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## THE ARCHAEOLOGY OF ARTEFACTS

*ABSTRACT: Artefacts form an inseparable couple with humans. Their circulation among humans follows the principles of (artefact) inheritance; their formal variation is given by degrees of complexity, which is the basis of archaeological institutes determining social relations. The couple artefacts-humans is the basis of the Human World, an entity higher than Nature. Certain concepts valid in Nature, such as life and death, lose significance in the Human World.*

*KEY WORDS: Human World – (Cultural) inheritance – Degrees of complexity – Archaeological institutes*

### TRADITIONAL ARCHAEOLOGY

I am distinguishing two kinds of archaeological theory in this paper. The first variety is what I describe as *traditional archaeology*. In the context of this paper, traditional archaeology unites culture history, processualism and post-processualism. The other variety is what I call, *artefact archaeology*.

When I published my book on archaeological theory (Neustupný 2010), a friend of mine told me immediately that he did not believe my views. While I suggested that archaeological theory was about artefacts, he argued that archaeology had no theory of its own: archaeological theory was the same as that pertaining to other social sciences such as anthropology, history or sociology. It was the theoretical questions of those disciplines that archaeology should study by means of their "sources" called material culture. In this connection I would remind

you of the famous processual saying "Archaeology is anthropology or it is nothing" (Willey and Phillips 1958: 2) which some would like to rephrase "Archaeology is history or it is nothing".

What distinguishes archaeology from other social sciences according to the vision of traditional archaeologists is the *record*, often described as *sources* to fit the terminology of historians. *This view leads to the concept of "material culture"* that creates the contrast of archaeological sources, allegedly *material*, to those of history and other social disciplines (cf. Kuna 2012).

From the point of view of methodology, archaeologists supporting these views adhere to the philosophy that the archaeological record is not entirely static (or dead); according to them it contains at least some remnants of past life, as otherwise it would be impossible to understand its meaning. This can be more or less easily recovered or just read (Hodder 1991) on the basis of archaeological finds.

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Theoretical papers and books of traditional archaeologists are full of quotations of anthropological and historical authors, sometimes even philosophers (e.g. Tabaczyński 2013) in addition to the quotations of archaeologists from their own and/or friendly communities writing in the same language (e.g. Shanks, Tilley 1987). The study of anthropology and history is not meant to generate models for archaeology, but to discuss how anthropological and historical theories and stories can be *applied* to archaeology, mostly as *parallels* (e.g. Vencl 1984). In consequence of this the theory of our discipline is becoming texts about complicated concepts, about the minds of past people and their social life, sometimes about their struggle with Nature. Typical questions solved in this kind of archaeology are migrations, adaptations to the natural conditions of life, symbolism, variations in ideological systems, the role of individuals, social relations in prehistoric societies, and some kind of struggle between social groups.

Archaeologists defending these views do not usually hesitate to accept that the historical, anthropological and sociological agenda brings the right set of problems for archaeology. *Artefacts disappear and/or are used as examples*. Important questions around them are not discussed.

According to this traditional programme, people of the past are either natural beings (studied by physical anthropology, genetics, etc.) or abstract thinkers and social actors comparable to those figuring in written history. In some currents of archaeology people are members of ethnic units (e.g. tribes) or members of social groups exercising power over others.

I would like to clarify right at the beginning that all those traditional queries are not to be simply discarded; however I would like to argue that they cannot be properly studied without realising that they are generated by *people producing and using artefacts*.

It is interesting to note that many varieties of traditional archaeology *lead to culture history in the long run*. The same is true of various natural scientific methods if their results are taken uncritically at their face value. This approach includes the *radiocarbon dating* method where individual dates are considered as accurate determinations of the time of individual archaeological events (within their measuring uncertainties; many contributions in Czebreszuk, Müller 2001). This leads to the view that all (or at least many) archaeological cultures were contemporary – a condition necessary for explaining them as ethnic units.

Similarly, the *DNA studies* allegedly lead to the proof that people constantly migrate over large territories;

these assumptions have been avidly grasped by archaeologists who never abandoned the inclination towards culture history. Some even declare that this is a new archaeological paradigm, as they do not have the courage to openly return to Kossinna.

This demonstrates that traditional views do work even within modern-looking archaeology.

## A THEORY OF DYNAMIC ARTEFACTS

### The generality of modern artefacts

In developing an opposition to the traditional view on the Human World, which I call *artefact archaeology*, I am starting from the simple and obvious observation that the artefactual world of modern times represents an ever growing and more deeply penetrating environment of man. Looking around us we can hardly see anything other than artefacts and/or their negatives called ecofacts. Modern man rarely has any undisputable "nature" within his immediate reach.

This is not to say that there is nothing natural in the Human World. Both artefacts and ecofacts consist of natural materials governed by the laws of Nature. But to consider these artefacts and ecofacts simply as parts of Nature would represent the same mistake as to consider animals and plants parts of the inorganic mineral world with the excuse that they consist of chemical elements. The newly originating forms of the Universe always conserve the properties of the older phases, but they cannot be reduced to them.

In the following part of my paper I shall concentrate on a segment of the theory of modern dynamic artefacts that is needed for the concept of artefact archaeology.

### The theory of artefacts and archaeology

I have noted several times that artefacts, in contrast to many parts of Nature, have *not been explained in any kind of general theory*. This is a fact to be clarified, not necessarily at this place. I am trying to formulate some general theory of artefacts in this section of my paper. However, it is far from anything like complete: to create a comprehensive theory of modern artefacts would require an immense effort.

Yet, archaeology has to produce at least some partial theories of this kind to be used as theoretical models for the construction of descriptive systems and for interpretation. I am keen to stress that archaeology does not use the theory of the modern world directly in the form of observed parallels, but only filtered through theoretical models.

This is the way archaeology exploits information about modernity. I have emphasised many times that the dynamic world, accessible to us in the form of moving and changing artefacts and their consequences loaded with various kinds of purpose and causality, must be turned into theory to be used in the process of interpretation (e.g. Neustupný 2007, 2010). *This cannot be done in the form of parallels*, for example ethno-historical parallels, which are on the level of narrations.

### ***Artefacts and humans***

One of my principal ideas about artefacts is that they form one *inseparable entity with humans*. Artefacts cannot exist without humans, and humans do not exist without artefacts. In other words, artefacts are created and used by humans, and humans do not live otherwise than by means of artefacts and in their active environment. A man without artefacts is not a valid abstraction.

This generates important consequences for the conception of the *Human World* in which artefacts and humans are the main constituents. It also has important consequences for the idea of archaeology.

The key concept of my theory is artefact. It is an object (movable or immovable and of any size) created by man to serve some purpose of his. Creation implies intention. Artefacts are not synonymous with tools; many artefacts are not tools (e.g. ceremonial vessels, graves, parts of clothing) while some tools are not intentionally created and therefore they are not artefacts (so-called isolates – e.g. simple unworked pebbles).

### ***The material and the spiritual***

The development of the social world in the last thousands of years has brought the *dichotomy of material and spiritual*. This bipartition is still the maxim of the science of man. According to this vision the objects of nature and artefacts are material while the products of human brain, externalised in some sort of symbols or signs, are spiritual. Most often spirituality is expressed in words of the natural language. All social sciences and humanities, except for archaeology, rely on words and/or other symbolic systems, and are therefore "spiritual".

Traditional archaeology tries to overcome this isolation among its closest relatives by assuming that artefacts are simply (and only) the *material sources* of the discipline. In accordance with this view, the "real" past is *hidden behind* them and has to be recovered on their basis.

I have argued that artefacts are not simply material things. Not counting the transitional phase from animals

to humans in the Lower and Middle Palaeolithic, artefacts mostly have some *non-material purpose* which reflects their spirituality – mainly social meaning, symbolic significance and the expression of identity (Neustupný 2010; cf. Binford 1962 for a similar approach). For example: to what degree is the Venus of Věstonice material, or the decoration of a Bell Beaker or the arrangement of a Globular Amphora grave?

### ***The dead and the living***

*Artefacts are "artificial" human organs detached from human body*. As long as they are linked with humans, they cannot be considered to be material and dead, but also not living: they are dynamic extensions of the individual who forms a pair with them.

Consequently, dynamic artefacts can be conceived as *extensions of human bodies that in some respect resemble live entities*. However, they are neither dead objects belonging to the inorganic nature nor the remains of living matter belonging to organic Nature. Clearly, they are something else.

In accordance with the traditional views, the material things of Nature are *either living* (animals and plants) *or dead* (inorganic nature and the deceased bodies of animals and plants). This becomes the model by means of which people measure their environment and within it also their artefacts.

Using these rules humans are believed to be live while artefacts are considered to be dead material things irrespective of whether they belong to the archaeological record or to the dynamic culture of the past. Only some ecofacts (e.g. domestic animals) and humans are given the status of living creatures as long as they appear in the living culture.

### ***The new dichotomy***

My theory brings a new light on these problems. *Artefacts are neither dead nor living in the sense of the above-mentioned dichotomy used for the description of organic Nature*. The concepts of life and death are irrelevant for the consideration of artefacts.

The only reasonable distinction between live and dead artefacts arises when the former are transformed into the archaeological record. I have used *such terms as live and dead* in my books and papers from time to time previously (e.g. Neustupný 2012), but now I would prefer the *terms static and dynamic* instead in order to clearly express the difference between the living world of Nature and the dynamics of the Human World.

I suggest that we should also revise oppositions such as organic-inorganic when applied to the Human World.

The opposition material-spiritual belongs to the earlier form of social science as well. All *these concepts are used for the description of the Human World as an equivalence of the preceding forms of Nature, and they are therefore inappropriate.*

While the non-Human World itself (i.e. Nature) remains dichotomised in the old way, in the case of the dynamic Human World such dichotomy loses any sense. *Artefacts are neither dead nor living* and the same is true of the human beings who created them and use them. Their life cycle is only superficially similar to that of animals.

Summing up: contemporary artefacts that have not gone out of use are neither living nor dead things. They are nothing in between as well. They represent *a new phase in the development of the Earth and this part of the Universe.* They cannot be fully understood on the basis of concepts derived from the traditional natural history of organic Nature – similarly as life cannot be grasped in terms of the traditional history of inorganic Nature. At the same time artefacts cannot be assumed to be epiphenomena (or reflections) of social or intellectual activities of humans.

So far I have mainly discussed the artefactual component of the inseparable couple artefacts-humans. *Humans* cannot be conceived as animals, not even tool-producing animals. They change themselves by their creative activities especially once they cross the very early stage of their existence. They become new entities through their combination with artefacts. Moreover, I believe *that the formation of artefacts creates human consciousness and human society.*

Neither artefacts nor humans express *the leading or determining element* of the Human World. It represents an entity that consists of two oppositions and none of them has any priority. It is often maintained that artefacts are secondary because they are "material" and "dead", while people who possess life and spirituality are primary. But I could argue that artefacts are as spiritual as human brains and they are as dynamic as humans. So there is no need to place humans above the artefacts.

The fact that I am speaking about *artefact* archaeology is given by the accumulation of artefacts over time and their durability. I have already mentioned how artefacts spread over the Earth, and the archaeological record reveals that they become permanent components of our environment. This stresses the role of artefacts in our contemporaneity and allows us to use the word "artefact" as a *symbol* of the Human World.

### **Artefact archaeology**

After explaining some of the basic concepts of artefact theory I am now turning to the second variety of archaeology that I call *artefact archaeology*. I shall only discuss two fairly general problems that can be placed close to the start of archaeological theory. The principle of complexity of artefacts unveils the relationship between the creation of artefacts and the development of human thinking. And the principles of inheritance (of artefacts) show how artefacts change over time and how they are able to transform the Human World.

I am using the theory of the complexity of artefacts and their inheritance to give an example of important questions specific to the theory of archaeological artefacts not discussed by anthropology and history. I shall only mention the existence of other problems of archaeological theory based of artefacts.

### **The complexity of artefacts**

Many artefacts are *simple* (for example hand axes or most pieces of pottery), i.e. they consist of a single part. They require causality in their production and their often standardised form proves that simple concepts are known. The Lower Palaeolithic and most periods of the Middle Palaeolithic yield exclusively simple artefacts such as hand axes or scrapers.

The second category of complexity is *combined or compound artefacts*. They consist of two or more parts such that the individual parts do not have much purpose if isolated from each other. A typical example is a steel axe (plus a handle) or a spear with a flint spearhead. The composition of a combined artefact requires a much more intricate way of reasoning using clearly formulated properties of artefacts. Combined artefacts appear demonstrably for the first time in the Upper Palaeolithic period, but we may possibly look for their beginnings at the end of the Middle Palaeolithic.

The third variety of artefacts can be termed *complex*. They consist of two or more parts such that each part has its own purpose (can exist independently). A graveyard composed of graves is an example, and a set of vessels in a house. Such artefacts allow the producers to conceive of a relation between elements of a set, relations between sets, etc.

The progression of artefacts from simple to complex corresponds to the way human reasoning develops. We can observe how simple artefacts reigned until 40,000 years ago, and were followed by combined artefacts at that time. We can observe how human culture rapidly developed concurrently with the emergence of combined

artefacts in the Upper Palaeolithic, mainly in the form of first non trivial interments, developed arts and religion.

Further steps in mastering the complexity of artefacts include the exploitation of live beings (cultivated plants and tamed animals) fixed to limited plots of the ground representing very simple artefacts. This happens in the form of *agriculture*. Creating new "artificial" materials is almost equally old – mainly by means of pyrotechnologies: pottery, later metals and glass.

Important new developments in the complexity of artefacts occurred when simple or compound artefacts were combined with domesticated animals; this happened when plough and wagon were introduced in the Eneolithic period shortly after 4500 BC (Neustupný 1967, 2008). The plough started a new phase in the development of prehistoric society. These two artefacts were highly important until the 20<sup>th</sup> century AD.

It is to be found how artefacts developed into more complex forms in later periods. The complexity of artefacts testifies to how artefacts create human logics and also *human society*. It shows the productivity of the approach to the past on the basis of artefact theory (see *Table 1*).

### The inheritance of artefacts

The second important topic of archaeological theory is the inheritance of artefacts.

The theory of the inheritance of artefacts over time and space is very different from natural inheritance by means of genes. It does not happen in Nature but in the Human World, and it is another consequence of the separation of artefacts from human body. It can be summarised in several points:

- Artefacts can be used (inherited) by people who have not produced them.
- The knowledge of an artefact can be acquired by any other individual.
- One person can use several artefacts either at the same time or in a sequence one after the other.

- The rate of change of artefacts escapes the slowness of biological time and the determination by natural environment.
- The new form of an artefact can be retained for as long as needed and then discarded.
- Artefacts can grow to surpass any dimension (this applies especially to complex artefacts).
- The formal differentiation of artefacts is almost unlimited, which enables their use in the sphere of communication and identification.
- The new form of an artefact can spread to any distant point in space.

The theory of the inheritance of artefacts discloses how artefacts change over time and space and how they are able to change the Human World. This kind of inheritance of the Human World has immensely altered the face of our Planet over the last 40,000 years. And it will continue to do so in the future.

### Further topics of archaeological theory

The preceding paragraphs present a very short introduction to the starting concepts of archaeological theory. *Further topics* include the following (cf. Neustupný 2010):

- the purpose and expression of artefacts;
- structures and events in the Human World;
- the form, space and time of artefacts;
- artefacts as means of adaptation, specialisation, communication and expression (of identity).

### CONCLUSIONS

Artefacts create a new phase of the planet Earth and the Universe, the so-called Human World. Archaeology is one of the first disciplines that realises this.

TABLE 1. Some examples of the degrees of complexity in prehistoric times.

Degree of complexity	Examples	Composition
Simple	Hand-axe, pots	None
Combined	Steel axe, spear with a spearhead	Two or more partial artefacts combined
Complex	Dress, graveyard	Two or more independent artefacts
Agricultural	Plot + seed	Plot of land + seed or tamed animal
Artificial materials	Ceramics, metals, glass	Raw materials + energy from fire
Animal traction	Plough + oxen Waggon + horses	Artefact + traction animal

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