

Peer Review

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

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This article presents a stimulating and thought-provoking perspective on the processes of human and animal domestication, framed within a long-term theoretical and anthropological approach. Its primary strength lies in its ability to cite and integrate contributions from diverse disciplines – archaeology, evolutionary biology, genetics, ecology, and animal behaviour studies – which often do not communicate closely with one another. This multidisciplinary strategy provides an up-to-date overview of the literature and offers a coherent framework for interpreting management and domestication processes that would be difficult for individual disciplines to address independently. In particular, the paper encourages reflection on long-term mechanisms governing human–nonhuman relationships, opening perspectives that extend beyond animal domestication to include plant domestication and landscape management.

The paper addresses the question of whether a link exists between the self-domestication of anatomically modern humans and early herd management practices associated with changes in environmental energy availability. This approach is fascinating and plausible; however, as the author acknowledges, it is not directly demonstrable. Human self-domestication is therefore employed primarily as a conceptual analogy through which possible Upper Palaeolithic processes can be explored. In this respect, the article maintains a careful balance between assertive reasoning and acknowledgment of its limitations, making clear that its aim is to stimulate discussion rather than to provide definitive empirical proof.

The article's structure represents a further strength. It progresses logically from concrete empirical examples – such as Arctic reindeer, Eurasian steppe horses, bovid herds in the Fertile Crescent, and Palaeolithic wolves – to more abstract theoretical discussions, including human self-domestication and

taphonomic logic. This organisation enables the reader to move from specific case studies to broader generalisations while remaining grounded in illustrative evidence. The use of spatially and temporally distant examples is handled with relative care: these cases are not presented as historically connected events but rather as conceptual tools for exploring general mechanisms, particularly the economic and biological dynamics of domestication. In this sense, the potential “spatial mismatch” of examples is mitigated by the paper’s explicit narrative strategy. The discussion section, in particular, succeeds in contextualising the limits of the argument, explicitly acknowledging the speculative nature of certain claims and refraining from presenting them as demonstrable historical facts.

The article’s interdisciplinary ambition is further reflected in its engagement with multiple strands of literature and empirical cases. It effectively situates its arguments within broader debates on domestication, including recent work on plant domestication and landscape management, exemplified by volumes such as *Unravelling Domestication* (Philosophical Transactions B, Royal Society)^[1], which reflect a growing discussion within the scientific community on how domestication should be defined, what kinds of archaeological evidence can be identified, and which methodological approaches are most suitable for investigating these processes.

From a critical perspective, some readers may find the density of examples and references demanding, and distinguishing between well-supported evidence and more speculative extrapolations requires careful attention. Moreover, the proposed model may appear overly simplified when applied to highly complex historical processes; nevertheless, the text explicitly recognises that multiple interacting factors are involved and does not attempt to impose a single, definitive explanatory framework. The discussion section is generally well balanced and consistently acknowledges the uncertainties inherent in Palaeolithic reconstructions.

A minor issue concerns the frequent use of assertive language (e.g. *proves, most certainly, ultimately, exhaustively, irreversible, clearly*) and the occasional presentation of speculative causal links as established facts. In several cases, these formulations could benefit from more cautious phrasing (e.g. *may, might, appears, suggests, potentially*), which would better reflect the hypothetical nature of some arguments.

Overall, the article successfully stimulates reflection on the nature of domestication and provides a valuable conceptual contribution to future research on both animal domestication and analogous processes in plants, landscapes, and humans. In conclusion, the paper stands out for its theoretical ambition, interdisciplinary scope, and capacity to encourage broad and critical reflection, while also demonstrating a commendable awareness of its own limitations.

References

1. [^]Rosalind Emma Gillis, Marta Dal Corso, Hugo Rafael Oliveira, Robert N. Spengler. (2025). Unravelling domestication: introduction to the theme issue. *Phil. Trans. R. Soc. B*, vol. 380 (1926). doi:10.1098/rstb.2024.0187.

Declarations

Potential competing interests: No potential competing interests to declare.