
Shapes and technological procedures of the bifacial tools at the Melka Wakena Acheulian site complex

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Résumé

Competing hypotheses have been forwarded in the last few decades about behavioural factors governing the technological choices of Acheulian LCTs makers and how they may have affected the morphology of bifacial tools. Hypotheses range from those asserting that Acheulian knappers used expert cognition and fore-planning to impose form on a wide spectrum of raw materials (i.e., mental template hypothesis) to hypotheses suggesting that the final shapes of LCTs are the mechanical outcomes of reduction intensity and the impact of raw material size, form and quality. Consisting of a number of stratified localities in an extensive spatial context, the Melka Wakena site complex presents an opportunity to explore patterns in the technology of Acheulian LCTs production through time. Here we focus on two bifacial tool types – Handaxes and Cleavers – to evaluate the influence of technological procedures, reduction intensity and raw material characteristics in determining the final shape of the bifacial tools. We present a technological study of these two tool types in stratified assemblages, examining the shape, size and raw material trends across time (from 1.6 Ma to ~ 0.7 Ma) on inter-and intra-site scales. Results show that raw material selection for these tool types was nearly identical across time and space in the MW sites, yet there is no clear co-variation between technology (blank preparation, selection and shaping) and morphology of the bifacial artifacts. We compare these results to other broadly contemporaneous African and Levantine sites and discuss parameters of decision making procedures governing the production of Acheulian LCTs.

Mots-Clés: Early Acheulian, Tool morphology, Lithic technology, Ethiopia

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