Abstract

This research hypothesizes that a data-rich, geographically explicit agent-based model can provide context for archaeological finds when the archaeological record itself is too incomplete or damaged to do so. It specifically seeks to address the problem posed by disparate but mounting evidence of earlier than expected sea crossings in the Mediterranean. Hundred-thousand-year-old lithic evidence of human presence on islands encourages the revisionist view that the Pleistocene Mediterranean was less of a barrier and more of a facilitator for travel than previously thought. Nevertheless, it fails to answer Mediterranean archaeologists' questions about how and why. This research shows how an agent-based model can be designed to allow archaeologists to formulate and test theories about the ways the environment could have created opportunities for early sea crossings. It demonstrates the process of designing and building this model in R and NetLogo. Preliminary results show that this model can be used to help archaeologists better understand the revisionist conceptual model of sea crossings in the Pleistocene Mediterranean.