at the working end.
 - d) **Lanceolate:** This type of handaxe has fairly long tapering or sloping sides ending in a pointed end, just like a lance head. The surface is found rather flattish as a result of probable well-planned controlled flaking. The width of the tool is always shorter than the length.
- iii) **Micoquian Handaxe:** These are small triangular handaxes, with thin elongated working ends. The thick and heavy butt end often preserves the original surface. However unlike Abbevillian it is finely retouched with extensive secondary flaking. They were first noticed in a French site, La Micoque and follow the Acheulian types stratigraphically. They are not as symmetrical as the Acheulian handaxes.



Fig. 1: Lower Palaeolithic Tools

Source: <http://historyhelpmate.blogspot.com/2017/11/palaeolithic-cultures-of-india.html>

Check Your Progress

3) What are the three types of Lower Palaeolithic tools along with their variations?

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C) **Cleaver:** Next to handaxe, cleaver is an important and regularly occurring lower Palaeolithic tool. This is a cutting or cleaving tool with a broad cutting edge and a prototype of the present iron axe. Though occurring in association with handaxe, it is later in antiquity than the handaxe. They were first found in association with middle Acheulian handaxes and recovered from Bed III at Olduvai Gorge, East Africa.

On the basis of (a) shape of the butt, (b) shape of the edge, (c) nature of cross-section, cleavers can be sub-divided into:

- i) Cleaver with square/round/‘U’ butt and straight edge, and generally square or rectangular in shape,
- ii) Cleaver with pointed butt and straight edge, roughly triangular in shape or ‘V’ like,
- iii) Cleaver with broad or narrow butt and flaring sides with straight, concave or convex edge, and
- iv) Cleaver with parallelogram shaped cross-section.

9.2.2 Middle Palaeolithic

Contrastingly the massive tools of the Lower Palaeolithic are replaced by much smaller tools in the Middle Palaeolithic. The earlier usage of the core to make tools is now replaced by the extensive use of smaller flakes. Thus new tool techniques such as Mousterian and Levalloisean made their appearance in this period.

A) **Scrapers:** These are usually smaller tools made on medium-sized flakes. A scraper is a tool essentially manipulated by fingers. This necessarily makes the scraper a thin tool usually made on medium sized triangular or fan-shaped flake in which the longest side is slightly convex. The convex edge of the flake is found thinned out by knocking off larger primary flakes from the surface and then subjecting it to uniform and controlled secondary retouching along the entire border. The undersurface of the tool is seen seldom touched, as it maintains the single flake scar of detachment (Bhattacharya, 1972).

These tools are used for scraping barks of trees, dressing of the wooden or bamboo shafts and skins of animals.

There are many varieties of scrapers that have been identified. These are mainly on the basis of (a) shape, (b) position, and (c) nature of the edge for scraping:

- i) **Side scraper:** In this type, one or both of the longer sides from the upper or underside or sometimes from both surfaces, retouch is done. They are thus called single sided or double sided scrapers respectively.
- ii) **End scraper:** The scraping edge in this type is confined to the shorter side which is steeply retouched. Usually the scraping end is located on the distal or proximal end of the flake in respect to the location of bulb of percussion.
- iii) **Round scraper:** In this type the working end is along the periphery, all round the flake.
- iv) **Concave or hollow scraper:** In this tool type the scraping edge is intentionally made concave by flaking or by taking advantage of the natural concavity. The tool is retouched from the upper or undersurfaces.
- v) **Convex scraper:** Regardless of the shape of the nodule or flake the working edge in this type of tool is convex or arched and obliquely retouched from above or undersurface.
- vi) **Concavo-convex scraper:** In this type the working edges are concave and convex respectively.
- vii) **Side-cum-end scraper:** Here one or two of the longer sides and ends bear retouch and hence they are called so.

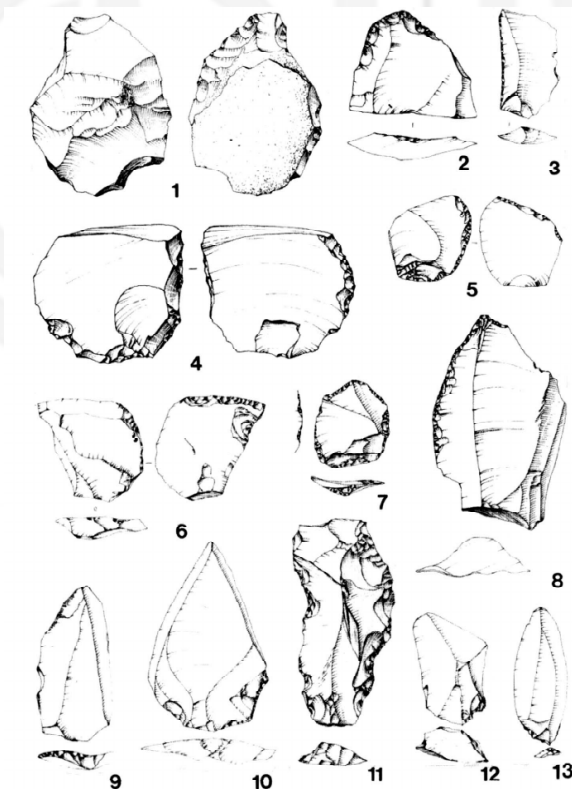


Fig. 2: Middle Palaeolithic Tools

{Levallois core (1), different types of scrapers (2–8 and 11), Levallois points and flakes (9, 10, 12 and 13). All the tools are made on local light grey chert, except for 3, which is of very dark green quartzite (1:2)}

Source: https://www.researchgate.net/figure/Middle-Palaeolithic-tools-Levallois-core-1-different-types-of-scrapers-2-8-and-11_fig3_259531793

- B) **Points:** Points are almost of the same size as the scrapers i.e., made on medium sized flakes. Unlike scrapers where a general slope is formed from the back border to the scraping border by flaking, there appears a slope of similar kind obtained for two opposite borders. Thus the central region is a little elevated than any of the borders. These two borders converge in the anterior part to give rise to a point. This is further enhanced by secondary retouching near the pointed end. Some special types of points may be grouped as follows:
- i) **Single shouldered point:** These are tools where a single corner towards the base is removed by a single blow.
 - ii) **Double shouldered point:** Here both corners towards the base appear to have been removed. These are also referred to as tanged points.

9.2.3 Upper Palaeolithic

The Upper Palaeolithic period is characterized by the blade and burin industries. The authors of these industries were fully modern men comparable to the *Homo sapiens sapiens*. Besides blade and burin industries, they made tools on bones, antler, and ivory. They lived in caves or rock shelter as shown by paintings on the walls and carvings on rocks. Their culture is found not only in Europe, Africa and West Asia but also in India. Some of the tools of this period include the following:

- A) **Knife Blades/ Blades:** Blades are thin, long, parallel sided flakes which may be retouched or unretouched. In some specialized varieties this retouching occurs in the form of backing or blunting of a border and these are called backed knives.
- B) **Borer or Awl:** These consist of artifacts usually made on flat flakes but sometimes on convenient nodules. It has a thick projecting point specially obtained by etching out two notches on the two sides of the projection.
- C) **Burin or Gravers:** This tool was specifically used for engraving on soft stone or bone as well as on the walls of rock shelters and caves. A typical burin is a blade with margins sliced obliquely at one end so that they meet to form a narrow chisel edge.
- D) **Bone Tools:** Tools made on bone, antler, ivory, horn etc. first appeared in the upper Palaeolithic times in the European sites. There are varieties of bone tools. Some of the commonly occurring ones include the following:
 - i) **Baton-de-commandement:** In its simplest form it consists of a portion of antler with one or more holes pierced through it.
 - ii) **Fish Hooks:** The simplest type of fish hook consists of a thin needle with a hole through it though not at the centre. Fish hooks were found during Magdalenian times.
 - iii) **Harpoons:** This constitute an important family of bone tools and show an evolutionary series such as (a) harpoons without barbs; (b) harpoons with one barb; (c) harpoons with single row of barbs; and (d) harpoons with double row of barbs.
 - iv) **Needles:** These were probably made by grinding a small fragment of bone in a groove in a piece of sandstone or some such hard surface.

- v) **Bone Lance points:** These are thin wands of bone pointed at one end. At the other end some workings are found in order to get the lance points hafted in the shafts.
- vi) **Spear Thrower:** This is made of a long flat piece of bone. At its one end there is a little projection on the upper side in the form of a hook. The other end is held in the hand in such a way that it points backwards over the shoulder of the operator and a projectile, usually a spear, to be thrown, can be rested upon it with its butt end.

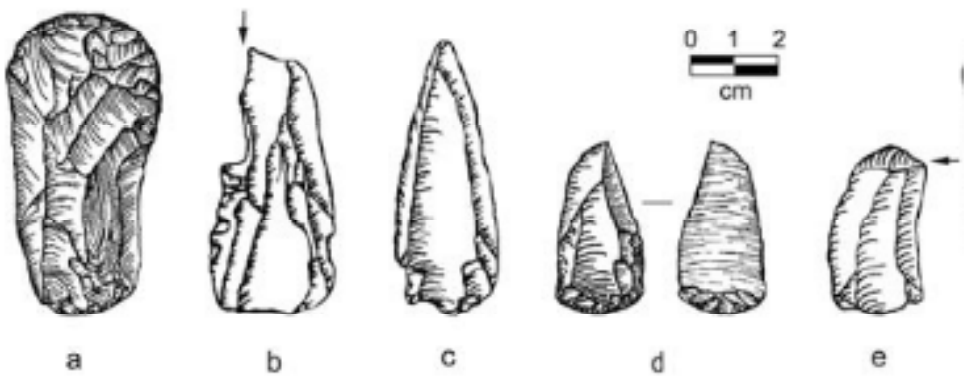


Fig. 3: Upper Palaeolithic Tools

Examples of Upper Palaeolithic tool types (a) end-scraper on blade (b) burin (c) Umm el Tl el point (d) Emireh point (e) chamfered piece

Source: https://www.researchgate.net/publication/316991124_The_Initial_Upper_Palaeolithic_in_the_Levant?_sg=yCqYOGOF2n5BaPapGEQvWrzWabnYIPfiXNEDOT1ulQEM0qLMSDhROQmTEpGrbYuowrcdwV2clA

Check Your Progress

4) Which industries does the Upper Palaeolithic period characterize?

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9.3 MESOLITHIC TOOLS

Mesolithic period is a transitional stage between Palaeolithic and Neolithic periods. It developed in the Holocene epoch. In this period the tools produced were tiny blades produced by the fluting and pressure flaking techniques. These extremely tiny tools are called microliths. This was probably needed since the focus was now on fast game hunting, and probably hafting was used widely. When viewed from this context, the tiny microliths possessed many advantages over the Palaeolithic tools. These were easier to make and took lesser time to manufacture. These economised the raw material and at the same time when hafted on a wooden shaft in a particular fashion they formed very effective tools and weapons. These are known as composite tools. Microliths as composite tools marks advancement in technology as compared to the Palaeolithic. Microliths usually comprise of the following:

A) Geometric Microliths

- i) *Lunates or crescents*: These are small microliths made on parallel sided blades resembling a half moon. They have a round back (or arc) and a straight opposite side (chord). The arc is thick and intentionally blunted by steep retouch to facilitate hafting in a handle, while the chord remains almost unretouched and sharp.
- ii) *Triangles*: These are made on broken blades, the sharp edge of which forms the base while the longitudinal sides are blunted. There are two varieties – non-geometric triangular form and a regular form with a longer cutting edge, such as scalene, equilateral and isosceles triangles.
- iii) *Trapezes*: They resemble geometric trapeze in which the shorter three sides are retouched steeply while the longest side remains as a sharp cutting edge. It may be taken as a transitional form to lunate. In a true trapeze the two parallel sides of the original blade remain unretouched while the non-parallel sides are retouched.
- iv) *Trapezoids*: These form a sub-type of trapeze in which no two parallel sides can be seen while the other longitudinal sides are retouched.
- v) *Transverse arrowheads*: In this type the length between the cutting edge and its posterior border is more than that between the lateral sides. It is usually an arrowhead having a transverse sharp edge instead of a pointed one.

B) Non-geometric Microliths

- i) *Backed blades*: These are parallel sided blades with one or both of their lateral sides retouched for cutting purposes.
- ii) *Obliquely blunted blades*: These are also called pen knife blades. These possess a steeply blunted side which curves to meet the thin, unretouched edge which acts as a working edge. Partial or complete blunting may be done on right or left side. The working edge could be concave or concavo-convex or straight.
- iii) *Truncated blades*: These are blades, the broken ends of which are trimmed either transversely or obliquely probably to produce a scraping end. The truncation is done at one or both ends. The working edge is transverse or straight.
- iv) *Tranchets*: These are flake tools the cutting edge of which is formed by the intersection of two or more flake scars from the two surfaces of the tool.
- v) *Hollow based points*: In these tools at least a part of one side of the point is steeply blunted while the base is intentionally hollowed by retouch. They include both symmetric and asymmetric types.

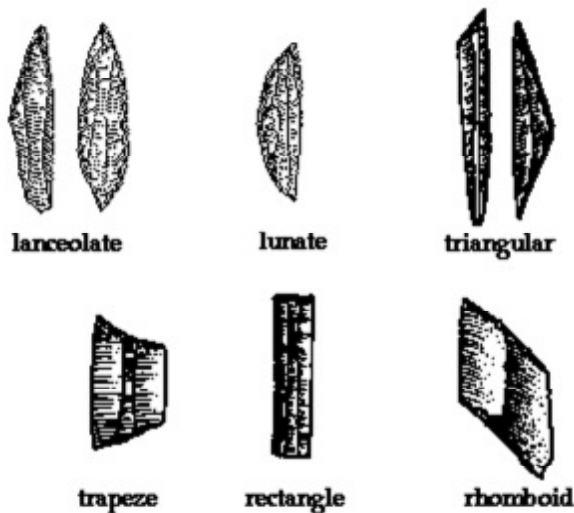


Fig. 4: Microliths

Source: <http://rogergrace.webmate.me/SARC/type/microliths.html>

Check Your Progress

5) In which epoch did the Mesolithic culture develop?

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9.4 NEOLITHIC TOOLS

Neolithic period marks a cultural revolution. From their role as foragers of nature, man became the controller of nature. The tools of this period were more durable and took longer time to finish. Besides stone tools, the people also introduced ceramics, which could be used for different purposes.

During this period prehistoric people made tools out of different types of igneous rocks by pecking, grinding and polishing in order to adapt to their environmental conditions although the use of earlier tools were still continued.. Surface of a wet sand stone was used as an abrasive. The tools thus made were more durable and one took longer time to make them. Thus mostly the Neolithic industry is referred to as pecked and ground stone tool industry.

- a) **Celts (a term used for both Adzes and Axes):** Axes are mostly triangular in shape with a broad cutting edge with a butt which may be pointed, rounded, broad thick or broad thin. They constitute the most significant and major group in the pecked and ground stone industry. They vary in size from small to large specimens. Majority of them are medium sized. Small and large axes are quite rare. Working edge of the axe has got symmetrical beveled surfaces meeting at the sharp working edge. .
- b) **Adzes:** An adze is a tool for chipping or slicing away the surface of the wood. These are thin, triangular shaped tools usually made on flakes. They differ from

axes in having one flat surface and the other slightly convex surface with a beveled, central edge. Adzes are hafted in such a way that the blade is at right angles to the handle. Usually the beveled edge is ground.

- c) **Chisels:** Chisels are narrow elongated cylindrical or rectangular celts with ground edges which may be straight or convex. They are actual prototypes of the metal chisels employed in carpentry. They might have been used for splitting purposes and for cutting as well.
- d) **Wedges:** These are small, roughly triangular/quadrilateral pieces with wedge shaped pointed ground edge and pecked surfaces. These were used for splitting wood and were probably made from broken axes.
- e) **Grinding or Rubbing stones:** These are domestic implements usually found in association with querns, serving the purpose of grinding and pounding of grains. They are made on small natural slabs in relation to the querns made on huge boulders. They may be oblong, rectangular, oval or circular in shape.
- f) **Saddle Querns or Mills stones:** They derive their name from their appearance to riding saddles. They were used for grinding and pounding grain and other cereals. They are rectangular, square and less frequently round in shape and made out of large granite boulders. Majority of them are long, broad and shallow in depth. Their surfaces were hollowed out by pecking.
- g) **Mace heads or ring stones:** These are thick massive circular stones with a well-drilled central hole. Their surfaces are sometimes pecked and ground. The central hole was pecked and drilled alternatively from both surfaces. The diameter of the hole narrows down from the surface to the centre, taking an hour glass shape. Their use as weights for digging sticks suggests they were agricultural implements.
- h) **Fabricators or hammer stones:** These are round or cylindrical in shape. These were put to use in the manufacture of blade tools and in making grinding and rubbing stones. Particularly the cylindrical ones with marks of battering at either end must have been used as punches for dressing axes and similar ground tools.

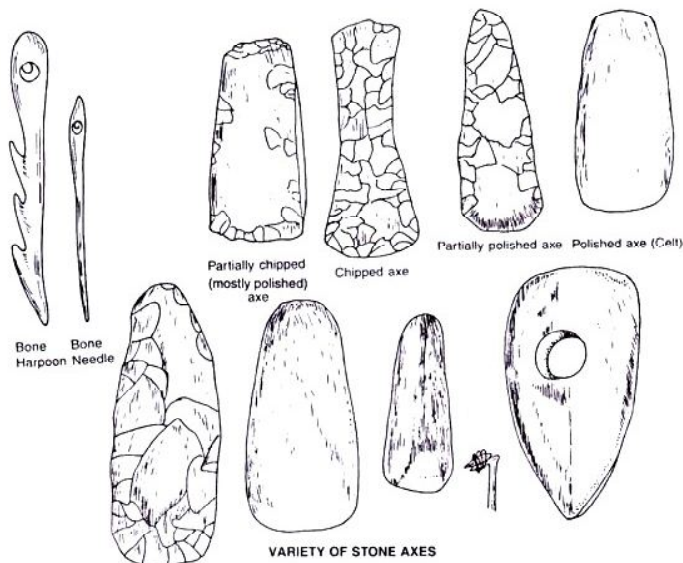


Fig. 5: Neolithic Tools

Source: <http://www.yourarticlelibrary.com/notes/history-notes/brief-notes-on-neolithic-stone-age-life-culture-and-tools/41957>

Check Your Progress

6) What kind of rocks was used to make tools during the Neolithic Period?

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9.5 CERAMIC TYPES

Pottery or ceramic ware appears in the Neolithic period, even though there are reports of stray finds from the Mesolithic period too. However, it was only in the post-Neolithic period that pottery technology becomes much advanced and found in almost all regions of the world. This refers to the craft of making pots from clay.

The clay used in pot making was invariably selected with the utmost care; often it was traded over considerable distances. The consistency of the clay is important – it is pounded meticulously and mixed with water to make it entirely even in texture. By careful kneading, the potter removes the air bubbles and makes the clay as plastic as possible allowing it to be molded into shape as the pot is built up (Fagan, 2001).

9.5.1 Types of Pottery

The basic classification that is made in pottery is handmade and wheel made pottery – the former used in Neolithic period, the latter used in a few sites of Neolithic, especially in the later part of Neolithic culture. Proliferation of wheel made pottery took place mostly in Chalcolithic period.

- a) **Coil building method** – Here, flattened long coils of clay are placed in a concentric manner and then squeezed and smoothed together.
- b) **Mould method** - The vessel is made from a lump of clay that is either pressed into a concave mold or placed over the top of a convex shape.
- c) **Potter’s wheel method** –The vessel is formed from a lump of clay rotating on a platform turned by the potter’s hands or feet.

9.5.2 Surface Treatment

Following the initial manufacturing and shaping process, clay vessels would be put aside for a short time until they reach the *leather-hard stage*. At this point most of the water that had been mixed with the clay to make it plastic and workable would have evaporated and maximum drying shrinkage would have occurred. However a small amount of water of plasticity still remains allowing secondary manufacturing techniques, such as *burnishing* (polishing) or the use of *paddle* and *anvil*. It is at this point too that decorative as well as functional surface treatments would be carried out – *comb*, *cord*, *finger nail* and *bird bone impressions* as well as *incised decoration*.

9.5.3 Firing

Firing produces irreversible change, and it is only after firing that the vessel becomes pottery. In the Neolithic period, firing was done using open fires or a pit-fire. In later

periods, sophisticated kilns were prepared for firing pots that were mass produced, such as those found at Harappa.

9.5.4 Some Example of Pottery Type

On the basis of the types of pottery, different cultures can be identified. In the following a few examples of well-known pottery type is given.

- a) **Malwa ware** – This is a characteristic pottery type of Malwa Chalcolithic culture. This is a wheel made pottery with buff or cream slip and has painted patterns in dark brown or black colour. The designs are usually of triangles/lozenges, and animals/birds/plants/dancing human figures.
- b) **Painted Grey Ware (PGW)** – PGW is a characteristic pottery of early Iron Age in India, the other being NBP. This is produced from well-levigated clay and on a fast wheel. A thin slip is applied on both surfaces and the vessels baked at 600° C under reducing conditions producing the smooth ashy surface. The vessels are painted with black pigment on both surfaces with geometric and naturalistic patterns.
- c) **Northern Black Polished ware (NBP)** – This is made on a fast wheel from well-levigated clay, well-baked with a blackish-grey and occasionally reddish core, and is thin and sturdy. Its distinctive feature is its glossy surface with mirror effect. Normal surface colour is light to jet black or steel blue but occasionally tends to be silvery, golden, brown or chocolate. It is rarely decorated with painted designs in dark steel blue, grey, light and deep red, black and dark brown colours.

9.6 SUMMARY

In the foregoing pages, we have seen how the Stone Age artifacts of the prehistoric period have been classified. This classification has been done keeping in mind the different kinds of tools that have been discovered from different parts of the world. This in no way means that the tools found in Europe or East Africa would be exact replicas of each other.

These objects made of stone and clay is called artifacts because they have been produced artificially by humans and not by nature. Their identification and later classification requires the necessary training, experience and objective and careful examination without which there is every likelihood of doubting their authenticity as man-made. These objects consist of a wide variety of tools and implements and weapons primarily produced from stone though other materials like wood, bone, antler, ivory, and shells were used. But stone being the most imperishable material survives time and hence prehistoric cultures are called Stone Age cultures.

These cultures show evolution in typo-technology and raw materials in time with the needs of people living in respective physical environments.

As we saw, in the beginning the stone tools were larger in size, crudely made by applying simpler techniques. In course of time the tools became relatively small sized and well made. The study of tool typology is related to technology as well. Both of these are in turn dependent upon the type of raw material available to a group of prehistoric people. Environment, both social and physical, plays a significant role in the type formation and usage of these artifacts.

The aim of study of prehistoric typology is to establish various tool making techniques adapted by prehistoric people at different places during early phases of their cultural development. The study of tool types is aimed at diagnosing diffusion, contact and

migration of different traditions and their effect on past cultures. The classification of different tool types is done by looking at different morphological criteria such as form, technique and possible functional significance. It is not necessary that all tool types found all over the world should conform to the defined typology since prehistoric men made tools according to their convenience. Therefore variation in the style of the types of tools is natural.

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9.8 ANSWERS TO CHECK YOUR PROGRESS

- 1) Archaeologists usually excavate two kinds of specimens: artifacts and ecofacts.
- 2) Assemblage refers to a set of artifacts, not necessarily of the same type, recovered from a specific archaeological context.
- 3) Three of the important lower Palaeolithic tools are Pebble Tools, Biface or Handaxe and Cleaver.
- 4) The upper Palaeolithic period is characterized by the blade and burin industries.
- 5) The Mesolithic Period developed in the Holocene epoch.
- 6) Different types of igneous rocks were used to make tools during the Neolithic Period.