

earlier material would have been welcomed, particularly as the standard of the few figures provided is good.

A section on scientific analysis does include specific examples of techniques applied to glass. Simple visual examination is rightly emphasised -- a well known archaeometric laboratory recently identified an early glass bead as fossil mollusc. Glass is susceptible to aqueous corrosion and the difficult problem of conservation is discussed, especially for excavated material.

The author, in a final chapter, gives bibliographic sources that should be consulted to keep up with the dispersed literature yet to appear. This is valuable and the example could be followed to advantage elsewhere.

Glass and Archaeology is a useful initial reference guide and can be used as a primary source for those seeking further information, but the author, and, not least, the series editor and publisher have missed an opportunity to provide a comprehensive handbook on glass of immediate archaeological value.

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RICHARD HODGES, Dark Age Economies. Gerald Duckworth and Co., Ltd, London, 1982. 230 pp. £24.00 (hard) ISBN 0-7156-1531-9

Reviewed by Tim Champion

Richard Hodges has set himself a large task: no less than a thorough re-examination of the field of early medieval Europe so long dominated by the towering figure of Pirenne. This is an ambitious book, but certainly one which needed to be written to clarify the present state of knowledge. The last fifteen years have seen a huge increase in the sheer volume of evidence for this period,

which has formed a major focus of archaeological research in all the countries around the North Sea. The current transformation of our perception of this period is almost entirely due to the urban archaeologist, and it was perhaps inevitable that at some point the traditional historical approach should be challenged by the upstart archaeology. The intellectual ancestors to whom Hodges appeals to legitimate his work are the likes of Fried, Service, Flannery, Polanyi, Renfrew and Sahlins, not least in the obvious origin of his title. It remains to be seen what history will make of this encroachment into its territory: the reception afforded to a similar pioneering effort, Klavs Randsborg's The Viking Age in Denmark, does not bode well. And yet this book deserves to be read by all students of early medieval Europe, whether their approach is primarily archaeological or historical, and by all students of early complex societies, for it achieves a considerable measure of success in its ambitious aim.

After an introductory chapter dealing with the prevailing historical theories and the growth of an anthropological theory of the relationship between trade and social development, the core of the book is to be found in the next six chapters. These are largely a factual summary of the evidence for trade and towns in the early medieval period, and are an invaluable introduction to what have hitherto been very scattered and inaccessible data. It appears to be up-to-date to early 1981, and the evidence is well chosen and generally well presented. The coverage is wide-ranging, and includes not just the trading systems themselves and the emporia, but also the boats, merchants and objects of trade as well as the subsistence economy. Though this part will grow dated as the pace of work continues, it will, for some time

yet, form a useful starting point for anyone interested in the period.

Though Hodge's ideas can be discerned in the earlier part of the book, his assessment and explanation of the evidence are more fully set out in the last three chapters. He claims to be offering only an essay in interpretation rather than a fully worked out account of the period. In this section of the book I feel we are on rather less sure ground. Part of the problem stems from a rather eclectic use of analytical concepts derived from a wide variety of sources: systems theory, Service's chiefdom and state, Polanyi's redistributive and market economies, Earle's typology of redistributive mechanisms, Renfrew's models of trade, even Gall and Saxe's ecological energy models. Though many of these ideas are explained, there is seldom any attempt to assess their relevance to the data under discussion or the enhancement of our understanding achieved by their use.

The market, for instance, is described as a high-energy structure, but it is difficult to see what we are to make of such a potentially interesting assertion, since the application of the energy model is not taken any farther. We are not really told in what way previous exchange mechanisms -- replaced by the market -- represented lower energy systems, and in the absence of a fuller analysis of the development of early medieval society in terms of energy flows, such a description loses much of its meaning.

Great emphasis is, quite rightly, placed on the emergence of the market, and on the crucial difference from the redistributive economy which preceded it. Redistribution has been a favourite concept for some years now, but it is becoming increasingly difficult

either to recognise it in the archaeological record or to define precisely what it means. Hodges makes great play of Earle's notion of levelling mechanisms, which, it is claimed, prevented individual kings from exerting sufficient control over the exchange system to transform it. The evidence for such levelling mechanisms is nowhere discussed, and neither is this rather curious concept. Insofar as they went beyond domestic production, the economies of the early post-Roman period seem rather to have been designed to mobilise resources for the elite. The association of these early trading economies with long-distance trading networks handling luxury goods is well described, but it is difficult to see where Hodges stands on the question of a prestige goods economy, for there is no extended discussion of whether this trade was a mere contingent adjunct to the chiefdoms, the mechanism through which inter-polity relationships were practised, or the very basis for the existence of the chiefdoms themselves.

Hodges rightly tries to relate changes in exchange mechanisms and settlement types to the changing structure of social organisation, but the discussion is marred by a strict adherence to Service's oversimple distinction between chiefdom and state. This leads to some strange consequences. Most people would, I suspect, think of Ethelbert's Kent, Offa's Mercia, or sixth and seventh century Merovingia as having many of the characteristics of a state, and to describe them as cyclical chiefdoms rather misrepresents them. Hodges also uses Renfrew's idea of an Early State Module, but the societies to which he applies it are not states by his definition or even his cyclical chiefdoms, but ordinary chiefdoms. Such anomalies may not represent serious flaws in the argument, but it is irritating to the reader to discover that they

have gone apparently unnoticed. A clearer definition of terms and a more critical assessment of the appropriateness of some of his analytical concepts might have yielded a clearer and more penetrating insight into the processes of state formation. As it is, we seem to hover uneasily between management theories and exploitation theories, though the mass of detailed evidence, both archaeological and historical, now available would seem to make this an ideal case study for refining these theories.

Many more detailed points also come to mind, and indeed it is a major achievement of this book that it provokes so many lines of enquiry. Was the organisation of the later Roman empire really so town-centred? What was the purpose of the peripatetic kingship? Was it a means of enforcing control of the periphery by a regular progress through the territory? Or was it a means of reducing transport costs for the collection of food-rents? Were these massive food-rents really all paid in kind, or were some of them commuted to money payments? Why were the emerging polities of north-western Europe so large compared to those in other areas of early state formation?

We may not believe that Hodges has got all the answers, or even believe the answers he has got, but it is a tribute to his book that the study of early medieval archaeology can never again be the same.

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ARCHAEOLOGY - BY ENVIRONMENTALISTS?

The use of scientific aids no more makes archaeology into a science than a wooden leg makes a man into a tree.

David Clarke

MYRA SHACKLEY, Environmental Archaeology. Allen and Unwin, London, 1981. 256pp., £18.00 (hard) ISBN 04-913-020-X, £9.95 (soft) ISBN 04-913-021-8

IAN SIMMONS and MICHAEL TOOLEY (eds), The Environment in British Prehistory. Gerald Duckworth and Co., Ltd., London, 1981. 334pp., £24.00 (hard) ISBN 0-7-156-1440-1, £7.95 (soft) ISBN 0-7-156-1441-X

Reviewed by Peter Rowley-Conwy

Behind two similar titles are two very different books. Shackley provides a chapter by chapter discussion of environmental techniques, using specific case studies as examples. Simmons and Tooley give a period by period description of British environments, drawing on various techniques for each period.

Shackley's stated goals are to provide (1) a guide to the subject and the associated literature, and (2) a reference book of procedures and techniques. The book is spiced with considerable humour, but it must be said that it largely fails in its aims. The book is written from the point of view of the specialist, not of archaeological application. It looks, in fact, very much as if it was designed to produce the kind of 'potted specialists' Shackley specifically repudiates.

This clearly emerges from the book's organisation. The first chapter, "sediments and soils", is the best one in the book, and goes a long way towards showing the archaeologist what the specialist can do to help (Shackley is herself a sedimentologist). Examples back this up; stone orientation in a flint scatter at Danebury, for example, shows that this feature is natural tumble from the ramparts, not a deliberately laid foundation. The specialist's perspective dominates, however: a study of lagoon formation at Carthage is discussed

here, while a similar study from the Netherlands is in a later chapter. This is presumably because the Carthaginian case was approached by means of sediment analysis (= sedimentology specialisation), the Dutch case through diatoms (= micro-organism specialisation). Archaeologically identical information is discussed in different places because of the different specialisations involved.

Shackley is on less certain ground when discussing environmental reconstruction, and lays herself open to criticisms from both sides. Specialists may be unhappy with the treatment of their own field - in one review, Harry Kenward (Times High. Ed. Suppl. 14/5/82) devoted nearly half the available space to correcting latin names and long words (Kenward is an insect specialist). Division into topics is never from an archaeological point of view. Coprolites, for example, are discussed in chapters 2 (microbes), 4 (pollen), 6 (seeds), 9 (parasites) and 11 (fishbones), while at no point are archaeologists told which sort(s) of specialist(s) to employ to best effect in a given situation should they have the misfortune to encounter palaeopoop. Not all the background questions receive adequate treatment - the pollen work of Tauber and Peck (suggesting that pollen frequencies may be affected by filtration and water transport) is mentioned only to be ignored in the later discussion.

This treatment emphasises the lack of an archaeological perspective. We are faced with a bewildering array of specialisations, which must surely reinforce the tendency of some archaeologists to collect specialists as if they were exotic butterflies. The student will find parts of these chapters useful, but will be forgiven for wondering (as the reviewer does) whether such things as fungus, bacteria, parasites, liverworts

etc. will ever be of other than anecdotal value to archaeology. In David Clarke's terms - are we not in danger of losing sight of the wood because of a proliferation of wooden legs?

Shackley is on even weaker ground when discussing bones and seeds. She fails to appreciate that studies in this field have a completely different goal, namely economic reconstruction. We are no longer in the realms of environmental archaeology, but in a different branch of the discipline. The problem is highlighted by the most unfortunate juxtapositioning in the book: environmental reconstruction from landsnails is in the same chapter as shell midden analysis, merely because they both involve molluscs. The seed chapter shows little interest in prehistoric economies, with its search for exotica such as the germination of wheat from Egyptian tombs, the history of brewing, and coprolites (again). The lack of interest in human behaviour is shown by the treatment of crop processing, which is discussed as a factor obscuring the "nature of the sample" (p. 122), not as one revealing a whole series of human activities.

Similar problems arise in the chapters on bones. One section discusses preservation and taphonomy, and only at its conclusion do we discover that this is intended "to distinguish those species which may act as environmental indicators from those whose representation is primarily biased by anthropogenic and/or economic considerations" (p. 165). Is the study of human behaviour as revealed by animal bones really nothing more than a weeding out process designed to leave a sample of environmental indicators? The chapters on fish and bird bones show the same orientation, with economic reconstruction and human behaviour playing second fiddle to ancient hydrology and environments. The background information is some-