

The discipline of archaeology is by no means a simple nor singular study of the past. Due to the wide range of evidence within the archaeological record, from organic to inorganic, many different methods and approaches are taken in order to deal with the wide spectrum of differing evidence. Nevertheless, the study of pottery is without doubt one of the most important tasks taken on by any archaeologist. A great wealth of information can be gained from the study of pottery, despite its inanimate state. It is for this very reason that this essay will attempt to explore and explain the multitude of study that archaeologists apply to pottery.

As has already been stated, there are many lessons to be learned from the study of pottery. These lessons vary in both practice and utility. However, all play their part in piecing together the past. Much can be learned from pottery some of which is directly linked to the pottery itself. Other information can be found which is more inferred than anything else. This therefore makes the study of pottery one of two parts. Firstly, the physical study of pottery, which will be dealt with in the first part of this essay, and secondly the study of the cultural insight pottery gives enabling archaeologists to understand the society from which it came.

Perhaps the most obvious way of analysing pottery is by the naked eye but its obviousness should not detract from its importance. By observing the physical attributes of any artefact a great deal can be told of its manufacture as well as its manufacturer. The practice of typology is of great use when analysing pottery. By observing the shape and size of any artefact it is often possible to date that artefact within a specific range of dates. The size of this range is however not always as accurate as one might wish it to be. Nevertheless, by using typology an educated guess can be made regarding the creation of a piece of pottery this can then be further applied to the site itself where the pottery was excavated. If however, the piece of pottery is decorated in any way the date of creation can be more accurate. The reason for this increase in accuracy is quite simple. Even though the shape of a piece of pottery is an important factor in determining its date through typology it is unfortunately not particularly prone to change through time, unlike decoration. The shape of a water vessel generally remains the same in any specific culture due to the nature of its purpose, it is therefore much more useful if a decoration is present on the vessel since it is much more susceptible to change. Decorative features may change in a few generations and therefore are said to be "chronologically sensitive". It is for this reason that decorative features can narrow the range in which an artefact can be dated. As useful as typology proves to be it is unfortunately only suitable when sufficient research has been done in the particular area which is being studied. Characteristics from one culture cannot necessarily be applied to another. It is therefore not possible to assume that a small narrow vase found in Asia could be dated along with one of similar attributes found in Europe.

Not all physical study of pottery have such complexities. Very basic observations can tell a great deal about the production of a piece of pottery. Although common place today, the practice of throwing pots on a wheel was only introduced after approximately 3400 B.C. Previous this date a process of building pots up using a series of clay coils was used. This easily identifiable difference can immediately give the piece of pottery a terminus post quem. It also gives a very clear picture of the technology available and used by the craftsman. The physical characteristics of pottery can also be used to identify even finer details of its production. If the surface of a piece of pottery is vitrified or glazed it can be assumed that it was fired in a heat in excess of 900 degrees Celsius which is only possible in an enclosed kiln. the process of firing pottery in an enclosed kiln produces complete oxidisation of the clay and therefore a uniform colour can be seen on the finished product. A cloudy or blotchy surface indicates incomplete

oxidisation which is the product of insufficient time or heat in firing, this is generally the result of a piece of pottery fired in an open kiln. It is also possible to apply more scientific methods to establish details of a piece of pottery's manufacture. Scanning electron microscopy can reveal slight changes in the microstructure of clay heated in excess of 900 degrees Celsius. The attention paid to how hot the kiln was may seem at first disproportionate to its worth but in fact it is of major importance. By establishing at what temperature the pottery was fired a clear picture can be painted of man's grasp of pyrotechnology at the time in question. The building of enclosed kilns therefore is an important stage in man's development. By assessing the method of manufacture an archaeologist is able to reveal the technological development of the group of people from which the pottery came from.

Although merely observing pottery with the naked eye can give a large amount of information it has also been illustrated that more scientific methods of study are of great use also. The recent development of such methods has changed the field of vision of the archaeologist and enabled him to view the past with greater detail. The use of chemical and infrared spectroscopy has enabled archaeologists to establish details of the diets of the ancient people under study. Residue left in or on pottery can be looked at under a microscope to reveal the contents of a pot thousands of years ago. As stated in Renfrew & Bahn a jar found in Western Iraq, after chemical and infrared spectroscopy was found to contain tartaric acid which indicated the earliest appearance of wine in the diet of any human race. Of course this particular piece of evidence goes further than merely indicating what an ancient group of people may have eaten or drunk. It has cultural implications too. It infers that, due to the nature of alcohol, the ancient group which the vessel came from were involved in social gatherings where wine would be drunk. This use of science within archaeology is by no means atypical. Scientific analysis may seem cold and quite unable to shed light on the people of the past but this is not the case. The existence of grain impressions or grains themselves in or on ancient pottery lend themselves perfectly to science. From this much can be learned of the culture of the ancient people in question. By studying the shape and size of ancient grains under a microscope archaeologists can gain knowledge of cereal domesticity amongst early peoples. Again, as with residue in the jar stated earlier, information regarding the culture of the group from which the pottery came from can be deduced through the scientific results of such practices as grain analysis through microscopy, spectroscopy and chemical testing. The cultivation and domesticating of cereals shows an advance in man's grasp of the world around him. Oil bearing seeds found in or on pottery can also help give an insight into the life of the group who made the pottery. Oil bearing seeds which give flax can be used to make textiles. These seemingly worthless remains often found in or on pottery are in fact of paramount importance to the study of the past. As has been illustrated knowledge of diet and behaviour as well as clothing and technology can all be gained through the study of pottery and that found with it.

The application of scientific methods to the clay itself can also give great insight to the archaeologist. By identifying the chemical constituency of the clay the source can be identified also. This in turn gives evidence of the range and contacts of the particular group from which the pottery came from. This information can help the archaeologist understand the trade or lack of trade which existed amongst the ancient peoples under study. Obviously, if a piece of pottery was sourced 300 miles from where it was discovered it can be assumed that the group of people from which it belonged had contact directly or indirectly with the site 300 miles away showing either a very broad ranging community, as associated with nomadic groups, or alternatively an established trade link, as associated with a more settled community. In fact, as stated in Renfrew & Bahn, the very "existence of pottery indicates the emergence of a more sedentary life". (Renfrew & Bahn, 1996, 320) The presence of pottery within a culture shows the beginnings of complexity where trade and production are beginning to establish themselves. It is

also important to note that pottery lends itself not only to the study of early technology and complexity but also to simpler aspects of early peoples lives. Beliefs and religious practices can often be seen on ancient pottery. Depictions of the arts and music can also be found on ancient pottery such as those found on the Iberian vases excavated in San Miguel de Lina, Spain.

The discovery of pottery on an archaeological sight is a discovery of great importance. Pottery tells many stories of how it was made and who made it. It also goes further than this and can tell a great deal about the people involved in its production. Recent developments have transformed archaeology from "closets of curiosity" to a viewing hole into the past. Without the existence of pottery in the archaeological record that transformation would not have been possible. Pottery holds an endless supply of information all which may not have been tapped into.