

M. P. MALMER

THE CORRELATION BETWEEN DEFINITIONS AND INTERPRETATIONS OF NEOLITHIC CULTURES IN NORTHWESTERN EUROPE

Archeology, like all the other sciences, is a combination of facts and hypotheses, and it is extremely important for the results of our research that we are aware of just where the distinction lies between these two major complexes¹. It is remarkable, however, that opinions differ so, or are confused, on this particular question. Suppose, for instance, that we ask: What are the facts known to us concerning the Middle Neolithic in Southern Scandinavia? Most scholars would presumably reply: The main fact is that there are three cultures, the Funnel-Beaker Culture (*Trichterbecherkultur*, *trattbägarkultur*), the Pitted-Ware Culture (*Grübchenkeramische Kultur*, *gropkeramisk kultur*), and the Battle-Axe Culture (*Streitaxtkultur*, *stridsyxekultur*). As major hypotheses can be mentioned that the people of the Funnel-Beaker Culture were settled farmers, those of the Pitted-Ware Culture fishermen and hunters, while those of the Battle-Axe Culture were nomadic herdsman. Other scholars might object and say that these are not hypotheses but facts. In reality, however, the truth is rather the reverse, namely that all the above, even the existence of the three cultures, is only a series of more or less likely hypotheses, at all events not facts. For archeology has no facts to hand other than the physical properties of the artifacts and the circumstances under which these have been discovered, recorded objectively (Malmer, 1963a, p. 258) and expressed in logically correct, verbal terms.

This is not, of course, to deny the importance of the hypotheses; they are essential in all scientific work. The objective recording of facts must not be an end in itself – archeology must strive to interpret the facts. This is done by constructing hypotheses and then seeking support for these in additional facts until, ideally, the hypothesis approaches the realm of the proven (Malmer, 1962, p. 879). This, however, is as far as one can get in an empirical science such as archeology; one cannot construct conclusive evidence, only a probability bordering on certainty.

The central concepts in archeology are *typological element*, *type* and *culture*. Now there is a certain fraternity of archeologists – unfortunately quite numerous – which believes that a concept need not be defined before it is used. Thus they can use the expression “a thin-bladed flint axe” when in fact all they mean is “a flint axe that

looks thin to me". But as everyone has his own idea about what is meant by "thin", a discussion employing such indefinite concepts will be worthless scientifically, or at all events made unnecessarily tedious. A scientific determination of concepts must be based on known quantities. In the case of the typological element "thin-bladedness" the known quantity is clearly the metric system (or, naturally, some other system of measure): "thin-bladedness" may be defined as a thickness of less than a certain number of millimetres, say 20 mm, or as a thickness corresponding to a certain percentage of the width or length of the axe (Malmer, 1962, p. 361 ff.).

A typological element can thus be defined only by being expressed in known quantities. A type can be defined only by enumerating the typological elements that constitute attribution to that type, possibly with an additional enumeration of the typological elements which disqualify from attribution. By the same token, the most useful concept of culture is obtained by defining a culture through the enumeration of the types that constitute attribution to that culture, possibly with an additional enumeration of the types which disqualify from attribution.

A study of how the cultures debated in the archeological literature are defined reveals that in the great majority of cases they have in fact no definitions or at least only a very incomplete one. The most usual form for such an incomplete definition is that a group of finds, say a number of graves, is described and then held to represent a culture, which also receives a name. Inevitably, several of the types found in these graves turn up elsewhere, too, though in other combinations. In such a confused situation, the interpretation of the culture is often fixed by a hypothetical element. To take a concrete example, the Swedish-Norwegian Battle-Axe Culture is commonly defined as the culture represented by the well-known flat graves with skeleton in crouched position. Only small grave-fields of 2 to 4 such graves have been found as a rule, and from this it has been deduced that the representatives of the Battle-Axe Culture were nomadic herdsmen, not settled farmers (Stenberger, 1956, p. 17). The graves of the Battle-Axe Culture contain a highly characteristic pottery, which can be identified with absolute certainty even when it is found outside the typical flat graves. And this pottery has in fact been found on over 60 habitation sites, usually in small quantities. Referring to the hypothesis that the Battle-Axe Culture was nomadic, it has been concluded that these 60 or so habitation sites do not belong to this culture but that this is a case of a few vessels having been transferred by trade or some other means to the habitation sites of other cultures (Hinsch, 1956, p. 17). Consequently, the Swedish-Norwegian Battle-Axe Culture is found to have no habitation sites, a conclusion that further convinces scholars that its people were in fact nomads. The definition of the culture has here had a decisive influence on its interpretation. The true interpretation is probably quite different. Rich finds in the habitation sites is a characteristic of the Mesolithic Cultures and the Pitted-Ware Culture, the representatives of which seem not to have settled. The richness

of these finds is due to the location of the habitation sites, which are on beaches and other barriers, not on cultivated ground. The peoples of the agricultural cultures have of course inhabited the good arable land, which has remained under cultivation ever since. During these thousands of years a considerable proportion of the artifacts of the agricultural Neolithic cultures has been destroyed, and in particular their pottery. The small habitation sites of the Battle-Axe Culture, far from being indicative of nomadic herdsmen, are a sign of a settled people (Malmer, 1962, p. 262 ff.). Returning, finally, to the small size of the grave-fields, we find that recent investigations have shown that these are not in fact all that small. It is simply that these graves are usually sited in a long row, possibly along some prehistoric road, so that they are more difficult to find than graves that lie in clusters (Malmer, 1962, p. 244 ff.).

Another way of defining cultures can be studied with the Swedish-Norwegian Battle-Axe Culture as an example. In this case the definition states that all the types found in the flat graves that are typical of this culture belong to it, whether they are found in these graves or elsewhere. Such a definition has remarkable consequences. These particular graves contain, for instance, certain characteristic types of amber beads. Exactly the same types occur in the graves of the Jutlandish Battle-Axe Culture. By this definition, therefore, several of the Jutlandish culture's graves should in fact belong to the Swedish-Norwegian Battle-Axe Culture. Made wise by experience, one is then tempted to declare that it is only some of the types found in the graves of the Swedish-Norwegian Battle-Axe Culture that define this culture, whereas the other types are excluded. In adopting such a solution, however, it must be realized that however one may formulate the definition, whichever types one may exclude, this will affect the interpretation of the culture. This is clear already from the fact that no two of the types occurring in these graves have the same pattern of distribution; indeed, the differences are often extreme. A few examples can be quoted. Let us define the Swedish-Norwegian Battle-Axe Culture by saying, for instance, that it is represented wherever its typical pottery (Malmer, 1962, p. 8 ff) is found, and only there. Some of the consequences of such a definition will be as follows: The Swedish-Norwegian Battle-Axe Culture is related to the arable regions in the south of the Scandinavian peninsula; it covers an area that runs 1000 km from north to south, although two-thirds of the ceramic finds are located to the southernmost and most fertile part of the peninsula, a region that measures scarcely 100 km from north to south (Malmer, 1962, p. 38, Table 2 and maps Abb. 22–25). Alternatively, we can define this culture by another type, namely its characteristic battle-axe (Malmer, 1962, p. 612 ff.). We then find that the culture extends over a region twice as large – 2000 km from north to south – from Schleswig-Holstein to northernmost Norway; that the small region that had two-thirds of the ceramics has only a quarter of the battle-axes; and that the connection with the arable regions is admit-

tedly still clear, but less pronounced than in the case of the ceramics (Malmer, 1962, p. 594, Table 63). Other types from this Battle-Axe Culture have different distributions again. A characteristic type of bone rings belongs exclusively to southern Sweden, while the thick-bladed stone-gouge occurs only in eastern Central Sweden; if these were used to define the culture, the result would be different again (Malmer, 1962, p. 287 ff. and 557 ff.).

Examples such as these can be taken from any of the Neolithic cultures in north-western Europe and also, I am convinced, from any known culture. If one defines the Funnel-Beaker Culture in terms of its dolmens and passage-graves, it will be located in Scandinavia to the coastal districts in the south-west, as an exclusive farmer-proprietor culture in splendid isolation from other contemporary cultures. If one defines it in terms of its flint-axes and double-edged battle-axes, on the other hand, not only does it become well represented in the north-east, but the border line with the Pitted-Ware Culture becomes extremely difficult to draw. If one, finally, defines the Pitted-Ware Culture by its ceramics it becomes decidedly eastern, so that certain scholars are tempted to seek its origins in eastern Europe; whereas if one defines it by its arrow-heads, it becomes just as decidedly western.

The interpretation of a culture, in other words, always varies according to whether it is defined by one type or several, as well as by which types are chosen for this purpose. Which, then, is correct? Some scholars have defined a culture by a single type, others have severely criticised such a practice (De Laet, 1954, p. 94; Childe, 1956, p. 16). Others, again, have constructed extremely detailed and categorical rules, for instance: "To qualify for inclusion in the culture's content any type should be represented in at least two representative sites and by more than one example" (Childe, 1956, p. 33).

I believe that the simplest way out of this definitional dilemma is to recognise that there are two general attitudes among archeologists which may conveniently be termed *empiricism* and *rationalism*². The empirical line sees the archeologist's task as the *discovery* of the types in prehistoric materials, *i.e.* the types which the prehistoric peoples themselves recognised. The rationalist attitude, on the other hand, sees the types as nothing more than a convenient archeological classification of the prehistoric materials; the artifacts themselves exist *a priori*, it is true, but the *types* have not *a priori* existence, they are created the instant one formulates a logically correct verbal definition. The same holds of the culture definitions. The empirical line considers that by studying the distribution of the types and their combinations with one another in the finds, it is possible to arrive at the "correct" boundary between the cultures, whereas the rationalists hold that it is up to each scholar to draw these boundaries as he sees fit. Thus, it may seem that the empirical view involves being as objective as possible, while the rationalistic could not be more subjective. In practice, however, we have a very different state of affairs. The empirical search

for the “correct” or “natural” boundaries rapidly leads to a very large number of points where it is quite simply impossible to decide objectively what is “correct” or “natural”, leaving the scholar to make a subjective choice. The empiricist’s desire for objectivity leads ironically enough to repeated instances of notorious subjectivity. Rationalism, on the other hand, starts with a conscious, entirely subjective selection but from then on is able to record the phenomena that fall within the prescribed limits with complete objectivity.

Both empiricists and rationalists, when formulating their type definitions naturally start from a hypothesis, an attempt at interpreting the facts, a vision of the concrete prehistoric situation. But the danger of the empiricist’s attitude is that in formulating the definition of a culture, he believes that he has “discovered” a culture and starts treating this as though it were a fact and not just a hypothesis. The rationalist, however, is well aware that his definition of a certain culture is nothing but an experiment; he is interested in what the result, the interpretation, will be if he formulates his definition in a certain way. But once he has completed this experiment, he is bound to formulate his definition in some *other* way, study the result of this and compare it with his first experiment. He then proceeds to a third definition, and a fourth; and so on. It is in the *comparison* of the results that the most reliable knowledge is to be found.

Which brings us to the conclusion. It is hazardous to believe that the more or less clearly formulated and habitual definitions of the Funnel-Beaker Culture, the Battle-Axe Culture and other cultures represent anything essential or factual: they are all hypothetical. Questions such as: Was the Funnel-Beaker Culture agricultural? or Were the peoples of the Battle-Axe Culture immigrants? can very easily be meaningless. They can in many cases be likened to a mathematical problem to which there is not rational solution, quite simply because the problem has been incorrectly formulated.

There is nothing wrong in itself in defining a culture by a single type, though the results will frequently be more interesting if several types are included in the definition. What is important is that several different definitions are formulated, and that the interpretations resulting from these are then compared with one another.

[As presented January, 1964.]

NOTES

¹ In analogy with the usage in nearly all languages apart from English, both the humanistic and natural science disciplines are referred to in this paper as "sciences".

² Ford & Willey, 1949 p. 38 ff.; Phillips, Ford & Griffin, 1951 p. 61 ff.; Ford, 1954, p. 42 ff.; Steward, 1954 p. 54 ff.; Shepard, 1957 p. 308; Moberg, 1958 p. 11; Malmer, 1962 p. 6 and 586; Malmer, 1963a, p. 120 f. and 254 f.; Malmer, 1963b, p. 93 f. and 111 f.

LITERATURE

- Childe, V. G., 1956. *Piecing Together the Past*. London.
- Ford, J. A., 1954. The Type Concept Revisited. *American Anthropologist* 56, p. 42-54.
- Ford, J. A. & G. R. Willey, 1949. *Surface Survey of the Viru Valley, Peru*, (Anthropological Papers of the American Museum of Natural History, New York, 43: 1).
- Hinsch, E., 1956. *Yngre stenalders stridsøkskulturer i Norge*. Bergen.
- Laet, S. J. De, 1954. *L'archéologie et ses problèmes*. Wetteren.
- Malmer, M. P., 1962. *Jungneolithische Studien*. Lund.
- Malmer, M. P., 1963a. *Metodproblem inom järnålderns konsthistoria*, (Methodological Problems in the History of Art during the Scandinavian Iron Age). Lund.
- Malmer, M. P., 1963b. Empiricism and Rationalism in Archaeological Research. *Fynd*, p. 93-94; p. 111-112.
- Moberg, C. A., 1958. *Bearbetning av hopade fynd*. (Unprinted manuscript) Göteborg.
- Phillips, Ph., J. A. Ford & J. B. Griffin, 1951. *Archaeological Survey in the Lower Mississippi Alluvial Valley, 1940-1947*, (Papers of the Peabody Museum of American Archaeology and Ethnology, Harvard University, Cambridge, Mass., 25).
- Shepard, A. O., 1956. *Ceramics for the Archaeologist*. Washington.
- Stenberger, M., 1956. *Västeråstraktens historia*. Västerås.
- Steward, J. H., 1954. Types of Types. *American Anthropologist* 56, p. 54-57.