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THE TECHNOLOGICAL ABILITIES OF THE LEVANTINE MOUSTERIANS

Cultural and Mental Capacities

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1. INTRODUCTION

The present article is an endeavor to understand the technological abilities of the Levantine Mousterian population, from which some insight may be gained into the nature of human cognition at that time. The approach employed here is similar to that adopted in a previous study (Belfer-Cohen and Goren-Inbar 1994) which dealt with issues pertaining to human cognition during the Lower Paleolithic through examinations of Levantine lithic techno-complexes.

Though much of prehistoric research is concerned with the phenomenon of transitions, most efforts have been oriented towards explaining the Middle Paleolithic/Upper Paleolithic transition while the Lower Paleolithic/Middle Paleolithic transition has attracted considerably less attention (but see Clark 1982, 1988; Volman 1984; Klein 1989; McBrearty 1991; Goren-Inbar 1995). The behavior of Middle Paleolithic (i.e., Mousterian) hominids is unquestionably rooted in their past and origins—the Lower Paleolithic patterns. It is nevertheless obvious that a fundamental change must have occurred around the time of the passage from the Lower to the Middle Paleolithic which is reflected in both the typological and the technological aspects of the relevant industries (Figure 1).

When examining traits considered to be the hallmarks of the Middle Paleolithic lithic assemblages, from the Levant as well as from Europe and the Middle Stone Age of Africa, several differences from the Lower Paleolithic industries stand out quite clearly:

1. An emphasis on flake and flake tool production as opposed to an emphasis on production of core tools in the Lower Paleolithic.
3. The disappearance of tool types that were dominant in Lower Paleolithic industries, i.e., bifaces, spheroids, and chopping-tools (Volman 1984; Clark 1988; McBrearty 1991).

4. Greater standardization of the cores and their by-products, i.e., flakes and flake tools (Clark 1988; Klein 1989).

In summary, the underlying difference between the Acheulean and Mousterian assemblages is the following: in the Lower Paleolithic industries, each morphotype reflects a particular mental template outlining a specific reduction sequence, while in the Mousterian techno-complex all morphotypes derive from a single, though complex, reduction strategy. Accordingly, whereas in the Acheulean techno-complex one observes separate reduction sequences for spheroids, chopping-tools, bifaces, cores, and their products (i.e., flakes), in the Mousterian techno-complex, as a rule one finds reduction sequences involving mainly Levallois cores and their by-products.

There is, nonetheless, a high degree of similarity between the flake/flake tool components of the Late Acheulean and the Mousterian in the Levant. This can be interpreted as indicating continuity, similar to that observed in the Lower to Middle Paleolithic transitional industries in Europe (e.g., Roebroeks et al. 1988; Tuffreau 1995) and in transitional Early to Middle Stone Age lithic assemblages from Africa (Clark 1982, 1988).

Indications of this transitional nature are readily observable in the Levantine archaeological record. Thus the most common Mousterian core technology, the Levallois technique, appears in the Levant as early as the Lower Paleolithic and is used for the production of flakes and flake tools for quite a while before becoming the dominant Mousterian technique. Moreover, spheroids, which are typically absent from Mousterian assemblages just as bifaces are, disappear along with their particular production mode already during the latest stage of the Acheulean (as in Tabun E, Garrod and Bate 1937; and at Gesher Benot Ya’aqov, Goren-Inbar in prep.), though bifaces are still present at that time.

The nature of the mental development processes which may have brought about the observed changes is purely a matter for speculation. Undoubtedly, many complex proc-