

Peer Review

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

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This manuscript explores the hypothesis that Palaeolithic resource management and early forms of animal control may have contributed to processes of domestication and, ultimately, to the emergence of human “modernity.” Drawing on archaeological, zooarchaeological, ethnographic, and evolutionary perspectives, the author presents a broad comparative framework spanning ungulates, canids, and hominins, with particular emphasis on taphonomic logic and long-term processes. The paper is ambitious in scope and commendable for its integrative approach, especially the effort to contextualise domestication as a gradual, multi-stage phenomenon rather than a discrete event. The discussion of reindeer and the explicit engagement with taphonomic bias are particularly valuable contributions. Overall, the manuscript raises stimulating questions and has the potential to provoke productive debate across archaeology and evolutionary anthropology. However, several conceptual, methodological, and argumentative issues need to be addressed to strengthen its scholarly robustness.

Major points of criticism

1. Imbalanced treatment of wolf domestication hypotheses

In the section “*The case of the wolf/dog*”, the manuscript presents the commensal scavenging model as the primary explanatory framework for early dog domestication. Alternative hypotheses that emphasise deliberate human agency, such as the pet-keeping hypothesis, are not discussed in comparable depth, despite being equally plausible and, in the view of many scientists, potentially more consistent with certain archaeological and morphological observations.

This imbalance is problematic because the dog is a key taxon for the paper’s broader argument about early animal management and its relationship to human self-domestication. Important contributions

that explicitly argue for non-commensal pathways to domestication are missing and should be incorporated. Without a systematic comparison of competing models, the discussion risks appearing selective rather than evaluative.

2. Teleological narrative structure

Relatedly, the wolf/dog section implies a relatively smooth and almost inevitable progression from scavenging wolves to cooperative hunting partners. This narrative downplays the social, cognitive, and behavioural thresholds involved in sustained interspecific integration and underestimates the potential role of intentional human practices. A more critical discussion of discontinuities, failures, and alternative pathways would better reflect the complexity of the archaeological record.

3. Conceptual ambiguity between management, taming, and domestication

Throughout the manuscript, key terms such as *management*, *taming*, *habituation*, and *domestication* are introduced but not consistently distinguished in later argumentation. While the author explicitly acknowledges domestication as a process, these concepts are sometimes used interchangeably, particularly when inferring early animal control from indirect evidence. This lack of terminological precision weakens several inferential steps and should be addressed more rigorously.

4. Internal tension with the taphonomic logic framework

A central strength of the paper is its explicit reliance on taphonomic logic to argue that early stages of animal management are unlikely to leave clear archaeological signatures. However, this framework sits uneasily with statements such as “this idea lacks firm support based on the available archaeological evidence.” Given the author’s own argument that such evidence is systematically lost or underrepresented, the absence of “firm support” cannot be used straightforwardly to undermine the hypothesis without creating a methodological inconsistency. Greater clarity is needed regarding what kind of support can reasonably be expected under the proposed model.

5. Human self-domestication as an explanatory umbrella

The self-domestication hypothesis for *Homo sapiens* is presented with considerable confidence and explanatory breadth. While the hypothesis is intriguing, alternative explanations for cranial gracilisation and behavioural change (e.g., demographic scaling, energetic constraints, climatic factors) are not systematically weighed against it. As a result, the argument sometimes appears more conclusive than the current evidential base allows.

Minor comments and style

- Several passages rely on strong modal language (“clearly,” “most certainly,” “must have”) in contexts where inference remains speculative. A more cautious tone would improve scholarly balance.
- Some archaeological examples are cited descriptively but not analytically integrated into the main argument, particularly in the discussion of early canids.

Recommendation

The manuscript addresses an important and challenging topic and offers several original perspectives. However, **substantial revision** is required, particularly with respect to conceptual clarity, balance in the treatment of domestication models (especially for dogs), and internal consistency between methodological premises and conclusions. Addressing these issues would significantly strengthen the paper’s contribution to ongoing debates on domestication and human evolution.

Declarations

Potential competing interests: No potential competing interests to declare.