

Peer Review

Review of: "Does Palaeolithic Resource Management Leading to Domestication Explain Human “Modernity”?”

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The manuscript addresses a broad and relevant question in anthropology/human evolution: whether Palaeolithic resource management (especially management of large mammals as an early step toward domestication) could explain aspects of human “modernity” through a process of human self-domestication. The attempt to integrate the domestication syndrome framework, human self-domestication, and taphonomic bias is interesting and could be valuable as a conceptual synthesis. However, the paper requires major revisions due to definitional issues, inferential control, and tone in key sections.

Although this submission is being evaluated as an “original” paper, the document does not provide reproducible methods (e.g., search/selection criteria), novel data, or an explicit analytical procedure; it also states that “all data used... have already been published” in the literature. In its current form, the manuscript fits better as a theoretical essay.

An important weakness of the manuscript is the reliance on poorly defined and ambiguous concepts, which detracts from the analytical rigor of the proposal. Below, I outline the key concepts that require further specification and, where relevant, articulate their relationship to the bibliographic sources cited. “Modernity”: the term is used in a broad and encompassing sense (anatomical, behavioural/technological, and social), but it is neither clearly defined nor operationalised, which hinders causal and chronological assessment. “Self-domestication”: it is linked to anatomical changes (e.g., gracilisation, cranial capacity reduction, neotenisation) and to pleiotropy/domestication syndrome, but the paper does not specify what evidence is considered diagnostic, nor how alternative explanations are addressed. Another example is about near-terms like “domestication syndrome”, “domesticated phenotype”, “habituation”, “incipient domestication”; are they used as distinct stages or synonyms?

On the other hand, the paper's argument would benefit from a clearer differentiation between evidence, inference, and speculation, as their current overlap reduces overall clarity and rigour. Several passages move from "could" to strong inferences without fully making assumptions explicit. For example, the Cyprus discussion implies complex organisation and animal transport in numbers sufficient to avoid inbreeding over millennia; this may be plausible, but the manuscript should clearly distinguish archaeological observations from inferred scenarios and state underlying assumptions.

The central argument depends on relative chronologies (e.g., appearance of self-domestication proxies vs. evidence for ungulate domestication/management). A chronological table or figure (phenomenon → proxy/evidence → time range → region → cited source) would substantially improve clarity and allow readers to evaluate uncertainty and regional variability.

Taphonomic logic is relevant for preservation bias and lag-time issues, but here it functions mainly as a general argument to push practices further back in time. To strengthen the paper, it should be turned into testable expectations/predictions for this specific question: what patterns in faunal/archaeozoological assemblages would be expected if pre-domestication management (without reproductive control) occurred? What signals would support or contradict such scenarios? This would increase argumentative rigour.

Declarations

Potential competing interests: No potential competing interests to declare.