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Behavioral Ecology and the Future of Archaeological Science

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Abstract

The future of archaeological science relies as much (if not more) on theoretical as on methodological developments. As with anything in biology, explaining past human behavior will require the application of evolutionary theory. As with anything in archaeology, theory is useless without clear ties to a material record. Human behavioral ecology (HBE) has become one of the central theoretical frameworks in archaeological science by providing a broad conceptual toolkit for linking principles of natural selection to operational hypotheses about variability in behavior and its archaeological consequences. Here we review the general approach and outline cases where applying HBE models can contribute to key research issues in archaeology. These examples illustrate how foundational applications of HBE are being built upon to explain complex and diverse phenomena ranging from the origins of agriculture to the emergence of institutionalized inequality. With each case, we outline avenues where this research strategy can advance archaeological science into the future.

Keywords: evolutionary ecology; optimal foraging theory; resource depression; habitat modification; origins of agriculture; colonization; cooperation; institutionalized hierarchy.

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