

THE PRODUCTION OF SMALL FLAKES IN THE MIDDLE PALEOLITHIC:
A NEW LOOK AT ASSEMBLAGE VARIABILITY

Utsav A. Schurmans

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ABSTRACT

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Utsav A. Schurmans

Harold L. Dibble

The Late Pleistocene is pivotal in research on the origins of modern human behavior. In this period, anatomically modern humans are found in Africa and Neanderthals in Europe. Archaeologists have developed theories of human behavior based on the analysis of lithic artifact assemblages associated with these hominins, but few have in fact *compared* the lithic assemblages across these two regions. This dissertation does so by focusing on a specific aspect of lithic technology, the production of small flakes. According to traditional archaeological models, large tools, such as scrapers, are considered the products of intentional human behavior. Flakes—and small flakes, in particular—are usually seen as by-products or debris of the knapping process. This dissertation questions whether or not small flakes were deliberate end-products and attempts to correlate small flake production to other features of lithic assemblage variability, such as raw material utilization.

Typological, technological, and metric attributes from all stone tools, cores, and samples of complete flakes are studied from the Middle Paleolithic sites of Pech de l'Azé IV, Roc de Marsal, and Combe Capelle Bas in France, and the Middle Stone Age sites of Contrebandiers Cave in Morocco and Muguruk in Kenya. Comparisons of scar negatives on tools and cores reveal considerable overlap in their size distribution, platform preparation, scar location, and scar technology. In addition, the African and European sites share general reduction patterns, despite some differences in overall assemblage composition. The implications of these results are both theoretical and methodological. First, analysis of scar negatives suggests that small flakes were intentional. As reduction proceeded on a site, smaller and smaller pieces of raw material (including flakes) were selected for the manufacture of other flakes. Thus, several "tools" described in the Bordian typology are perhaps better interpreted as "cores" for the manufacture of often very small flakes. In lieu of Bordes' construct of "tool," archaeologists might consider scrapers alone or a composite construct, "toolcore," as introduced here. Second, there appears to be no difference in the Middle Paleolithic between how different hominins employed raw material for the manufacture of flakes and the occasional tools.