

Archaeology lecture 4th October 2008

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Periods:

- 1) Palaeolithic
- 2) Mesolithic
- 3) Neolithic (4000 BC in UK; 4700 BC in N.France)
- 4) Bronze Age
- 5) Iron Age
- 6) Roman
- 7) Saxon

Pottery is a fundamental dating tool used by archaeologists. It is more than that – it tells about diet, class etc. Today's lecture focuses on pottery.

Reference Books:

Shire Pottery series – some of the best books ever written on pottery.

Renfrew and Bahn - the best introductory text. New 2008 version. - segments on all areas of archaeology and also case studies.

See sheet for **Internet Resources**

Lithics = the study of stone (coming from the Greek: Lithos)

What do we mean by Artefacts and Ecofacts?

An artefact is any object that has been used, modified or made by people.

An ecofact is a non-artefactual remain – one that has never been modified, used or made by people.

ARTEFACTS:

Wood: A post is dug, a stake is driven. A stake has been modified to be driven into the ground.

If wood is not conserved/preserved it will shrink dramatically.

Textiles: An Iron Age cape made of sheepskin and a woven kilt were preserved in a bog in Sweden. The colours were preserved fantastically. Horse bridle with tassels was preserved in a bog in Ireland.

Parts of plants can sometimes be accidentally preserved in tiles. Ecofacts can therefore sometimes be studied by looking at artefacts.

Vindelande on Hadrian's Wall has preserved writing tablets, sandals etc etc. because of the moist conditions in which they are found.

Metalwork: The Bush Barrow burial – has some extremely famous gold work: The Devises Museum has a rare opportunity to view on 25th & 26th October with a bookable lecture on the Sunday evening.

Pottery: The Boscombe Bowmen Grave revealed some very important pottery which has been reassembled.

Stone Tools: The most important artefact class we have from the earliest of times.

ECOFACTS:

Animal Remains: Which reveal what animals were used for as well as for food.

Differentiating between wild and domestic animals. Are sheep kept for wool, meat or dairy products? Compare the age of death "the kill-off rates" across the whole site.

Plant Analysis: Can tell us an enormous amount. A pollen exine can preserve very well – it will give a really good indicator as to what a landscape was like at a point in the past.

Archaeological evidence and what is retrieved is affected by a number of variables.

Pre and Post depositional evidence. Artefacts deposited by man. If it's an ecofact, then it is when it last lived or a geographical feature.

Archaeologists always have to start with the latest evidence – that is what is found first, having been deposited last.

Things that can have a huge effect on artefacts can be:

Ploughing – churns up layers, damages objects, oxidation

Prehistoric pottery was all fired in open kilns (like a bonfire). Because it was not very high fired, if it was left out and weathered on the surface, it would quickly deteriorate and dissolve. Therefore, post ploughing, the pottery will likely be degraded. The glaze will be affected.

Building Works

Recycling – both deliberate and accidental. Often in cathedrals, earlier bricks, stone etc. will be reused. This can affect how you date things.

Natural Processes – the decay of material, wood, anything organic.

Climatic or Environmental Change – Whole sites can be affected where they dry out, causing decay, shrinkage of wood etc. If you do not take shrinkage into account, all your analyses will be out.

Flooding can deposit alluvium from the river - silts. Colluvium is the on-land equivalent where earth etc. is moved by the wind and then the rain can complicate the picture.

Colluvium can protect archaeological sites.

UNDER THE MICROSCOPE: ANALYSING ARTEFACTS

There are 3 main archaeological approaches to the analysis of artefacts:

- 1) Physical analysis of raw materials
- 2) Analysis of technology and techniques
- 3) Stylistic analysis

Stylistic Analysis: **TYOLOGY**

This is the study of type. Typology is very important because by classification archaeologists give themselves the building bricks to build bigger pictures.

e.g. Roman forts or villas and how they changed in design – the basic ground plans are always very similar. By looking at the ground plan, you can determine whether it is 1st century, 2nd, century, 3rd century etc.

Shape, size, materials and decoration are what you look at when you are considering type.

By combining the study of types with stratigraphy you are able to cross check your knowledge and understanding. You are able to build up a cross-checking pyramid.

Both Typology and Stratigraphy are relative dating techniques.

Prior to the 1950's, archaeologists were "estimating" when articles related to. Knowledge is now much more accurate because of "absolute dates".

Typology is fundamental, particularly when combined with stratigraphy, as a dating tool.

Ceramics are crucial here because of the fundamental changes in style from one period to another.

The study of artefacts is fundamental to being able to date any archaeological sites.

Neolithic Arrowheads

Leaf-shaped arrowheads are found in the early Neolithic whereas Oblique arrowheads are found in the later Neolithic.

SPATIAL ANALYSIS is incredibly important to being able to date a site.

Crickley in Gloucestershire dates to about 3,550 BC. The site fell into disuse following an attack. Every leaf-shaped arrow head fired in was recorded. It took months and months. Later, computer programmes could do the same recording in 4 minutes – it now it takes a matter of seconds. CAD and GIS (Geographical Information Systems) are important here. There is evidence that the palisade was burnt also.

Raw Materials: Composition

There are a broad range of techniques which can be applied to determine this. They are detailed on page 3 of the Sheet

"Archaeological Techniques Explained III: Artefacts and Ecofacts"

Joan Taylor has done much in this area – see Wiltshire Journal of some three years ago. She discovered that precisely the same tools were used in specific finds and that in many others gold had come from the same smelt.

Raw Materials: Petrology

Petrology – the study of stone / rock from the Greek.

Even very similar rocks have variations in them according to which particular source they come from. A Group 1 Axe was made in Cornwall – probably somewhere in St Mounts Bay in an area now lost to the sea.

A Jadeite Axe, also from Cornwall, was made of material from the Alps. Was it exchanged or traded on?

Petrology gives us important information as to sources.

At Windmill Hill a Jadeite axe has been found as well as local flint axes. Some axes were given to foster a culture of obligation so that the recipient would also give to the donor in times of need.

Axes were fundamentally important to people shaping their landscape. Most of the landscape was covered by deciduous forest and trees had to be cut down to enable agriculture to take place.

Absorbed Residue Analysis

Dairying in the Earlier Neolithic at Windmill Hill – bowl. Absorbed Residue Analysis looks at the fats absorbed into the glazes. It has been established that from the earliest times people were keeping animals for dairying. You can also use dairy products to seal the pots. The fact that they were milking the animals for this purpose would suggest that they also used that milk etc for food.

Human beings are naturally lactose intolerant but have built up a resistance due to the long time consumption of milk etc.

Technology and Techniques

If you find a copper dagger (around 2,350 BC) you know that people's understanding of the use of ores etc had developed significantly.

Felt production is a very old technique – it is made from beating wool.

Spindle whirrs are often found – stone, ceramic etc – varying in shape dependant on place and time.

Loom weights as well vary in material and style.

Ethnography and Archaeological Experiment can take us inside the mind of the ancient person who produced the original and show what technique was used.

Pottery

- Neolithic to the Present (from c 4000 BC to now)

At the beginning, it was largely people making their own pots – prior to this being the work of a specialised potter. The thumb marks were often those of the women and even children. When things became more specialised, the thumb marks tend to become those of men.

Pottery was handmade until the Late Iron Age. Pit firing, clamp kilns. Variability in firing. Fuels. Seasonal? Ethnography/grain impressions. Continental influence c. 30 BC – 43 A.D. some wheel-made fine wares.

Terra Sigalata is more commonly known as “Samian Ware”. This is not wheel thrown but is moulded.

During the Roman period there were many sites where Terra Sigalata pottery was made. The reason it is called “Samian” is that it was found on Samos. It wasn’t made there. This was a form of table ware – not the sort of thing that everyone would have. It was largely confined to the middle class and also to the army who wanted their comforts across the Empire.

Earlier Neolithic c 4000 BC – c 3000 Round bottomed bowls, baggy bottomed pots. Limited decoration i.e. incision, impression, carination. Similarities of styles of north-western France.

Later Neolithic c 3100 Scotland - c. 2800 BC southern Britain – c 2000 BC) pottery included Grooved Ware. All are flat bottomed. The applied decoration is incised and applied. Geometric patterns. Barrel, bucket, flower pot shapes. The style can be seen in the Orkneys. It then moved south and was found in places like Durrington Walls.

Early Bronze Age – Beakers, Collared Urns, Food Vessels, Accessory vessels. Small highly decorated vessels.

TAPHONOMY – from “Taphos” meaning burial
and “Nomos” meaning law.

i.e. it RELATES TO THE LAW OF BURIAL.

Faunal Analysis

Bone survives very well in alkaline conditions but not in acidic conditions. In acidic conditions, bone becomes decalcified. This means that it has no structure and therefore “dissolves”. Bone will survive well in waterlogged, anaerobic conditions providing they are alkaline. In the acidic conditions of peat bogs, whilst there is remarkable preservation of skin and hair of human beings, the skeleton does not survive. Bone will also survive well in arid conditions. Where it dehydrates in well-aerated, damp soils - such as porous sands then bone survival is poor.

Palynology – the study of pollen

Pollen survives in the opposite conditions to bone.

One can easily tell the difference between Hazel pollen exine and others because of size.

IDENTIFICATION

Faunal: All mammals share similar bone structure although the type and form will differ (including as to whether it is male/female/adult/ etc as well as to the species).

There are a number of ways in which you can gauge age – including Epiphysial union – where bones grow from a growth point beneath the head of the bone.

When growth is completed, the epiphysis fuses (= adult) In humans a number of bones fuse at around puberty. If you have a whole skeleton, the more age-indicators you can have, the better.

In humans, the angle of the sciatic notch changes post-puberty. This is useful also in judging the sex of remains. The sciatic notch is wider in women than in men because of child birth etc. There is a range however and sometimes it is difficult to tell the difference between a lightly framed man and a heavily framed woman. Then DNA would need to be employed.

You can tell what animals were kept for from the kill-off patterns that are found.

If there are a few males but many females this will indicate that cattle/goats/sheep are kept for milk. This is because young males are killed off soon after birth to prevent them drinking the milk.

Wool / hair: The best animals for wool/hair production are castrated males (wether = castrated sheep). These are kept into old age and a few females and uncastrated males are kept for breeding. The rest are killed off.

Molluscan Analysis

There are 4 different main divisions. Those that like

- **Woodland** (shaded)
- **Open country** (grassland, arable and scree)
- **Catholic** (variety of habitats)
- **Marsh** (marshy areas)

Coleoptera (Beetles)

There is a phenomenon in the archaeological record that occurred at around 3500 BC where there was a huge decline in elms. The remains of *Scolytus scolytus* (the dutch elm beetle) were found within a layer just prior to the Elm Decline (which was already known from pollen analysis). The discovery of these insect remains therefore demonstrated that the Elm Decline was, at least in part, the result of natural causes and was not, as had previous been argued, wholly the result of anthropogenic woodland clearance.

Plant Remains

It is possible to tell the difference between wild and domesticated wheat.

BP = before the Present. The base line for "Present" is 1950.