

IS OLDOWAN TECHNOLOGY THE PRODUCT OF SOCIAL LEARNING?: EVIDENCE FROM THE TURKANA BASIN

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Current debates in the study of early human tool use (Oldowan technology) center on the rate and degree of temporal variation in artifact form. The Oldowan archaeological record possibly documents variance in types of artifact production that may be associated with skill or social learning processes. Yet much of the variety in attributes of artifacts that is often associated with levels of cognition is difficult to separate from ecological or biological differences in the makers of these tools (e.g. availability and quality of stone, functional differences in tool forms). However, recent reviews of tool use among humans and non-human primates indicates that the production of sharp edged stone tools (like those found in the Oldowan archaeological record) requires a heightened level of accuracy in powerful bimanual movement. Thus investigation of the variation of this accuracy in Oldowan tool forms may reflect aspects of skill and learning in hominin groups. Here we investigate measures of this accuracy reflected in degrees of variation artifact attributes in a large dataset from the Lake Turkana basin. Results suggest Oldowan tool use incorporated selection of particular shapes and angles to enhance the efficiency of tool use through time.

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