Eksperimentell arkeologi
Experimental Archaeology as a Pillar of Archaeological Education

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Historically, Experimental Archaeology (EA) has contributed significantly to larger issues regarding archaeological method and theory (Coles 1973; Johnson 1978; Reynolds 1999). More recent work, involving a variety of material culture, demonstrates that EA’s potential for further contribution is nearly limitless (e.g. Outram 2008 and papers therein). Established degree programs in EA (University of Exeter, established in 2000), burgeoning magazines and journals (e.g. EuroREA), Open-Air centers (e.g. Butser Farm, U.K.; Lejre, Denmark), and independent craft groups (Umha Aois, Ireland; http://www.umha-aos.com) bespeak academic and public recognition of the subfield’s unique ability to test assumptions, to create middle range data sets that help archaeological interpretation, and to suggest hypotheses that can be tested by future archaeological excavations.

While EA advocates may look forward to a bright future within the larger framework of archaeological method and theory, let me suggest that the nature of EA also lends itself to a much more practical matter: education. Below, I provide four reasons why EA can serve as a pillar of undergraduate and graduate studies in archaeology. Then, I discuss how experimental approaches to archaeology can help educators engage with the vast array of student interests in archaeology, and how this in turn can be beneficial to archaeology as a whole.

EA encompasses all sorts of research involving technology, taphonomy, and preservation. However, for the purposes of archaeological education presented here, it should be noted that by “experimental archaeology” I mean actualistic studies that involve testing the manufacture,
use, and discard of replicated prehistoric technologies (Figure 1). This may involve laboratory analyses, but without an actualistic component a project ceases to fall in the realm of EA.

**Experimental Archaeology and Archaeological Education**

(1) Experimental Archaeology compels students to learn both the «what» as well as the «why» of material culture. In order for an experimental analysis to be valid and applicable archaeologically, it must be actualistic. This requires replicated artifacts to be produced as closely as possible to those found in the archaeological record. Experimental and experiential practice with the procedures and techniques necessary for accurate artifact replication not only requires students to memorize *what* a particular artifact or artifact trait looks like (e.g. a lithic flake with a lipped platform), but also *why* it appears the way it does (e.g. soft-hammer percussion striking a core at a specific angle). Recognizing both the «what» as well as the «why» of an artifact trait transforms a static typological approach into a holistic and dynamic view of material culture vital for all aspects of archaeological interpretation (Figure 2).

(2) Experimental Archaeology teaches students how to ask questions, create projects,
and publish research. While some broad, long-term, and expensive archaeological experiments do exist (e.g. Aubry et al. 2008), many can be focused, short, and economical (e.g. Eren et al. 2005). Smaller archaeological experiments are perfect projects for undergraduate- or M.A.-level theses. Such projects require knowledge of the literature in order for a student to identify gaps or assumptions in logic involving material culture. Additionally, EA projects provide excellent experience in small project design, familiarizing the student with the scientific process, method and materials organization, and teamwork. Thus, smaller, focused EA projects provide essential skills that will come in handy when the time comes for students to tackle larger scale projects (i.e. excavation).

Many EA project do not require large grants. For example, a recent study of mine (Eren et al. 2008) only cost a $12.00 bus ticket to the coast to gather flint. In another study involving butchering fish and the location of resulting bone cutmarks (Willis et al. 2008), many materials were donated by North American fisheries, resulting in the entire study costing less than $700.00 (L.M. Willis, personal communication). These sums of money are easily reimbursed by departmental or university funds/ grants, which the student can prepare himself or herself. Also, since excellent EA projects can be done in 6-9 months during academic year, there is no reason why students will have to miss field experiences during the summer season.
Since the student creates his or her own datasets, EA is the perfect avenue for student publication. Substantive theoretical contributions, or publications involving archaeological excavation, can take years to complete. Additionally, in order to publish excavated remains, permission is often needed from an antiquity department or the director of an excavation, which can delay analysis and publication even further. In contrast, data produced through EA is the student’s own, and it takes less time than excavation to produce it. This permits students to publish papers earlier in their graduate or undergraduate careers, which, when coupled with the usual archaeology-regiment (fieldwork, artifact analysis, advanced graduate degrees), may help tremendously when the time comes for job applications.

(3) Experimental Archaeology necessitates curation. The creation of EA datasets requires their immediate organization and curation so that they may be available for future study. Depending on the specific technology and material culture involved, particular labeling, preservation, and storage procedures must be undertaken. This will facilitate other researchers’ access to and examination of the EA dataset (critical for building solid relationships with colleagues). Also, when the particular material culture is encountered archaeologically in the field the student will have some idea of how to organize it properly within larger archaeological collections.

(4) Experimental Archaeology develops skills useful for interacting with the public. It is no secret that archaeologists can be

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Figure 3: A reconstruction of a Mesolithic but at Lejre, Denmark, brings the past alive for the visiting public. Photo: M.I. Eren.
poor at communicating their research to the public. Additionally, when archaeologists do interact with the public, technical jargon may preclude full understanding and information transfer. However, performing artifact replications for people interested in the past can serve as opportunities to illustrate principles of material culture, or simply act as a mnemonic device for larger theoretical issues. The tangible nature of EA allows the public to “touch the past” in a unique way not easily forgotten and more digestible than a textbook or lecture (Figure 3).

**Experimental Archaeology: A Project-Based Approach to Education**

The four benefits of EA presented above are key issues from a student’s perspective. But how does this EA help archaeological educators engage with students, many of whom will not go into archaeology as a career? When discussing archaeological education, it is important to note the vast range of interested students and their reasons for archaeological inquiry, especially at introductory university levels. Some students may enjoy hard science but also have interests in history and prehistory; archaeology allows this happy union. Rice (1990: 167) suggests that archaeology be taught as a laboratory science because some students cannot “handle” university level physics and chemistry classes, while biology classes are too competitive due to the presence of “pre-med” students. While it is certainly wrong simply to teach archaeology as a “lab science” in order to cater to students unable or unwilling to take difficult or challenging classes, a “hands-on” experimental approach to archaeology can help students learn principles of scientific practice and should be included if done correctly and rigorously.

Another important student population interested in archaeology includes artists and art historians (e.g. Hilson 1991). In the same way artists create works for aesthetic enjoyment or as a societal critique, the manual and creative skills acquired through the study of EA can help to further those purposes (Figure 4). If Hilson (1991: 237) is indeed correct when she...
states that the «study of art cannot be
divorced from the study of life and the
great issues of our time,» then the artistic
approaches to experimental material cul-
ture (in her particular case, Neolithic art)
may help students question conventional
attitudes and assumptions (Hilson 1991:
237) or link important contemporary soci-
al issues to the past (e.g. conservation,

Finally, archaeology interests social sci-
entists (Donahue and Adovasio 1985:306),
anthropologists, student activists (Upham
et al. 1988), and ethnographers, especially
in the United States where history has inti-
mately wedded these disciplines (Trigger
2006). Teaching students how to replicate
one’s ancestor’s technologies serves as
both a physical and symbolic connection
to past heritage, ingraining social identity.
In addition to providing means for people
to discover social identity, archaeological
inquiry empowers both cultural groups
and students to create and define their
own identities:

… learning is situated, taking place in
specific contexts with particular identi-
fying features and purposes. A project
on archaeology should, therefore,
allow for connections between objects
and cultures and should somehow
relate to the classroom community-cul-
ture to make leaning meaningful to the
specific students (Pitri 2002: 22).

Thus, given the diverse educational back-
gounds and interests of students in arche-
ology, rather than educators take an «all
science,» «all art,» or «all anthropology»
approach to the subject, a general, a criti-
cally reflecting «project-based» approach
(see Hennessey 1975:38; especially Pitri
2002:19; Winkler 2002) that incorporates
all these thrusts might be most fruitful. A
project-based approach to education
develops «hands-on» and «visual» activities
derived from a student’s interests (Pitri
2002:19). In this sense, experimental
approaches to archaeology are project-
based, but focused on replicating prehis-
toric technology. Though Pitri (2002) focu-
ses on the importance of «projects» for
children, she suggests important factors
derived from a project-based approach.
First, projects help establish successful
communication by making visible diffe-
rent modes of thought. Second, projects
develop individual and group decisions
making skills that allow for the opportu-
ity to make invested choices. Third, pro-
jects lead to multidimensional problem
finding and problem solving.

Since EA falls squarely within a project-
based approach to education, it may
encourage students to continue their archeological education as they see oppor-
tunities to independently explore their
own specific interests in the material cul-
ture (Pitri 2002:19), to create their own
data, to publish their own results, and to
establish their own identity within the dis-
cipline. Students’ critical reflection upon
their own archaeological experiments can
reconnect subjectivity and experience
with knowledge, allowing «students not
only to understand the material and social
processes that generate and reproduce
their own subjectivity, but also question
and even transform these processes
and conditions» (Hamilakis 2004:287).
Additionally, while EA may inspire more
students to pursue archaeology as a career, it may have the even more positive benefit of increased donation, finance, and funding for archaeological research as more and more students (soon to be ‘the public’) recall favorable memories of self-discovery, identity creation, and expression through experimentally crafted material culture.

**Conclusion**

The practical skills EA endows upon students are fundamental to archaeological education and essential for people planning a career in archaeology. Additionally, EA is an excellent ‘project-based’ approach to education that can serve as a common-bond among varied student interests within archaeology. For these reasons, archaeology departments would be well advised to consider developing resources for experimental archaeology. While human resources and knowledge experts regarding various prehistoric technologies may be initially hard to find, a dedicated departmental space for experimental practice, as well as a steady accumulation of materials useful for replicating different artifact types, can go a long way toward enhancing experiences in archaeological education (Figure 5). In turn, better-trained students, increased student publication, more rigorous research, and amplified interaction with the public will enhance
any archaeology department’s stature, boost its ability to attract future students, improve its alumni career-placement percentages, and justify its existence to its home university, to funding bodies, and to the archaeological discipline as a whole.

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