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Archaeological Excavations Methods

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Introduction

Archaeology excavation is a very imported research system in the field of archaeology. This paper discuses excavation historical development, site formation, excavation type and development led of archaeology. **Archaeology** excavation is the exposure, processing and recording of archaeological remains. An excavation site or "dig" is a site being studied. Such a site excavation concerns itself with a specific archaeological site or a connected series of sites, and may be conducted over as little as several weeks to over a number of years.

Numerous specialized techniques each with its particular features are used. Resources and other practical issues do not allow archaeologists to carry out excavations whenever and wherever they choose. These constraints mean that many known sites have been deliberately left unexcavated. This is with the intention of preserving them for future generations as well as recognizing the role they serve in the communities that live near them. (***Lewis: 1978, 25 - 28)***

Excavation involves the recovery of several types of data from a site. These data include artifacts (objects made or modified by humans), features (modifications to the site itself such as post molds, burials, and hearths), Eco facts (evidence for the local environment and resources being used such as snail shells,

seeds, and butchered bones) and, most importantly, archaeological context (relationships among other types of data). Ideally, data from the excavation should suffice to reconstruct the site completely in three-dimensional spaces.

The presence or absence of archaeological remains can often be suggested by remote sensing, such as ground - penetrating radar. Indeed, grosser information about the development of the site may be drawn from this work but the understanding of finer features usually requires excavation though appropriate use of auguring.

Historical Development

Excavation techniques have developed over the years from a treasure hunting process to one which seeks to fully understand the sequence of human activity on a given site and that site's relationship with other sites and with the landscape in which it is set. The history of excavation began with a crude search for treasure and for artifacts which fell into the category of 'curio'. These curios were the subject of interest of antiquarians. It was later appreciated that digging on a site destroyed the evidence of earlier people's lives which it had contained. Once the curio had been removed from its context, most of the information it held was lost. It was from this realization that antiquarianism began to be replaced by archaeology, a process still being perfected. (***Lewis: 1978, 46)***

Site Formation

Archaeological material tends to accumulate in events. A gardener swept a pile of soil into a corner, laid a gravel path or planted a bush in a hole. A builder built a wall and back-filled the trench. Years later, someone built a pig sty onto it and drained the pig sty into the nettle patch. Later still, the original

wall blew over and so on. Each event, which may have taken a short or long time to accomplish, leaves a context. This layer cake of events is often referred to as the archaeological sequence or record. It is by analysis of this sequence or record that excavation is intended to permit interpretation, which should lead to discussion and understanding.

The prominent processual archaeologistLewis Binford highlighted the fact that the archaeological evidence left at a site may not be entirely indicative of the historical events that actually took place there. Using an ethno archaeological comparison, he looked at how hunters amongst the NunamiutInupiat of north central Alaska spent a great deal of time in a certain area simply waiting for prey to arrive there, and that during this period, they undertook other tasks to pass the time, such as the carving of various objects, including a wooden mouldfor a mask, a horn spoon and an ivory needle, as well as repairing a skin pouch and a pair of caribou skin socks. Binford notes that all of these activities would have left evidence in the archaeological record, but that none of them would provide evidence for the primary reason that the hunters were in the area; to wait for prey. As he remarked, waiting for animals to hunt "represented 24% of the total man-hours of activity recorded; yet there is no recognisable archaeological consequences of this behaviour. No tools left on the site were used, and there were no immediate material "byproducts" of the "primary" activity. All of the other activities conducted at the site were essentially boredom reducers." (Horn and White: 1986, 62 - 63).

Excavation Types

There are two basic types of modern archaeological excavation:

I. Research excavation - when time and resources are available to excavate the site fully and at a leisurely pace. These are now almost exclusively the preserve of academics or private societies who can muster enough volunteer labour and funds. The size of the excavation can also be decided by the director as it goes

II. Development - led excavation - undertaken by professional archaeologists when the site is threatened by building development. Normally funded by the developer meaning that time is more of a factor as well as its being focused only on areas to be affected by building. The workforce is generally more skilled however and pre-development excavations also provide a comprehensive record of the areas investigated. Rescue archaeology is sometimes thought of as a separate type of excavation but in practice tends to be a similar form of development-led practice. Various new forms of excavation terminology have appeared in recent years such as Strip map and sample some of which have been criticized within the profession as jargon created to cover up for falling standards of practice. ***(Barker, 1982, 33 – 34)***

Development Led Archaeology

There are two main types of trial excavation in professional archaeology both commonly associated with development-led excavation: the test pit or trench and the watching brief. The

purpose of trial excavations is to determine the extent and characteristics of archaeological potential in a given area before extensive excavation work is undertaken. This is usually conducted in development-led excavations as part of Project management planning.The main difference between Trial trenching and watching briefs is that trial trenches are actively dug for the purpose of revealing archaeological potential whereas watching briefs are cursory examination of trenches where the primary function of the trench is something other than archaeology, for example a trench cut for a gas pipe in a road. In the USA, a method of evaluation called a Shovel test pit is used which is a specified half meter square line of trial trenches dug by hand. ***(Cobb and Olson: 2015, 29 - 30)***

Stratification

In archaeology, especially in excavating, stratigraphy is a fundamental concept. It is largely based on the Law of Superposition. When archaeological finds are below the surface of the ground (as is most commonly the case), the identification of the context of each find is vital to enable the archaeologist to draw conclusions about the site and the nature and date of its occupation. It is the archaeologist's role to attempt to discover what contexts exist and how they came to be created. Archaeological stratification or sequence is the dynamic superimposition of single units of stratigraphy or contexts. The **context** (physical location) of a discovery can be of major significance. More precisely, an archaeological context is an event in time which has been preserved in the archaeological record. The cutting of a pit or ditch in the past is a context, whilst the material filling it will be another. Multiple fills seen in section would mean multiple contexts. Structural features, natural deposits and inhumations are also contexts. ***(Pillip: 2010, 75)***

By separating a site into these basic, discrete units, archaeologists are able to create a chronology for activity on a site and describe and interpret it. Stratigraphic relationships are the relationships created between contexts in time representing the chronological order they were created. An example would be a ditch and the back-fill of said ditch. The relationship of "the fill" context to the ditch "cut" context is "the fill" occurred later in the sequence, i.e., you have to dig a ditch first before you can back - fill it. A relationship that is later in the sequence is sometimes referred to as "higher" in the sequence and a relationship that is earlier "lower" though the term *higher* or *lower* does not itself imply a context needs to be physically higher or lower. It is more useful to think of this *higher* or *lower* term as it relates to the contexts position in a Harris matrix, which is a two-dimensional representation of a site's formation in space and time. ***(Hill: 2009, 50)***

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