

LINKING FIELDWORK, THEORY, AND KNOWLEDGE IN TEACHING PREHISTORIC ARCHAEOLOGY

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Abstract

The discipline of archaeology has changed a great deal over the last 20 years and this carries great implications for teaching prehistory. Here attention is directed towards two interconnected issues. First, the expansion of archaeological work in the commercial sector and the concomitant increase in the quality, quantity, and nature of relevant materials for teaching and research. And, second, the role of fieldwork in providing opportunities to learn and understand archaeological practices relevant to using published results from elsewhere, comprehending something of the archaeological record relating to prehistory, and applying archaeological theory to the investigation of topical research questions. Bournemouth University's field school held at Billown in the Isle of Man between 1995 and 2004 is used by way of illustration.

Keywords

Neolithic; Isle of Man; undergraduate field school; post excavation; assessment; theory and practice

Introduction

Archaeology in general, and prehistoric archaeology in particular, is a subject that advances by investigation. Ever since the eighteenth century, key questions about the past have been addressed by bringing data to bear on the issues rather than by appealing to authority or tradition. Collecting data, or more accurately 'capta' following Chris Chippindale's way of thinking (2000), through fieldwork occupies a central place within the discipline. Whether directed towards structures and monuments, deposits and accumulations, artefacts and ecofacts, records and archives, or geochemical signatures in soils and sediments fieldwork combines theory and practice. It links observation and explanation, engagement and understanding, and provides the life-blood of the subject (Figure 1). For most archaeologists data / capta underpins all rational inquiry about the human past and serves to distinguish the discipline not only from what Glyn Daniel cruelly referred to as the "dotty people who gyre and gimble in the lunatic wabes of archaeology" (1962:166) but also from cognate academic disciplines with, to varying degrees, different prevailing paradigms, ontologies, and objectives. Archaeology is essentially a field-science and is heavily reliant on engagements between its practitioners and the raw materials from which knowledge is created. As Grahame Clark once observed "ambitious though the aims of prehistory have become, the fact remains that, in so far as they are to be realized by means of archaeology, they depend on evidence that needs to be recovered from the soil" (1957:37). Understanding what that evidence is; how it is collected and manipulated; how it is made available to others; what it is used for; who uses it; how it is interpreted; and what exactly this business of 'fieldwork' is all about, forms a fundamental part of an archaeological education.

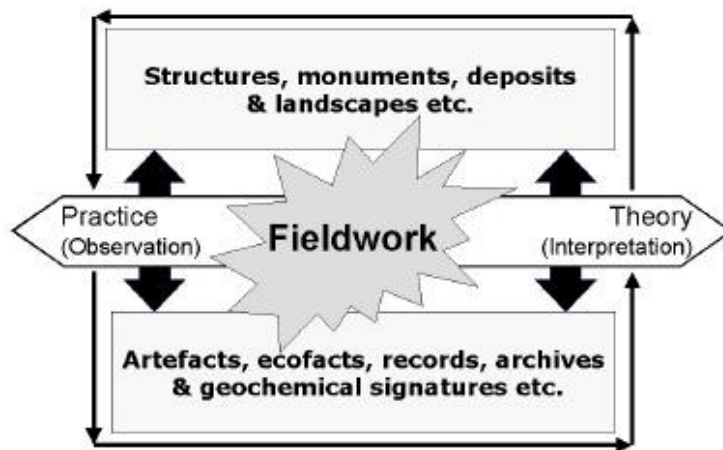


Figure 1 Fieldwork as an articulating activity linking theory and practice.

Traditionally, things were straightforward. The archaeological world was a small place, change was gradual, and the number of competing perspectives few and well differentiated. Since the mid 1980s, however, things have been changing rather rapidly. In many parts of Europe and North America archaeological endeavour has become complicated, diverse, and potentially rather confusing. In this short paper I explore some of the implications of these changes for archaeology in higher education, suggesting that as the balance of fieldwork activity has shifted from the academic sector to the emergent domain of commercial archaeology its place in the curriculum has declined. Focusing specifically on prehistoric archaeology, I argue for a repositioning of fieldwork as a central strand of the archaeological process and the core academic curriculum, structuring teaching and learning in archaeological theory, practice, and underpinning knowledge.

The times they are a-changin ...

Space does not permit a detailed analysis of the recent history of archaeological endeavour, although one is certainly overdue to judge from the provisional studies of the British and European experience by Carver (1993), Kristiansen (1993), Wainwright (1993, 2000), and Willems (1998). Among the more obvious trends and changes, three have a special bearing on teaching archaeological fieldwork, theory, and knowledge in the context of higher education.

First is the quantum leap in the nature and the range of data that can be collected in order to progress our investigation of the ancient past, the resolution at which it can be logged, and speed at which it can be processed and manipulated. Once archaeology was about an ancient and largely displaced past. Now it is anything from the first appearance of hominins on planet earth more than three million years ago to the actions of individuals just a few days or weeks back. Where once energies focused on the hills and vales that dominate the terrestrial landscape there is now a clear value in examining extreme environments: in mountainous regions (Mitchell 2006); below the peats and alluvium of our river valleys and wetlands (Coles & Coles 1996); within the high energy inter-tidal zone around the coast (Fulford et al. 1997); and indeed beyond planet earth to the expanding heritage created by space travel (Spennemann 2006). Archaeological investigation was once synonymous with excavation. The topsoil was dug away (probably by a machine), features explored, and the resulting surface peppered by voids planned and photographed. Nowadays archaeological investigations are as likely to use remote sensing as a pick and shovel, and most take a much broader, more holistic, and more integrative approach than ever before (Drewett 1999; Roskhams 2001). Satellite images are reviewed; LiDar or ground penetrating radar models checked; geophysical and geochemical surveys conducted; trenches positioned with surgical precision over things whose limits are already known; the topsoil sampled in minute detail; all layers carefully examined one at a time in reverse stratigraphic order – each being described, sampled for artefacts, ecofacts and chemical characteristics, planned, and photographed before, during, and after removal; van-loads of material are transported to the laboratory for sorting, testing, and microscopic investigation; and selected pieces of burnt wood or bone are disintegrated in a mass spectrometer to determine their date and atomic make-up. Where once there was just a few boxes full of finds, notebooks, plans, and photographs; now there are now millions of bits and bytes of related data in coded electronic format and substantial archives of finds, samples, and research materials. The very nature of fieldwork has become transformed to the point where, quite literally, the laboratory is moving out into the field (Andrews & Doonan 2003), the range of relevant specialisms that can be brought to bear defies classification, and the very processes of managing the task has all the hallmarks of a sub-discipline in itself (English Heritage 1991, 2006).

Second is the multiplication of theoretical and ideological perspectives applied to archaeological issues, to the nature and scope of the questions asked of the past, the interpretative frameworks used to make sense of it all, and the socio-politics of knowledge-building. As Matthew Johnson has recently emphasized ‘theory’s place in archaeology is secure to the extent that its necessity can now be assumed’ (2006:117–8) even if he and others sometimes lose their nerve by giving ground to those who believe their work to be so eclectic or comprehensive that their efforts somehow bypass the need to articulate an epistemic basis. While processualism was characterized by its relative coherence and unity, post-processual thinking is characterized by its diversity and lack of coherence. Western Marxism, hermeneutics, post-structuralism, constructivism, phenomenology, feminist theory, queer theory and many more besides offer alternative ways of looking at the past and provide interpretative perspectives on what we see and how we see ourselves (Hodder 1984, 1986:147–70, 2001; Ucko 1995). Yet, ironically, although each of these approaches conceives of the data / material they use very differently, and privilege certain kinds of evidence (see Shanks & Tilley 1989:8–10), all have successfully been applied to archaeological problems that draw upon, re-work, and re-interpret material derived from fieldwork programmes carried out decades ago and within quite different theoretical frameworks.

A third change is represented by an explosion in the number of people and organizations that collect and use archaeological data, and the concomitant budding of the realpolitik that surrounds purposeful archaeological investigations. In Britain in 1976 there were about 80 organizations employing around 1200 archaeologists, mainly in university departments, museums, and archaeological units (Jones 1984: Figure 3). By contrast, a survey conducted in 2003 revealed that around 6000 people worked in archaeology at that time (Aitchison & Edwards 2003). Of these, 41% were employed by commercial organizations, 22% were in local government, 16% in universities, 15% in national government agencies, and the remainder (about 6%) in a range of other private and public organizations (Aitchison & Edwards 2003: Table 15). Similarly, over the last 15 years or so the number of investigations carried out in across the UK has increased dramatically. In England in 1990 there were 938 fieldwork events, of which 29% yielded some data relating to prehistory. Fifteen years later, in 2004, there were at least 4588 field investigations of which 33% yielded data on prehistory (Darvill & Russell 2002, with additional data from the Archaeological Investigations Project). Behind these figures there is an increasing heterogeneity in the kind of investigations carried out. Most are closely aligned to specific purposes such as assessing the nature of preserved archaeology in a given area, evaluating its potential, or recording deposits threatened by proposed development. In a sense all investigations are research, but over the period 1990 to 2004 some 86% percent of investigations in England were undertaken within the overall context of property development of some kind; 89% of all investigations with evidence for prehistoric activity were prompted by property development (Data from the Archaeological Investigations Project). Elsewhere in the British Isles a broadly similar pattern is also evident (Bradley 2006; Phillips & Bradley 2004). Archaeological fieldwork has moved beyond simply saying something about what happened in the past; investigations are now just as likely to be about the creation of knowledge to support public policy, inform the spatial planning system, contribute to environmental management, support tourism, and promote opportunities for recreation and public engagement with their heritage.

Individually and collectively these changes have profound implications for teaching and learning in archaeology in general, and prehistory in particular, not only in terms of what is included in the curriculum but also how it is structured. One response to change is the BBFM approach: ‘bigger–better–faster–more’. In this programmes are usually thickened-up by squeezing more in the same space. The list of methods and techniques gets longer and longer, and more and more technical. Lectures on theory grow wider as more perspectives are described and the canon of acceptable approaches expands. Accounts of prehistory itself become increasingly detailed as theoretical advances enrich understandings, the number of investigated sites rises, dates become more precise, distributions are better mapped, and plans drawn of everything from an individual house to the way the surrounding landscape was structured. In consequence, many of these strands become increasingly separated, are delivered in different ways, and are frustratingly hard to tie together. Fieldwork tends to be lumped-in with learning basic archaeological methods and skills. Hands-on experience is seen as better and more beneficial than lectures, and some of the teaching can be delivered by technicians, demonstrators, and visiting lecturers, or by attending a ‘training dig’. Theory by contrast suits seminars and requires the full attention of the best academics and the brightest postgraduate students. The knowledge-base for understanding prehistory can be learnt from books, supported by keynote lectures delivered by those able to take the broad view. And while there is

certainly exaggeration in this caricature to polarize the argument, it is a set of approaches easily recognized elsewhere in the characters who narrate Kent Flannery's wonderfully disguised textbook *The Early Mesoamerican Village* (Flannery 1976) – the real Mesoamerican archaeology (RMA), the sceptical graduate student (SGS), and the grand synthesizer (GS).

However, looking forward into the early years of the 21st century, teaching archaeological fieldwork faces a double-whammy as central Government policy promotes solutions based on the BBFM approach and the need to achieve more with less resources. As discussed more fully earlier in this volume (Croucher, this volume), there numerous ongoing changes in the delivery and organization of higher education in the UK that have profound and fundamental implications for the architecture and content of programmes. Participation rates have shot up from around 10% of post A-level school leavers in higher education in 1980 to 43% in 2003-04, and a target of 50% participation by 2010 has been set (DfES 2005). This has caused massive real increases in student numbers over recent years: 4189 enrolled on undergraduate archaeology programmes in the UK in 1996-97, rising by 75% to 7315 in 2004-05 (HESA 2007:9697, Table 2e, and 0405, Table 2e). Programmes have become increasingly 'unitized' with individual modules or units representing roughly comparable amounts of work in terms of teaching time and assessment (QAA 2006a). Locally, such frameworks are intended to facilitate comparison and movement between programmes and between institutions, while on a European scale there are moves to harmonize the content, structure, and duration of degree programmes under the Bologna Process launched in 1999 and introduce an EU-wide Credit Transfer Scheme (Roberts 2006). Quality assurance has been provided for research through a Research Assessment Exercise since 1989, the most recent being scheduled for 2007–08 (see Cunliffe et al. 1996 for review of earlier exercises), while teaching has been monitored and assessed by the Teaching Quality Assessment through the late 1990s, Subject Review in the period 2000–02, and now institutional audits (see Harding & Johnson 2002 for an overview). A 'benchmark statement' for undergraduate archaeology programmes was prepared under the guidance of the Quality Assurance Agency in 2000 and updated in 2006 (QAA 2006b). Central government funding agencies have imposed work-load monitoring of the time spent by academic staff on teaching, research and scholarship since 2000; full economic costing models for research are currently being phased-in; and similar costing models are due to be introduced for teaching over the next few years.

These fundamental changes, both in archaeology and in higher education, together with a host of other issues (e.g. health and safety constraints; the imposition in 2006 of student 'top-up fees'; pressure for students to work over the summer vacation etc.) goes a long way towards explaining why the amount of fieldwork that students engage with as undergraduates appears to be rather low. Preliminary results of a survey carried out for the archaeology strand of the Subject Centre for History, Classics and Archaeology revealed that around 40% of the archaeology departments studied require less than one month's fieldwork across a three-year programme, while only 6% require between 3 and 6 months in total. Most worrying, the survey revealed that much of what is delivered as fieldwork is best described as skills training (Croucher et al. 2008). Nobody has estimated what an appropriate amount of fieldwork might be, but participation in relevant fieldwork features strongly in the Benchmark Statement for archaeology which recognizes that "fieldwork constitutes an essential aspect of the engagement with professional practice" (QAA 2006b: Section 5). Taking all these issues into account, are current approaches right? Have we perhaps got trapped in a conventional wisdom that has outgrown its value? And have we marginalized fieldwork to the status of a technical appendix, a convenient way of delivering a unit about which buttons to press on a magnetometer and how to use a trowel in the vague hope of preparing at least a few students for life in the wider archaeological world when they graduate? Indeed, is the kind of fieldwork delivered in university programmes actually relevant to the variety of fieldwork carried on outside universities nowadays?

There seems to be a widespread problem with fieldwork both inside universities and in the commercial world beyond (see Barrett 1998; Bishop 2001; Aitchison 2004). Both sectors have become preoccupied with the technical aspects of fieldwork (although not necessarily in the same way), both have ignored the intellectual aspects and down-played the socio-politics of what they are doing, and each tends to accuse the other of not understanding the problem. Perhaps then in looking again at the role and place of fieldwork there is also scope to provide an alternative to the BBFM approach outlined above. Instead of using an atomized diverging model of teaching and learning with data at the centre and separate considerations of theory on the one hand and practice on the other, there is room for a more unifying approach in which fieldwork in the broad sense of data recovery and

analysis linking the definition of a problem with the creation of new knowledge becomes the central strand (Figure 2). As such fieldwork becomes a crucible within which background knowledge, theory, ethics, skills, competence, experience and practice can be brought together within the educational context. The focus becomes akin to what Ian Hodder (1999) has usefully described as the 'archaeological process': a diverse, fluid, and reflexive set of endeavours that relate ideas and questions to the generation of knowledge through investigation. It is an approach that is bubbling up in a few places (e.g. Perry 2004), and one that we have been developing at Bournemouth University within our undergraduate programmes for about a decade. I do not claim that we have found all the answers, and there are certainly many problems yet to overcome, but approaches based on the idea of archaeology as a field-science seems to deliver considerable benefits.

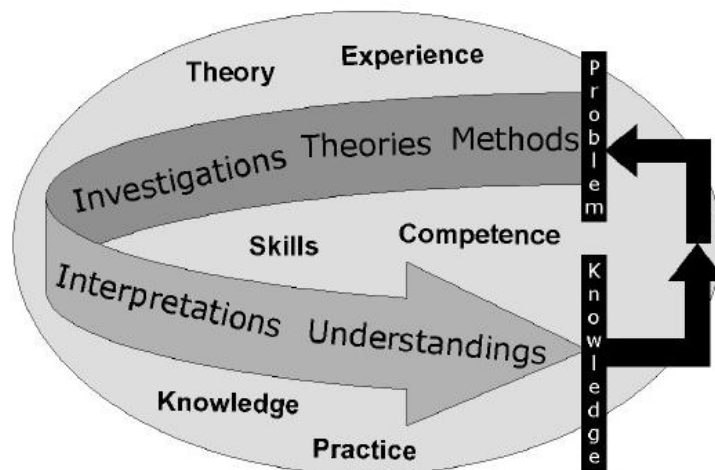


Figure 2 Fieldwork as an archaeological process linking problem definition with new knowledge in the context of higher education where theory, experience, skills, competence, knowledge and practice are learnt.

Bringing it all back home: archaeological fieldwork at Bournemouth University

All undergraduate archaeology programmes at Bournemouth are modularized, and generally recruit students with little or no archaeological background. Accordingly, there are units in the first year that provide underpinning knowledge: lectures and seminars that introduce the history of archaeology, archaeological theory, current understandings of the past, the socio-politics of archaeology and heritage, and the methods and techniques of archaeology. The balance of units taken depends on the particular programme being pursued, but students taking Level C (also known as Level 4) units in methods and techniques work outdoors throughout the academic year to learn and gain experience in basic skills such as surveying, use of a total station, geophysical survey, and field recording during their first year. With these skills to hand they then join one of the fieldschools at the end of the first year to pursue a 20 credit Level 1 (= Level 5) unit entitled Applied Field Methods (known by its unit code as AHE 205) spread over five weeks starting in mid June. There is a further five week period of field experience at the end of year 2 which together with term-time fieldwork represents a total of about 3 months in the field for BSc Field Archaeology students and only slightly less for those taking other programmes.

Between 1995 and 2004 the main fieldschool was at Billown on the Isle of Man, focusing on a series of Neolithic, Bronze Age, and Iron Age settlements and ceremonial sites. This provides the basis of the case-study briefly reviewed below, but there were contemporary parallel fieldschools at Knowlton in Dorset that looked at Neolithic and Bronze Age ceremonial landscapes in central southern England, Studland, Dorset, focussing on the medieval and later historic landscape especially for students studying Heritage Conservation, and Bigbury on the south Devon coast for students taking Marine Archaeology.

Billown Fieldschool, Isle of Man

Between 1995 and 2004 the Billown Fieldschool was based around a real-case archaeological project that had an essentially research purpose while exploiting the opportunities presented by the gradual expansion of a limestone quarry in the southern part of the Isle of Man (Darvill 2005, with earlier references). Thus there were three strands to the work – research, rescue, and education – which allowed the exploration of many dimensions of the archaeological process, including the socio-political and realpolitik implications of working in a country with antiquaries legislation that is different to that of the UK and includes arrangements for the licensing of archaeological activities and the export abroad of archaeological samples and materials.

The focus of the Billown Neolithic Landscape Project was investigating the transition from hunter-gatherer lifestyles to a full agricultural economy through the fifth to second millennia BC within an island context, a problem identified as a research priority in the region, and for which relevant data existed within the Billown landscape. The work was funded by Bournemouth University through its fieldwork budget, Manx National Heritage, and Billown Lime Quarries, in roughly equal measure. The Fieldschool staff typically comprised six or seven members of Bournemouth's academic staff, two members of the technical and support staff, and four or five contract staff experienced in various aspects of excavation and survey. Curatorial staff from Manx National Heritage also contributed to the teaching programme and hosted visits to the Island's museums and ancient monuments.

Typically, between 50 and 60 undergraduate students from Bournemouth would attend the Fieldschool. The majority were taking the Level I unit (AHE 205), but a number of students returned at the end of their second year as supervisors either to develop skills in project management and/or to collect data for a personal research project / dissertation based on the site. The results of these studies were published in an annual report, and these contributions typically form the first entry on a students' bibliography. Some students returned a third time at the end of their third year to gain further experience while applying for jobs; some of those who continued with postgraduate research based their projects on questions linked to the wider project. In addition, there would be between 10 and 15 students and volunteers attending the Fieldschool either to fulfil the fieldwork requirements of programmes they were taking at other universities (UK and world-wide) or to gain practical experience. Experienced archaeologists also attended the Fieldschool as part of CPD programmes agreed with their employers in order to refresh fieldwork skills and gain experience applying new technologies to archaeological work (e.g. laser scanning, total-station mapping, ground penetrating radar etc.). This had the added benefit of exposing undergraduate students to informal work-place contact with established professionals who were able to give valuable insights about the real nature of a career in archaeology.

Unit aims and objectives

While the Fieldschool certainly provided basic training in particular techniques, especially those not able to be included in weekly work programmes in Bournemouth, the overarching aim was to provide experience and engagement with the whole archaeological process, and allow students to deploy the skills and knowledge learnt during their first year in the context of a research project. The intended learning objectives of the Unit may be summarized as:

- A basic knowledge and understanding of the design, organization and execution of field-based projects.
- An ability to apply a range of excavation and/or survey techniques where suitable and in response to direction and/or judgement.
- The ability to participate effectively in an archaeological excavation, field survey or recording exercise at a level of professional / technical competence and responsibility influenced by the extent of previous experience.
- An understanding of the correct application of the basic principles underlying the interpretation of archaeological and historical data.
- An appreciation of the integration of non-destructive and destructive method in the execution of an archaeological or heritage conservation project.
- Experience in the core fieldwork techniques of observation surveying, sampling, and the recording of primary data and materials.

- Effective collaboration in team-based fieldwork.

But this is only part of the picture because the project at the heart of the Fieldschool was embedded within, and served to help articulate, many other units through vertical and horizontal linkages, for example: Research methods and project management; Professional studies; Theory in contemporary archaeology; Reconstruction of environment and economy; and Post-excavation data analysis.

Work patterns and activities

As a research project spread over a period of more than a decade when post-excavation work is taken into account there is of course a natural progression from planning and evaluation through the main fieldwork phase, and on to post excavation assessment, analysis and reporting stages that would be difficult for any one student to follow right through. Accordingly, the work was broken down into blocks that involved participation in planning the Fieldschool during classroom sessions and briefings in Bournemouth, executing the data recovery programmes in the field while staying on the Isle of Man, and subsequently writing-up aspects of the fieldwork through laboratory analysis, workshop sessions, and dissertation projects. Lectures in other units taken in the second and third year dealt with such matters as ethics, health and safety in fieldwork, project costing, and project management and used real data from the Fieldschool as case-study material in a way that reflectively draws upon existing experiences. In 1995 and 1996 fieldwork mainly involved surveys and field evaluations, from 1997 through to 2004 much of the work involved open-area excavation coupled with off-site surveys and trial trenching but the changing overall character of the project did not adversely affect the nature of the experience.

The Fieldschool was based at the Billown Quarry Site which was set up with appropriate infrastructure for those working on the site itself and also those working in the area on surveys and sampling exercises (see below). All participants worked a 9.00-5.30 day, six days a week. Twice a week there would be seminars on site to review what has been achieved over the previous three days, consider methods and interpretations, and think-through the work programme for the following three days.

Each week there would also be two in-door evening lectures at King Williams' College where participants were staying. These would variously review aspects of the archaeology of the Island, describe progress at off-site investigations, or provide the background to particular methods or equipment that was being used.

A very wide range of tasks were undertaken in any one year during the Fieldschool, and since no participant could engage in all of them choices were necessary. This was achieved by introducing the main spheres of work during the initial briefing sessions and then creating sign-up lists so that students could express preferences for broad task-sets such as geophysical survey, environmental sampling, finds processing and so on. In general, students were encouraged to spend a minimum of three days on any particular activity set; some spent considerably more and where possible there was encouragement for those wishing to specialize in particular areas for up to half the duration of the Fieldschool.

Working out what it all means was critical, and experimental reconstruction formed part of the experience. Patterns of postholes uncovered during the excavation, for example, were reinhabited by placing replica posts in the sockets and exploring the resultant structure in terms of patterns of movement, visibility, access, and bodily engagement (Figure 3). In the same way, earthworks were re-built after calculating the volume of soil that would have been yielded by borrow-pits and quarry ditches (Figure 4). In this way both general and middle-range archaeological theory could be applied to concrete archaeological situations. Concepts such as the social use of space, phenomenology, and structured deposition make far more sense, and can easily be critically assessed, when related to actual applications in the field. As already indicated, seminars and discussions were a key part of the learning experience in the field.

Overall, excavation represented only about half of the total Fieldschool experience. Other activities generally undertaken away from the Billown Quarry Site included environmental sampling, landscape survey, trial trenching of associated monuments, geophysical survey, resource sampling (e.g. clays, rock types etc.), and experimentation. Attention was also given to presenting the results of all the fieldwork to the public and to local schools (Figure 5). Public archaeology was one of the key task-

sets that students could elect to follow, and this included debates on the socio-political implications of the work and how it might be presented to different audiences.



Figure 3a



Figure 3b

Figure 3 Reinhabiting post-structures. A. Excavated postholes. B. Replica posts set in the excavated sockets ready for experiments in the social use of space, and visibility. [Photographs: Timothy Darvill, Billown Neolithic Landscape Project].



Figure 4a



Figure 4b

Figure 4 Reconstructing earthworks. A. Excavating a class I henge monument. B. Re-built henge with an outer bank and central stone setting. [Photographs: Timothy Darvill, Billown Neolithic Landscape Project].



Figure 5 Explaining excavation techniques to school children. [Photograph: Timothy Darvill, Billown Neolithic Landscape Project].

Beyond the Fieldschool

It is hard to over-emphasize the centrality of the Fieldschool within the archaeology programmes delivered at Bournemouth as it extends well beyond the actual fieldwork and associated lecturers and meetings at the heart of unit AHE 205. During the fieldwork it was possible to take samples and create records that were taken back to Bournemouth and used during second year teaching of such things as soil chemistry, environmental reconstruction, ceramics, lithics, and palaeobotany. The Fieldschool also provided numerous opportunities, typically 3 or 4 per year, for second and third year students to develop personal research projects submitted for examination as third-year dissertations; a small number of masters-level projects and two PhD programmes were also linked to the wider Billown Neolithic Landscape Project. As already noted, the published annual reports included contributions from students, or teams of students working together.

Assessment

For those attending the Fieldschool as an assessed unit, there was both formative and summative assessment. At the end of the first week there was a finds-test involving a selection of ten items typical of the material being recorded (or likely to be recorded) during the excavation which students had to identify by material and class (e.g. flint scraper; pottery (coarseware) rimsherd; iron nail etc.). Following the test, the finds supervisor went through the assemblage and discussed each piece so that students could see how well they had done. Those scoring less than five out of ten were generally given additional coaching in finds recognition!

Formal assessment comprised two pieces of work, each contributing fifty per cent of the final mark. The first component was completed during the Fieldschool and was based on what each student actually did. This was recorded in a Fieldschool Passport, each set of tasks being signed-off by supervisors and staff when completed satisfactorily. The results of the finds-test and attendance at on-site and off-site seminars, lectures, and briefings, was also recorded in the Passport to create a simple but comprehensive record of achievement. At the end of the Fieldschool all passports were collected and marks assigned on the basis of recorded achievement and comments by an assessment committee that comprised all the Fieldschool staff, including second and third year students acting as assistant supervisors and site supervisors.

The second component comprised a logbook that was begun during the Fieldschool as a diary of what an individual student did (time was set aside during the Fieldschool for students to work on their logbooks) and completed after the Fieldschool for submission on a predetermined day during the

autumn term (typically three months after completion of the fieldwork). In their logbook, students were asked critically to reflect on what they did, provide an overview of the results of that season's work, link the results with comparative sites, and suggest how future work might be structured. To assist in the preparation of the logbook copies of selected key plans were made available soon after the end of the fieldwork, and there were of course copies of the Project Design and previous annual reports available in the library for reference. The logbook was marked by the unit leader / project director. Finally, a de-briefing meeting was held six months after the end of the fieldwork to discuss the results of the work in the light on ongoing post-excavation analysis; that was also an opportunity to provide additional formative assessment on the marked logbooks and passports which by that time had already been returned with feedback sheets.

Conclusions

Re-situating the fieldwork unit(s) of an undergraduate degree programme as a central strand has many interesting and potentially important consequences in terms of linking theory, practice, and knowledge through attention to the archaeological process rather than an expanding universe of facts, theories, and methods. In a way it also serves to help break-down the deeply embedded idea (implicit in the repugnant notion of students as customers) that everything a student does is in preparation for something else, something that comes later, some point when they are ready to be let loose on the world. In fact, from the moment a student enrolls on a higher education programme the game is on, they are actively involved; by becoming part of an academic community students become participants in the archaeological process and contribute to the creation of new knowledge while taking in what is already known. Fieldwork has a critical integrative and balancing role, as Martin Carver once remarked "digging for ideas may be a way of preventing archaeology either slipping away into the netherworld of indulgent empiricism or evaporating into the political stratosphere" (1989:673).

For fieldwork is a thinking process: the act of investigation and data recovery makes space for ideas about the past to be formulated, relationships to be examined, structures to be explored, and processes to be modelled. It provides direct experience of a piece of archaeology that can be used to contextualize existing excavation reports and published data. Participation in a research project, and an opportunity to shape its future development, shows how the archaeological process as whole fits together. And fieldwork of this kind allows the opportunity to explore how the application of particular theoretical perspectives provide alternative interpretations of what the investigations reveal, and in due course, we hope, help create new research questions, prepare better project designs, and contribute to the pursuit of a stronger, more vigorous, and fully relevant archaeological process both in the purely academic context and in the commercial world beyond.

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