

Archaeology and craftsmanship

Many experimental archaeologists, when they are starting, lack practical knowledge in areas they are investigating. To some this devaluates the results of their research. We asked:

While carrying out archaeological experiments how vital is craftsmanship? Does it help or does it hamper the process? Or is it simply enough to be a 'good scientist'?



“Where experience and skill are a prerequisite for a procedure this should be defined and described as part of the experimental methods.”

■ Prof. Bruce BRADLEY BA PhD, University of Exeter (UK)

Craftsmanship is a very specific term that need not be applied to most archaeological experimentation. The degree of skill necessary to conduct a valid experiment depends entirely upon the nature of the experiment and the questions being investigated. Ability and experience are necessary in experiments where technology, especially as related to questions of efficiency, is being tested. This is also the case for actualistic

experiments that involve replication of functional objects or activities. There have been numerous experiments performed where the lack of experience or skill with a particular technology has invalidated the results. For example, testing the efficiency of a particular stone tool for a particular task is unlikely to result in useful information if the tool manufacture and the task are undertaken by a person who has

no experience with either. It is also difficult to even determine what questions are valid without some experience or skill in the subject.

Alternatively, there are many questions that may be investigated experimentally where ability or skill is not necessary, just good scientific method. Examples of this are most taphonomic, materials composition and numerous oth-

er studies that are not testing production processes. What is important in experimental archaeology is that the parameters and conditions of the experiment are thoroughly described and that the results are useful for investigating an archaeological question. Where experience and skill are a prerequisite for a procedure this should be defined and described as part of the experimental methods.

It depends on what are aims of the experiment but a craftsman's insight can always help

■ Tine SCHENCK, MA (NO)

Experimental archaeology is built on the mould of the natural sciences, ideally following the hypothetico-deductive nomological methodology of testing a specific hypothesis and deducing a result that then is recognized as confirmed.

In order to perform such tests, one should have a general insight into how to set up an experiment according to acknowledged standards. The question whether good crafts-

manship is vital within experimental archaeology depends on what kind of experiment is set up.

If an experiment is designed to gain information about production processes, craftsmanship would help one achieve either replica artefacts or replicating the process of production (as with flint knapping), but only when a skilful reproduction or a copy is needed. Some experiments research the processes of learning, and

the traces these leave. Experienced craftspeople might not be able to recreate the early stages of learning, whereas an inexperienced (archaeologist, perhaps) could do better for these kinds of analyses.

When examining wear usage on artefacts or functionality of form, most often a replica artefact is necessary to set up an actualistic experiment. This is when the aid of an experienced craftsperson is priceless.

If one wishes to perform lab experiments, these are most often not actualistic, and therefore require little replication. Still; even if craftspeople are not always required, they can help with insights into their material of expertise – whether it is physical behaviour, functionality or manufacturing techniques. I would therefore recommend seeking the advice of craftspeople whenever one is setting out on experiments.

“Manu et Mente” – “With Hammer and Mind”

■ Wulf HEIN, Archäo Technik (DE)

The experimenter’s disposition can never remain without influence on an experiment. Technical skills or previous professional training in a trade or craft certainly make work easier. Somebody who has never used a hammer before, will find it much harder to re-forged a sword than a professional carpenter – even though a carpenter’s training does not cover metal work. “Pencil pushers” who encounter serious physical labour for the first time in an archaeological experi-

ment must learn work procedures and activities – which are common practice to a craftsman – from scratch and therefore tend to dramatize or misinterpret the meaning of such procedures.

On the other hand, previous professional training makes an unbiased approach to an experiment more difficult. Certain internalized modern work procedures are assumed during the theoretical preparation of an experiment, they influence its implementation

and hence might distort the results. Today’s “golden rules of a carpenter” did not necessarily apply to the manufacturing of wooden objects in times long past. Too readily are modern perspectives and practices transferred to (pre-)historic conditions and often today’s procedures are assumed or adopted unchallenged.

However, I believe that the benefits of a professional training in a craft outweigh the drawbacks. The relevant

literature contains too many examples of experiments which have dramatically failed or the success of which was celebrated enthusiastically but where, when reviewed by a person with expertise in craft, the results had to be put into a different perspective or at least be considered with more scepticism. In my opinion the solution to the problem is a trusting project co-operation between scientists and craft-people to combine both scientific precision and practical knowledge.

An experimental archaeologist’s emotional answer: emphatic and aphoristic – aber Deutsch und deutlich!

■ Walter FASNACHT MA, Almyras Excavation Cyprus (CH)

“It must not be the goal of experimental archaeologists to claim applause for being better bronze casters than the ones 3000 years ago!” (sic Philippe Andrieux, exactly 20 years ago)

Actually, I simply try to carbon-copy 5000 years of history of bronze in my own 50 years of professional life: And how, therefore, could I ever get anywhere closer than 1% to Bronze Age craftsmanship?

It seems to be the destiny of each generation of experimental archaeologists to in-

vent the wheel anew, go step by step, make all the mistakes, go through all the errors. Individual knowledge, and especially skills that were still common knowledge a hundred years ago, need to be learnt from scratch by every one of us. The frame of the reactions of the former generation ranges from a gentle smile to pitying laughter, not just in experimental archaeology – and travels back and forth.

Or is experimental archaeology even similar to global financial crashes? After each experiment goes wrong, each

generation of “researchers” gets back up from their knees – except nobody has learnt anything!

Each and every amateur pilot spends long and sweaty hours in a simulator – only experimental archaeologists are allowed to immediately bang on flint from Grand Pressigny or pour liquid bronze on their shoes.

Has the difference between experimental archaeology and the re-enactment of the casting of one of the most spectacular bronze hoards in the

Near East with energy of today, industrial raw materials and modern machinery ever been defined?

Imagine an event of experimental archaeology run by natural scientist without the input of a single archaeologist!

Would we ever get anywhere if everybody always asked “*would we ever get anywhere*” and nobody went to see? (sic Mani Matter). So experimental archaeologists should just go for it, no master worker has ever fallen from heaven!



“We must be able to combine both theoretical and practical knowledge.”

■ Dr. Harald Bentz HØGSETH, Associate professor Technical Building Protection and Restoration, Faculty of Technology Sør-Trøndelag University College (NO)

Archaeology is often defined as the study of prehistory through systematic collection and analysis of material culture. This definition is rather wide and necessitates strict requirements as regards theory and choice of methods.

When we are studying artefacts and products from the past (and present) craftsmen aim to reconstruct the past craftsmen's knowledge, the production processes, procedures, movements et cetera. It is important to learn how the transmission of knowledge through action actually works, before communicating with craftsmen what he does or has done. A skilled craftsman has, through experience, constructed knowledge of the connections between materials, tools, techniques and body. These abstractions have altered in the living tradition among craftsmen but also have survived in both actions and words.

The task of the academic is, among other things, to communicate a craftsman's knowledge into an understandable format (i.e. writings, notation systems, arrangements et cetera). How can we, as archaeologists, obtain insight into the transmission of knowledge through action, when we have never learned these ourselves? This knowledge has hitherto been transmitted without books and formal learning. Consequently, our task as archaeologist is to bring about a dialogue between two “languages” of equal value: theoretical knowledge and knowledge through action. An example: If you want to learn how to ride a bicycle, it's not enough to read a textbook explaining

how to do it. You have to try it yourself and continue to do so until you are able to ride the bicycle. You learn the art of cycling through awareness in action. It is very useful if you have a skilled instructor who can give you verbal advice, such as: *“Look right in front of you and press the pedals hard to obtain speed. It is easier to keep your balance that way”*. The spoken words make the learning process easier, but they cannot stand alone. The understanding of the depth of the concepts comes when you are beginning to manage the knowledge while working together with a skilled performer and recognize the tacit knowledge communicated by language, movements, gestures and the product this action creates.

I would like to emphasize that in our modern western world craftsmanship and practical knowledge is considered separate, distinct and inferior to theoretical knowledge. It is viewed solely as manual labour. Many archaeologists have the same view about their own profession. They divide their own practice into something theoretical and something practical. It is not unusual to regard practical knowledge as less valuable than theoretical. In that sense archaeologist has forgotten something important: first, the intellectual process that precedes action and secondly is it fruitful to divide the executive knowledge in two different parts? In my point of view, archaeology should be considered as reflected craftsmanship. Like the craftsman's actions, an archaeologist action relies on the dialectic between theory, practice and experience.

It is also a common misunderstanding among non-craftsmen that craft is manual labour. These ideas are based on lack of knowledge. On the contrary, we are dealing with a very high level of abstraction. Before he starts a project, the craftsman has to decide on how his product is going to look, how to make it and how it works. This is a process based on his insight and experience in a range of features such as the properties and possibilities of tools and materials. All this is a long and winding process, based on a series of actions. Not all these are manual. A whole series of considerations and decisions each take their toll of mental energy. The craftsman's and archaeologist rhythm is built on his “know how” (or how to act with your hands or body) and “know what” (traditionally understood as a more theoretical or mental level). In that sense both the craftsman and the archaeologist work is “gestalt”. Skilled advice is just as important as tools and materials. The skilled and experienced executant knows the processes that underlie the experiences of his predecessors. To violate the rules is not solely a question of opposing authorities, but a development caused by earlier experience. Against my own background as a skilled carpenter and archaeologist I would like to propose the following point of view: Both craftsmen and archaeologist have abstractions which are essential in experimental archaeology. We must be able to combine both theoretical and practical knowledge. We must abolish the traditional European theory of science that so strictly separate and differentiate between practical and theoretical knowledge.

Summary

L'archéologie et les artisans

Qu'est-ce qui est réellement vital aux artisans lorsqu'ils réalisent des expériences archéologiques ? Leurs compétences sont-elles bénéfiques aux expériences, ou les faussent-elles ? Est-il suffisant d'être un “bon chercheur” ?

L'expérimentateur lui-même a un impact considérable sur les résultats de son expérience. Si elle consiste à reproduire à la fois un objet et son processus de construction, l'aide d'un artisan est inestimable. La situation est différente si l'expérience ne porte pas sur un objet, mais les conseils avisés d'artisans expérimentés peuvent être bénéfiques. Artisans et archéologues ont leur propre approche et des compétences spécifiques indispensables dans les expériences archéologiques. Nous devons être capables d'associer ces savoirs théoriques et pratiques.

Archäologie und Handwerk

Bei der Durchführung von archäologischen Experimenten stellt sich die Frage nach der Bedeutung handwerklicher Kenntnisse? Sind solche Kenntnisse hilfreich oder behindern sie eher den Ablauf? Oder ist es ausreichend ein „guter Wissenschaftler“ zu sein?

Die Vorbildung eines Experimentatoren bleibt niemals ohne Einfluss auf das Experiment. Falls bei einem Experiment die Herstellung von Artefakten oder die Rekonstruktion von Produktionsprozessen notwendig sein sollte, ist die Hilfe eines erfahrenen Handwerkers unbezahlbar. Die Situation ist eine andere, wenn es sich um die Durchführung nicht-aktualistischer Experimente handelt. Aber auch wenn die Anwesenheit eines Handwerkers nicht immer notwendig erscheint, so kann seine Erfahrung hilfreich sein. Sowohl Handwerker als auch Archäologen haben abstrakte Vorstellungen, die für die Experimentelle Archäologie von essentieller Bedeutung sind. Wir müssen in der Lage sein, sowohl theoretisches als auch praktisches Wissen miteinander zu kombinieren.