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Book Review: Designing Experimental Research in Archaeology by Jeffrey R. Ferguson (ed)

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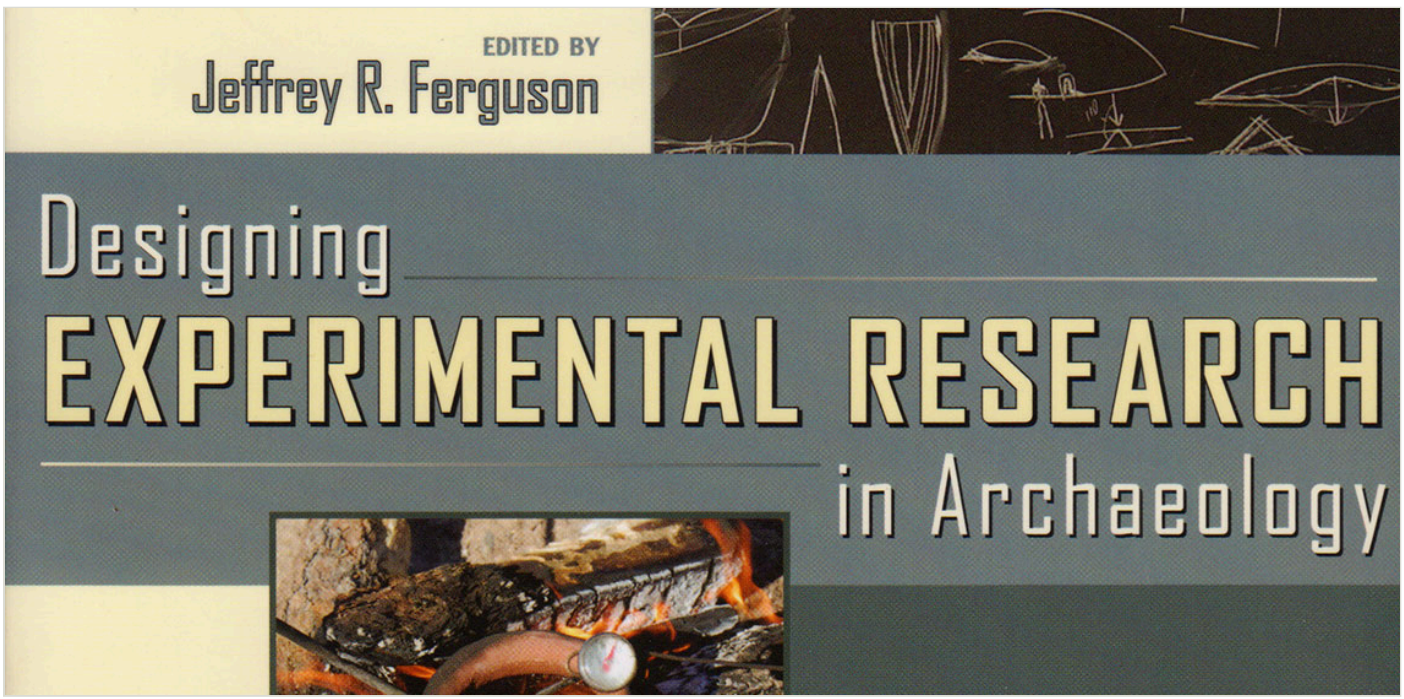

Designing Experimental Research in Archaeology is a recently published guide to planning and conducting archaeological experiments. Edited by Jeffrey R. Ferguson, a research assistant professor at the archaeometry laboratory at the University of Colorado, the book aims to guide researchers through methodology and experiment design. It consists of 11 articles that touches upon most of the established research within the North American

tradition of experimental archaeology, and is divided into ten chapters on research on different raw materials.

> “This is a proper guide to conducting correct, scientific experiments in archaeology. It has all the recipes for carrying out experiments with a multitude of raw materials, and includes helpful tips and tricks for specific tasks.

In the preface, Ferguson describes his motivation for collecting and editing this particular volume. Through his own research, he has encountered a lack of proper guidelines to plan, design, conduct, document and analyse an archaeological experiment (Ferguson 2010: xiv). The contributors were asked to provide a literature review of their subject field, and detail important issues that should be considered, and pitfalls to avoid, when conducting archaeological experiments.

Ferguson, in the introduction co-authored with Erik J. Marsh, begins by discussing the theoretical background for experimental archaeology. They highlight how archaeology bases itself mainly on analogies, between sites, between cultures and between times, through for instance ethnoarchaeology. As a source for analogies, they claim, experimental archaeology has a great strength - it offers a high degree of control of variables that ethnography lacks (Marsh and Ferguson 2010:1). It is a preferred method for 'isolating the effects and relationships of small sets of related variables', and allows researchers to draw conclusions about the archaeological past through analogies with the present results of experiments (Marsh and Ferguson 2010: 2).

Ferguson and Marsh go on to explain how the goal of the volume is to contribute 'to inference, such as developing material expectations for archaeological data', and how conducted experiments will add to the knowledge base for future research. They state that successful experimental research considers existing theories and incorporates previous experiments into both design and analysis (Marsh and Ferguson 2010: 3). This volume is meant to provide a starting point for experimenting with a number of technologies in archaeology (Marsh and Ferguson 2010: 9), and as such provide chapters that focuses on experimenting with specific raw materials.

The chapters are dedicated to ceramics (Harry 2010, Beck 2010), lithics (Carr and Bradbury 2010, Bamforth 2010, Jeske et al 2010), grinding technology (Adams 2010), organic fibre (Jolie and McBrinn 2010), weapon technology (Whittaker 2010), bone and fauno technologies (Bement 2010, Lubinske and Shaffer 2010). Every chapter includes a literature review of relevant sources and experiments, some more extensive than other, but all applicable to the raw material issues in question. This is indeed very useful for experimenters looking for the aforementioned analogies, but also gives a good entry for those who seek to try experimenting with a different raw material.

The authors were asked to provide guidelines for the execution of experiments for their respective raw materials. Quite a few are common for all: The choice of raw material based on the archaeological record, and how relevant the study will be to archaeology; the attention to detail when selecting variables to test; and the level of precision when it comes to the documentation phase. Most authors highlight the choice between field- and lab-oriented experiments, and discusses their pros and cons (Adams 2010: 136; Bamforth 2010: 102; Beck 2010: 59; Harry 2010:22-23; Jeske et al 2010:117; Jolie and McBrinn 2010:176; Lubinski and Shaffer 2010:242). Case studies are included by all, with pitfalls to avoid and principles to follow.

Some of the contributors discuss the conclusive evaluation of the experiment that should always follow an experiment (Adams 2010:146; Jeske et al 2010: 121-122; Jolie and McBrinn 2010:176; Lubinski and Shaffer 2010:247). Did it meet the research aims? Was the hypothesis well enough researched beforehand? Was the researcher biased? Were all the relevant variables controlled successfully? Many questions must be asked in self-evaluation to achieve truly reflective results that can be used by others in their research. What none of the authors touch upon, is the fundamental question of methodology: Why do we dedicate ourselves fully to a scientific methodology when archaeology as a subject is a social science? Why is the scientific way of executing experiments the better option? And why do we assume scientific principles to be ever present in all societies? Should we, for instance, measure temperatures for various processes when we know for a fact that prehistoric people did not have thermometers? In short – what is the relevance of science to archaeology?

The structure of the volume is excellent, with all chapters focussing on the same issues and therefore creating consistency amongst experimenters regardless of focal technology. But, one can ask the question whether the division of chapters into raw material specific topics will bring us anywhere new. Should we instead discuss, for instance, container technology as a whole, or projectile technology regardless of raw materials used? It might not be a better solution for a guide, but for future reference, it may be useful to slightly open up the pigeon holes of experimental archaeology as it stands today.

In conclusion, *Designing Experimental Research in Archaeology* is a proper guide to conducting correct, scientific experiments in archaeology. It has all the recipes for carrying out experiments with a multitude of raw materials, and includes helpful tips and tricks for specific tasks. The idea of a thorough guide to create consistency in the record of archaeological experiments is a good one, providing researchers with the tools to better communicate their results to others. However, there is the lack of theoretical reflection around archaeology – the social science – versus the hard science that experiments in archaeology are generally based upon. A discussion about the real relevance of a specific

methodology should be included in any text book that focuses on making just that methodology better.

Book information:

FERGUSON, J. R., *Designing Experimental Research in Archaeology, Examining Technology through Production and Use*, Boulder, Colorado, University Press of Colorado, pp. 262, 2010.

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