

The Lithic Assemblages of Qafzeh Cave

Erella Hovers

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Reviewed by ALEXANDRE STEENHUYSE

Department of Evolutionary Anthropology, Duke University, Durham, NC 27708, USA; alexandre.steenhuysen@duke.edu

The stratigraphic association, and subsequent dating (Valladas et al. 1988; Valladas and Valladas 1991), of Levantine Mousterian lithic assemblages with archaic modern human remains (Tillier 1999; Vandermeersch 1981) at the site of Qafzeh (Israel) has contributed to changing our expectations about the circumstances of the initial spread of early modern human populations out of Africa. It also has triggered a reevaluation of our interpretive framework concerning the complex relationships between lithic industries, adaptive strategies, and biological fossil types. The recent identification of artifacts, possibly bearing symbolic meaning, in the lower Mousterian layers of Qafzeh (Bar-Yosef Mayer et al. 2009; Hovers et al. 2003) further establishes the Levant as a key region documenting the early developments of behavioral modernity outside of Africa and thus emphasizing the role played by local factors in shaping this crucial chapter of our evolutionary history.

The Lithic Assemblages of Qafzeh Cave by Erella Hovers is best described as a monograph compiling the results of her analysis of the Qafzeh Mousterian assemblages, most of which was previously unpublished. The analysis aimed at testing a series of hypotheses targeting the technological, typological, and morphological variability observed between these Levantine Mousterian assemblages. Combining a *chaîne opératoire* approach with a traditional attribute analysis, the author offers the reader a detailed description of the most prominent technological and typological features of the assemblages through descriptive narratives, detailed summary tables, as well as drawings of selected artifacts. She also succeeds at effectively highlighting some methodological issues typically associated with lithic analysis and the interpretation of lithic variability at each step of the analytical process. This leads her to tackle crucial theoretical issues associated with both lithic analysis as a means of inferring behavioral patterns and our current understanding of the Levantine Mousterian, thus challenging some common assumptions and proposing new hypotheses.

The overall theoretical framework of the volume is firmly rooted in an ecological approach to lithic assemblages. The inferred technological choices are primarily interpreted as reflecting adaptive choices resulting from compromises between environmental constraints, economic needs, and technological options. However, Hovers also considers alternative culturally-based models emphasizing the role of social factors in determining some of the observed patterns. She posits that cultural traditions may

have been crucial decisional criteria for the selection of a specific adaptive option when several options were available. Granted that techno-economic decisions are necessarily mediated through social norms, interpreting archaeological patterns as being directly determined by social agents remains far more challenging. Lithic assemblages are ultimately the end results of a complex web of dynamic interactions between many factors, which include environmental constraints, social norms, technological knowledge, or even taphonomic agents. Evaluating the capacity of cultural traditions to shape the entire technological organization would require that we are able to isolate cultural and social factors from others and that we can make consistent predictions about their effects in different contexts. For Hovers, the overall redundancy of the blank production techniques implemented at Qafzeh could indicate the determinant role played by cultural traditions in limiting innovation by forcing the group to modify existing technological solutions rather than inventing new ones. It would be interesting to estimate the actual cost of innovation in other Mousterian contexts in order to further investigate the relationship between heightened environmental pressure and the implementation of new technological strategies.

The first three chapters focus on the significance of Qafzeh within the context of the Levantine Mousterian and the description of the archaeological (lithic artifacts, faunal remains) and fossil evidence unearthed at the site since the 1930s (Chapter 3). The author also discusses the implications of her methodological choices (Chapter 2). She thus acknowledges some of the strengths of a *chaîne opératoire* approach, which allows for the identification of discrete technological patterns and detailed descriptions of technological processes. She also stresses that the lack of overall consistency and quantifiable data often associated with this approach requires the support of a quantified analysis of specific technological and morphological attributes. The next three chapters (4, 5 and 6) are dedicated to the description and analysis of the main technological components (cores, debitage, and retouched artifacts) of the assemblages. The rest of the book is dedicated to the synthesis of the analysis results (Chapter 7), their implications regarding Middle Paleolithic subsistence and mobility strategies (Chapter 8) and population dynamics in the Levant (Chapter 9).

Throughout the analysis, Hovers acknowledges the difficulty to fully explain all aspects of the variability observed between the Qafzeh assemblages using the most

typical factors hypothesized as contributing to shaping interassemblage lithic variability (climatic conditions, fauna availability, prey selection, lithic raw material availability, mobility patterns, and site function). In short, the repeated non-intensive occupations of the site do not neatly fit within any *classic* mobility models. It is expected that the modalities of lithic raw material procurement and acquisition are largely conditioned by the timing and spatial distribution of the main food sources. Since lithic raw material availability also determines the intensity of tool reduction, the regional organization of faunal resources should have a direct impact on tool design and blank production. At Qafzeh, however, Hovers was unable to identify clear correlations between fauna availability, prey selection, and lithic technological strategies. Therefore, she proposes that plant resources may have been an alternative and crucial food resource exploited at Qafzeh. Hovers stresses that the inferred mobility patterns at Qafzeh are in fact similar to the ones observed in foraging groups relying on vegetal resources. Typically, these groups tend to monitor such resources over a small territory via short-distance residential moves. According to Hovers, a logistic strategy was possible at Qafzeh, as long as it is also permitted the close monitoring of plant resources. Regional environmental conditions (climate and topography) and their impact on plant availability may therefore best explain the motivations behind the repeated occupations of Qafzeh. Other previous studies (Goren-Inbar and Speth 1994; Shea 1989; Schoeninger 1982) may further support this hypothesis. Challenging the perception of Levantine Paleolithic hunter-gatherers as strictly big game hunters, Hovers contributes to renewing the interpretative models explaining lithic variability by stressing the role of local climatic and topographic variables in defining the distribution of plant resources across the landscape favoring particular mobility strategies and technological organizations. She further suggests that more accurate environmental reconstructions would allow for taking these subtle variations in the Levant into account.

The last two chapters (Chapters 9 and 10) target questions regarding the transition between the Middle and Upper Paleolithic and the relationships between Neanderthal and modern human groups in the Levant by comparing data from other Levantine sites (Skuhl, Tabun, Kebara, Dederiyeh, Amud). In recent publications, the term “mosaic” has been frequently used to describe the circumstances

of the Middle to Upper Paleolithic transition in Europe, as well as the emergence of behavioral modernity in Africa. With increasing datasets documenting these two events, we are to expect the erosion of broad-scale models in favor of finer models emphasizing regional environmental factors as primary agents contributing to creating such mosaic scenarios. Following this trend, Hovers puts forward new hypotheses designed to explain interassemblage variability within the context of the Levant. She further argues that the Levant could be conceived of as an ideal “controlled-environment laboratory” where differences in economic and technological strategies implemented by two hominin types could be studied with greater accuracy as long as subtle climatic shifts are taken into account. These new hypotheses, along with the methodological reflection present throughout the analysis and description of the assemblages, make this volume a significant contribution to our understanding of early modern human adaptation.

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