

# HIS6E01 -PRINCIPLES AND METHODS OF ARCHAEOLOGY

## MODULE-2 TERMS AND CONCEPTS IN ARCHAEOLOGY

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# Archaeological Site/ Tell / Mount, Site Formation Process


- ▶ **Locations that show significant traces of human activity, essentially where artifacts, features and eco-facts are found together, are known as archaeological sites.**
- ▶ **It also known as 'Tell', or 'Mount', the name given by Flinders Petrie, a British Archaeologist and Egyptologist after a brief interlude a six-week season of excavations at Tell el-Hesi Palestine in 1890.**
- ▶ **According to him, a Tell is a manmade mound of successive, superimposed 'cities'.**
- ▶ **There are different types of site like habitation sites, burial sites, manufacturing sites etc.**
- ▶ **The archaeological data found in a site are the result of two basic factors namely behavioural process or cultural formation process and transformational process or natural formation process.**

# TELL




# MOUND



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- ▶ **The behavioural process or cultural formation process involves the deliberate or accidental activities of human beings as they make or use artifacts, build or abandon buildings, plough their fields and so on.**
  - ▶ The artifacts and features are passed through three important consecutive stages known as **manufacture, use and deposition**.
  - ▶ **The transformational or the natural formation processes are natural events that govern both the burial and survival of the archaeological record.**
  - ▶ The natural agents of transformation include climatic factors like **wind, humidity, temperature, flooding, earthquakes and volcanic eruptions**.
  - ▶ The sudden fall of volcanic ash that covered Pompeii is an exceptional natural process; a more common process would be the gradual burial of artifacts, feature or ecofacts by rain or windborne sand or soil.
  - ▶ The transporting of artifacts or ecofacts by river action is another example of natural process

- ▶ In order to reconstruct past human activity at a site it is crucially important to understand the context of a find, whether artifacts, features or eco facts.
- ▶ Every archaeological material had some settings called **Matrix, Provenance and Association**
- ▶ **Matrix** refers to the physical medium like sediments, sands, clay, gravel etc, which surrounds, holds and supports the archaeological material.
- ▶ Its **provenance** refers to the horizontal and vertical (three-dimensional) position within the matrix.
- ▶ **Association** refers to the adjacent artifacts found in association with the significant archaeological material in the same matrix.
- ▶ For example, an arrowhead recovered from an alluvial soil at a depth of 7 m in the central part of the site found in association with a human burial represents the matrix (alluvial soil), provenance (central part of the site) and the association (human burial).

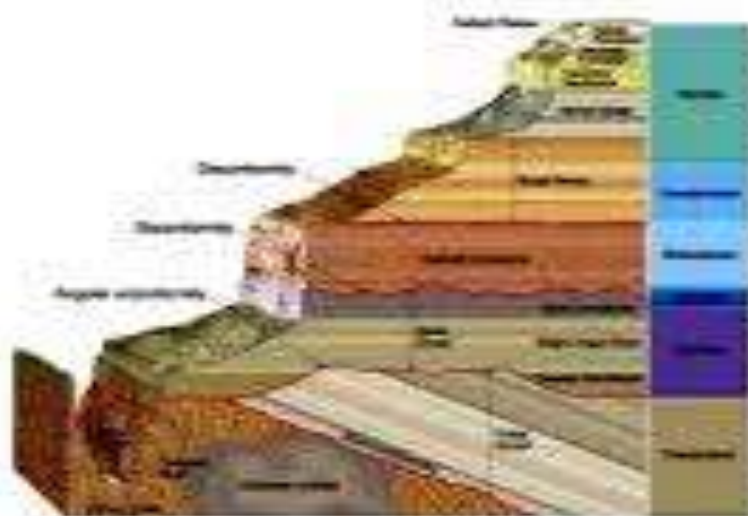
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- ▶ The meticulous observation and documentation of the matrix, provenance and association of archaeological data helps to understand its context.
  - ▶ **Artifacts found where they were originally deposited in the past are said to be in a primary context.**
  - ▶ **In another word, the material is found in undisturbed condition since its deposition, then it is known as primary context.**
  - ▶ **Objects that have been moved since their original deposit through either natural forces or human activity are said to be in a secondary contexts.**

# Layer and Stratigraphy

- ▶ There are **two layers** named **Geological layer** and **archaeological layer**.
- ▶ The **naturally formed sediment layers** are the **geological layer**.
- ▶ The **cultural deposit in the geological layers** is the **archaeological layer**.
- ▶ **Stratigraphy is the study of stratification; that is, the interpretation of horizontal layers that form the deposits of a site over time.**
- ▶ They may compose of **entirely natural deposits** and may consist of a **combination of natural and cultural materials**.
- ▶ Archaeologists may be able to understand the **history of the site through the study of stratification**.
- ▶ Of primary importance is the interpretation of the order in which events occurred at a site and the relative ages of artifacts and features found.
- ▶ This is essential for the relative dating of the cultural materials found.
- ▶ The **archeological study of the strata known as stratigraphy**.
- ▶ The **Stratigrafical method is the removal of the soil in a reverse order, from the surface layer to the natural layer**.



## *Principles of Stratigraphy*



- Superposition
- Original Horizontality
- Lateral Continuity
- Crosscutting Relationships
- Inclusions
- Faunal (biological) Succession
- Incomplete record
- Base-level
- Accommodation
- Preservation Potential
- Cyclicity
- Walther's Law
- Correlation

# Artifacts, Features and Eco facts

- ▶ The material remains collect from an archaeological context can be broadly classified into; Artifacts, Features and Eco facts.
- ▶ Any kind of portable object made, fashioned, modified or used by human beings are the artifacts. For example pottery, beads, plough share, ornaments, etc. It includes unbroken objects, broken objects, manufacturing wastes, rubbing objects, etc.
- ▶ All types of non- portable artifacts such as hearths, structures of floors, walls, postholes etc are called features. Both artifacts and features are the product of human workmanship.
- ▶ Eco-facts are the non- artifactual evidences which includes both
  - ▶ □ Inorganic eco-facts like geological samples such as minerals, sediments, stones, volcanic ash. etc
  - ▶ □ Organic eco-facts like bone, fossils, skulls, teeth, shells etc botanical samples like, plants or wood remains, pollen, nuts, grains, husks, etc.

## Ecofact vs. Artifact



# Assemblage, Industry

- ▶ Assemblage means a **group of artifacts, features and eco facts recurring together at a particular space belong to a particular period.**
- ▶ It represents the **sum of human activities.**
- ▶ For example; the **megalithic assemblage** which is the grouping of **various artifacts like Black and Red Ware pottery, iron Objects, etched carnelian beads, bone fragments etc of a period between 1st century AD and 4th century AD, from the excavation at Porkalam.**
- ▶ The **assemblage of artifacts, features and eco facts termed as Industry.**
- ▶ For example, **Pattanam Industry**, which means the grouping of **all artifacts and eco-facts discovered from Pattanam archaeological site.**


# Culture

- ▶ As part of the anthropological studies, **19th century witnessed the development of concept of archaeological culture.**
- ▶ Archaeologist often found **material remains such as artifacts, features and eco-facts in the course of their exploration or excavation in a particular site.**
- ▶ **They labeled the assemblage of such material remains as culture.**
- ▶ For example, the term **'Megalithic culture of Kerala'** stood for the **assemblage of artifacts collected so far from Kerala in association with the Megalithic monuments and it represented the cultural milieu of the people lived in the Megalithic period.**
- ▶ **E B Taylor**, in his work **"Primitive Culture"**, defined **culture as " the complex whole which includes knowledge, belief, art, morals, law, custom and other capabilities and habits acquired by man as a member of a society"**.

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- ▶ However, in archaeology culture means the grouping of archaeological remains from a particular site and then labeled the site as a distinct culture like Harappan culture, Mohanjodaro Culture, Lothal Culture, Dholavira Culture, Kalibangan Culture, Ropar Culture like that.
  - ▶ The **assemblage of these cultures stands for 'Civilization'**.
  - ▶ For instance, the grouping of the above said archaeological cultures labeled as Indus Valley Civilization.
  - ▶ The **transfer of material culture from one culture to another is labeled as diffusion.**
  - ▶ The **diffusion of iron technology is often quoted as a good example.**

# Cultural Evolution

- ▶ Archaeologists and anthropologists commonly use term '**cultural evolution**' to **conceive the long-term trends in human history.**
- ▶ It represented the **evolution of human culture from hunting food gathering to farming; from farming to the origins of civilization and the state; from agrarian civilizations to industrial and now post-industrial society.**
- ▶ Consequently, such **development has resulted to the increase of population, greater social complexity and inequality, and technologies that are more complex.**
- ▶ Archaeologist felt that the **culture is always moved from simple to complex or from one condition to another condition.**
- ▶ For example, **state is evolved from tribal society to chiefdoms and chiefdoms to kingdoms.**
- ▶ The cultural evolution concepts have originated during the **18th century Enlightenment period and it is largely influenced by the nineteenth century ideology of Karl Marx and Frederic Engels and heavily influenced by L.H. Morgan's sequence from savagery to barbarism to civilization.**

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- ▶ **Gordon Childe** in his *“Man Makes Himself”*, *“What Happened in History”* and *“Social Evolution”* clearly demonstrate the changes occurred in the human culture due to the changes occurred in the subsistence strategies.
  - ▶ Childe conceived the **origins of agriculture (the Neolithic revolution) and the emergence of urban societies (the urban revolution) as major steps in the progress of human societies, because they represented improved adaptations of humans to their environments**



# Kinds of Archaeology

- ▶ **Ethno-archaeology**

- ▶ Ethno-archaeology is the **study of living people and their material culture undertaken with the aim of improving our understanding of the past.**

- ▶ In another words, **anthropological observation aimed at the understanding of the nature of archaeological evidence is often called ethno-archaeology.**

- ▶ **Lewis Binford and Ian Hodder have conducted ethno-archaeological investigations amongst the Inuit (Eskimos) in Canada and in several parts of Africa to make a better understanding of archaeological sites.**


- ▶ The study of traditional bead making centers of Khambhat (Gujarat) and Kangayam (Tamil Nadu) and the pottery making centers of Pattanam (Kerala) unearthed valuable data on understanding the technology involving in making of beads and potteries that recovered from archeological sites.

# Settlement archaeology and Spatial analysis

- ▶ Settlement archaeology, which is **initiated by Bruce G Trigger**, is defined as **the study of societal relationships using archaeological data**.
- ▶ It is the **study of spatial distribution of an ancient human activities and occupation, ranging from the differential location of activities within a single room to the arrangement of sites in a region**.
- ▶ The special patterning of archaeological features is analysed in order to reconstruct past decisions **regarding use of environment, allocation of natural resources, ritual pattern, social relationships and other related matters**.
- ▶ **Gordon Willey's report of Prehistoric Settlement Pattern in the Viru Valley (Peru) has made a pioneer attempt to study the pre historic settlement pattern**.


# Salvage /Rescue Archaeology

- ▶ Salvage or rescue archaeology is a **method of retrieving the data from archaeological sites which are under hazard.**
- ▶ Rescue excavation was a **term coined in the 1960s when development and road building destroyed much of our archaeological heritage.**
- ▶ It involved **trying to excavate and record as much as possible in the time before the builders began work.** Occasionally sites were not discovered until bulldozing began.
- ▶ Nowadays, a number of archaeological sites, **especially the megalithic monuments, have been reported in Kerala during the construction works and most of them were destroyed.**

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- ▶ In certain context, such discoveries led to the salvage excavation; the rock cut sepulcher (megalithic monuments) site of Tiruvattur, Calicut, which was salvaged by the State Archaeology Department of Kerala immediately after the accidental discovery during a house construction.
  - ▶ **Rapid recording and rushed excavation in these circumstances was often the best that could be done. This process of the retrieval of archaeological objects is called salvage and Rescue archaeology.**


# Environmental Archaeology

- ▶ Environmental archaeology is the **study of past human economy and environment using earth and life sciences.**
- ▶ It tells us about **ecological, cultural, economic, and climate change.**
- ▶ Archaeological sites are created by human activity involving material culture (acquisition, manufacture, use, deposition).
- ▶ Archaeological sites and landscapes are altered by a combination of natural and cultural processes.
- ▶ Natural processes include geological and biological activity, such as erosion, sedimentation, frost heave, reworking by plants and animals, plant growth, deposition of dead plants and animals, and degradation by living ones

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- ▶ Cultural processes include subsistence and ritual activities, building, discarding or loss of material, manufacturing and the creation of manufacturing waste, recycling, deliberate destruction and resource utilization.
  - ▶ Environmental archaeologists **started reconstructing the past human life and climate drawn from different sources of information such as the study of ancient coastal lines, submerged land surfaces, raised beaches, palaeo-channels, pollen analysis, fossils and animal bones.**
  - ▶ **It aims to study the changes occurred in the flora and fauna of a particular archaeological sites.**

# Gender Archaeology

- ▶ The archaeology of gender is the **study of the roles, activities, ideologies and identities of men and women, and the differences between them.**
- ▶ It is mentioned that in archaeology, everything perceiving through the eyes of men (this is called androcentrism), understanding women only in biological roles such as mother and sexual partner, and describing the differences between men and women as polar opposites.
- ▶ Thus, the **archaeology of gender was created to balance archaeological interest in men and women by directing as much attention to women's activities as to men's, to demonstrate that women are not the same in all cultures and that therefore their activities are of interest for comparative studies, and to help make archaeology into a discipline that concerns people, rather than merely artifacts.**

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- ▶ **The first book on women in the ancient Mediterranean world was by a classicist and art historian, Sarah Pomeroy (*Goddess, Whores, Wives, and Slaves*, 1975).**
  - ▶ Her data included myths, documents, painted images and statues, but not archaeological sites as such.
  - ▶ Historic archaeologists, with a variety of written material such as diaries, wills and deeds, along with artifacts and features, had the tools to discuss gender issues as soon as the topic was on the table.
  - ▶ **The edited volume of Joan Gero and Margret Conkey (1991) entitled “*Engendering Archaeology: Women and Prehistory*” furnishes a broad perspective on gender in archaeology.**



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- ▶ The American historical archaeologist Suzanne Spencer-Wood organized the first session on gender at a historic archaeology meeting in 1986.
  - ▶ Roberta Gilchrist's "*Gender and Archaeology –contesting the past*" explores the significance of feminist critique of archaeology and feminist epistemologies.
  - ▶ Now it becomes one of the leading sections in the archaeology.


# Marxist Archaeology

- ▶ Marxist archaeology is an approach to **archaeological interpretation and explanation that draws on the work of Karl Marx and Friedrich Engels to explore materialist models of social change and the central questions of social relations.**
- ▶ **Understanding who has power and how that power is exercised are seen as vital elements in explaining social change.**
- ▶ **Marxists regard each human society as defined and shaped by its 'mode of production', which comprises both the 'forces of production' (i.e. science, technology, and all other human and natural resources), and the 'relations of production' (i.e. the ways in which people relate to one another in order to facilitate the production and distribution of goods).**

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- ▶ Social organization and change are seen in terms of conflicts between segments of society: for example, those based on class, sex, or age.
  - ▶ Among western archaeologists, one of the first to draw heavily on Marxist theory was **Gordon Childe, who emphasized the forces of production as being fundamental influences on prehistoric economies, societies, and ideologies.**
  - ▶ In many of his early works like ***“Man Makes Himself”***, ***“What Happened in History”*** and ***“Social Evolution”*** he effectively challenged the fascist German-based views of prehistory current at the time

# Geo archaeology

- ▶ Geoarchaeology is a multi-disciplinary approach, which **uses the techniques and subject matter of geography, geology and other earth Sciences to examine topics, which inform archaeological knowledge and thought.**
- ▶ Geoarchaeologists **study the natural physical processes that affect archaeological sites such as geomorphology, the formation of sites through geological processes and the effects on buried sites and artifacts post-deposition.**
- ▶ Geoarchaeologists' work frequently **involves studying soil and sediments as well as other geographical concepts to contribute an archaeological study.**

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- ▶ Geoaarchaeologists may also use computer cartography, **Geographic Information System (GIS)** and **Digital Elevation model (DEM)** in combination with disciplines from human and social sciences and earth sciences.
  - ▶ Geoaarchaeology is important to society because it **informs archaeologists about the geomorphology of the soil, sediments and the rocks on the buried sites and artifacts they are researching on.**
  - ▶ By doing this we are **able locate ancient cities and artifacts and estimate by the quality of soil how "prehistoric" they really are.**

# Behavioural Archaeology

- ▶ Behavioural archaeology is the **study of how artifacts move from their 'systematic context', the context in which it was originally touched by human beings, to their 'archaeological context' in which they found.**
- ▶ **Michael Brian Schiffer** in his work "*Behavioural Archaeology*" highlighted the importance of study of the movement of artifacts and coined the term "Behavioural Archaeology".
- ▶ He emphasized on various process involved in the movement of the artifacts from the original context to the archaeological context like dispositional process, reclamation process, disturbance process and rescue process

# Industrial Archaeology

- ▶ Industrial archaeology is the **systematic study of material evidence associated with the industrial past.**
- ▶ This evidence, **collectively referred to as industrial heritage, includes buildings, machinery, artifacts, sites, infrastructure, documents and other items associated with the production, manufacture, extraction, transport or construction of a product or range of products.**
- ▶ The field of industrial archaeology **incorporates a range of disciplines including archaeology, architecture museology, technology and urban planning and other specialties, in order to piece together the history of past industrial activities.**

# Experimental Archaeology

- ▶ Experimental archaeology is the **investigation of archaeological issues using experiments.**
- ▶ It has been part of archaeology from the very beginning of the discipline.
- ▶ **As artefacts were identified and sorted into chronological sequences, so assumptions were made about their manufacture and use.**
- ▶ Occasionally, someone would try out an object to see how it worked or how it could be made.
- ▶ **Some of the most systematic experiments in prehistoric agriculture were conducted in Denmark in the first half of the twentieth century, but the concept became more formally recognized as an archaeological tool in 1960s.**
- ▶ The formal recognition of experimental archaeology culminated **in two key books written by John Coles and another American-based edited volume, all published in the 1970s.**



# Symbolic Archaeology

- ▶ Ian Hodder coins the term 'Symbolic Archaeology' in the archaeological theories.
- ▶ The challenge of a Symbolic archaeology is **to explore the relationship between material culture and language.**
- ▶ To what extent is a pot or an axe symbolic in the way that the words 'pot' or 'axe' carry meaning?
- ▶ Are the material culture meanings, like the linguistic meanings, arbitrary, organized by, for example, paradigmatic and syntagmatic relationships?

# Contextual Archaeology

- ▶ An approach to archaeological interpretation **proposed by Ian Hodder in the mid 1980s** in which **emphasis is placed on methods of identifying and studying contexts in order to understand meaning.**
- ▶ This involves **two lines of enquiry.**
- ▶ The **first is to consider the environmental and behaviour context of action; understanding an object, for example, by placing it in relation to the larger functioning whole from which it is drawn.**
- ▶ **Second, it involves looking at the networks of associations that objects were placed within in the past and attempting to read meaning from such groupings as if the objects were words in text.**

# Cognitive Archaeology

- ▶ Cognitive archaeology deals with the **study of past ways of thought from material remains.**
- ▶ Cognitive archaeologists **often study the role that ideology and differing organizational approaches would have had on ancient peoples.**
- ▶ The way that these **abstract ideas are manifested through the remains that these peoples have left can be investigated and debated often by drawing inferences and using approaches developed in fields such as semiotics, psychology and the wider sciences.**
- ▶ It is interested in the **material expression of human ways of thinking about things, such as gender, class, status, kinship.**
- ▶ **Collin Renfrew and Paul Bahn are the chief proponents of this theory.**

# Under water Archaeology

- ▶ Under water Archaeology, also known as **Maritime archaeology or marine archaeology**, is a discipline within archaeology as a whole that **specifically studies human interaction with the sea lakes and rivers through the study of associated physical remains like vessels, shore side facilities, port-related structures, cargoes, human remains and submerged landscapes.**
- ▶ Underwater archaeology **concentrates more on the shipwrecks and submerged ports and cities.**
- ▶ It also extent to the **study of ancient trade, commerce, ship building technology, navigation etc.**
- ▶ **Discovery and retrieving of king Henry VIII's warship Mary Rose and Titanic are considered as one of the remarkable achievements in the field of underwater archaeology.**