

FORN VÄNNEN

JOURNAL OF
SWEDISH ANTIQUARIAN
RESEARCH

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http://kulturarvsdata.se/raa/fornvannen/html/2015_073

Fornvännen 2015(110):2 s. 73-83

Ingår i samlraa.se

Klejn, Malmer and the “Montelius formula”

By Evert Baudou and Ingmar Jansson

Baudou, E. & Jansson, I. 2015. Klejn, Malmer and the “Montelius formula”. *Fornvännen* 110. Stockholm.

The aim of this review is to draw attention to Leo Klejn’s recent publication *The Montelius Formula: Swedish Rationalism in the Archaeology of Mats Malmer* (2010), a profound discussion of the theoretical problems raised in Mats Malmer’s research. The book is written in Russian with an English summary. We concentrate on five problem areas discussed by Klejn: Montelius’s typology and “real types” versus Malmer’s classification and “artificial types”; Malmer’s verbal definitions versus empiricism; Malmer’s “production diagrams”; migration versus internal development as an explanation for the Swedish-Norwegian Battle-Axe culture; and Malmer’s actualism, theoretical realism and fictionalism.

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In 2010 an important analysis of Mats P. Malmer’s archaeology entitled *The Montelius Formula: Swedish Rationalism in the Archaeology of Mats Malmer* was published by the well-known Russian archaeologist Leo Klejn. The book is written in Russian with a summary in English. Klejn has previously discussed what he calls Malmer’s “war against impressionism” in his extensive article “A panorama of theoretical archaeology” (1977), a survey of the most important works published in Europe and America between 1960 and 1973, where he highlights Malmer’s doctoral dissertation *Jungneolithische Studien* (1962). Discussions of Malmer’s theories are also to be found in Klejn’s book *Archaeological Typology* (1982).

In the preface of his new book from 2010, Klejn recalls how he was fascinated by Malmer’s innovations and critical analysis, and how in the early 1970s he wrote a book on Malmer’s research which, however, remained unpublished. It is this manuscript that is now published, revised and expanded with discussions of Malmer’s later works, including *A Chorological Study of North European*

Rock Art (1981) and *The Neolithic of South Sweden. TRB, GRK and STR* (2002). Klejn’s exceptional insight into both western and eastern archaeological research enables him to review Malmer’s work with expertise and to bring essential theoretical issues to the fore. He expresses his deep respect for Malmer’s work but is at the same time very critical when it comes to fundamental theoretical problems. Our aim here is to draw attention to Klejn’s publication and discuss some of his important standpoints. The quotations from Klejn 2010 have been translated into English by Ingmar Jansson.

The rationalism characterising the nearly 1000 pages of Malmer’s doctoral dissertation was a revolt against the “impressionism” that dominated the archaeology of the time. Klejn compares Malmer to the French archaeologist J.-C. Gardin: both were exponents of a new archaeology that pre-dates the neo-positivist New Archaeology of Binford, Clarke and others. Malmer and Gardin represent neo-rationalism rather than neo-positivism. According to Klejn, Malmer’s ra-

tionalism was rooted in Swedish tradition, represented in modern times by Torsten Hägerstrand and David Hannerberg. Hägerstrand was especially important for Malmer's method.

Rationalism, typology and "the real type"

After two initial chapters surveying Malmer's work and position in Nordic and international archaeology, the remaining seven chapters review Malmer's discussion of basic archaeological issues, starting with typology as the key to the nature of archaeology, followed by special chapters discussing "rationalism" vs. "impressionism" and "rationalism" vs. "empiricism" (concepts which for Klejn and Malmer have partly different meanings). From there the discussion leads to the problem of creating a chronology, and finally to the problem of interpreting changes noticed in the archaeological material: do these mirror migrations or local developments, inventions or diffusions? Klejn's all-embracing question is: What is objectivity and what is subjectivity in Malmer's archaeology?

In chapters III–IV, which deal with type, typology and typological series, Klejn and Malmer are in strong disagreement. While "type", "typology" and "typological series" are basic concepts for both Malmer and Montelius, the meaning of these terms differs in their works. According to Klejn (2010, pp. 66 f), Montelius is of the opinion that "typology should not be understood as every sort of grouping or ordering, but only as the procedure that in contrast to classification (division into exact classes) distinguishes what is typical". Montelius builds developmental series in which the types represent "central forms". Intermediate forms and transitional forms act to strengthen the series. Or, as Klejn expresses it (2010, p. 67): "Classes are cut out of the material, whereas types are patterns towards which the real, concrete artefacts gravitate – around which they swarm." Thus, types, according to Klejn's concept, existed in the prehistoric world – they are real.

Malmer, instead, is of the opinion that "a typology is always and inevitably artificial" (Klejn 2010, p. 69). Malmer writes (1962, p. 881): "Der Typus entsteht in dem Augenblick, in dem man eine genaue Definition für ihn formuliert" ("The type is created at the moment when an exact de-

finition is formulated for it'). Klejn is not convinced. He maintains that Malmer, in his "enthusiasm for definitions and relative types", has abandoned the essential task of revealing "real" types and periods. Malmer replaces typology with analytical classification (fig. 1). He considers that the verbal definition is the starting-point of the type. "Ohne Definition existiert kein Typus, ohne Typus keine Typologie, ohne Typologie keine Archäologie" ('Without a definition there is no type, without a type no typology, without typology no archaeology'; Malmer 1962, p. 881; cited by Klejn 1982, p. 88).

By quoting L. Wittgenstein's *Tractatus logico-philosophicus* (1922) in the epigraph to chapter 4 in his book *Metodproblem inom järnålderns konsthistoria* (1963b), Malmer sides with logical empiricism. This is also clear from his statement: "Förutsättningen för en typs existens är en logiskt korrekt verbal definition" ('The prerequisite for the existence of a type is a logically correct verbal definition'; Malmer 1963b, p. 21; cf. his English summary p. 252). Malmer's epigraph to chapter 1 in his book from 1963 is a quotation from Wittgenstein's successor in Cambridge, G.H. von Wright: "En humanism, som flyr det exakta tänkandet, är ett kulturellt barbari" ('A humanism that eschews exact thinking, is a cultural barbarism'; von Wright 1957). Strange to say, Klejn does not notice Wittgenstein's importance for Malmer (cf. Klejn 2010, pp. 11, 136). Malmer does not mention Wittgenstein in his dissertation of 1962. However, in his chapter "Bemerkungen zur Methode" he gives expression to the same ideas as in his book of the following year.

Mats Malmer's wife Brita has explained in an unfinished article (which she placed at our disposal in 2012) why he chose German for the translation of his dissertation: German was a leading language in Sweden and most people with a university education could read German without problem. Earlier literature within the subject was written in German. But the conclusive argument was that he would be able to check that the translation was correct. "For M, the language itself was of decisive importance (cf. Wittgenstein). He had to be certain that his many definitions and other central concepts when translated expressed exactly what he meant." But he had noticed that

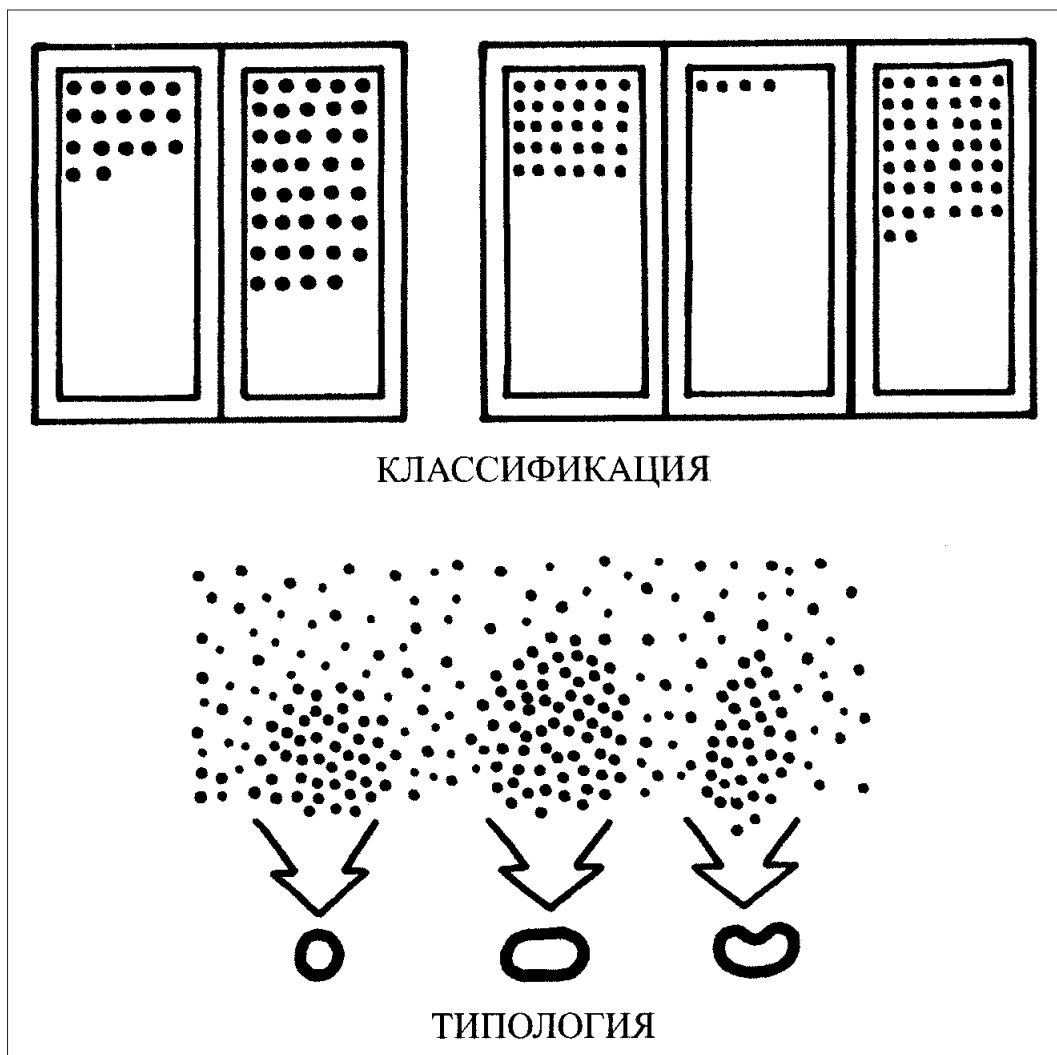


Fig. 1. The difference between typology and classification as illustrated by Klejn. Below: Typology. According to Klejn typology strives to catch the “swarming” of the material around certain patterns/types. Above: Classification. This is what Malmer calls typology. It does not consider swarming, and the definitions are verbal and have exact limits determined by the archaeologist. By formulating several definitions and comparing the results, classification approaches typology. From Klejn 2010, p. 69, fig. 22 (cf. Klejn 1982, fig. 1).

“some ‘Americans’ ... were also engaged in something new, and M wanted them to be able to read his own contribution to a renewal of archaeology, at least in summary form.” At a late stage, probably in January 1962, M suggested that the summaries at the end of each chapter should be translated into English for inclusion in the disserta-

tion. The proposal was not accepted. Instead, his Swedish book from 1963 was published “with an extensive English summary that contains the main points of M’s archaeological concept” (B. Malmer c. 2010, pp. 5 f, our transl.).

It is interesting to look more closely at Montelius’s well-known explanation of the concept

“type”: “Det som arten är för naturforskaren, det är typen för fornforskaren” (‘Type is to the archaeologist what species is to the natural scientist’). This sentence can be found in Montelius’s works from 1878, 1884 and 1899 as well as in *Die typologische Methode* from 1903 (cf. Baudou 2012, pp. 235 ff). A close friend of Montelius, the zoologist Wilhelm Leche (1859–1927), has written an encyclopaedia article about the concept of “species” which explains Montelius’s concept of “type”. Leche writes (1904, our transl.): “Theoretically, one could best determine the species as the form of a plant or animal at a certain stage of its historical development.” Montelius’s comparison gets an even deeper meaning later on in Leche’s text where it is stated that the species is an abstraction “medan individerna äro den organiska naturens enda realiteter” (‘whereas the individuals are the only realities of the organic nature’; cited in Baudou 2012, p. 239). This can be compared with Klejn’s characterisation of Montelius’s concept of typology: “For Montelius typology was essentially a study of development, and in no way a classification” (Klejn 1982, p. 41; cf. Klejn 2010, p. 67).

Both Klejn and Montelius try to find what Klejn calls “the real types”, the types distinguished by prehistoric people and/or characteristic of certain regions and periods (cf. fig. 1). Montelius has obviously managed to distinguish such types. His types and typological series for the Scandinavian Bronze Age have been scrutinised by generations of later scholars and have on the whole been confirmed by find associations and radiocarbon datings.

Klejn also discusses the methodical value of the typological series and of find associations (chapter IV). One section is called “Malmer – the successor of Montelius”. Malmer saw himself as following Sophus Müller, but Klejn says that this is wrong and that Malmer in fact perfected Montelius’s typological method to a new and more usable level by working with typological series of independent elements within the individual artefacts. In this way typology became independent of the evidence of closed finds. Klejn says that Malmer replaced Montelius’s “external” parallel series with “internal” parallelism by studying the gradation of independent typological elements.

The artefact as a whole takes the place of the closed find. The artefact ties together the links in the internal parallel series just as the closed find ties together analogous links in the external series. Klejn writes (2010, pp. 87 f) that this is an ingenious discovery. “But even if he acquired and perfected the Montelius formula in its structure, and even if he widened the possibilities of using it, he did not unravel the core of this formula, its typological nature. He did not understand that it was created for typology, not for classification.”

It should be noted that similar studies of individual elements, though less systematised than Malmer’s, were also undertaken by Montelius (cf. especially his analysis of the Scandinavian Bronze Age swords, Montelius 1903, pp. 39 ff, figs. 101–130).

Verbal definitions, rationalism and empiricism

In chapters V–VI Klejn analyses the decisive part of Malmer’s archaeology – his demand for clear definitions. For Malmer, “rationalism” is a stand against both “impressionism” and “empiricism”. Definitions must be verbal. He does not accept Montelius’s definitions, which can rather be characterised as descriptions or illustrations of types. Klejn, in turn (2010, pp. 114–118), rejects Malmer’s demand that definitions must precede research and must always be – and remain – arbitrary. This means that the researcher arbitrarily determines what shall be included in the definitions without being bound by any kind of *a priori* existing limits within the material, and without being obliged to motivate the limits chosen.

Klejn objects to Malmer’s subjectivism – a rationalism which “draws up limits between types and cultures with complete subjectivity and then with one-hundred-per-cent objectivity studies the phenomena that appear within these limits” (Klejn 2010, p. 119, citing Malmer 1963a, p. 93). According to Klejn this “has from time immemorial been called *subjective idealism*”. He continues: “It is just incomprehensible how a serious researcher can combine a confession about the subjectivism of his method with the advancement of this method in the struggle for an objective science” (Klejn 2010, p. 120). Malmer is an inconsistent idealist for whom the objects themselves exist *a priori*, but the types and cultures “happen to be artificial

constructs of our imagination”. There would be a better inner logic in Malmer’s views if he also understood the objects to be merely our ideas about these objects. But, Klejn asks (2010, p. 121), “what would then be the value of the whole campaign for an objective registration of the elements of the objects?” Later on, he concludes that Malmer’s work “cannot, in spite of all its scrupulousness and its large volume, have any serious scientific importance” (Klejn 2010, p. 133).

These are harsh words (Klejn expresses himself less categorically and more positively on other pages), and they are not fully consistent with reality. Malmer already presented an answer in 1967 to Klejn’s criticism: “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” (Malmer 1967, pp. 376f).

Malmer continues: “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 a 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” (Malmer 1967, p. 377).

These passages are also cited by Klejn (2010, pp. 120–122), and his analysis of them and other

passages leads him to his harsh judgement, finding several deficiencies and unanswered questions. How can repeated subjective definitions lead to objective interpretations? (Klejn 2010, p. 122), and which are the criteria for choosing the best concepts? (Klejn 2010, p. 143). Malmer also admits that he cannot formulate a decisive argument against empiricism (Klejn 2010, p. 123, citing Malmer 1963a, p. 93). Klejn maintains that Malmer’s subjective definitions inevitably lead to subjective interpretations and can therefore only be used in very special cases and only for rough estimations (Klejn 2010, pp. 133 ff; cf. Klejn 1982, pp. 106 ff). Klejn’s own view (2010, p. 146) is that types and cultures are archaeological facts, and our conceptions about them are hypotheses which, as research progresses, will approach the truth “asymptotically” – they will never reach the full truth but come so close that they, practically speaking, can serve as such.

Much of this would probably be accepted by Malmer. However, it is important to stress that Malmer’s criticism of empiricism in the cited passages refers to its use in “practical work” in contemporary and earlier research. Also, the cited passages offer a better understanding of his working procedure than short summarising statements like “definitions must precede research”. When formulating his definitions, Malmer had “a hypothesis ..., a vision of the concrete prehistoric situation” in mind, and he tested many definitions before he considered that he had found “reliable knowledge”.

A much-discussed definition in *Jungneolithische Studien* concerns the flint adzes and narrow chisels of the Swedish-Norwegian Battle-Axe culture (Malmer 1962, pp. 363 ff). For their definition Malmer chose two elements: greatest width and the angle between the narrow sides. The result is shown in a correlation diagram (fig. 2). It is not easy to grasp the significance of these two measurements for the shape of the adzes and chisels, nor how repairs may have influenced the recorded data. But nevertheless, as Malmer points out, the diagram shows two clear clusters, one for the adzes and one for the chisels. The measurements “have managed to catch something essential” (Malmer 1986, pp. 8 ff, our transl.). Other researchers would say that Malmer in this case has discov-

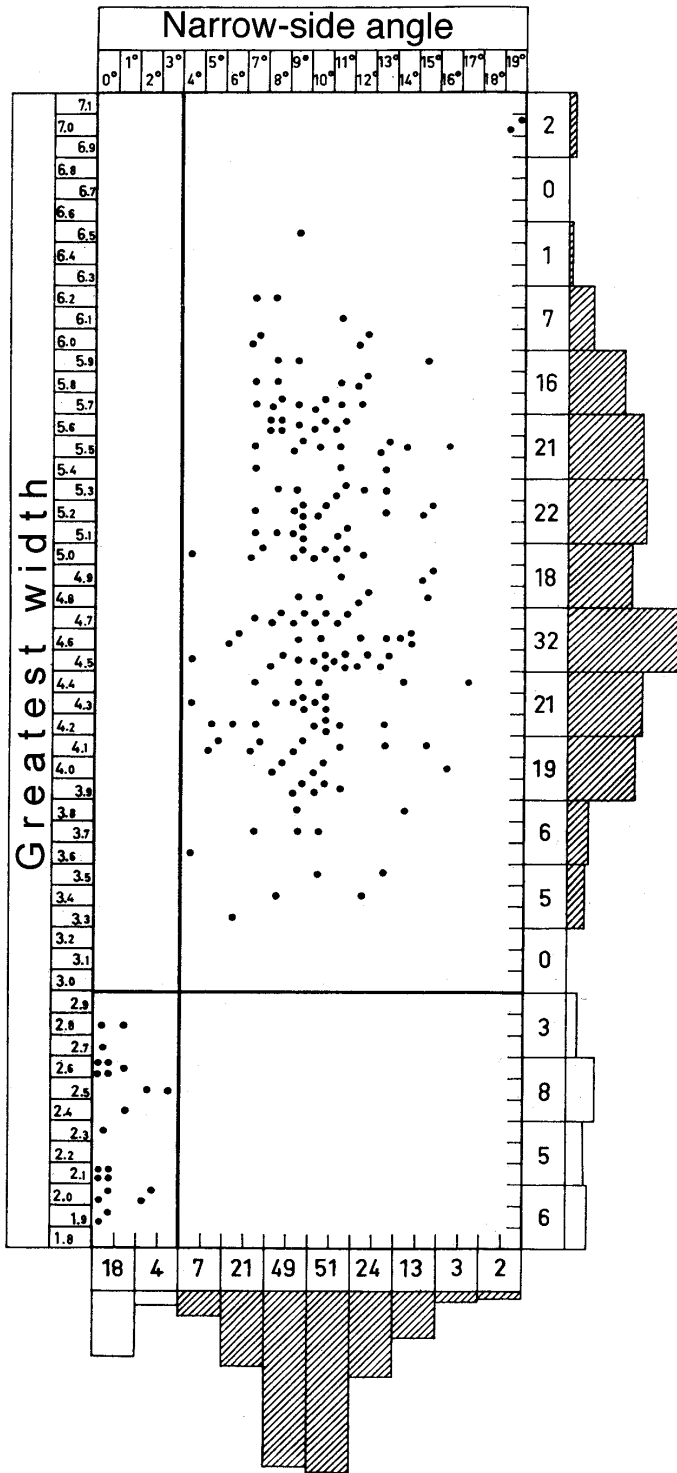


Fig. 2. Malmer's correlation diagram of the greatest width and the narrow-side angle of the flint adzes and narrow chisels found in graves belonging to the Swedish-Norwegian Battle-Axe culture. From Malmer 2002, fig. 74 (originally published Malmer 1962, Abb. 82).

ered two “real”, “*a priori* existing”, artefact types.

There is obviously an extensive procedure behind the type definitions published by Malmer. Researchers studying the Swedish-Norwegian Battle-Axe culture still use Malmer’s types – they obviously regard his classifications (typologies) as the best among those that have been put forward.

Production diagrams and the real development of culture

In chapter VI.5 and IX.4 Klejn, like many other archaeologists, rejects Malmer’s use of “production diagrams” as a chronological method. Malmer’s hypothesis is that the most frequent type in the archaeological record existed for the longest time, and that a new type cannot have existed at the same time as an earlier type. Klejn does not accept Malmer’s “constructed” types and periods. His intricate discussion shows that they disagree totally, and his judgement is hard (p. 169): “The production diagrams give an extreme simplification of the real process in the development of a culture and cannot serve as a basis for objective conclusions about the periodisation of a culture.” One reason for this disagreement is that Malmer accepts the numbers of known finds as a basis for his estimation of the length of his periods, while Klejn, quite correctly in our view, also wants to know what lies behind these numbers. Source criticism cannot be omitted. One cannot avoid the questions: Which factors have caused the known distribution of the artefacts? Does the known distribution represent the distribution when the artefacts were used in prehistoric times? Malmer does not discuss such matters.

The Swedish-Norwegian Battle-Axe culture – migration or local development?

Klejn’s final two chapters (VIII–IX) are devoted to an analysis of Malmer’s discussion of the genesis and spread of the Swedish-Norwegian Battle-Axe culture. This is a natural choice not only because the question occupies a central place in Malmer’s research but also because migration has been one of Klejn’s main interests, having in several works analysed migration from theoretical viewpoints and discussed the role of migrations in the history of the European Corded Ware/Battle-

Axe cultures. (We have not been able to consider Klejn’s most recent publication on the subject, 2013a.)

Malmer says that when he wrote *Jungneolithische Studien* his starting point was the traditional idea that this Stone Age culture arrived in Sweden with immigrants from the continent. It was not until his work progressed that he realised this to be wrong. Thus, it was the facts and not a preconceived idea that led him to his interpretation (Malmer 1965, p. 200). Klejn, on the other hand, is convinced that Malmer’s interpretation is based on an unconscious preconceived idea, rooted in the negative attitude towards migrations as an explanation of cultural change that became current in western research after the Second World War (Klejn 2010, p. 172).

Chapter VIII, “Migration or local development?”, is a critical analysis of Malmer’s interpretations in *Jungneolithische Studien*, not so much of the solutions themselves but mainly of “their dependence on the researcher’s theoretical guidelines and their connection with his methodical procedures for revealing the truth and for guaranteeing objectivity” (Klejn 2010, pp. 173 f). Klejn concludes that Malmer is right to point out that the facts that have been put forward do not give incontestable support for a migration, but this does not mean, as Malmer seems to think, that the opposite interpretation, an autochthonous development, is correct. Klejn is of the opinion that the facts can support both interpretations but are more compliant with migration (Klejn 2010, p. 178). Therefore he maintains that Malmer’s refusal to accept migration as an explanation is based not on facts but on subjectivism and preconceived ideas (Klejn 2010, p. 179 ff).

Chapter IX, “Invention and diffusion”, analyses Malmer’s interpretation that the Swedish-Norwegian Battle-Axe culture spread so fast that the earliest types of pottery and battle axes can be found more or less throughout the whole territory occupied by this culture. Malmer is convinced that the culture was “created” in Scania, the region closest to its sister cultures on the continent and with the best soils for agriculture, and that it spread northward very quickly from there. The reason why the earliest types are less frequent in Scania than further north is, according to Malmer,

that Scania was characterised by a rapid innovation process whereas the process was slower in northern areas resulting in early types being more common there. Malmer tries to support this interpretation with production diagrams and with references to an argumentation that he calls “common sense” or “actualism” in his book from 2002 (Malmer 1962, pp. 98 ff, 644 ff, 792 ff, Abb. 31–33, 114–115; 2002, pp. 168 ff, 173 ff, figs. 60, 96). Klejn is very critical. He points out that Malmer’s interpretation, that the different types of pottery and battle axes must have followed each other in a linear fashion, is based on a preconceived idea; and Malmer’s play with the diagrams in order to make all types start earlier in the south is based on his “impression of what is best” – it does not even lead to a result in full agreement with his wishes (Klejn 2010, pp. 199 ff, reproducing Malmer’s diagrams on pp. 161 f, 167 f).

Klejn’s criticism seems to us to be correct in many ways but is sometimes pushed too far. Maybe one should rather analyse Malmer’s – and Klejn’s – roles in the history of research and the presented interpretations in themselves. One could summarise Malmer’s position as follows: His philosophy, rationalism, forms the basis of a methodology for classification (Malmer uses the term typology) and partly also for chronological conclusions. But he does not believe that one can establish a clear-cut theory or method which can help to explain the more complicated aspects of human life. He agrees with Sophus Müller that “der hersker Orden og Lovmæssighed i Tilværelsen” (‘there is order and regularity in the world’; Müller 1884, pp. 185, 194; cited by Malmer 1963b, pp. 15, 27, 251) and says that we can therefore use common sense, ethnographic analogies (ethnoarchaeology), experimental archaeology and, of course, contributions from all other sciences. In his dissertation of 1962 these ideas are not so clearly expressed, but one can see his desire to make use of generalisations of the kind made in the social sciences (human geography, ethnography/social anthropology) and to express himself so that the basis for his interpretations can be clearly understood.

There is reason to believe Malmer when he says that his starting-point was to find support for the migration interpretation. His teacher at Lund

University, Holger Arbman, had accepted this interpretation without hesitation (Arbman 1947, pp. 31 f). Furthermore, in a discussion about migration published in *Fornvännen* 1955, the participating archaeologist, Carl-Axel Moberg, stressed that we must move away from the idea, rooted since the days of Montelius, that Sweden has not seen any immigration of importance since at least the beginning of the Neolithic. After *Jungneolithische Studien* the migration hypothesis for a time became almost obsolete. It was no doubt Malmer’s collection and discussion of the facts, not his theoretical considerations, that led to this shift. And the question is still disputed.

Klejn is right when he states that the migration hypothesis cannot be ruled out, but it should be noted that Klejn – seen from our perspective – is a typical Eastern European post-war archaeologist in holding such a strong belief that migrations can be proven on the basis of the archaeological source material alone. But “great skill is needed on the part of the archaeologists and very subtle means are necessary for distinguishing” traces of a migration (Klejn 2010, p. 183). He refers here to an extensive article he wrote in the early 1970s, which he revised and published fifteen years ago (Klejn 1999). This, as is typical for Klejn, is a very informative presentation and discussion of a large number of theoretical works on migration, but we cannot see that he manages to pinpoint the “subtle means” by which migration can be distinguished within the archaeological material. Neither do we find his own endeavours in the field convincing (e.g. Klejn 1963; 1969; 1978; 2000). We believe that migrations are practically impossible to confirm without support from written sources, linguistic material or the natural sciences. Written sources and linguistic data are lacking for the Stone Age. Osteology and studies of DNA and stable isotopes are yielding important data, but the data hitherto presented is, as we see it, still far from sufficient for the suggested interpretations.

Even if we are critical of Klejn’s migration interpretations, we would like to stress that his keen interest in the question and his enthusiasm for debate are of great value. Besides his discussions of the Corded Ware/Battle-Axe cultures, mention should be made of his seminar at Lenin-

grad University in the 1960s on the Varangian controversy, concerning which he recently published a book (reviewed by Johan Callmer in *Fornvännen* 2012; cf. also Klejn 2013b).

What can be known? Actualism, theoretical realism and fictionalism

As is clear from the above, we share much of Klejn’s criticism of Malmer’s theoretical views and interpretations. But it may be worth attempting to understand why Malmer’s interpretations often seem to lack support from his own theoretical standpoints. In 1985, Malmer contributed to a symposium with a paper published under the title “What *can* be known about the chronological and social relations of the Battle-Axe culture?” (Malmer 1986, our transl.). Malmer argues that two boundaries must be considered: an inner limit within which we have the certain, often trivial facts provided by the source material, and an outer limit that can be defined as the limit for what is verifiable. In his latest works he tried to put forward actualism as a theory for solving these questions (Malmer 1997; 2002, pp. 173 f) and, before that, theoretical realism (Malmer 1993).

At the symposium in 1985 he limited himself to defence of the positions set out in *Jungneolithische Studien* and criticism of his opponents. But in other publications from that time, he discussed the problems connected with questions close to the outer limit and referred to “fictionalism”, “the philosophy of As If” propounded by Hans Vaihinger (1911). This philosophy maintains that our theories and concepts of reality do not mirror reality. They are fictions that nevertheless are important as instruments by which we perform our research and everyday life. Complete objectivity does not exist, but “we ought to work *as if* it existed, in the same way as the laws of society strive to establish justice despite the fact that complete justice does not exist” (Malmer 1984, p. 267, our transl.; cf. Malmer 1980, p. 262).

Malmer does not give any explanation as to why he turns from fictionalism to theoretical realism to actualism in his publications from 1980 to 2002 – he does not even mention it. We believe that the underlying philosophy throughout these years is fictionalism but that he wanted to complement it with a theory that could support his

strong belief in science as leading to true knowledge about the past. There is a consistency in his thinking from his early citations of Sophus Müller’s words “there is order and regularity in the world” to fictionalism, theoretical realism and actualism. It shows his unease with the question of how to corroborate interpretations close to the outer limit and his desire to find support for his struggle against the relativism of the “post-processual” thinking that became influential in his later years. In this struggle Klejn sides strongly with Malmer (Klejn 2010, pp. 136, 138, 173).

Malmer as a teacher

Malmer’s characterisation in a short autobiographical article (1995, p. 130, our transl.) of his childhood “as an always on-going intellectual discussion, in which the parents and children participated with totally equal rights” clearly indicates his ideals as a researcher and as a teacher. When he expressed himself in writing, he was sharp in his criticism – very much like Klejn – but in oral discussions, privately and at seminars, he was eager not to dominate. This attitude is clearly seen in the large number and wide range of doctoral dissertations that were defended during his time as professor. Many of them lie far from his scientific ideals. He has, no doubt, appreciated them and his own discussions outside the theoretical framework as important for the development of scientific archaeology.

Conclusion

Klejn’s book of 2010 is the outcome of many years of study into archaeological theory in which Montelius and Malmer play important roles. Klejn characterises Malmer as a rationalist fighting against “impressionism” and “empiricism”. Central in Klejn’s evaluation is the problem of subjectivity and objectivity in Malmer’s research. As an empiricist Klejn is severe in his judgement of Malmer’s subjective verbal definitions, calling them “constructs by the archaeologist”. The rationalist Malmer instead rejects the empiricist’s incomplete and subjective definitions.

It should be emphasised that several of Malmer’s “constructed types” have been tested and accepted in later research in the same way as Montelius’s illustrated types and chronological

periods have been confirmed by find associations and radiocarbon analyses. As we see it, the new knowledge attained is in both cases the result of intensive studies of the source material and repeated comparisons between different type definitions. It is possible to work as both Klejn and Malmer provided that such comparisons are performed.

Malmer's use of "production diagrams" is also characterised by subjectivism. They neither provide an answer to chronological questions nor solve discussions of immigration versus local development. With regard to migration theory, both Malmer and Klejn, in our view, are influenced by the research traditions current at the time of their writing in their respective countries, Sweden and Russia.

Klejn's discussion is easy to follow – and easy to learn from – since it concentrates on one scholar – or more correctly two, Malmer and Klejn. Klejn's assessment of Malmer's method and theory forces the reader to re-examine the problems again and again. If published in English, this book would be essential reading for many archaeologists.

English revised by Uaininn O'Meadhra.

References

- Arbman, H. 1947. *Forntiden*. H. Maiander (ed.). *Sve- riges historia genom tiderna* 1. Stockholm.
- Baudou, E., 2012. *Oscar Montelius. Om tidens återkomst och kulturens vandringar*. Stockholm.
- Callmer, J., 2012. Review of L.S. Klejn, *Spor o varjagach. Istorija protivostojanija i argumenty storon*. St. Petersburg 2009. *Fornvännen* 107.
- Klejn, L.K., 1963. A brief validation of the migration hypothesis with respect to the origin of the Catacomb culture. *Soviet Anthropology and Archaeology* 1:4, Spring 1963. New York. – Russian original published in *Vestnik Leningradskogo universiteta, serija istorii, jazyka i literatury* 1962:2.
- 1969. Die Donez-Katakombenkeramik, eine Schnurkeramik der Becherkultur. Behrens, H. & Schlette, F. (eds). *Die neolithischen Becherkulturen im Gebiet der DDR und ihre europäischen Beziehungen. Vorträge der Tagung 1967*. Veröffentlichungen des Landesmuseums für Vorgeschichte in Halle 24. Berlin.
- 1977. A panorama of theoretical archaeology. *Current Anthropology* 18:1. Chicago.
- 1978. Zur historischen Auswertung der Ockergräber. Kritische Bemerkungen zu: A. Häusler, *Die Gräber der älteren Ockergrabkultur zwischen Ural und Dnepr*. *EAZ Ethnographisch-Archäologische Zeitschrift* 19. Berlin.
- 1982. *Archaeological Typology*. BAR International Series 153. Oxford. – Revised Russian edition: *Archeologičeskaja tipologija*. Leningrad 1991.
- 1999. Migracija: Archeologičeskie priznaki. *Stratum plus* 1999:1. Kishinev. – Available at www.e-anthropology.com/
- 2000. Migracija tocharov v svete archeologii. *Stratum plus* 2000:2. Kishinev. – Available at www.e-anthropology.com/
- 2010. *Formula Monteliusa (Švedskij racionalizm v archeologii Mal'mera)*. Teoretičeskaja archeologija 2. Donetsk: Doneckij nacional'nyj universitet. – English summary pp. 239–245: The Montelius formula: Swedish rationalism in the archaeology of Mats Malmer.
- 2013a. *Ėtnogenez i archeologija*. T. 1. *Teoretičeskie issledovanija*. T. 2. *Arii i varia*. St. Petersburg.
- 2013b. The Russian controversy over the Varangians. Bjerg, L. et al. (eds). *From Goths to Varangians. Communication and Cultural Exchange between the Baltic and the Black Sea*. Black Sea Studies 15. Aarhus.
- Leche, W., 1904. *Art, biol. Nordisk familjebok*. 2nd ed. Stockholm.
- Malmer, B., c. 2010. *Mats P. Malmer 18 okt. 1921 – 3 okt. 2007*. Unfinished manuscript.
- Malmer, M.P., 1962. *Jungneolithische Studien*. Acta Archaeologica Lundensia, Series in Octavo, no. 2. Lund.
- 1963a. Empirism och rationalism i arkeologisk forskning. *Fynd* 1963. Gothenburg.
- 1963b. *Metodproblem inom järnålderns konsthistoria*. Acta Archaeologica Lundensia, Series in Octavo, no. 3. Lund.
- 1965. Methode und Ergebnis. *Meddelanden från Lunds universitets historiska museum* 1964–65. Lund.
- 1967. The correlation between definitions and interpretations of Neolithic cultures in northwestern Europe. *Neolithic Studies in Atlantic Europe. Proceedings of the Second Atlantic Colloquium, Groningen, 6–11 April 1964*. *Palaeohistoria* 12. Groningen.
- 1980. Om arkeologins teori, metod och material. *Fornvännen* 75.
- 1981. *A Chorological Study of North European Rock Art*. KVHAA:s handlingar, antikvariska serien 32. Stockholm.
- 1984. Arkeologisk positivism. *Fornvännen* 79.
- 1986. Vad kan vetas om stridsyxculturens kronologiska och sociala förhållanden? Teoretiska betraktelser. Adamsen, C. & Ebbesen, K. (eds). *Stridsøksetid i Sydsandinavien. Beretning fra et symposium* 28.–30.X.1985 i Vejle. Arkæologiske skrifter 1. Copenhagen.
- 1993. On theoretical realism in archaeology. *Current Swedish Archaeology* 1. Stockholm.

- 1995. Grunden till mitt arkeologiska liv. J. Nordbladh (ed.). *Arkeologiska liv. Om att leva arkeologiskt*. GOTARC, Serie C, Arkeologiska skrifter 10. Gothenburg.
 - 1997. On objectivity and actualism in archaeology. *Current Swedish Archaeology* 5. Stockholm.
 - 2002. *The Neolithic of South Sweden. TRB, GRK and STR*. KVHAA. Stockholm.
- Moberg, C-A., 1955. Vittnesbörd om folkvandringar. Diskussionsinledning. *Fornvännen* 50.
- Montelius, O. 1880. Das Bronzealter und die Marburger Versammlung. *Korrespondenzblatt des Gesamtvereins der deutschen Geschichts- und Altertumsvereine* 1880: 4. Darmstadt. – Paper read at a meeting in Marburg 1878.
- 1884. Den förhistoriska fornforskarens metod och material. *Antiquarisk tidskrift för Sverige* 8:3. Stockholm.
 - 1899. Typologien eller utvecklingsläran tillämpad på det menckliga arbetet. *Svenska fornminnesföreningens tidskrift* 10:3. Stockholm.
 - 1903. *Die typologische Methode*. Offprint from *Die älteren Kulturperioden im Orient und in Europa*. Stockholm.
- Müller, S., 1884. Mindre bidrag til den forhistoriske archæologis methode. *Aarbøger for nordisk oldkyndighed og historie* 1884. Copenhagen.
- Vaihinger, H., 1911. *Die Philosophie des Als Ob. System der theoretischen, praktischen und religiösen Fiktionen der Menschheit auf Grund eines idealistischen Positivismus. Mit einem Anhang über Kant und Nietzsche*. Berlin. – English version: *The Philosophy of ‘As If’. A System of the Theoretical, Practical and Religious Fictions of Mankind*. London 1924.
- Wittgenstein, L., 1922. *Tractatus logico-philosophicus*. London–New York.
- von Wright, G.H., 1957. *Logik, filosofi och språk*. Helsinki.