

BOOK REVIEWS

ROBIN TORRENCE, Production and Exchange of Stone Tools. Cambridge University Press, Cambridge, 1986. pp256 (56 figs. and 35 tables). £27.50 (Hard) ISBN 0-521-25266-0.

Reviewed by Richard Bradley

This volume brings together the results of work in two areas of modern archaeology. It is at the same time a contribution to the study of prehistoric exchange systems and an original analysis of a large body of worked stone. The two are brought together in a valuable account of the prehistoric obsidian quarries of Melos.

The author quite rightly regards this study as a contribution to middle-range theory, in the sense employed by Lewis Binford, who supervised the original research. We begin with a thorough review of exchange studies in recent archaeology, and of the difficulties that arise when we apply theoretical models of exchange systems to the distributions of artefacts originating from a single source. It may be possible to pin-point their area of origin, but simulation studies have shown that different types of exchange system may produce the same spatial patterning in the archaeological record. We shall not be able to investigate the relationship between production and exchange unless we can overcome this difficulty. It follows that it may also be impossible to decide whether the production and exchange of particular artefacts took place under centralised political control. In the case of Melos this has a direct bearing on the processes which led to the rise of this 'island polity'.

At the same time, it may be easier to investigate the distribution of worked stone than the movement of other materials, since stoneworking is a subtractive process which leaves easily recognisable (and virtually indestructible) by-products at every stage. Moreover, the fact that stoneworking depends on certain physical constants means that we can employ our knowledge of the raw material, combined with experimentation, to assess the degree of skill invested in the process.

Torrence's approach to the production of obsidian artefacts attempts to break the deadlock in exchange studies through our knowledge of the properties of worked stone. Instead of inferring the nature of these processes from the distribution of the finished artefacts, she uses our knowledge of stoneworking to assess the efficiency with which they were being made at the quarries themselves. The evidence from Melos is compared with a series of ethnographic case studies in which the wider context of stoneworking is already known.

These examples range from the extraction of lithic materials by modern hunter-gatherers to the recent gunflint industry. On this basis she suggests that there is a relationship between the efficiency with which raw materials were extracted and worked, the standardisation of the end product and the degree of specialist involvement in production. Such comparisons also extend to the spatial organisation of the quarry workshops. Applying this approach to the evidence from Melos, she rejects the argument

that obsidian was being extracted by specialists and that access to this material had come under centralised political control.

The argument is persuasive, lucid and vigorous. Her case is well made and the methods that she advocates are eminently practical and could easily be applied to other lithic material; indeed, we have begun to use some of them with productive results at the Neolithic quarries in Cumbria. There is no doubt that this book is one of a select group which use stone artefacts to say something interesting. The case for more detailed documentation of quarry sites and their products is inescapable.

There are, of course, some problems with a study of this kind, but none is very important. Not all the ethnographic case studies which Torrence uses are documented in enough detail to suit her purposes, so that her approach must still be tested on more and better samples. It is also possible that surface samples from the Melos quarries do not reflect the complete range of processes that once took place there. It is conceivable that Torrence's results reflect only the last stages in a long period of use. Similarly, it would be good to learn more about the contexts in which the products of the Melos quarries eventually entered the archaeological record. Even if we can show that the obsidian was extracted and worked on a fairly ad hoc basis, it could have taken on very specific meanings at the other end of its distribution.

It would be all too easy to end on that note, for reviews are often written by people who have no conception of the sheer difficulty of the research which they are

criticising. Since my involvement in fieldwork at Great Langdale, I have come to recognise the immense problems of devising any methodology which can help archaeologists to come to terms with the complexities of early quarry sites. There is such an embarrassing profusion of material that there seems to be little way of making order out of chaos. To devise a methodology which puts that material to work needs imagination and perseverance in equal amounts. Undoubtedly, more work can be done with Melos obsidian, but Robin Torrence's study marks a quantum leap in our ability to carry this work out. On any reckoning it is a considerable achievement.

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CLIVE GAMBLE, The Palaeolithic Settlement of Europe. Cambridge University Press. Cambridge, 1986. pp471 (110 figs. and 91 tables). £40.00 and £15.00 ISBN 0-521-24514-1 and 0521-28764-2.

Reviewed by Anthony Sinclair

The interpretation of the palaeolithic period in recent years has changed dramatically. Out has gone the old emphasis upon the lithics. In has come a new concentration upon human groups adapting to their environment, developing new means of coping with risk-laden situations. This altered viewpoint can be traced directly to the influence of two schools of thought; that of Lewis Binford stressing the notion of adaptation, and that of Eric Higgs emphasising the importance of the economy.

To date though these schools of thought have dealt largely with developing theory. They have not yet attempted to interpret the vast