

# On Theoretical Realism in Archaeology

Mats P. Malmer

In the 1960s the American New Archaeology recommended a logical empiricist, positivist research programme. But in philosophy positivism was by then already out of date. Also in archaeology it was much criticized, and some post-processualists ended up in total relativism. It has been maintained that we cannot attain any objective truth about the past, but have to form a subjective picture of it. But archaeology does not have to choose between positivism and relativism. A new philosophical school, theoretical realism, allows archaeologists to speak of the prehistoric past as a reality, not as a construction or a fiction. The research strategy observed by all good archaeologists since the beginning of our science in the 1830s is good and will lead to trustworthy results.

*Mats P. Malmer, Department of Archaeology, Stockholm University,  
S-106 91 Stockholm, Sweden.*

Vad vi egentligen gräver efter?  
Ja, folkhumorn berättar, att det letas  
efter Kalevipoegs partibok . . .  
JAAN KROSS, *Utgrävningar*

"There is only one principle that can be defended under *all* circumstances and in all stages of human development. It is the principle *anything goes*." Paul Feyerabend's famous slogan (1975:28) is one of the philosophical tenets that produced a deep effect on the archaeological discussion of the 1980s. Probably no other humanistic discipline was so deeply affected by this kind of relativism.

From an archaeologist's point of view Feyerabend's most fundamental thesis is, that all observations and empirical data are to some extent subjective, or at least theory-laden. He does not stop at Kuhn's (1962) ideas about several competing paradigms, but even questions the very concept of scientific truth. Science is placed on a level with myths, religious systems and political ideologies.

Feyerabend's most extreme ideas are accepted by Shanks & Tilley, who deny that we can attain any objective truth about the past: "Choosing a past, constituting a past, is choosing a future. The meaning of the past is political and belongs to the present." – "Archaeology, as cultural practice, is always a politics, a morality." – "We do not argue for truths about

the past but argue through the medium of the past to detach the power of truth from the present social order" (Shanks & Tilley 1987: 212f). Watson (1991:280) justly summarizes their position thus: "Because archaeology is a deceit we should use it propagandistically".

Trigger (1991:72) is less stern, but very clear-cut: "All scientific activities have subjective elements, but studying the past is not the same as dreaming or writing a novel".

*Why don't we write historical novels instead?* is exactly the question asked by the historian Christer Winberg (1990) in a critique of both positivism and relativism. In Swedish historical research an animated debate on theory started in 1965 with an explicit appeal to use positivistic principles (Winberg refers to Björklund 1965). It is well known that the American New Archaeology recommended a consistent logical empiricist, or positivist, research programme (Binford 1968; Gibbon 1989). In Scandinavian archaeology there was a parallel development, beginning around 1960. An explicit terminology was shaped for the description of archaeological data and definition of types, and exact meas-

urements, statistics and graphs were introduced (Welinder 1991). Evidently also the Scandinavian variant of new archaeology was influenced by positivism, but only in so far as source criticism, clearness and precision in the treatment of archaeological material was demanded. There was no attempt to introduce a formal deductive-nomological model of explanation into archaeology.

Positivism was out of date already when introduced into American New Archaeology and Swedish historical research (Gibbon 1989: 35; Winberg 1990:5). In Anglo-American philosophy it was sharply criticized since the 1950s, and in 1962 the new situation became evident to all the learned world by Kuhn's famous book. No wonder that there was soon much criticism, both external and internal, also against the positivist, "processual", New Archaeology (Gibbon 1989:91). This started a debate, which resulted in many very valuable contributions to archaeological theory, and a few less valuable ones. In sum, archaeology certainly improved more than ever during the last 30 years.

Winberg is less happy about the development in the field of history. Attempts toward strict observation of positivist rules of inference led to superficial results (Winberg 1990: 10). Still worse, when the philosophical criticism of positivism, especially in Kuhn's version, reached history, a relativism developed. Since all observation is loaded with our own theories, how can we know what *really* happened in history? Subjective hermeneutics tried empathy in the spiritual life of individual historical personalities. From the relation between the historical event and its scientific representation focus moved to the relation between this representation and the reader. So why not write novels instead? (Winberg 1990:6).

According to positivists, the research strategy of natural sciences should be used also in archaeology and other humanities. This is eagerly denied by post-processualists and relativists, but it is astonishing how little energy has been used to define the distinctive character of archaeology. As a matter of fact the

structure of archaeology is almost unique (Malmer 1984:266; 1990:69):

The materials of natural sciences are mute and non-human.

The material of archaeology is mute and human.

The materials of other humanities are verbal and human.

This means that in archaeology there is a much clearer distinction than in any other science between observable data and the reality about which we want to obtain knowledge. We are not interested in artefacts (unless we are antique dealers, or see them as works of art); we are interested in the social and private life of prehistoric man. But artefacts don't voluntarily tell us anything about prehistoric life; we have to use strict scientific method to make them talk (and this, of course, is the reason why scientific archaeology started very late, in the 1830s).

Also in the natural sciences there is no doubt a distinction between directly observable data and underlying forces and structures. A metal can be said to have "dispositional" properties, for example that it is hard, heavy, malleable, resistant to rust and melts at a certain temperature, but also "essential" properties, such as a certain atomic number and a certain atomic weight (Gibbon 1989:149). But whether these properties are "dispositional" or not obviously depends on one's technical competence: palaeolithic man could apprehend only that this lump of metal was hard and heavy. Only successively, as technology improved, could man discover that this metal is also malleable, rustless, meltable and has an atomic structure. Evidently, then, in the natural sciences there is no such clear dichotomy between observable data and "essence" as in archaeology.

The same holds true for other humanities than archaeology. History, for instance, tries to work out a verbal account of the essentials of a past situation, but its observable data is contained in other verbal accounts. More resemblant to archaeology is art history since its

task is sometimes to discern and verbalize essentials of works of art, which are not accompanied by any verbal account, or even the artist's name. Still greater similarity exists between ethnography and archaeology, since reports about the exact function of ethnographic objects are sometimes missing. This analogy between ethnography and archaeology came to an end some 25 years ago, when ethnography transformed itself into social anthropology, with little or no interest in artefacts, thus deserting from one of the most interesting anthropological problems, viz. the reflection of ideas in the material world – and *vice versa*. Luckily archaeology has taken over this complex of problems in what is now called ethno-archaeology.

In sum: in all sciences there is a distinction between direct observable data and an underlying essential reality about which we want to obtain knowledge. But in prehistoric archaeology this distinction is uniquely clear, since we have to extract a verbal account from an absolutely mute material of artefacts (including, of course, ancient monuments and traces of human activities in nature).

How is it possible that archaeology in the last decade was so deeply affected by relativism, that many archaeologists seem to be sceptical about the possibility to obtain safe knowledge about the prehistoric past? Richard Watson, who is a philosopher by profession, underlines that *philosophical* scepticism cannot be refuted (1991:280). But archaeologists are not philosophers, Watson maintains, and so they need not be concerned with metaphysical questions about reality. Extreme scepticism never has and never will undermine practice.

This is also Winberg's position. There must be a (present, historic, prehistoric) reality, about which we can obtain knowledge. The decisive proof is the fact that mankind to an ever increasing extent has learned to master nature, understood more and more how it functions, achieved scientific and technical progress (Winberg 1990:7).

Of course we can draw safe conclusions

from mute artefacts and traces. If we observe footprints on the snow-covered ground, do we doubt that somebody walked here? If the footprints lead to a house, do we call in question that the person arrived there? Of course not. The proof is not absolutely conclusive: somebody might have invented a cunning device to cheat us. But such things happen very rarely; it is overwhelmingly probable that our first inference is correct. Almost all inference in applied sciences is of this type: more or less probable, but not absolutely conclusive. Some relativists in archaeology admit that such inference is possible, but only concerning trivial problems, such as the function of tools and the like. It is often maintained that prehistoric man thought in ways that were so totally different from ourselves that we simply cannot understand his ideas and actions. This, however, remains to be proved. Anyone who is in doubt whether archaeology can achieve substantial results is recommended to compare our present knowledge with what was known 50 years ago. We do have reliable knowledge even of ideas and mentality, and we have good hope that we may achieve an ever more comprehensive understanding of what happened in the past (Trigger 1991:73).

Archaeology is based on all other sciences and on common sense, Watson concludes (1991:278), and it may be added that this was the case from the beginning of scientific archaeology (Malmer 1991:286). This seems reassuring, and archaeologists may be content with Watson's (1991:280) declaration that archaeologists need not be concerned with metaphysical questions about reality. Nevertheless it seems satisfactory, that since 20 years or more a philosophical school exists which allows archaeologists to speak of the prehistoric past as a *reality*, not as a construction (Johansson & Liedman 1981:101). Its initiators are Rom Harré (1970; 1986) and Roy Bhaskar (1975; 1979). Muurimäki (1982; 1986) gives a good introduction.

Harré and Bhaskar recommend a *theoretical realism*. Positivists maintain that observation is the only source of sure and certain

knowledge. What is not observable is in their terminology "theoretical". But realists assert that theoretical terms have ontological status, i.e. that they have real existence (Gibbon 1989:48). On the other hand realists and positivists agree in that science must be objective and rational, and that scientific theories must build on empirical data (Gibbon 1989:143). Realists argue from observable data to hidden causes. We have to establish casual links between observable surface phenomena and underlying structures, and so description of even small observable details are not worthless – they may have important underlying causes (Gibbon 1989:167; Winberg 1990:12).

The way of thinking recommended by the champions of theoretical realism is exactly the research strategy observed by all good archaeologists since the beginning of our science. Archaeology's unique dichotomy be-

tween observable data and the reality about which we want to obtain knowledge has made this theoretical standpoint most natural. What has happened is simply – but indeed very important – that philosophy has provided us with an explicit approbation of our way of working. We don't have to choose between positivism and relativism, which both have obvious defects.

Prehistoric artefacts are real, and the prehistoric past is real, which means that both levels are connected by logic. Consequently we have good chances to study prehistoric reality on the basis of the artefacts it produced. Or, as Bhaskar (1975:113) puts it: "Whatever is capable of producing a physical effect is real and a proper object of scientific study."

English revised by Laura Wrang.

## REFERENCES

- Bhaskar, R. 1975. *A Realist Theory of Science* (Leeds).  
 – 1979. *The Possibility of Naturalism* (Brighton).
- Binford, S. R. & L. R. 1968. *New Perspectives in Archeology* (Chicago).
- Björklund, S. 1965. Dikt och vetande i historieforskningen. *Scandia* 31:189–226.
- Feyerabend, P. 1975. *Against Method* (London).
- Gibbon, G. 1989. *Explanation in Archaeology* (Oxford).
- Harré, R. 1970. *The Principles of Scientific Thinking* (Chicago).  
 – 1986. *Varieties of Realism* (Oxford).
- Johansson, I. & Liedman, S.-E. 1981. *Positivism och marxism* (2nd ed., Stockholm).
- Kross, J. 1990. *Väljakaevamised* (Tallinn).  
 – 1991. *Utgrävningar* (Stockholm).
- Kuhn, T.S. 1962. *The Structure of Scientific Revolutions* (Chicago).
- Malmer, M. P. 1984. Arkeologisk positivism. *Fornvännen* 79:260–268.  
 – 1990. Comments to D. Tangri: !Science, Hypothesis Testing and Prehistoric Pictures. *Rock Art Research* 6: 69–70.  
 – 1991. Comments to R. A. Watson: What the New Archaeology has Accomplished. *Current Anthropology* 32:286–287.
- Muurimäki, E. 1982. Historical and methodological remarks concerning "thunderbolts" and their true nature. *Studia Minora, Helsingin yliopiston arkeologian laitoksen Moniste* 29:61–65. (Helsinki).  
 – 1986. Transcendental realism and archaeology. An introductory survey. *Kontaktstencil* 28–29:178–201. (Århus).
- Shanks, M. & Tilley, C. 1987. *Social Theory and Archaeology* (Cambridge).
- Trigger, B. G. 1991. Post-Processual Developments in Anglo-American Archaeology. *Norwegian Archaeological Review* 24:65–76.
- Watson, R. A. 1991. What the New Archaeology has Accomplished. *Current Anthropology* 32:275–280, 288–289.
- Welinder, S. 1991. Review of J. H. Kelley & M. P. Hagen: Archaeology and the Methodology of Science (1988). *Norwegian Archaeological Review* 24:131–132.
- Winberg, C. 1990. Varför skriver vi inte historiska romaner i stället? Ett debattinlägg om historikerns förhållande till verkligheten. *Scandia* 56:5–17.