

Lithic Raw Material Economies in Late Glacial and Early Postglacial Europe

Edited by Lynn E. Fisher and Berit Valentin Eriksen

BAR International Series 1093. Oxford: Archaeopress, 2002, 179 pp., (paperback).

ISBN 1-84171-471-2

Review by Teresa P. Raczek

Department of Anthropology, University of Pennsylvania

This edited volume examines an interesting time period in Western Europe, that of the Late Glacial and Early Postglacial. Changing climate and environmental conditions, coupled with enormous social and economic transformations, provide the backdrop for a series of questions about lithic raw material economies posed by the editors to the contributors. Originally presented as a symposium at the 59th Annual Meeting of the Society for American Archaeology, the volume investigates the relationship of raw material acquisition and mobility, subsistence, social systems, scheduling, the procurement of non-stone materials, and method of procurement (i.e. direct versus exchange). Comprised of 11 articles plus a summary introduction, as well as maps, tables, drawings, and photos, the volume explores these topics through a variety of methods and theoretical perspectives. Taken as a whole, the articles present a nice palimpsest of Europe (six countries are represented) from the Upper Paleolithic to the Mesolithic, with occasional forays into earlier time periods for the purposes of diachronic comparison. Moreover, the volume offers much to those who study raw material procurement in other regions of the world.

A number of common themes run throughout the volume because many of the writers are greatly influenced by the works of Binford (1979, 1980), and Torrence (1983, 1989), on the subject of raw material acquisition. While using these frameworks as a starting point, each author strives to put acquisition into a behavioral or social context that is temporal-historically specific. Binford's ideas of embeddedness and logistical versus residential mobility are particularly influential, however, each author considers the specific ways that procurement may or may not be a part of daily or seasonal movements or periodic migrations. Similarly, Torrence's premise that timing and reliability is critical to tool production and material acquisition is taken up and examined in the context of increased use of microlithic technology and changes in subsistence practices. The authors also consider raw material quality, technology, stage of production, and site function.

Most of the authors utilize two or more archaeological methods to address the questions that the editors posed. While some focus mainly on one or a few sites (Hahn, Valentin *et al.*), most treat a defined region as a whole (Sulgostowska, Eriksen, Fisher, Floss, Otte *et al.*, Olive and Taborin, Strauss, Thacker, Bicho). Most researchers in this volume utilized survey to document numerous raw material sources and to add extensively to the database of stone sources that have been commonly known for decades. While some authors used a total coverage survey approach, others opted for a less intensive method. The editors point out that, unfortunately, most researchers in this volume were only able to use macroscopic methods of raw material identification, as a result of funding limitations as well as poor sourcing contexts in many of the study areas. However, despite these limitations, the results are sufficient enough to track sources that lie within 0.5 km of the study site to in some cases, over 200 km away. The raw material analyses are accompanied by a variety of typological and technological analyses of the lithics, each of which is geared towards determining whether initial core preparation and tool production occurred at separate locations, the

extent to which resharpening and reuse influence procurement, the relationship of expedient versus formal tools to procurement, as well as other topics. Finally, some researchers (Hahn, Olive and Taborin) also include refitting in their methodological approach, in order to determine the extent to which a collection represents a single occupation, and which items were removed from the site (i.e., cores, blades, etc.).

There are a number of common findings among the contributions. There appears to be some consensus that environmental changes influenced mobility patterns, subsistence, and consequently stone tool technology and raw material procurement. Many authors (Erikson, Fisher, Floss, Otte *et al.*) find an increased reliance on more local and regional materials during the Mesolithic and a decreased reliance on long-distance materials. However, the authors move beyond the local/non-local dichotomy and provide evidence that a wide variety of raw material procurement strategies existed at the juncture of Late Glacial and Early Post-Glacial Europe.

Five authors examine the role of mobility in raw material acquisition as well as the variation of mobility strategies over time and within a given region. Hahn investigates the Buttental cave site in Germany which was occupied a very limited number of times during the Magdalenian and suggests that local materials may have been procured through “micromoves,” while non-local materials may have been procured during “macromoves.” Straus’s work supports earlier studies on the Magdalenian and Azilian and finds that raw material use in Vasco-Cantabria, Spain, and Gascony, France, was mainly local with some medium-distance material brought in during seasonal moves. Floss studies 70 sites and over 400 material sources in the Middle Rhine region of Germany and argues that changes in raw material from Magdalenian to the Final Paleolithic were brought about by a shift from logistical to residential mobility as a response to climate and environmental shifts. Thacker, in Portugal, challenges the curated/expedient dichotomy in the presence of multiple raw materials and finds that increased mobility from the Gravettian to the Magdalenian also influenced procurement. Bicho encourages researchers to examine local material with as much interest as exotic material and suggests that settlements and routes in the Portuguese Estramadura were both influenced by the location of raw material.

Two authors specifically investigate the possibility of raw material acquisition through trade and exchange activities. Eriksen finds fewer non-local stone and ornamental materials in the Mesolithic than the Upper Paleolithic at 77 sites in Switzerland and Germany and considers which materials were procured directly and which through exchange. Conducting an intra- and inter-site spatial analysis in the Paris Basin, Olive and Taborin suggest that the Upper Paleolithic site of Etiolles specialized in blade production and participated in intra-group exchanges of materials and other goods.

Finally, a number of other research questions are considered including territories, the relationship of technology and raw material, and diachronic changes of both raw material acquisition and technology. Sulgostowska, working in Poland, compares procurement patterns of the Late Paleolithic and the Mesolithic and finds increasing use of local materials that may be the result of territorial boundaries. Fisher examines the role of changing technological strategies between the Upper Paleolithic and the Mesolithic by studying 16 lithic assemblages in the same region as Eriksen and finds an association between microliths and local materials as well as larger flake and blade tools with non-local materials. Otte *et al.* study procurement patterns from the Middle Paleolithic through the Mesolithic in Belgium and find a shift of emphasis from local materials to non-local and finally back to local. They suggest that environment and culture both influenced where material was procured and prepared. Valentin *et al.*, also working in the Paris Basin, challenge the perceived influence of environmental shifts on material acquisition and find that raw material

procurement changes little from the Upper Paleolithic to the Late Paleolithic, even though lithic technology and settlement patterns change.

The volume raises a number of issues for further exploration, some explicitly and some more implicitly. First, each author creates their own distance hierarchy that may include three or four levels of distance from the study site, each level of which is defined by a different number of kilometers. Loose or varying definitions of terms such as “local,” “regional,” and “exotic” continue to pose a problem when attempting to compare raw material use strategies around the world. Second, determining whether procurement occurs directly or through exchange continues to challenge researchers, given the nature of lithic data. While some contributors begin to explore this subject (Erikson, for example), others admit that material patterns may be interpreted as either direct procurement or exchange, based solely on their associated time period (Hahn). New models are still required in this area. Similarly, the models that archaeologists build for lithic procurement versus procurement of non-tool materials also vary greatly; while some articles in this volume begin to address this issue, models should not necessarily separate items that provide “function” from those that provide “meaning,” since all objects have the potential to offer both of these qualities. Finally, some authors (see Bicho) rightly point out that raw material studies frequently focus on non-local procurement at the expense of local procurement patterns. While some examples of ways to address this problem are provided, increased research on localized procurement is essential.

This volume as a whole has much to offer; the articles are extremely data rich, and generally use multiple lines of evidence to support their findings. However, some authors over-emphasize data at the expense of presenting the full implications of their work. Overall, though, the volume is a valuable resource in methodological and theoretical contributions to the study of lithic raw materials.