

Man the Interpreter

From Natural Science to Hermeneutics in Swedish Archaeology

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The epistemological principles of natural science dominate the archaeological discourse. Methods and theories developed exclusively for natural science are used in archaeology without further ado. Archaeological institutions employ experts on scientific methods. University departments, scholarship foundations and other institutions spend large amounts of money on projects and education with an explicit connection to natural science. The significance and outcome of such projects are hardly ever questioned. In this article the background of the present situation is analysed. It is also argued that archaeologists should pay more attention to life. It is in the ontology of life that we as archaeologists seek a significant meaning in history, not in explanations of present conditions constructed with methods developed for natural science. It is stated that archaeologists should turn to the first science – philosophy – if our mission, which is to explore the ontological aspects of life, shall become explicit in the discourse of archaeology.

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INTRODUCTION

In 1963 *Science in Archaeology* (Brothwell, Higgs & Clark 1963) was published. Already the title excludes archaeology as a science, which indicates that archaeology first becomes scientific when archaeologists use science. In the preface it is stated that archaeological studies in themselves can not give any valuable information: “Archaeological studies are now increasingly dependent upon a variety of scientific disciplines for valuable information” (Brothwell, Higgs & Clark 1963, Preface). This means that archaeologists must depend upon science or the epistemology of science if archaeology shall become a scientific discipline.

What then, is archaeology if not a science? Well, no more than a study. Further

on the authors write: “It becomes clear that not to use the scientific methods now available to archaeology, is to commit the worst of archaeological crimes...” (Brothwell, Higgs & Clark 1963, Preface). It is also stated that, “There are in fact few archaeological institutions or bodies which are equipped with the right kind of personnel to pose the questions which science can answer...” (Brothwell, Higgs & Clark 1963, Preface).

Science in Archaeology sums up the history of archaeology. I shall later show that archaeology has always been dependent upon different scientific disciplines, or, more clearly, upon the epistemology and methods of natural science. The book also defines a future archaeology by pointing out methods in natural science that are relevant for archae-

ology. It is even stated that archaeology in the future will depend upon science (Preface).

And the authors were right. Today many archaeological institutions and bodies are equipped with personnel that can pose the questions which science can answer. But the question that must be asked is why philosophy was not included in the definition of science. Philosophy is usually called "the first science". By excluding philosophy from science it is clear that by science the authors mean natural science and that there is no room for philosophy. As a general consequence the institutions and bodies of today exclude theoretical aspects of philosophical significance, and as a result there are no personnel to pose significant theoretical and philosophical questions. As we shall see further on, there are of course archaeologists with an interest in theoretical and philosophical questions. But the overall and general picture is that archaeology still is equivalent with natural science. Why is that so?

This is clearly illustrated by Fred Plog's article from 1982, which is entitled *Is a Little Philosophy (Science)? a Dangerous Thing?* (Plog 1982). As indicted by Plog's text, we are dealing with the philosophy of science and not philosophy as the first science. The consequence is that we return to natural science, which answers my question above.

Let me give a few more examples. Fritz & Plog was of the opinion that "One measure of the attainment of a science is the degree to which laws are explicitly formulated, explicitly tested, and explicitly used" (1970:405). According to Fritz & Plog, this was science. Gutorm Gjessing emphasised that, "Although there is certainly a long and very stony road ahead before archaeology can be considered a deductive, theoretical science, any valid step in that direction should be considered progress" (Gjessing 1967:237). Binford stated that "Science is the only strategy thus far developed for evaluating the general utility of ideas generated in a paradigmatic context" (Binford 1982:136). Colin Renfrew

went even further and argued that, "Mathematics ... is both Queen and Servant of Sciences ... her power and authority should not be overlooked" (Renfrew 1979:4).

It is clear that archaeologists have been and still are blinded by the reason and logic developed by natural science. There are different degrees of the impact of natural science and its methods on archaeological works. My examples may be extreme and outdated, but they are explicit and can perhaps serve as reminders also for today's archaeologists who do not even know that they are working within a tradition and discipline completely dominated by natural science.

SOME SIGNIFICANT SCIENTIFIC METHODS

From its origin as a discipline in the early 19th century, archaeology has been viewed as a part of natural science, or as a field that should at least work in line with natural science. The emergence of new methods in natural science has consistently contributed to new ideas and questions in the field of archaeology. During the first decades of the 20th century pollen analysis was developed by Lennart von Post (1884-1951), and in 1948 Willard Frank Libby (1908-1980) developed the ¹⁴C-method. These methods together with, for example, the *Geographic Information System* (GIS) are today significant for an archaeology inspired by natural science.

GIS has become important in many scientific fields due to the enormous impact computers have had on Western societies. It is the latest trend and fashion in archaeology.

GIS facilitates the analysis of geographic data and makes it possible to store, study and present such data. The information is stored in databases with the help of co-ordinates. This makes it possible to study a large amount of data and to reproduce map-sheets of details or larger areas.

The ¹⁴C-method and pollen analysis are related to the fundamental question of dating. But pollen analysis is also of importance for

environmental reconstructions. The GIS method assists with topographical orientation. Together they correspond with our understanding of time as a chronological order. Today we don't bother to question this order. Instead we work as if this was something God-given, or, even worse, we don't even reflect over this state of order.

The need to find support in natural science goes back to the first years of archaeological discourse, at least with regard to Swedish archaeology. In 1797 Nils Henric Sjöborg (1767–1838) argued that geography was of significant importance for antiquarian research. He spoke about choreography and topography, whereby choreography described a country and topography a place (Sjöborg 1797:35f). The connection to GIS of today is significant. Later Sven Nilsson (1787–1883), in his archaeology influenced by natural science, used natural geography and geology to construct a scheme over the cultural-historical development. Cultural history was, in the same way as natural history, dependent upon laws and the development was predestined according to the will of God. The laws of cultural history could be uncovered by an adequate science. Such science was the same as natural science.

HYPOTHETICAL ROOMS

By using the three methods mentioned above hypothetical rooms are created. Each room is equipped with artefacts and other empirical phenomena that have accumulated in the present. A map-sheet is such a hypothetical room, which means that it exists in the present but is believed to illustrate a prehistoric context.

But the point is that we are not dealing with (pre)history when using these methods; we are not even reconstructing (pre)history, but constructing it for the present out of the present in accordance with our understanding of reason and logic. This logic tells us that it is impossible to travel in time, which makes archaeology contradictory. So our scientific

constructions can at best be understood as mere hypothetical constructions and at worst as pure fantasy. If these constructions were at least significant for the present, everything would be fine. But they are not, because the point of (pre)history is not hypothetical constructions or time-travel fantasies but life or an outlook on life. Archaeology must turn to the first science – philosophy – if its mission, namely life, shall become a significant part of the present. It is in the ontology of life that we as archaeologists and the public seek the significant aspects of history, not in constructed hypothetical rooms or contemporary facts.

In this article I shall argue for the benefit of another form of historical understanding. An important point to make already here is that I am not looking for an epistemology that in any way can compete with the epistemology that dominates archaeology today. I merely want to state that there are many different interests behind historical understandings and it is about time that archaeologists start to investigate the ontological dimensions behind historical outlooks – why do we care about and take an interest in history at all?

THE QUESTION

In his *Brief über den Humanismus* (1996) Martin Heidegger pointed out that being and thinking are united. Being is a state of thinking. These states are historical and comes to language in speech. Speech is the language of being (Heidegger 1996:73ff). Through speech we express interpretations. Hermeneutics deals with the theory of interpretation (Gadamer 1989:59). For the hermeneutist there are no facts, only interpretations (Vattimo 1996:40); and to quote from *Ruin*: “Language defines the hermeneutic relation” (Heidegger in *Ruin* 1994:75). The act of interpretation is intrinsic to the act of being, and being is historical. That is why we find ourselves interested in interpreting history, that is life.

During the last decades some archaeologists have moved away from the positivistic epistemology of natural science and the search for scientific facts. Instead they have focused upon being (as history) (see e.g. Karlsson 1998a; Thomas 1999), language and hermeneutics (Thomas 1999:17, 59).

The question is why this happened as late as during the 1980s and 1990s and not during the beginning of the 19th century. Why have archaeologists followed the scientific and epistemological standards of natural science and not the theoretical aspects of hermeneutics and ontology? And, concomitantly, is the role of hermeneutics destined to increase in archaeology, or will natural science continue to dominate? Finally, what consequences will a shift toward hermeneutics have for archaeological institutions and bodies?

Before I try to give at least some partial answers to these questions, let me point out that hermeneutics and phenomenology in general are not specifically a Swedish matter (Andersson 1979; Bengtsson 1991). To some degree this is explained by the focus upon more positivistic scientific structures and methods in both archaeology and science in general. To get a more comprehensive picture, my discussion will include references to British archaeology and European hermeneutics.

I must also emphasise that I am not anti-technological, and I do not dismiss or question natural science. This article deals with the relationship between natural science and archaeology.

To get a clear and unitary definition of archaeology and natural science, I have consulted three different Swedish encyclopaedias which cover the entire 20th century. The encyclopaedia are *Bonniers 3-bandslexikon* (from here on, BO) from 1981, the Swedish National Encyclopaedia – *Nationalencyklopedin* (NA) – from the 1990s and *Nordisk Familjebok* (NF) from the beginning of the 20th century.

An encyclopaedia is supposed to give the

public universal and essential information. Furthermore, the articles are often written by authorities and should express the prevalent opinion. Therefore the articles can serve as a suitable point of departure for a discussion on the lack of hermeneutics in Swedish archaeology.

WHAT DOES NATURAL SCIENCE DO?

In BO, a small popular encyclopaedia, it is stated that natural science deals with the phenomena of nature and the laws that they follow. Natural science includes, for example, physics, astronomy, chemistry, geology, zoology, botany, anatomy and physiology.

In NF, a much more comprehensive encyclopaedia, it is argued that the task of natural science is to learn and understand the particular objects and phenomena of nature. Every field, such as zoology, botany, mineralogy, chemistry and physiology, deals with its own scientific problems. It is also underlined that it is difficult to define clear boundaries between natural science and other scientific fields. Physiology and astronomy involve mathematics; the natural history of mankind leads to ethnology and history.

In the beginning of the 19th century natural science in Sweden was criticised for its materialism and greediness. According to Sven Nilsson, this was not the case. Nilsson was the founder of Swedish archaeology, zoology and geology (Hegardt 1999) and could not see anything wrong in viewing the material as a useful source, that is, the scientific knowledge of how the resources of nature should be exploited. Such knowledge would increase the standard of living for everybody (Nilsson 1875:50).

It is exactly this point of view that, 150 years later, is emphasised in our most contemporary encyclopaedias. In NA it is stressed that natural science has its roots in different historical, human activities. Technology is described as a fundamental activity, and it is stated that throughout our history

we have exploited nature to extract products, energy and information. It is also stated that the most dynamic progress of natural science occurred in the European and European-inspired cultures.

When the African philosopher Kwame Gyekye (1997) described the post-colonial situation in Africa, he underlined the difference between “traditional” African knowledge and the modern and global science (Hegardt in press).

From a Western point of departure, this difference in reason and knowledge has been viewed as a difference in technological and cognitive development, just as it is stated in NA. Archaeologists in general use this contemporary reason and logic when the past is analysed (Hodder 1982). This means that archaeologists use a logic and reason that contradicts the reason and logic of the past (Herschend 1999). This is so because we have explicitly created our understanding of reason and logic as a negation. It is usually described as a question of an underdeveloped and a developed reason, but this is of course not the case. Instead we are probably dealing with different ontologies concerning life.

The fundamental problem is that, when archaeologists use our contemporary understanding of reason as a point of departure, they turn themselves away from their own scientific task which is to give information about the past. As a result they express an unfortunate contradiction. As stated above, the outcome of such scientific conclusions has nothing to do with the past and consequently nothing to do with the present either, except as a cognitive conquest of the past. The ontological difference between the past and the present is invalidated. How is it possible to argue that there is a difference? Firstly this difference has been stated throughout our own modern history. Secondly, if there were no difference we would not care about (pre)history. The problem is how to cope with it.

Natural science deals with the phenomena

of nature and the exploitation of these phenomena. The epistemology of natural science demands objectivity. Nature should be measured and its laws unmasked to enable us to exploit its resources. One important mission of science, perhaps the most important, is to explain the observed state of things. This is at least the central task of basic research. Such research shall in the first place give us true knowledge of the world and only secondarily contribute to the exploitation of the world. For applied science, prediction is more important than explanation which is most important in basic research (Elster 1986:7). It happens that these two aspects work together, and in archaeology both prediction and explanation are used – prediction in cases of excavations, and explanations are used when changes in culture are described. Predictions are used in the present to control the future, for example in the case of excavations and explanations to control the past by abolishing the difference between the past and the present.

WHAT DOES ARCHAEOLOGY DO?

In NF (1904) the word “archaeology” exists but there is no definition. Instead we are referred to antiquarianism. Here it is stated that the method of antiquarian studies, that is comparative–typological, is the same as in natural science. The evolution of artefacts is studied in the same way as the evolution of species in biology. It is also said that the Three Age System was one of the most important antiquarian discoveries. The methods of natural science were incorporated into prehistoric archaeology by Sven Nilsson, and the process was completed by Oscar Montelius and Hans Hildebrand.

Up to the late 19th century Swedish archaeology was a part of natural science, which Nilsson pointed out. He wrote that comparative archaeology/ethnography must be understood as natural science (Nilsson 1856:42).

In NA (1991) “antiquarianism” is defined

as an older word for archaeology. (There has been a shift in meaning here compared with NF.) When analysing and interpreting, the archaeologist collaborates with humanistic sciences, social sciences and natural sciences. In trying to describe archaeology, one section is entitled "interpretation". This is new in relation to older encyclopaedias and indicates that Swedish archaeology has been influenced by the debate on the nature of truth and knowledge. But this has nothing to do with hermeneutics.

Instead it is stressed that, when archaeologists want to get a coherent picture of prehistoric situations, they work with different points of departure, such as the laws of nature, biological rules and our knowledge of environmental conditions. Experiments in line with natural science are also conducted. But above all archaeologists work with analogies, comparing archaeological contexts with known social systems. It is maintained that the anthropological analogy is the most important source of archaeological knowledge.

Under the heading of anthropology, it is stated that evolutionism, structuralism and functionalism are the three most important components of modern social and cultural anthropology. The theoretical development of cultural anthropology has been based on four concepts: evolution, function, structure and history. The perspective of evolution and function has its point of departure in natural science's search for general and universal laws. Structuralism is based on linguistics, and the historical aspect of cultural anthropology ends in an unclear and general cultural and historical study influenced by both natural science and philosophy.

In another place in NA it is emphasised that anthropology can be described in more philosophical terms. The question asked is, what is a human? Here anthropology has relied upon phenomenology and existentialism and has tried to describe the essence of Man. The point of departure for this direction

in anthropology has been the ambition to connect the understanding of humans as thinking and acting beings with the scientific picture produced by biology and psychology.

Archaeology and anthropology are defined on surprisingly similar grounds as natural science. The reason for this is found in the epistemology of positivism and the goal of knowledge in natural science, which in principle views physical and social phenomena as equal (Andersson 1979:19). Because archaeologists work with the same epistemology as natural science, they have been interested in anthropological analogies based on the epistemology of positivism and natural science.

The object of archaeology and anthropology has been to explain the social and cultural history of Man on similar grounds as the phenomena of nature have been explained in natural science. The laws of history and culture shall be explained. The goal of knowledge is to exploit history in a similar manner as natural science exploits nature. There has not been room for any ontological reflections. If this had been the case the above mentioned difference between the reason and logic of the past and that of the present, as well as the contradictions between our worldview and the worldview of humans in the past, would have become clear much earlier.

To clarify, I must emphasise again that I do not view this difference in terms of development or better or worse reason. The general opinion is nevertheless that Western reason is more developed and therefore better than any other form of understanding. The result is that we as archaeologists continue to distance ourselves from the otherness of the Other, and as a consequence we do not deal with the questions that we say we are dealing with, that is we do not answer the question of what past people had in mind and did with their lives. Instead archaeology is part of the historical tradition of colonialism, racism and imperialism, because implicit in

the discourse is the fact that this difference is viewed as a difference in reason and development.

There is a difference due to context and intention, and the task of archaeology and anthropology should be to understand this as an ontological problem concerning life.

As I have said, there is in general no room for ontological reflections in archaeology. And as shown, this is also a problem in anthropology. Despite this some anthropologists started, like archaeologists, to move in the direction of hermeneutics during the beginning of the 1980s (Clifford & Marcus 1986; Marcus & Fischer 1986). Hermeneutics became an instrument for a critical survey of the epistemology and ontology of positivism and its influence on anthropology (Clifford 1986:10; Marcus 1986:166). The consequence of this is called "interpretative anthropology" (Marcus & Fischer 1986:25) and it has, as in archaeology, focused upon selfcritique and dialogue (Marcus & Fischer 1986:30).

WHY NATURAL SCIENCE?

The impression that natural science has dominated archaeology is strengthened by Glynn Daniel's (1978) and Bruce Trigger's (1989) archaeological surveys. Trigger and Daniel focus upon the history of archaeological thought, a history that resulted in the predominant and particular understanding of the things, history and mankind expressed in my examples. The total loss of interest in hermeneutics is clearly shown in these works.

But it is not self-evident that archaeology must depend on the epistemology of natural science, and it is even less self-evident that archaeology must be a part of natural science or follow the questions set up by natural science.

Julian Thomas underlines that archaeology has been entangled in the distinction between material and mental structures (Thomas 1999:11). Already Sven Nilsson had problems with this. He argued for the logical and empirical structures of natural science

(Nilsson 1875:41) but often returned to mental and metaphysical aspects of primitive people (Nilsson 1838–43:1). In spite of this he was convinced that the true object of science was not, in Binford's words, paleopsychological nonsense (Binford 1972:198), but a search for the laws of history. For Nilsson history was a process of time in which socio-economical systems materialised themselves. Through an epistemology borrowed from natural science Nilsson, on technological and functional grounds, arranged the evolution of culture and explained change over time.

The founder of social anthropology, Edward B. Tylor, appreciated Nilsson's archaeology (Tylor 1871:55f). Tylor criticised what he thought was a philosophy of cultural history that expressed the evolution of culture with no consideration to facts. It was necessary to arrange these facts after similarities if the process of evolution should become clear. It was essential to find general inductive principles for the theoretical statements if facts and theory should coincide with a reasonable conclusion (Tylor 1865:162f).

Modern science was for Tylor a question of identifying laws and unmasking sequences of causes and effects. He was also of the opinion that human cultural studies should be part of natural science, because natural science showed that the history of mankind was part of natural history: our thoughts, wishes and actions are guided by laws as clear as the laws that govern nature. One obstacle on the way to this insight was, Tylor argued, metaphysical and theological speculations (Tylor 1871:2).

Tylor was fully aware of the critique against the connection between cultural history and natural science. He wrote that the critics dismissed the idea that humans and culture are subject to the laws of nature by arguing that humans, in such a case, would lose their responsibility, free will and be reduced to soulless machines (Tylor 1871:3). Rational ethnography was for Tylor a ques-

tion of investigating the causes behind cultural phenomena and exploring the laws that these phenomena and causes were subject to. Therefore it was necessary to work out a systematic model of the evolution of culture and uncover the different lines of development (Tylor 1871:19). It was, Tylor argued, totally clear that, "The tendency of modern enquiry is more and more toward the conclusion that if law is anywhere, it is everywhere" (Tylor 1871:22).

Tylor was inspired by Auguste Comte (Tylor 1871:18) and indirectly by Kant. That is so because Comte was of the opinion that it was Kant who had formulated the structures of modern positive science (Comte 1979:24).

During the first half of the 19th century Swedish archaeology was dominated by the same goal of knowledge expressed by natural science. When Tylor and others, for example Max Müller (Müller 1887), started to express the line of orientation of modern anthropology in the later part of the 19th century, this idea of knowledge was strengthened in Swedish archaeology (see e.g. Hildebrand 1880). My brief survey of some of the Swedish encyclopaedias shows that this goal of knowledge still dominates Swedish archaeology and anthropology today, although this is not the only aim of these subjects. But it is still a general idea that this is how archaeology must be done. And this explains why it was stressed in *Science in Archaeology* that archaeological institutions and bodies must depend upon (natural) science, and it also explains why philosophy as the first science was and still is excluded.

ARCHAEOLOGY AND HERMENEUTICS

In the beginning of the 1980s Ian Hodder argued that analogies must be understood as subjective instruments. No analogy can give a complete explanation, because every interpretation must be viewed as one interpretation among others (Hodder 1982:211). Therefore Hodder argued that, "The proper

use of analogy in archaeology must pay special attention to context; that is, to the functional and ideological framework within which material items are used in everyday life" (Hodder 1982:24, 27). It was also important that symbolic aspects were discussed and that archaeologists focused upon the relationship between these aspects and the context of the artefacts (Hodder 1982:26).

Hodder's point of departure was to create understanding because the relationship between material culture and the society is based on a web of significative and ideological relationships that has nothing to do with explanation in natural science. In order to interpret such relationships it is important to express a cultural theory with an explicit epistemology. First then can we determine which analogies are relevant both for present and for past relationships. But at the same time every context must be understood as unique and meaningful. Analogies also show that every aspect of a society must be viewed as social and not as an object for natural science. If, Hodder argued, ethnographic models shall be used in archaeology, they must contribute to an understanding of symbolic, ideological and social phenomena (Hodder 1982:195). Hodder is one of the first archaeologists to break with the archaeology inspired by natural science, and instead he argues for an archaeology based on hermeneutics.

When Wilhelm Dilthey (1833-1911) was installed as professor in Basel in 1867, he maintained that Kant's *Kritik der reinen Vernunft* was a contribution to the epistemology of natural science (Lübcke 1987:31). Kant's radical critique of reason can be viewed as the origin of modernism and the positive sciences (van der Heeg & Wallenstien 1992:22; Habermas 1992:60). He also argued for an ontology based on a critical theory of knowledge (van der Heeg & Wallenstien 1992:23) and focused on philosophy in itself, on a philosophical We – we, the philosophers. Kant's theory of knowledge can be under-

stood as a philosophy of knowledge equal to what Plog was advocating. Through Kant this philosophy of knowledge became the discourse of modernity (Foucault 1992:42), and it is this discourse that is expressed by scholars such as Nilsson, Comte and Tylor and later Plog. Comte wanted to create a sociology with the same precision as natural science (Comte 1979:79f). It was George Cuvier (1769-1832) who pointed out the direction for modern biology (Foucault 1991:268f). Nilsson was influenced by Cuvier and viewed him as the "high priest" of natural science (Nilsson 1875:45). It is also this line of thought that we find in *Science in Archaeology*. The intertextuality between these different scholars points to natural science and the theory of knowledge defined by Kant.

Dilthey was of the opinion that the methodology of natural science could not be seen as a point of departure for a theory of knowledge. Humans and the spiritual life of humans must not be reduced to nature, Dilthey argued, and he underlined that human science works with other concepts than natural science. He questioned Kant's transcendental philosophy, which means that he was critical of Kant's idea that the categories should precede the experiences and thereby state their cognitive content. The consequence of Kant's transcendental philosophy is clear in natural science, which means that it is through our methods and instruments that we understand our world. Things have no meaning in themselves that we can experience. What is needed, to quote Binford, is "a robust body of principles serving the methodological needs of the fields in question" (Binford 1982:135). It was from this perspective, inspired by natural science, that for example Montelius worked (Montelius 1899:237). This is also underlined in NF.

Dilthey was, however, of the opinion that the categories should be the same as the experiences, and by "experience" he meant a common concept that is permanent in our

humanity and historical lives (Lübcke 1987:31). This made it possible for Dilthey to criticise the positivistic and empiristic tendencies that were taking shape during the later part of the 19th century under the influence, of among others, John Stuart Mill and Auguste Comte. Through his critique Dilthey laid the first building blocks for a future hermeneutics.

Friedrich Schleiermacher (1768-1834) was Dilthey's master thinker. Schleiermacher was of the opinion that human products are full of expressions. Therefore they must be interpreted. Hermeneutics was for Schleiermacher a general doctrine of understanding and he separated a grammatical interpretation, that is the interpretation of the expression in itself from a psychological one that tried to reconstruct the original individuality behind the expression.

Schleiermacher transformed the classical biblical hermeneutics into a general doctrine of understanding that could deal with every kind of text. The hermeneutic philosophy has been further discussed by Heidegger, Gadamer and later Paul Ricoeur, among others, and it has influenced archaeology during the last decade (Karlsson 1998a, 1998b; Moore 1990; Shanks & Tilley 1992; Thomas 1999; Tilley 1991).

Dilthey went a step further than Schleiermacher and maintained that the purpose of hermeneutics was to understand the text through the person who expresses oneself in it. This means that the process of interpretation becomes psychological, since it is a question of understanding the person who is saying something and not what is said in the text. This line of thought has been criticised by Ricoeur (Ricoeur 1981:52). Similar critique against Dilthey was expressed by Collingwood: "Psychology is not history but science, a science constructed on naturalistic principles" (1989:173), which means that we can identify a paradox in Dilthey's reasoning. Despite this, Dilthey's work can be seen as a neo-Kantian epistemology of historiography

based on the hermeneutics of Schleiermacher (Ruin 1994:41), which is in contrast to Comte's Kant-inspired positivism and its connections to the archaeology of the 19th and 20th centuries.

Dilthey succeeded in overcoming a historical research inspired by natural science as well as its demands for a triumphant and absolute knowledge by emphasising that life grasps life (Ruin 1994:16). This should be understood in its double meaning, namely that life both understands life and at the same time holds on to it. After Dilthey this resulted in a debate that has not, in contrast to Dilthey's objective, tried to improve the epistemology of human science but instead questioned if it is on the whole important to formulate a method that can compete with natural science. Both Gadamer and Heidegger doubted whether hermeneutics could be viewed as an epistemology and criticised thereby Dilthey (Ricoeur 1981:52f). The theme of historicity is the key to the transformation of Heidegger's thinking, and the historicity of human existence could be understood as the "hermeneuticity" of our existence even though Heidegger never used the word (Ruin 1994:31, 73).

Gadamer was of the opinion that Dilthey was not capable of freeing himself from the traditional theory of knowledge (Ricoeur 1981:68). It was when the real doubt started to assert itself that hermeneutics reached its essential meaning. It was Nietzsche's radical doubt that made the difference (Gadamer 1989:69). Therefore Gadamer and Heidegger should not be viewed as successors to Dilthey. In their thinking they have rather tried to escape the epistemological questions and uncover the ontological conditions of life (Ricoeur 1981:53).

CONCLUSION

It was Schleiermacher who released hermeneutics from exegesis during the beginning of the 19th century. At the same time the scientific structures of archaeology were

being shaped in Scandinavia. The exactness of natural science and not the problems of interpretation became the ideal for the new science (Nilsson 1835, 1838-43; Thomsen 1836). It is clear that the conditions for a hermeneutic interpretation of history existed already during the beginning of the 19th century. During the later part of the 19th century and the entire 20th century hermeneutics has been discussed but not in archaeology. The goal of knowledge expressed in natural science has been so predominant for archaeology that it has become a canon in our encyclopaedias. Archaeology has also been viewed as a part of natural science. The background of this is ontological, because the choice of epistemology originates from our view of life (Andersson 1979:102). By conceiving of our historical being as a state of nature and arguing that only natural science can deal with history, modernity was justified during the 19th century and the evolution of culture legitimated. The goal of knowledge expressed in natural science has been viewed as total and boundless. The consequence of this is that Western reason and ontology has become hegemonical and dogmatic. This has been expressed in different ways, but one aspect is that hermeneutics has been excluded from archaeology. Another aspect is that our knowledge of the past is constructed on a negation, that is the repudiation of past reason and knowledge. The effect is that the ontological question of (pre)historic life and its relationship to our understanding of life has been neglected.

Evolution and the outlook on people is one major reason for the connection between archaeology and natural science, and we deal with people in the same manner as we understand or explain them. The evolutionary perspective and the interest in dividing our history into different cultural categories or classes has successively strengthened the impression that it is a question of facts and laws of nature. In this context humans are

understood as a resource that can be developed. Archaeology contributes to the idea of evolution by showing that human culture has developed from a primitive embryo to completeness in the Western culture. Natural science and technology represent a guarantor for this opinion. But natural science is in this case a hostage in an ideological scheme, and from a hermeneutic point of departure the cultural-historical facts constructed on natural science are no less than dubious interpretations due to the questionable outlook on people that they express.

A hermeneutic approach to history opens up the possibility of a pluralism of interpretations and the ethical aspects of an unprejudiced dialogue concerning life; or as Ruin writes: "It implies a sense of life as the non-objectifiable origin of objectification itself, in other words, of life as a meaning-constituting movement...it implies a certain understanding of history as self-reflexive being" (Ruin 1994:48). Archaeologists should in general spend more time discussing the outlook on people in archaeology and contribute to an ontological, pluralistic and ethical view of culture, people and life. But if this is to become the case, natural science can only be used for what it is meant for. The cultural expression of people and our being is not within reach of natural science. Instead it must be a question of ethical considerations and a considerable self-critique. This is so because the nihilistic ontology of hermeneutics, this radical doubt that Gadamer speaks of, creates an interest in ethics (Vattimo 1996:45).

Since the interpretations are always on their way (Gadamer 1989:74), there exists from a scientific point of departure a major danger that the discourse will multiply itself. A control-system has therefore been devised to prevent anybody from talking about whatsoever (Foucault 1993:7). The failure to

control the discourse has, as Binford puts it, "doomed those alleged sciences to endless paradigmatic debate and endless stylistic replacement by one 'theory' by another" (Binford 1982:135). But the wish to control and organise the discourse ends in an exclusion of such interpretations that are not accepted. The consequence is that questions raised concerning life as an ontological problem and the historicity of being have been excluded from the archaeological discourse. This is not due to a lack of facts, as is usually stated, but has its point of departure in the epistemological structures of the discipline in question. This is in itself an ontological dilemma because we reduce our experiences and possibilities of life to a technological question.

The answer to my opening question is that the influence of natural science and positive epistemology will probably continue to dominate archaeology because this is the predominant ontology behind Western reason. But in my opinion the nihilistic ontology of hermeneutics and the ethics that follow create the possibility of an emancipation (Jensen 1999:133; Vattimo 1996:59) for both the Self and the Other, and is hence a prerequisite for a liberated deconstructed discourse and dialogue concerning our ontological relationship to life. What we need is a multitude of archaeological interpretations that are always on their way. This is so because it is our experience of life as something historical that opens up for our interest in history and our desire to integrate life with history. This interest can not be technified or objectified and reduced to a simple scientific problem. Therefore it is of significant importance for archaeology that our institutions and bodies start to deal with the ontological question of life.

English revised by Laura Wrang.

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