ABSTRACTS

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selection of particular forms will influence the final tool morphology to various degrees. the balance between "large flake based" and nodule based tools in relation to the available raw material allows assessing the weight of the tradition versus that of adaptation to the mineral environment.

The technical behaviour answers to survival need according to cultural traditions and raw material contingences. The latter imply adaptation and reactivity in case of change and the former require stability for the consistency of human groups. To understand this behaviour, its evolution and its implication for Acheulian populations demands to consider at least the mineral environment together with the finished products.

ORAL

7. DISCOID TECHNOLOGY: A KEY TO TRACE THE EMERGENCE OF THE ACHEULEAN AT MELKA KUNTURE (UPPER AWASH, ETHIOPIA)

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In 1971, Mary Leakey established at Olduvai the distinctive characters of the Oldowan and Acheulean industries, introducing the terminology and descriptive criteria needed to define them. Following the methodological approach developed in Europe by F. Bordes, she used a typological classification of lithic assemblages. Notably, she defined "discoids" as bifacially flaked tools with a working edge along the whole circumference. Over more than 30 years, Leakey's typological definition was retained as the reference one when dealing with the earliest archaeological record of East Africa.

Since 1971, however, after that discoid technology was recognized in late Pliocene/Lower Pleistocene complexes, Leakey's "discoids" were silently moved into the category of cores. Notwithstanding much attention devoted in recent years to the technical criteria employed in small débitage in East African complexes, descriptions of discoid flaking procedure(s) generally lack in technical definition. Furthermore, the technological analysis does not take into account the theoretical discussion and analytical details developed in the last 20 years in the study of European Middle Paleolithic assemblages.

The aim of this paper is to present a systematic techno-economic account of the discoid débitage in the Lower and Middle Pleistocene industries (1.7-1.0 Ma) of the Melka Kunture region. This includes a systematic survey of raw material composition in the (paleo)channel system, to define volcanic facies, size and shape of the original matrixes in coarse alluviums.

Our analysis shows that 1) since 1.5 Ma discoid technology was used in the Ethiopian highlands both for small-medium flake production and for the extraction of large flakes to be turned into large cutting tools (LCTs); 2) in older sites the centripetal exploitation does not document a full management of the débitage convexities and of the core volume, but aims at the proper solution in the exploitation of (sub)spherical cobbles; 3) the knappers were able both to transform the original matrix shape and to select morphologically ideal cobbles in order to apply criteria required by discoid débitage; 4) discoid small débitage is based on reduction sequences longer than those documented for other methods; 5) discoid débitage coexists with unifacial centripetal prepared exploitation (UCPE), both in small débitage and in LCT chaînes opératoires. UCPE bears some of the technical criteria successively developed by the Levallois technology, suggesting that the co-existence of discoid and Levallois technologies in more recent contexts could come from these Lower Pleistocene assemblages; 6) discoid small débitage becomes dominant in the middle Acheulean and is replaced by Kombewa method for LCT production.

These technical behaviours are shared by other penecontemporaneous East African assemblages, with our without LCTs. This common background is relevant in cultural terms and notably provides a key to trace the emergence of the Acheulean in East Africa.

ORAL

8. AN ACHEULEAN LANDSCAPE IN THE ARABIAN DESERT

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