INTRODUCTION

In April 2004 a dedicated band of lithic studies students met in King’s Lynn, Norfolk to watch John Lord engaged in a comprehensive series of flint-knapping demonstrations, producing replica flint tools using manufacturing techniques ranging in date from the Palaeolithic to the Bronze Age (Plate 1).

Plate 1: Lithics Studies conference delegates, with John Lord in the centre holding a replica Earlier Neolithic flaked flint axe. Photograph: Clive Bond.

In the space of a few hours John worked through c. 500,000 years of prehistory, producing some beautiful replica tools and also educating and enlightening the audience on some key techniques (Plates 2–3). As well as providing a forum where questions and discussion on a range of manufacturing techniques and lithic technology could be addressed to a master craftsman, the conference also aimed to highlight the continuing development of lithic and replication studies in the British Isles.

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19 The conference was attended by a dedicated group of people from many walks of life, criss-crossing the range of people interested in archaeology today: amateur, professional and academic.
This approach was adopted to enable a much needed bridge to be developed between theoretical aspects of lithic studies and the practical, particularly the craft skills involved in stone tool production (Bond 2003). Despite recent replication studies conducted on Palaeolithic lithic assemblages from the sites of High Lodge, Suffolk (Ashton & McNabb 1994: 189; Barton 1997: 48–50, plates 5–6) and Boxgrove, West Sussex (Roberts et al. 1997), such replication studies are not widely developed in Britain. However, this form of experimental archaeology is more widespread in continental Europe and North America (cf. Andrefsky 1998: 6–8; Odell 2004: 5 & 125–126) where recent studies build on the work of François Bordes and Jacques Tixier (the French School) and Don Crabtree, Errett Callahan and Bruce Bradley (the American School). Both schools worked hard to bring experimental knapping into mainstream archaeology, where it remains today (Bordes & Crabtree 1969; Bradley 1974; Callahan 1979; Tixier 1984). The work of these scholars/knappers was mainly laboratory-based and geared towards understanding methods of production linked to direct comparison with archaeological lithic assemblages. This work continues, for example Gallet’s
systematic approach to experimental blade production and is regarded as integral to lithic analysis (Amick & Mauldin 1989; Odell 2000, 2001).

Plate 3: Handaxe, thinning flakes from handaxe manufacture, tranchet axe and blade core, with parallel-sided narrow blade products. Scale in centimetres. Photograph: Clive Bond.

INSIGHTS AND THEMES

During the knapping sessions a variety of lithic technologies, ranging from core tool production to blade and flake production, was demonstrated, discussed and debated. These technologies included: Palaeolithic technology (handaxes, the Levallois method, long blade production, Janus flake production); Mesolithic technology (broad/narrow blade production, microliths, burins, scrapers, an adze) and Neolithic/Bronze Age technology (flake production, a flaked axe and a hollow-based arrowhead).

The session opened with the production of a handaxe made from a large nodule of chalk flint (Plate 4).\textsuperscript{20} This artefact was completed in less than five minutes, although the edges and surface were left rough, as a large part of the thick chalk cortex prevented further thinning following bifacial working of the piece. Much more care was invested in preparing the blank, thinning and maintaining the symmetry of the second handaxe produced (Plate 5). This second axe took at least four to five times longer than the first, perhaps 25–30 minutes. Both

\textsuperscript{20} High quality flint was procured from Lynford pits, the location of the recent hominid and handaxe site on the River Wissey (Boismier 2003; Lord 2003).
replications, which were made from similar sized and quality material, would not look out of place within an archaeological assemblage from a Middle Palaeolithic site (Boismier 2003; Lord 1993, 2003).

John Lord produced the first axe in silence but provided commentary on the production of the second axe. What was noticeable was that there was a very different aural rhythm to the working of the flint in each case. The sound of flint breaking as the hammer fell differed. During production of the first handaxe it was perhaps at the beat of 6/6 time (as in the number of beats to the bar) and during production of the second handaxe it was perhaps at 4/6 beats. When hammer blows were not successful or mistakes were made John worked around the mistake and recovered control of the flaking by turning the flint. The stone, we were told, was not “behaving itself”, but with great skill and tenacity John recovered and finished the piece. Knowing when to stop due to flaws in the raw material, such as thermal fissures and thick cortex, was important and failure to do so might have resulted in the handaxe splitting into two halves.

During production of the second handaxe a different approach was observed, which involved much turning, from left to right as John rotated the roughout and, focused on the mesial edges for thinning. Finally, after pauses and the execution of perfect blows producing clean crisp breaks of stone, and the ejection of thinning flakes, the artefact was finished. The dorsal face was more flaked than the ventral, as with the first handaxe, but the symmetry and balance of the piece was well executed, with the thinning of the distal dorsal edge taking place during the last few minutes. The quality of the flint was flawless and the cortex was more easily reduced.

What came to mind in seeing this process in action was the amount of information we lose from the making of a tool in the past to it coming to reside on the specialist’s desk. Despite the use of the reduction process (Bradley 1975) or chaîne opératoire (Leroi-Gourhan 1993) in lithic analysis, much information is lost regarding the conditions of working and attitude of the knapper. With much focus on the order of sequences, gestures, mental templates and such (Karlin & Julien 1994; Schlanger 1994; Shott 2003), it remains a very coarse way of understanding the process we observed. As lithic specialists we can produce lists of typologies and procedures for analysis (understanding reducing the core or nodule), but few words are devoted to timing and duration of knapping in relation to outcome. The element of timing should be considered more carefully, beyond the logic of, for example, whether a tool such as a simple end scraper on a flake is an ‘expedient’ tool form (Andrefsky 1998: 30 & 213–214; Binford 1979). If it were, did this mean that the tool was less important than, for example, a well finished plano-convex knife in the eyes of the person who made it?

The difference observed between the two replica handaxes lay not in comparative levels of skill since the same craftsman, John Lord, produced both. Instead, as John commented, if a roughly finished, bifacial axe is required then it will take less than five minute to make one but if a more elaborate tool is required, this will take longer to manufacture. Various themes converged in the first replication, including the quality of the raw material, the level of skill involved and the immediate, or longer-term needs of the knapper — whether a tool is to be used now, later today, in a week, or at a longer time scale has implications for the way a tool is made. All of these factors were observed to affect the knapper’s decisions.

While refitting studies can reveal the reduction sequence, the human decisions involved in flint-working are missed and as specialists we often forget the human balancing act that working stone involves, focussing discussion instead on clear examples of good workmanship
or conversely poor workmanship and on technological jargon or on a strictly economic sense of time (Torrence 1989). Too often in lithic reports technology is the central theme, as if this occurs in a vacuum without the flint-knapper. While watching John Lord we observed how when mistakes occurred allowances were made, while another, perhaps less able, craftsman might have failed, in which case the broken product might still have been used, if it had an appropriate edge. Conversely the knapping process might begin again.

Plate 4: Handaxe made in five minutes. Photograph: Clive Bond.
It was also clear from the conference that flint-knapping can be a social event in itself and it has been suggested that stone tools were caught up in people’s social life (Edmonds 1999: 75–78). John Lord did suggest there was an element of relaxation in working stone which can
be almost meditative and we observed how the sound of successful hammer blows and the ring of flakes ejected was almost hypnotic. Thus, different factors might also have been important in prehistoric flint-knapping, such as whether the knapper worked alone or within a group. Context too is an important consideration, whether knapping occurred at certain events (e.g. ceremonies, rites of passage, a burial) or whether it took place at different locations: domestic — around the hearth; ceremonial — in a ditch beside a long barrow; or elsewhere in the landscape (cf. Edmonds 1995, 1999). These factors might have changed the perspective of the knapper which, in turn, might have affected the outcome of the knapping event, as well as the make-up of any resulting lithic assemblage to be analysed. Such considerations go beyond the simple functional life history of the artefact.

FIELD VISITS

The second day of the conference commenced with a visit to a group of earlier Neolithic long barrows, two of the limited numbers of upstanding prehistoric monuments in Norfolk, where we were joined by Helen Patterson of the Norfolk Monuments Management Project (Norfolk Museums and Archaeology Service). We talked to the delegates about the management of these monuments, previous work on the sites (Hogg 1940; Sainty et al. 1938), ongoing research and some recent interpretations. This was followed by a visit to round barrows on Anmer Minque and Harpley Common (Lawson 1976). Both locations were adjacent to fields with dense lithic scatters. Here, the delegates were shown samples of lithic material collected during systematic survey, thus linking the physical locations where prehistoric knapping took place to laboratory research and experimental knapping. To put the lithics and monuments in context I gave a talk on subjects such as walking the land, ceremonial processions, the concept of the ancestors and working stone as a symbolic act. The field visits completed the theme of the conference: people working stone, the landscape context of stone tools, lithic scatters and prehistoric locales.

CONCLUSION

The experience of the conference was a far cry from the often isolated studies of raw materials, techniques, technology and typology that dominate in lithic reporting. Behind the stone, as John Lord had demonstrated so well, was always a person, and behind the person was a place to live, routines and tasks to complete, and even places to be buried and customs to observe. Lithics were arguably embedded in many past human actions. These less obvious aspects of past people’s lives are an area in which lithic analysis can legitimately contribute (see an ethnographic and lithic approach in Sillitoe & Hardy 2003). The potential for experimental approaches is open, if laboratory-based (Amick et al. 1989).

With the high level of interest in the event it was suggested that a discursive publication should be produced to redress the current paucity of publications about lithics and replication studies. ‘Lithic Technology, Manufacture and Replication Studies Reconsidered’ is now in production with a view to publication later in 2005.21

Working stone came alive for a few hours in April 2004. Another meeting is planned for April 2005, focusing on working different types of raw material and procurement strategies, together with a practical knapping class, to breathe fresh life into old technology. With lithics

21 Papers in the volume were contributed both by lithic specialists who attended the conference as well as other interested scholars (Bond forthcoming).
there is no substitute for practice: seeing is believing and this experience furthers our understanding. This can only be a good thing in British lithic analysis.

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BIBLIOGRAPHY


