

## Archaeology as a Science

Archaeology started as a thrilling spare-time occupation where members of the upper classes through excavations could collect art treasures. This is one of the reasons why just the art history of archaeological finds has played such a dominant role in archaeological research.

In our days however, archaeology has developed to be an important part of the social sciences. Questions like, how has man influenced the natural biotops, can archaeology give us the possibility to record long-time investigations on the impact on natural resources under different utilisation-techniques, and how does different social systems influence the development of technical innovations, are challenging archaeology. But to emerge into a true science is not an easy process for archaeology and through the years many bypass roads have been tried with varying success. Most archaeologists are trained as scholars in humanities but the fragmentation and the complexity of the archaeological source material need use of technical methods of the kind used in natural sciences. However, the technical training of archaeologists is often limited to the actual excavations, but not to the recovery of archaeological data in a laboratory. Further there is no good tradition of collaboration between different specialists within archaeology. I think this is a part of the tradition of research in humanities where each scholar has to demonstrate his or her own independence and ability to create new perspectives. In science this ability is well recognized but in the same time it has been long known that each scientist is not capable of knowing in detail a too wide field and therefore collaboration between independent well trained scientists is a general rule. In archaeology it is often referred to the « so called helpsciences » which means natural scientists working with archaeological material. I think this term is very dangerous and may lead to wrong results. The natural scientists have to be involved in the discussions of the scientific interpretations because otherwise the scientific results very often become wrongly interpreted.

One of the problems involved in this collaboration, and which I will exemplify further in my lecture, is the somewhat different way of making hypotheses which is characteristic for research in humanities and natural sciences. In humanities the ability to create a hypothesis is trained by the students from the very first beginning, indeed a sound hypothesis can often be the only result. To prove that an historic interpretation is absolutely right is as a rule very difficult and almost always there have to be some more or less clear assumptions. The bare fragmentation of the archaeological records in itself would allow a series of interpretations. The natural scientist often starts without a specified hypothesis and bases the interpretation on evident actual findings. Thus the natural scientist often refrains from taking part in the historical interpretation and the final discussion of a project lacks the important dialogue between the two sides. I think that in future this dialogue has to be created. Otherwise archaeology cannot meet the challenge to be a true science.

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