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What Is Animal Prehistory?

ABSTRACT *This paper engages animal archaeologies with key debates in animal history. Animal archaeology is currently and primarily framed as a multi-species venture, and a brief review of its disciplinary genealogies illustrates dominant foci on questions of ecology and (posthuman) ontology. I argue that this situation, paradoxically, has led archaeologists to largely neglect the challenges of the historical animal. To overcome this constriction, animal archaeology needs to conceive of itself also as a critical and conceptual project—coevally celebrating and problematizing the notion of “the animal.” Importantly, this project pivots to questions of historicity, with regard to both its animal subjects of study and animal scholarship itself. I position “animal prehistory” as a strategic lens to bring to the fore and interrogate these unattended animal specificities and articulate them with long-standing concerns in animal history. I suggest this can proffer a new, exciting field of inquiry and exchange for both historians and archaeologists.* **KEYWORDS** Animality, historical animal, multispecies archaeology, human-animal relations, zoo-difference

INTRODUCTION

This inaugural issue of *Animal History* offers a welcome opportunity to query the troubled relationship between historical and archaeological scholarship with regard to other animals—how we portray and write about them, how they figure in prevalent ideas of pastness, and what they reveal about our own positionalities and preoccupations. I begin with a basic observation: notwithstanding the recent surge of attention to animal matters in archaeology,¹ these discussions rarely draw on animal history literatures and are predominantly framed as part of a “multi-species” venture.² There is at present no

1. Nerissa Russell, *Social Zooarchaeology: Humans and Animals in Prehistory* (Cambridge; New York: Cambridge University Press, 2012); Erica Hill, “Archaeology and Animal Persons: Toward a Prehistory of Human-Animal Relations,” *Environment and Society* 4, no. 1 (1 September 2013): 117–136; Yannis Hamilakis and Nick J. Overton, “A Multi-Species Archaeology,” *Archaeological Dialogues* 20, no. 2 (December 2013): 159–173; Naomi Jane Sykes, *Beastly Questions: Animal Answers to Archaeological Issues* (London: Bloomsbury Academic, 2015); Brian Boyd, “Archaeology and Human-Animal Relations: Thinking Through Anthropocentrism,” *Annual Review of Anthropology* 46, no. 1 (2017): 299–316; Peter Whitridge and Erica Hill, eds., *Reimagining Human-Animal Relations in the Circumpolar North*, Arctic Worlds (Abingdon, Oxon, UK; New York: Routledge, 2024); Shumon T. Hussain and Nathalie Ø. Brusgaard, “Human-Beaver Cohabitation in the Early and Mid-Holocene of Northern Europe: Re-Visiting Mesolithic Material Culture and Ecology Through a Multispecies Lens,” *The Holocene* 34, no. 1 (1 January 2024): 25–55.

2. Suzanne E. Pilaar Birch, ed., *Multispecies Archaeology*, Archaeological Orientations (London; New York: Routledge, 2017); Oliver J. T. Harris and Craig N. Cipolla, “Multi-Species Archaeology: People, Plants and Animals,” in *Archaeological Theory in the New Millennium. Introducing Current Perspectives* (London: Routledge, 2017), 152–170.

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“animal prehistory,”³ in other words, to complement the now well-established field of animal history⁴ and to build new animal-oriented alliances across the historical sciences. But why is this the case? And what can this situation tell us about animal archaeologies as they currently take shape? Attending to such questions is not merely a scholastic exercise but can play an important role in strengthening and revising the “animal lens”⁵ in both disciplines, thereby nurturing the ambition of a truly transepochal animal-oriented research program at the intersection of history and archaeology. Such a research program comprising and re-articulating what is sometimes also called “shallow” and “deep history”⁶ is needed to satisfy some of the broader ambitions and goals of the original “animal turn”⁷ across the humanities, and may also help to better engage with a range of thorny problems that plague the study of animal pasts.

In what follows, I take a critical look at multi-species archaeology and the opportunities, challenges, and limits of animal-oriented scholarship in order to distill the contours of what may be termed “animal prehistory.” The question of animal prehistory is brought up not because there is need to coin yet another animal archaeology term but rather to draw attention to shared sensibilities and complications vis-à-vis engaging with animal pasts at the history-archaeology nexus. I argue that some of these issues are currently not at the center of archaeological attention, rendering the idea of animal prehistory a useful foil to unearth and belabor them. I am particularly critical of archaeologists’ tendency to table animal archaeologies in continuity to—or as a logical progression of—particular kinds of zooarchaeology and the related proclivity to picture such archaeologies primarily as projects of positivist science, with little consideration of animal archaeologies as a form of literature and critical history-writing. My contestation is that animal archaeologies, by attending chiefly to zooarchaeology as well as posthuman, ontological, and feminist perspectives devised by scholars foremostly interested in the present and future of how we think about and interact with other animals, seem to have largely lost sight of the very

3. But see Shumon T. Hussain, “Deep Animal Prehistory: Gathering Feral Voices from Vanished Pleistocene Worlds,” Keiko Kitagawa, Valentina Tumolo, and Marta Diaz-Zorita Bonilla, eds., *Beyond Subsistence. Human-Animal Interactions* (Tübingen, Germany: CRC 1070 Monographs, 2024), 19–68, for an attempt to outline and motivate a prehistory of and for other animals.

4. Philip Howell, “Animals, Agency, and History,” in *The Routledge Companion to Animal–Human History* (Routledge, 2018); Mieke Roscher, André Krebber, and Brett Mizelle, eds., *Handbook of Historical Animal Studies* (Boston: De Gruyter, 2021); Susan Nance, ed., *The Historical Animal*, 1st ed. (Syracuse, NY: Syracuse University Press, 2015); Sandra Swart, *Riding High: Horses, Humans and History in South Africa* (Johannesburg: Wits University Press, 2010); Sandra Swart, *The Lion’s Historian: Africa’s Animal Past* (Johannesburg: Jacana Media (Pty), 2024); Harriet Ritvo, “Recent Work in Animal History (and How We Got Here),” *Journal of Modern History* 94, no. 2 (June 2022): 404–419.

5. Joshua Specht, “Animal History After Its Triumph: Unexpected Animals, Evolutionary Approaches, and the Animal Lens,” *History Compass* 14, no. 7 (2016): 326–336.

6. Andrew Shryock, Timothy K. Earle, and Daniel Lord Smail, eds., *Deep History: The Architecture of Past and Present* (Berkeley: University of California Press, 2011).

7. Harriet Ritvo, “On the Animal Turn,” *Daedalus* 136, no. 4 (2007): 118–122; Sandra Swart, “‘But Where’s the Bloody Horse?’: Textuality and Corporeality in the ‘Animal Turn,’” *Journal of Literary Studies* 23, no. 3 (1 September 2007): 271–292; Kari Weil, “A Report on the Animal Turn,” *Differences* 21, no. 2 (1 September 2010): 1–23; Cary Wolfe, “Moving Forward, Kicking Back: The Animal Turn,” *Postmedieval: A Journal of Medieval Cultural Studies* 2, no. 1 (1 March 2011): 1–12.

problem of the “historical animal”⁸ itself. Making space for such animal historicity, however, is necessary to evade the pitfalls of presentism, and opens up a critical space of interdisciplinary exchange between historians and archaeologists. This paper is my humble attempt to work toward such a space of productive debate and interaction.

GENEALOGIES OF MULTI-SPECIES ARCHAEOLOGY

Although this is not the place to present a detailed history of archaeological thought with regard to nonhuman animals, the way in which animals have recently come to the fore in archaeology is notable and merits a few brief comments. Already on the linguistic surface, animals are pivoted in a manner contrasting recent developments in historical scholarship: while “animal history” draws attention to animals as subjects and potential protagonists of historical processes, terms such as “animal archaeology” or “animal prehistory” as I use them here are difficult to spot in the archaeological literature. Moreover, the term “animal archaeology” is readily equated with “faunal archaeology” or “zooarchaeology”—the focused study of animal remains from archaeological contexts⁹—thus conflating an archaeology reconfigured by the animal turn with a long-standing subdisciplinary endeavor rooted in particular sources and research methods.¹⁰ This confusion—rarely articulated in written form but frequently voiced at academic conferences and symposia—on the animal turn itself, often viewed as superfluous for archaeology, is said to have factored in animals and their behaviors since its disciplinary beginnings. The term which in the last couple of years has gained archaeological traction instead is “multi-species archaeology,” and I believe this is no mere coincidence: “multi-species” is much less emphatic and provocative than “animal (pre)history” and, at first glance, also much humbler in its ambitions.

“Multi-species” immediately places emphasis on the diversity of life and thereby decenters human projects but, paradoxically, also those of other animals. The animal question is explicitly broached in a broader ecological rather than historical perspective. As Suzanne Pilaar Birch has put it, “Multispecies archaeology can really be viewed as *archaeo-ecology*, as an archaeology of life which understands the past through networks and interactions rather than stochastic events and places” (emphasis added).¹¹ Such a multi-species archaeology is almost trivial in its insistence on the interconnectedness of life and advocates for a close-to-literal understanding of “multi-species” as the *interactions* of species in the past, illuminated for example through the study of food webs, co-mobilities, and niche dynamics. Even though Pilaar Birch also briefly engages with multispecies ethnography and selected work in human-animal studies (HAS), the vision of multi-species archaeology she sketches clearly stands in the tradition of

8. See esp. Nance, *The Historical Animal*.

9. Simon J. M. Davis, *The Archaeology of Animals* (London: Routledge, 1987); Diana Gifford-Gonzalez, *An Introduction to Zooarchaeology* (New York: Springer, 2018).

10. See esp. Davis, *The Archaeology of Animals*.

11. Suzanne E. Pilaar Birch, “Introduction,” in *Multispecies Archaeology* (London; New York: Routledge, 2017), 4.

natural history—humans appear as yet another organism in a given ecosystem.¹² This archaeo-ecology shares features with life-scientific methods and understandings of the role and place of other animals in the past; it also voices a critique on the wider animal humanities that is rarely noticed: Pilaar Birch decidedly notes that “although a ‘multispecies ethnography’ and human-animal studies offer many useful insights, they are not enough. It is essential to take as inspiration a much broader compass from the earth and life sciences that challenges our notions of evolution and life on earth.”¹³ I will return to this supposed challenge below as it largely defines the present discourse in animal archaeology.

Another short note on typography: I have opted to refer to “multi-species” here because this is a common rendering of the term in the archaeological literature¹⁴ and the hyphenation may tell us more than meets the eye. It not only defuses the double implication of “multispecies” in Donna Haraway’s¹⁵ sense—as both *critique* and *extension* of the troubled species concept in different hetero-topological worlds—it may also be taken to suggest that species-centeredness (or speciesism) can be addressed simply by adding a plethora of other (nonhuman) species to the totality of analysis. “Multi-species” can in fact be read to *retain* species separateness—*contra* Haraway—and may thus bear stronger conceptual kinship with multi-species ecology, which notably also features a hyphen, than multispecies studies in anthropology and the environmental humanities. Multi-species ecology is part of the broader endeavor of community ecology and typically concerned with population-level species interactions and types of coexistence,¹⁶ echoing Pilaar Birch’s construal of multi-species archaeology in significant ways and putting its genealogy into further substantive context.

The second strand of multi-species thinking in archaeology complements this genealogy but similarly lacks significant import from historical scholarship. This body of literature includes Yannis Hamilakis and Nick Overton’s initial proposal for a multi-species archaeology,¹⁷ Oliver Harris and Craig Cipolla’s prominent textbook coverage thereof,¹⁸

12. See esp. Melanie Challenger, *How to Be Animal: A New History of What It Means to Be Human* (New York: Penguin Books, 2021), for an insightful discussion of these and related views.

13. Pilaar Birch, “Introduction,” 2.

14. C.f. e.g. Hamilakis and Overton, “A Multi-Species Archaeology”; Harris and Cipolla, “Multi-Species Archaeology: People, Plants and Animals”; Georgia Koromila et al., “The Neolithic Tell as a Multi-Species Monument: Human, Animal, and Plant Relationships Through a Micro-Contextual Study of Animal Dung Remains at Koutroulou Magoula, Central Greece,” *Journal of Archaeological Science: Reports* 19 (1 June 2018): 753–768.

15. Donna J. Haraway, *Simians, Cyborgs, and Women: The Reinvention of Nature* (New York: Routledge, 1991); Donna J. Haraway, *The Companion Species Manifesto: Dogs, People, and Significant Otherness*, Paradigm 8 (Chicago: Prickly Paradigm Press, 2003); Donna J. Haraway, *When Species Meet* (Minneapolis: University of Minnesota Press, 2008).

16. Jeffrey C. Miller, “Insect Natural History, Multi-Species Interactions and Biodiversity in Ecosystems,” *Biodiversity & Conservation* 2, no. 3 (1 June 1): 233–241; Alexandra Weigelt et al., “Identifying Mechanisms of Competition in Multi-Species Communities,” *Journal of Ecology* 95, no. 1 (2007): 53–64; J. HilleRisLambers et al., “Rethinking Community Assembly Through the Lens of Coexistence Theory,” *Annual Review of Ecology, Evolution, and Systematics* 43 (1 December 2012): 227–248.

17. Hamilakis and Overton, “A Multi-Species Archaeology.”

18. Harris and Cipolla, “Multi-Species Archaeology: People, Plants and Animals.”

as well as the seminal work of scholars such as Erica Hill,¹⁹ Kristin Armstrong Oma,²⁰ and Brian Boyd.²¹ Taken together, this scholarship represents a confluence of emancipatory work, centering nonhuman animals and other beings in archaeological theory and analysis. Importantly, the term “multi-species” is very differently understood and mobilized here when compared to the “archaeo-ecology” championed by Pilaar Birch and others. Harris and Cipolla muster backgrounds in posthumanism, new materialism and ontological archaeology, and are variously influenced by Indigenous critiques.²² Yannis Hamilakis and Brian Boyd are critical theorists and draw heavily from post-colonial literatures, including (neo)feminist theory, critical animal studies, critical heritage studies, and migration studies. Erica Hill’s animal gaze, albeit often incorporating ethno-historical sources, is primarily influenced by human-animal studies and cultural anthropology. Ian McNiven’s zooarchaeology, finally, can be added to this list as it is widely recognized as a form of Indigenous archaeology.²³ This scholarship is heterogeneous in its details but crystallizes various counter-archaeologies of human-animal relations, whether foregrounding “agency” (Hill), sensory resonance (Hamilakis/Overton), “assemblages” (Harris/Cipolla), “co-becomings” (Armstrong Oma), or power relations (Boyd). Animal specificity is rarely theorized in these counter-archaeologies, however, and they often carry on the legacies of what has been called “relational”²⁴ and “symmetrical” archaeology.²⁵

19. Erica Hill, “The Contextual Analysis of Animal Interments and Ritual Practice in Southwestern North America,” *Kiva* 65, no. 4 (2000): 361–398; Erica Hill, “Animals as Agents: Hunting Ritual and Relational Ontologies in Prehistoric Alaska and Chukotka,” *Cambridge Archaeological Journal* 21, no. 3 (October 2011): 407–426; Hill, “Archaeology and Animal Persons”; Whitridge and Hill, *Reimagining Human-Animal Relations in the Circumpolar North*.

20. Kristin Armstrong Oma, “Between Trust and Domination: Social Contracts between Humans and Animals,” *World Archaeology* 42, no. 2 (1 June 2010): 175–187; Kristin Oma Armstrong, *The Sheep People: The Ontology of Making Lives, Building Homes and Forging Herds in Early Bronze Age Norway* (Sheffield, UK; Bristol, CT: Equinox Publishing, 2018); Kristin Armstrong-Oma, “The View from the Cheap Seats: An Archaeologist Grappling with Multispecies Entanglements,” *Current Swedish Archaeology* 29, no. 1 (9 December 2021): 72–77.

21. Brian Boyd, “Archaeology and Human-Animal Relations: Thinking Through Anthropocentrism,” *Annual Review of Anthropology* 46 (2017): 299–316.

22. For the Indigenous critique vis-à-vis multispecies thinking, see e.g. Robin Wall Kimmerer, *Braiding Sweetgrass*, 1st ed. (Minneapolis, MN: Milkweed Editions, 2013); Kim TallBear, “Why Interspecies Thinking Needs Indigenous Standpoints,” *Cultural Anthropology*, no. 24 (2011): 1–8; Zoe Todd, “Fish, Kin and Hope: Tending to Water Violations in Amiskwaciwâskahikan and Treaty Six Territory,” *Afterall: A Journal of Art, Context and Enquiry* 43 (March 2017): 102–107; Kim Tallbear and Angela Willey, “Critical Relationality: Queer, Indigenous, and Multispecies Belonging Beyond Settler Sex & Nature,” *Imaginations: Journal of Cross-Cultural Image Studies* 10, no. 1 (25 July 2019): 5–15.

23. Ian J. McNiven, “Saltwater People: Spiritscapes, Maritime Rituals and the Archaeology of Australian Indigenous Seascapes,” *World Archaeology* 35, no. 3 (1 January 2004): 329–349; Ian J. McNiven, “Navigating the Human-Animal Divide: Marine Mammal Hunters and Rituals of Sensory Allurement,” *World Archaeology* 42, no. 2 (June 2010): 215–230; Ian J. McNiven, “Theoretical Challenges of Indigenous Archaeology: Setting an Agenda,” *American Antiquity* 81, no. 1 (January 2016): 27–41.

24. E.g. Chantal Conneller, *An Archaeology of Materials: Substantial Transformations in Early Prehistoric Europe*, Routledge Studies in Archaeology 1 (New York: Routledge, 2011); Eleanor Harrison-Buck and Julia A. Hendon, eds., *Relational Identities and Other-than-Human Agency in Archaeology* (Louisville: University Press of Colorado, 2018).

25. See e.g. Bjørnar Olsen, “Symmetrical Archaeology,” in *Archaeological Theory Today* (Cambridge: Polity Press, 2012), 208–228.

It is central to these approaches, I believe, that they are fueled by a deeply critical orientation toward Western humanism—what Richard Grusin has attempted to capture in the figure of the “nonhuman turn”²⁶ in the 21st-century West—and thus variously take stock of the politics of the present. Harris and Cipolla are quite clear about this when they say that “archaeologists need to find a way of discussing humans, plants and animals that doesn’t hide our interest in human beings, but equally avoids separating them off as a uniquely special entity in the world. We need a flat ontology, in other words.”²⁷ This ontological bearing—the talk of “flat ontologies,” for example—is rarely historicized and typically presented as a problem of how we think about and analyze animals *in general*. Nerissa Russell has rightly criticized this generalization and argued that tearing down the distinction between “wild” and “domestic” animals entirely may mask important historical transformations as such categorizations gained human significance,²⁸ yet she has also qualified the issue as a problem of “pigeonholing” and in other places framed it as a mere clash of perspectives premised on discrete vs. gradual boundaries at the human-animal interface.²⁹ What remains is an overriding difficulty to align the contextual ambition to map and interrogate other animals in their historical situatedness with the ontological critique of modernist modes of thinking about them. This discrepancy indeed risks re-introducing yet another *universalism*—whether “flat” or “rhizomatic”—which is arguably of limited value given archaeologists’ interests in how various animals have fared and how human-animal relationships were configured in different times and places. Through the backdoor, critique of this sort that is exclusively rooted in the politics of the present without gesturing beyond it, or at least developing a dedicated historical outlook, can easily contribute to yet another manifestation of progressivist or “Whig” history—a history that presents binary practices of ordering and understanding the world as anachronistic—as a symptom of modernity—and thus as a priori inadequate and flawed.

HUMANISM AND ANTHROPOCENTRISM IN ARCHAEOLOGY

Archaeology has cultivated an opaque and often-ambivalent relationship with humanism, and this is clearly linked to its promise to elucidate the human—the *Anthropos*—as an evolutionary singularity, coevally unifying all of humanity *and* explaining its culture-historical diversity. As Stefanos Geroulanos has highlighted, the very idea of “prehistory” can indeed not be detached from the historical project of modernity and, as such, served as a prime vehicle to legitimate and reproduce particular views of particular presents.³⁰ Archaeology, especially the archaeology of human origins, has therefore never escaped

26. Richard A. Grusin, ed., *The Nonhuman Turn*, 21st Century Studies (Minneapolis: University of Minnesota Press, 2015).

27. Harris and Cipolla, “Multi-Species Archaeology: People, Plants and Animals,” 156.

28. Nerissa Russell, “Wild Meets Domestic in the Near Eastern Neolithic,” *Animals* 12, no. 18 (January 2022): 2335.

29. Nerissa Russell, “The Wild Side of Animal Domestication,” *Society & Animals* 10, no. 3 (1 January 2002): 285–302.

30. Stefanos Geroulanos, *The Invention of Prehistory: Empire, Violence, and Our Obsession with Human Origins* (New York: Norton, 2024).

the need to frame, negotiate, and re-calibrate nature-culture relations,³¹ so that the Descartes-centered narrative of humanism vs. naturalism often invoked to motivate the turn to animals never really applied to archaeology as a discipline. Instead, archaeology seems to have developed its characteristic form of practiced humanism based on a dedicated engagement with the *human animal*, incentivizing the idea that human exceptionalism is rooted in a specific but evolved *bodily* condition, extended or not. Archaeology, seen from this perspective, has so arguably *contributed* to the consolidation of what Kay Anderson and Colin Perrin have identified as the dominant science-based understanding of human exceptionalism³² precisely *because of*, and not despite of, the foregrounding of human animality.³³ Archaeology's deep-running obsession with the animal side of human nature is well reflected in its selective recruitment and celebration of other animal sciences, especially primatology, which has, paradoxically, only furthered the promotion and normalization of a "logic of lack" vis-à-vis other animals, and so merely reinforced tropes of human exceptionality, uniqueness, and nature transcendence.³⁴ This orientation is most apparent in publications in journals such as *Evolutionary Anthropology*. Archaeology thus clearly, and pervasively, remains troubled by humanist goals and ambitions.

The situation is deeply contradictory as archaeologists often consider themselves as considerably "less" humanist than many of their colleagues in the humanities—for example, with regard to the weight attached to the universal figure of a supposedly rational, moral, and self-sufficient human detached from nature (*Homo clausus*³⁵). Archaeology not only conjures an influential research tradition rendering human agency fairly limited and framing a deeply impersonal past governed by powerful external forces, including environment and climate change; it has also, in the view of many scholars at least, traditionally cemented animal behavior as a key context of past human behavior, as is supposedly well documented in the history of zooarchaeology.³⁶ Yet I believe that such deflection of the original critique linked to the animal turn—namely, to recognize human sociality, culture, and history as a more-than-human affair—severely misses the point as

31. Raymond Corbey, *The Metaphysics of Apes: Negotiating the Animal-Human Boundary* (Cambridge; New York: Cambridge University Press, 2005).

32. Kay Anderson and Colin Perrin, "Removed from Nature': The Modern Idea of Human Exceptionality," *Environmental Humanities* 10, no. 2 (1 November 2018): 447–472.

33. See also the key role delegated to archaeology in this debate in Challenger, *How to Be Animal*.

34. See the remarkable jubilation of the recent discovery of orangutan self-medication in the wild (Isabelle B. Laumer et al., "Active Self-Treatment of a Facial Wound with a Biologically Active Plant by a Male Sumatran Orangutan," *Scientific Reports* 14, no. 1 (2 May 2024): 8932) on various social media platforms in early May 2024, which among many other things also speaks to the still widespread, one-dimensional understanding of other animals and their capacities. Cf. e.g. Cindy Engel, *Wild Health: How Animals Keep Themselves Well and What We Can Learn from Them*, 1st ed. (Boston: Houghton Mifflin Harcourt, 2002).

35. Norbert Elias, "Die Entstehung Des Homo Clausus," in *Lust an Der Erkenntnis. Der Mensch Als Soziales Wesen. Ein Lesebuch* 2. Auflage (Munich/Zurich: Piper, 1998), 173–181.

36. Erica Hill, "Pre-Domestication: Zooarchaeology," in *Pre-Domestication: Zooarchaeology* (Berlin: De Gruyter Oldenbourg, 2021), 21–36; Russell, *Social Zooarchaeology*; Umberto Albarella and Angela Trentacoste, eds., *Ethnozooarchaeology: The Present and Past of Human-Animal Relationships* (Oxford: Oxbow Books; Oakville, CT: David Brown Book Co., 2011); Lee G. Broderick, ed., *People with Animals: Perspectives & Studies in Ethnozooarchaeology* (Oxford: Oxbow Books, 2016).

taking animals and animality more seriously is not merely a question of the importance of animals as subjects of empirical study. This is why multi-species archaeology or “animal prehistory” cannot simply be (social) zooarchaeology 2.0, even though the latter’s initial framing as an emphatic response to narrow economic perspectives on human-animal relationships may be taken to suggest so.³⁷

The trouble with humanism, in this optic, then, is really not about the tendency to take the human as a starting point or even a nodal point of analysis at all, yet this appears to be the focus of current debate in archaeology, irrespective of whether the animal question is framed in terms of archaeo-ecology (Pilaar Birch) or the posthuman (Boyd). Brian Boyd’s “Archaeology and Human–Animal Relations: Thinking Through Anthropocentrism” illustrates this quite well as the problem of human-centeredness is squarely put front and center in how to interrogate the relationship between humans and animals in the archaeological record. It is telling, I would argue, that anthropocentrism is primarily discussed here through the lens of critical animal studies and that it is cast in yet another dualism: as ethical-normative vs. ontological anthropocentrism, with speciesism being a variant of the former.³⁸ What is confusing about these debates, as Boyd notes himself, is that a fundamental form of anthropocentrism can, of course, never be avoided as all research is conducted by and for human knowing subjects.³⁹ A “God’s-eye view” of reality, or a “view from nowhere,” is therefore impossible by definition,⁴⁰ but is not an argument against the possibility to enrich, complicate, and unsettle what we consider the “default” or “normal” gaze on other animals. As noted above, animal and multispecies scholarship frequently take issue with sedimented ideas of human exceptionality, as these underpin authoritative “ontostories”⁴¹ such as those orbiting the becoming of our species⁴² and the process of animal domestication,⁴³ but these ideas register complex and non-trivial relationships with *different* anthropocentric positionalities.⁴⁴ It is therefore of

37. Hamilakis and Overton, “A Multi-Species Archaeology”; Nick J. Overton and Yannis Hamilakis, “A Manifesto for a Social Zooarchaeology. Swans and Other Beings in the Mesolithic,” *Archaeological Dialogues* 20, no. 2 (December 2013): 111–136; Nick J. Overton, “More than Skin Deep: Reconsidering Isolated Remains of ‘Fur-Bearing Species’ in the British and European Mesolithic,” *Cambridge Archaeological Journal* 26, no. 4 (November 2016): 561–578; Nick J. Overton, “The Rhythm of Life: Exploring the Role of Daily and Seasonal Rhythms in the Development of Human-Nonhuman Relationships in the British Early Mesolithic,” in *Multispecies Archaeology*, ed. Suzanne Pilaar Birch (London: Routledge, 2018), 295–309.

38. Boyd, “Archaeology and Human–Animal Relations,” 301.

39. See also Eileen Crist, “Anthropocentrism,” in *Companion to Environmental Studies*, ed. Noel Castree, Mike Hulme, and James D. Proctor (London; New York: Routledge, 2018), 735–739.

40. See esp. Adam Frank, Marcelo Gleiser, and Evan Thompson, *The Blind Spot: Why Science Cannot Ignore Human Experience* (Cambridge, MA; London: The MIT Press, 2024).

41. See Severin Fowles in Benjamin Alberti et al., “‘Worlds Otherwise’: Archaeology, Anthropology, and Ontological Difference,” *Current Anthropology* 52, no. 6 (December 2011): 896–912.

42. Shumon T. Hussain, “Multispecies Alterity: Interrogating Hominin, Animal and Techno-Material Diversities in the Deep Past,” in *Alterity and Human Evolution: Deep Time and Multispecies Perspectives on Difference and Variation* (Oxford: Berghahn Books, in press); Shumon T. Hussain, “The Dialectic Neanderthal: Reconfiguring the Human Question in the Face of Planetary Catastrophe,” *Yearbook of Philosophical Anthropology*, in press.

43. Boyd, “Archaeology and Human–Animal Relations”; Harris and Cipolla, “Multi-Species Archaeology: People, Plants and Animals.”

44. Crist, “Anthropocentrism”; Anderson and Perrin, “Removed from Nature.”

critical importance to neatly and explicitly distinguish between epistemological and ontological goals of animal archaeology, including why we talk about “ontology” in these contexts in the first place.

We may, for example, interrogate the dominant ontologies of the present, and how they figure in our scholarly thinking about other animals, how we engage with them in our daily lives, and how research frameworks and protocols privilege particular observations, arguments, insights, and perspectives, while closing off others. This can also include critical attention to the kinds of “implicit ontologies”⁴⁵ perpetuated by animal archaeology as a body of literature and discursive force. It does not immediately follow, however, that the question of ontology can be universalized, for instance, by assuming that the many identified “pathologies” of modern zoo-ontologies must be “rolled back” to reveal a “purer” and more adequate image of past animals and human-animal relationships. This is also the trouble with the call for “flat ontologies” understood as an ontological thesis about how the world (always) was “in actual fact,”⁴⁶ as this certifies precisely the kinds of ontostories animal archaeologies should be critically engaging with (and arguably pushing back against). “Flattening” the ontological plane, perhaps paradoxically so, was therefore never really an ontological maneuver but a deeply epistemological one. The goal is typically to level the conceptual playing field in order to open up a maximally inclusive space of historical possibilities, precisely without closing off any alterities *or* commonalities.⁴⁷ Yet many animal archaeologies of more recent date appear to locate, often in wide-ranging explorations, what sort of ontological lens should best be adopted in order to examine the past.⁴⁸ This not only risks coating fundamentally epistemological questions

45. See e.g. Raymond Corbey, “Theoretische Probleme Zur Kognition, Sprache Und Gesellschaft Bei Frühen Hominiden,” *EAZ – Ethnographisch-Archäologische Zeitschrift* 39 (1998): 321–333; Paul Diesing, *Patterns of Discovery in the Social Sciences* (London: Routledge, 1971).

46. For a similar critique on “metaphysical archaeologists” and the risk of simply introducing “new metaphysical dogmas,” see e.g. Benjamin Alberti, “Archaeologies of Ontology,” *Annual Review of Anthropology* 45, no. 1 (21 October 2016): 163–179; and Artur Ribeiro, “Archaeology and the New Metaphysical Dogmas: Comments on Ontologies and Reality,” *Forum Kritische Archäologie* 8 (2019): 25–38. The various criticisms voiced against so-called object-oriented ontologies (OOOs) in the wake of Graham Harman, Ian Bogost, and others have pointed to similar issues, but Steven Shaviro’s problematization of the inherent reductivism of many OOs as they regard their target entities as always already-there rather than brought into (historical) existence in incongruent yet very real ways, is noteworthy in this context (Steven Shaviro, *The Universe of Things: On Speculative Realism*, Posthumanities 30 (Minneapolis: University of Minnesota Press, 2014). Pascal Eitler’s “Animal History as Body History: Four Suggestions from a Genealogical Perspective,” *Body Politics* 2, no. 4 (2014): 259–274—a critique of static ontologies of the body—aligns with these voices against an ontology that precedes history. Daniel Vandermommers has drawn my attention to the important work of Steven Shaviro.

47. Alberti et al., “Worlds Otherwise.”

48. See e.g. Armstrong, *The Sheep People*; Vesa-Pekka Herva and Antti Lahelma, *Relational Archaeologies and Cosmologies in the North: Northern Exposures* (Abingdon, Oxon, UK; New York: Routledge, 2019); Ian J. McNiven, “Dugongs and Turtles as Kin: Relational Ontologies and Archaeological Perspectives on Ritualized Hunting by Coastal Indigenous Australians,” in *The Oxford Handbook of the Archaeology of Indigenous Australia and New Guinea*, ed. Ian J. McNiven and Bruno David (Oxford: Oxford University Press, 2022), 993–1020; Anja Mansrud, “Fishy Relations? Human–Fish Engagement in the Norwegian Late Mesolithic (6300–3900 BCE),” in *Reimagining Human–Animal Relations in the Circumpolar North*, ed. Peter Whitridge and Erica Hill (London; New York: Routledge, 2023), 127–146.

in the logic of ontology, it also easily bequeaths a situated diagnostic of the present and so “domesticates” the past. The link readily established between anthropocentrism and ontology in archaeological discourse, in other words, promotes recognition merely of superficial difference—difference as *antithesis* to how animal archaeologies and the literatures they draw on *at present* conceive of the here and now, and how we have come to relate to other animals in this moment. This, I suggest, amounts to nothing more than yet another presentist projection of what the past ought to be.

The overarching anthropocentrism that has befallen archaeology is therefore not ethical-normative, nor is it ontological: it is *historical*. Ignorance of the historical (and cultural) dimensions of animal pasts is anthropocentric because in classical humanist terms, only humans are candidate historical actors,⁴⁹ and accordingly only they can be said to both *make* and *have* history in any meaningful way.⁵⁰ Nonaccidentally, these tropes are similarly deeply inscribed in much of the history of zooarchaeology. The tendency to universalize the human-animal problem as ontological glosses over the very possibility of historical mutability and contingency, with regard to both the relevant inter-relationalities and the behaviors and perspectives of the other animals in question. I will recount below that the category of the “animal” itself is fruitfully destabilized by such historicity, but not always in the same way and to the same effects, and sometimes perhaps not at all, and this is for the better. This historical condition of the animal itself—Susan Nance’s “historical animal”⁵¹—adds to the difficulties of adopting the perspectives of animals and probing their sensibilities, a challenge critically received by many animal historians.⁵² Yet the problem, I would argue, is not so much that we cannot hope to fully escape our own vantage points as humans, as strategic approximation, immersion, and speculative simulation would nevertheless offer potentially useful insights; rather, a key problem is that we cannot assume that such animal perspectives and sensibilities are historically *stable*, neither can we assume that today’s knowledge of the animals in question is particularly useful or generalizable. The most potent anthropocentrism to dabble with may thus be archaeologists’ lack of engagement with the *animal as changeable*. It is here, I suggest, that archaeology’s humanist legacy shines brightest.

ANIMAL SPECIFICITIES: (ZOO-)HISTORICITY, (ZOO-)CULTURE, AND SPECIES-THINKING

Markus Schroer’s geosociology asserts that “to define humans means to define the wrappings [*Umhüllungen*], the life support systems, the effective environment, enabling them to breathe—precisely what humanism has omitted to do” (my translation).⁵³ This

49. Not all humans were always granted such history-making capacities, of course.

50. Hussain, “Deep Animal Prehistory: Gathering Feral Voices from Vanished Pleistocene Worlds.”

51. Nance, *The Historical Animal*.

52. See e.g. Ritvo, “On the Animal Turn”; Ritvo, “Recent Work in Animal History (and How We Got Here).”

53. Markus Schroer, *Geosozologie: Die Erde Als Raum Des Lebens*, Erste Auflage, Originalausgabe, Suhrkamp Taschenbuch Wissenschaft 2324 (Berlin: Suhrkamp, 2022), 225.

critique of the “naked” human⁵⁴ extends Elias’s adamant attack on the “(en)closed” human (*Homo clausus*)⁵⁵ to revise our apprehension of human life in terms of not just human-human interdependencies but the many human-nonhuman entanglements that frame, mediate, and promote the sociohistorical conditions of the always-situated and ever-evolving human. In concert with scholars such as Donna Haraway and Anna Tsing,⁵⁶ Schroer puts the finger on the problematic humanist fantasy of *the* Anthropos as a constant and singular, instead foregrounding ongoing “metamorphoses” and “modifications” in the face of changing externalities.⁵⁷ As Pascal Eitler has pointed out, such reconfiguration of the human implies a decidedly “genealogical” perspective in which even the *bodily* human, the human animal, is never given or “out there,” but co-made through its unfolding engagements and involvements with the nonhuman.⁵⁸ In fact, “human” and “animal” must so be recognized as historical *products* of continuous negotiative interactions rather than as categories transcending their situated becoming. A significant but often overlooked implication of this important critique of humanist tropes—its flipside, if you will—is its largely analogous bearing on the human-defining externalities. These externalities must be equally unpacked in their situatedness and heterogeneity in order to overcome an undifferentiated attendance to nature as an anonymous super-agent or black box. Critique of *the* Anthropos therefore also calls for a poignant critique of *the* animal. I suggest that this is the central, although also most paradoxical, import of animal history, explaining its limited resonance with and reception in archaeological discourse. Animal history, similar to animal prehistory,⁵⁹ celebrates “the animal” by coevally centering *and* questioning “it.”

In my view, this is really the crux of animal-oriented inquiry, and arguably the place where animal archaeologies can benefit the most from close engagement with animal history. What is needed is more archaeological attention to and sensibility of *animal specificity*, and this is why it is not enough to simply foreground animals as subjects of empirical investigation. In order to take animals seriously, to “turn” to them, or to adopt an “animal lens,”⁶⁰ we must be ready to critically disassemble the conceptual frameworks we routinely muster to address and examine them. This hearkens back to Cary Wolfe’s insistence that the question of the animal necessitates articulation of two projects: the first centered on questions of “content, thematics, and the objects of knowledge,” the second concerning “the level of theoretical and methodological approach.”⁶¹ Wolfe goes on to suggest that in literary animal studies, and perhaps the study of culture more

54. Schroer, *Geozozoologie*, 225.

55. Elias, “Die Entstehung Des Homo Clausus.”

56. Anna Tsing, “Unruly Edges: Mushrooms as Companion Species,” *Environmental Humanities* 1, no. 1 (1 May 2012): 141–154; Haraway, *When Species Meet*.

57. Schroer, *Geozozoologie*, 225.

58. Eitler, “Animal History as Body History: Four Suggestions from a Genealogical Perspective.”

59. Hussain, “Deep Animal Prehistory: Gathering Feral Voices from Vanished Pleistocene Worlds.”

60. Specht, “Animal History After Its Triumph”; Hussain and Brusgaard, “Human-Beaver Cohabitation in the Early and Mid-Holocene of Northern Europe.”

61. Cary Wolfe, *What Is Posthumanism?*, Posthumanities Series 8 (Minneapolis: University of Minnesota Press, 2010), 99.

generally, the situation is complicated by a schism between “scholars committed primarily to matters of history” and “scholars committed primarily to matters of theory.”⁶² Animal archaeologies, I would argue, are caught up in this “schism” without recognizing it and, by foremostly attending to matters of general theory—mainly through the prism of ecology/evolution or posthumanism—have neglected the specific *historical* challenges of their project(s). This situation is perhaps not surprising given that especially deep time archaeologies have long privileged “evolution” over “history,”⁶³ but its consequences for animal research are far-reaching and not yet fully understood. All of this leads me to a provocative conclusion: if animal prehistory fails to cultivate a decidedly *critical*, *conceptual*, and *historical* commitment, it betrays its very purpose.

This more-than-empirical project must involve exposing the thicket of colonial framings vis-à-vis our scientific understandings of “the animal,”⁶⁴ but it also calls for open-ended conceptual work on the implications of the “embedded” animal. Drawing on Karl Polanyi’s⁶⁵ influential theorization of embeddedness, the animal is naturally pluralized while both animal behavior and evolution are enabled and constrained by conditions untethered to the animals themselves. This admission in many ways closes the circle as we consequently need to “define the wrappings [*Umbüllungen*], the life support systems, the effective environment, enabling [animals] to breathe”⁶⁶ in order to close in on the historical animal. These situated wrappings importantly include humans, embedded in their own wrappings. I have elsewhere proposed to understand these wrappings as contextually assembled Uexküllian animal *Umwelten* with important repercussions for animal behavior and cognition, and that archaeology may be uniquely positioned to elucidate and qualify them.⁶⁷ Following this logic, even strategically adopting a zoocentric outlook thus returns us to the human and the historical conditions shaping coupled human-animal systems. As we increasingly come to terms with the difficult fact that humans cannot be separated from their nonhuman natures,⁶⁸ so should we recognize that animals, too, cannot be separated from their nonanimal natures. Dominik Ohrem has gestured toward this issue as the basic problem of “world-openness”⁶⁹ in human-animal studies:

62. Wolfe, *What Is Posthumanism?*, 101.

63. See esp. Tim Ingold, *Evolution and Social Life*, Routledge Classic Texts in Anthropology 2 (Abingdon, Oxon, UK; New York: Routledge, 2016), for an instructive discussion of the history of the history-evolution dualism in anthropology and related disciplines including archaeology.

64. Rick De Vos, *Decolonising Animals* (Sydney: Sydney University Press, 2023).

65. Karl Polanyi, *The Great Transformation* (New York: Farrar & Rinehart, 1944); Karl Polanyi, “The Economy as Instituted Process,” in *Economic Anthropology: Readings in Theory and Analysis*, ed. Edward E. LeClair and Harold K. Schneider (New York: Holt, Rinehart, Winston, 1968), 122–142.

66. Schroer, *Geozoologie*, 225.

67. Hussain, “Deep Animal Prehistory: Gathering Feral Voices from Vanished Pleistocene Worlds.”

68. Anderson and Perrin, “Removed from Nature.”

69. “World-openness” is developed here in the German tradition of philosophical anthropology, most notably based on the work of Arnold Gehlen (Arnold Gehlen, *Man, His Nature and Place in the World* (New York: Columbia University Press, 1988), but reinterpreted and enriched from a post-anthropocentric standpoint, emphasizing “how embodiment can be understood in terms of an actively shared creaturely with-sphere that is of crucial ontological and ethical relevance in itself rather than merely figuring as a stepping stone for imaginings of anthropological difference” (Dominik Ohrem, “An Address from Elsewhere: Vulnerability, Relationality, and

creaturely co-habitation emerges as a problem of the coming together, fostering both limitations and possibilities, of human-world and animal-world relations.⁷⁰ I would like to refer to this more broadly as the *parity principle* of animal-oriented inquiry in the historical sciences, and animal archaeologies are advised to take careful stock of it.

We can also resist the classical humanist tendency to essentialize and thereby monolithize the animal by taking up Giorgio Agamben's distinction between *bios* (*βίος*) and *zoé* (*ζωή*). Drawing on Attic philosophy of nature, Agamben points out that *bios* refers to the "form or way of life proper to an individual or group," while *zoé* denotes "the simple fact of living common to all living beings."⁷¹ Animals are always caught up in both the conditionalities of biological life in general (*zoé*) and the specific demands of living such life for particular individuals and groups thereof in particular historical contexts (*bios*). Understood as a key locus of negotiating animal being and becoming, *bios-zoé* relations can thus be read as a specific variant of the structure-agency dynamic. Historical animals are defined not only by their changing externalities but always also by their own organismal structures and the possibilities and limitation incurred by them. This is the Gibsonian animal whose plural agency is primarily determined by the affordances (possibilities/invitations to act) emerging at the intersection of specific, individual organisms and their life-worlds.⁷²

The organismal structure, including body plans, dietary constraints, and cognitive predispositions of animals, is therefore a key mediating factor of their behavior in general and can be added as an intermediate level of organization between Agamben's rendition of *bios* and *zoé*. Organismal structure is difficult to pin down and generalize, however, as it can differ within populations and even change over the course of an individual's life history, or biography. The modern species concept (*speciēs*), derived from Linnaean taxonomy, can be understood as an exceptionally influential attempt to capture and systematize such differences in organismal structure across the tree of life, although notably prioritizing phenotypical bodily features and qualities. The species concept is thus reprieve and curse at the same time: it facilitates specifying some conditionalities of *zoé* but it also denies the even more specific claims of *bios*, notably its historicity.

The deployment of "species" as observational and interpretive units can thus both benefit and obstruct the study of the embedded animal. This "species problem" poses considerable challenges for both animal historians and animal archaeologists as it requires

Conceptions of Creaturely Embodiment," in *Beyond the Human-Animal Divide: Creaturely Lives in Literature and Culture*, ed. Dominik Ohrem and Roman Bartosch [New York: Palgrave Macmillan, 2017], 46).

70. Dominik Ohrem, "An Address from Elsewhere: Vulnerability, Relationality, and Conceptions of Creaturely Embodiment," in *Beyond the Human-Animal Divide: Creaturely Lives in Literature and Culture*, ed. Dominik Ohrem and Roman Bartosch (New York: Palgrave Macmillan, 2017), 59.

71. Giorgio Agamben, *Homo Sacer: Sovereign Power and Bare Life*, trans. Daniel Heller-Roazen (Redwood City, CA: Stanford University Press, 1998), p. 1.

72. James J. Gibson, "The Theory of Affordances," in *Perceiving, Acting, and Knowing: Toward an Ecological Psychology* (Hillsdale, NJ: Lawrence Erlbaum, 1977), 67–82; Madhur Mangalam, Alen Hajnal, and Damian G. Keltz-Stephen, eds., *The Modern Legacy of Gibson's Affordances for the Sciences of Organisms*, Resources for Ecological Psychology Series (New York: Routledge, 2024).

integrating knowledge of species-level animal behavior and ecology while remaining critical about species as the default, and sometimes exclusive, lens to animal pastness. The problem of the historical animal thus calls for a multi-level approach to animalness, with the need to identify and examine ever new context-dependent animal categories. Erica Hill, writing about the entanglement of birds and burial practices in the historic Indigenous Western Arctic, argues that in order to “better understand how Ipiutak and other people of the past engaged with birds, traditional osteological skills ought to be accompanied by those of the naturalist.”⁷³ Recent work in animal history makes similar reference to the animal behavioral sciences, especially ethology.⁷⁴ I would argue that such wide-ranging engagement is indeed urgently needed to heed animal specificities, and it is here that archaeology provides an interesting “trading zone”⁷⁵ of ideas and concepts due to its focal disciplinary position at the juncture between the humanities and natural sciences, notably paleoecology.

Yet again, the challenge is to negotiate species-level generalities that these sciences maintain to have uncovered with evidence illustrating the limitations of such apprehensions. Animal scholarship in history and archaeology should therefore be particularly attentive to the nascent “organismal turn”⁷⁶ in the biological and evolutionary sciences which takes individual organisms and their (zoo-)agency as a starting point and highlights behavioral plasticity, behavioral novelty, as well as organism-environment couplings and feedbacks. In addition, there is now growing appreciation of varyingly stable animal “ecotypes”—patterned organism-environment couplings—that also showcase intricate linkages between animal behavior, morphology, genetics, and the histories thereof, in particular populations.⁷⁷ A prominent example is the different orca ecotypes, some of which are now discussed in terms of their potential status as distinct species.⁷⁸ The orca case is particularly instructive as ecotype-formation in this marine keystone predator is

73. Erica Hill, “Humans, Birds and Burial Practices at Ipiutak, Alaska: Perspectivism in the Western Arctic,” *Environmental Archaeology* 24, no. 4 (2 October 2019): 434–448.

74. Mieke Roscher, “Methoden der Human-Animal History (Tiergeschichte),” in *Handbuch Methoden der Geschichtswissenschaft*, ed. Stefan Haas (Wiesbaden: Springer, 2022), 1–18; Daniel Vandersommers, *Entangled Encounters at the National Zoo: Stories from the Animal Archive*, Environment and Society (Lawrence: University Press of Kansas, 2023).

75. See Peter Galison, *Image and Logic: A Material Culture of Microphysics* (Chicago: University of Chicago Press, 1997).

76. Denis M. Walsh, *Organisms, Agency, and Evolution* (Cambridge: Cambridge University Press, 2015); Sonia E. Sultan, *Organism and Environment: Ecological Development, Niche Construction, and Adaptation*, 1st ed. (New York: Oxford University Press, 2015); Denis M. Walsh and Gregory Rupik, “The Agential Perspective: Countermapping the Modern Synthesis,” *Evolution & Development* 25, no. 6 (2023): 335–352.

77. A. T. Bergerud, “Evolving Perspectives on Caribou Population Dynamics, Have We Got It Right Yet?” *Rangifer*, 1 January 1996, 95–116; P. J. N. de Bruyn, Cheryl A. Tosh, and Aleks Terauds, “Killer Whale Ecotypes: Is There a Global Model?,” *Biological Reviews* 88, no. 1 (2013): 62–80; Morten Tange Olsen et al., “Genetic and Behavioural Data Confirm the Existence of a Distinct Harbour Porpoise Ecotype in West Greenland,” *Ecological Genetics and Genomics* 22 (1 March 2022): 100108.

78. Christopher Johnson, “Ecotypes and Killer Whales: A Scientific Concept to Guide the Endangered Species Act’s ‘Distinct Population Segment,’” *University of Colorado Law Review* 89, no. 3 (2018): 967–999; Phillip A. Morin et al., “Revised Taxonomy of Eastern North Pacific Killer Whales (*Orcinus Orca*): Bigg’s and Resident Ecotypes Deserve Species Status,” *Royal Society Open Science* 11, no. 3 (27 March 2024): 231368.

likely human-mediated and deeply entangled with global climate change,⁷⁹ illustrating the historicity and contingency of present-day orca behavior.

The orca example helps us to appreciate the fundamental paradox of the “ethologization” of animal history-writing: ethology and other “hard” animal sciences muster a limited temporal scope of observations on how animals operate in their environments and evolve, and the bulk of knowledge clearly derives from (near-)Anthropocene conditions. Ethological knowledge therefore encodes its own historicisms. It simply is an open (empirical) question to what extent such presentist knowledge about animals can be generalized, and in what ways it can inform accounts of past animals. The answer may well differ with regard to different animals and different aspects of their being and becoming. Bioarchaeological studies of animal feeding behaviors and habitat preferences often reveal considerable plasticity in these domains,⁸⁰ and a long-term study of red deer ecology, for example, indicates that woodland adaptations in this species may be a very recent, late Holocene phenomenon.⁸¹ Such findings can help animal historians contextualize and calibrate their own interrogations, but they should also remind animal archaeologists that some long-standing zooarchaeological approaches may no longer be tenable. Extrapolating the detailed texture and composition of local and regional environments based on the presence and absence of certain animal taxa is, for example, a deeply Cartesian praxis premised on the basic stability of animal-environment relations and, at the very least, requires animal-specific reconsideration.⁸² Traditional ethology, too, produced much of its knowledge through a humanist lens of the instinctual, innate, and automatic-responsive animal cast broadly as machine, prominently reflected in the work of Nikolaas Tinbergen and Konrad Lorenz.⁸³ Both animal history and archaeology would therefore do well to take stock of such received constellations of knowledge without reproducing their animal presuppositions. This is why researchers interested in animal pastness cannot content themselves with simply “integrating” knowledge on animals; they need to develop and cultivate a critical competence of animals as situated and agentive beings: what I would like to call transdisciplinary *zoo-literacy*.

Approached from this perspective, Donna Haraway’s⁸⁴ reconfiguration of the species concept really motivates not merely a critique of the taxonomization of animal-oriented inquiry but makes space for a whole new universe of significant animal categories to

79. See esp. the discussion in Anaïs Remili et al., “Quantitative Fatty Acid Signature Analysis Reveals a High Level of Dietary Specialization in Killer Whales Across the North Atlantic,” *Journal of Animal Ecology* 92, no. 6 (2023): 1216–1229.

80. For a recent example, see e.g. Kate Britton et al., “Multi-Isotope Zooarchaeological Investigations at Abri Du Maras: The Paleoecological and Paleoenvironmental Context of Neanderthal Subsistence Strategies in the Rhône Valley during MIS 3,” *Journal of Human Evolution* 174 (1 January 2023): 103292.

81. Maciej Sykut et al., “Variability in Feeding Habitats of Red Deer *Sensu Lato* in Eurasia in the Late Pleistocene and Holocene,” *Journal of Archaeological Science* 150 (1 February 2023): 105726.

82. Hussain, “Deep Animal Prehistory: Gathering Feral Voices from Vanished Pleistocene Worlds.”

83. See esp. Konrad Lorenz, “Durch Domestikation verursachte Störungen arteigenen Verhaltens,” *Zeitschrift für angewandte Psychologie und Charakterkunde* 59, nos. 1/2 (1940): 2–81; Nikolaas Tinbergen, “On Aims and Methods of Ethology,” *Zeitschrift Für Tierpsychologie* 20, no. 4 (1963): 410–433.

84. Haraway, *The Companion Species Manifesto*; Haraway, *When Species Meet*.

throw new light on the interlaced being and becoming of past animals, with or without reference to human externalities. Importantly, however, this problem cannot be reduced to a question of ontology; it remains deeply epistemological and calls for ongoing conceptual-empirical dialogue. In sync with many others who have said this before, I have recently argued that “wildhood” is one of the many influential humanist misnomers to make sense of animal behavior in the deep past and effectively blocks investigations of animal agency and behavioral novelty as these often crystallize below the species threshold.⁸⁵ Animal archaeologists are in a unique position to deconstruct such concepts by directly investigating changing animal behaviors in varying human environments,⁸⁶ showing that figurations of the historical animal can indeed be traced on the level of the population, group, or even the individual. In this context, it has been suggested that (paleo-)synanthropy offers a privileged window into this type of “world-openness” of animals, exposing how animals adjust their behaviors in response to historically specific opportunities catered by their human co-inhabitants.⁸⁷ Such emerging perspectives can be productively aligned with current concerns in animal history, for example, with regard to “more-than-human urbanities” or questions of “liminality.”⁸⁸ But they also open up the floodgates, indicating how little we actually know about animal diversity.

As I write this, more and more critique of the Linnaean animal is mounted from within the sciences of animal behavior, as observational evidence increasingly suggests substantial below-species-level differences in animal lifestyle, interpreted as cultural variation and now documented across diverse genera.⁸⁹ The impact of such zoocultures on the making of the past is rarely taken into account, even though a proper and conceptually dedicated “cultural history” of animals seems increasingly accessible.⁹⁰ Engaging with “embedded” animals in the sense sketched above thus also brings up the crucial question of how to adequately describe and understand the specificities of past animal cultural realities. To account for such historical specificities may well require drawing on

85. Shumon T. Hussain, “Feral Ecologies of the Human Deep Past: Multispecies Archaeology and the Palaeo-Synanthropic Niche,” *Journal of the Royal Anthropological Institute* (2024), <https://doi.org/10.1111/1467-9655.14152>.

86. See e.g. Chris Baumann et al., “Fox Dietary Ecology as a Tracer of Human Impact on Pleistocene Ecosystems,” ed. Michael D. Petraglia, *PLoS ONE* 15, no. 7 (2 July 2020): e0235692; Magdalena Krajcarz et al., “Ancestors of Domestic Cats in Neolithic Central Europe: Isotopic Evidence of a Synanthropic Diet,” *Proceedings of the National Academy of Sciences* 117, no. 30 (28 July 2020): 17710–17719; Chris Baumann, Shumon T. Hussain et al., “Evidence for Hunter-Gatherer Impacts on Raven Diet and Ecology in the Gravettian of Southern Moravia,” *Nature Ecology & Evolution*, June 22, 2023, 1–13.

87. Chris Baumann, “The Paleo-Synanthropic Niche: A First Attempt to Define Animal’s Adaptation to a Human-Made Micro-Environment in the Late Pleistocene,” *Archaeological and Anthropological Sciences* 15, no. 5 (20 April 2023): 63; Hussain, “Deep Animal Prehistory: Gathering Feral Voices from Vanished Pleistocene Worlds”; Hussain, “Feral Ecologies of the Human Deep Past: Multispecies Archaeology and the Palaeo-Synanthropic Niche.”

88. See e.g. Clemens Wischermann, Aline Steinbrecher, and Philip Howell, eds., *Animal History in the Modern City: Exploring Liminality* (London: Bloomsbury Academic, 2019).

89. Hal Whitehead and Luke Rendell, *The Cultural Lives of Whales and Dolphins* (Chicago: University of Chicago Press, 2015); Andrew Whiten, “The Burgeoning Reach of Animal Culture,” *Science* 372, no. 6537 (2 April 2021): eabc6514.

90. Swart, *The Lion’s Historian: Africa’s Animal Past*.

sociology, cultural studies, and anthropology, as argued by John Hartigan engaging with the specific “world-openness” of Galician horses vis-à-vis their human wrappings,⁹¹ hence further destabilizing the human-animal boundary in terms of disciplinary competences and authorities.

This culturalist critique of animal behavior only adds to the broader significance of historical evidence on and the contextualization of animal performativity, as zoocultures cannot be assumed to be ahistorical constructs. All of this reinforces the need to take seriously the deep-running conceptual challenges of animal pastness, namely to center the fundamental problem of *zoo-difference*. Animal scholarship needs to overcome renditions of the animal as a difference category (*differentia specifica*), as an antonym to the human, and instead re-locate difference *within* “the animal” itself. This may also mean re-directing scholarly attention from animal bodily appearances as foregrounded in taxonomic logic and species-thinking to the problem of what animal bodies *can do*. This framing is not incidentally consonant with how feminist disability researchers position and engage with human bodies.⁹² The crux, I would insist, is to overcome the tendency to describe animal bodies as lacking something. Difference is not deficiency—a key issue that touches upon how we conceptualize the “normal” animal or what is “species typical.” I would argue that it is indeed no coincidence that interpretive concepts such as “keystone” animals, securing species-level capabilities but also grouping animals oblique to species differences, have become increasingly popular in animal archaeologies in recent years.⁹³ These concepts respond to the need to attend to the specificities of animal *bodily functionalities*, in a similar way as human bodies are now pivoted in feminist-materialist disability studies.⁹⁴ Looking at animal bodies not as fixed and deficient but as differently-abled and relational goes a long way and opens up new avenues for the study of past zoo-agency and human-animal co-habitation.

CONCLUSION: ANIMAL SOURCES AND NEW OPPORTUNITIES

Animal archaeologies gain increasing prominence and importance within the discipline, yet archaeological theory, as we have seen, has largely evaded key questions of history and historicity. Animal archaeologies currently revolve around two larger projects—one “archaeo-ecological,” the other “ontological” and “posthuman” in orientation; yet both projects have largely neglected to examine their own presuppositions of what animals are and how animals are enfolded in (deep) history. These presuppositions have less to do with traditional forms of (Western) anthropocentrism, which archaeologists have emphatically started to tackle. Rather, they are linked to a broader animal paradox in

91. John Hartigan Jr., “Knowing Animals: Multispecies Ethnography and the Scope of Anthropology,” *American Anthropologist* 123, no. 4 (2021): 846–860.

92. See e.g. Carla Rice et al., “What a Body Can Do: Rethinking Body Functionality Through a Feminist Materialist Disability Lens,” *Body Image* 38 (1 September 2021): 95–105.

93. Shumon T. Hussain and Harald Floss, “Sharing the World with Mammoths, Cave Lions and Other Beings: Linking Animal-Human Interactions and the Aurignacian ‘Belief World,’” *Quartär* 62 (2015): 85–120; Hussain and Brusgaard, “Human-Beaver Cohabitation in the Early and Mid-Holocene of Northern Europe.”

94. Rice et al., “What a Body Can Do.”

archaeology—namely, that although archaeologists concern themselves with the study of change in the past, they have conceived of animals as ahistorical and largely stable contributors to this past. I suggest this is not because archaeology has little to contribute to the fundamental problems posed by the “historical animal,” quite to the contrary, as I have tried to show here. Archaeologists are simply not sufficiently aware of and literate in relevant discussions on these matters, and this in part has to do with a lack of scholarly interaction with animal history. Pivoting animal archaeologies not only as a multi-species project but also as “animal prehistory” may help to counteract this issue, as centering the term “animal” requires us to attend to the domain specificities of the same, and “prehistory” secures continuity with history.⁹⁵ The shared discursive space which then becomes available at the archaeology-history interface promises to be productive and holds hitherto untapped possibilities to reconfigure historical and archaeological scholarship alike.

In response to baseline critique of historians’ ability to recover the “historical animal” based on essentially human-mediated sources by scholars such as Erica Fudge,⁹⁶ animal historians have recently expanded their repertoire of source materials, to include zooarchaeological remains and material culture.⁹⁷ For archaeology, too, it is time to move “beyond making the case that animals mattered in the past and explore how [archaeologists] can uncover and interpret traces of historical animals.”⁹⁸ I argue that this problem is differently configured in archaeology, but in addressing it, animal archaeologists can still learn a lot from historians and simultaneously proffer new perspectives for them. To begin with, many archaeological sources are much less human-centered than traditional historical sources such as textual documents. The “search problem”⁹⁹ of animal history—how to *find* other animals in human-targeted sources—tends to be much less pronounced in archaeology as the materiality of animals and the consequences of their behaviors are key features, and often are formative, of the archaeological record,¹⁰⁰ and archaeologists, with the help of a large battery of colleagues deploying natural science methodologies, routinely reconstruct even the living spaces of animals as these are shared or significantly overlap with human taskscapes. Aided by paleogenetics, archaeologists have recently even begun to chart the presence of animals in the *absence* of their bodies through animal genetic material left behind in past soil matrices.¹⁰¹ The archaeological sciences now employ

95. This is not to say that the term “prehistory” is neutral either; see esp. Geroulanos, *The Invention of Prehistory: Empire, Violence, and Our Obsession with Human Origins*.

96. Erica Fudge, “A Left-Handed Blow: Writing the History of Animals,” in *Representing Animals*, ed. Nigel Rothfels (Bloomington: Indiana University Press, 2002), 3–18; see also Howell, “Animals, Agency, and History,” for a useful discussion of the relevance and impact of this debate.

97. Roscher, “Methoden der Human-Animal History (Tiergeschichte),” 11–13.

98. Jennifer Bonnell and Sean Kheraj, “Introduction: Traces of the Animal Past,” in *Traces of the Animal Past: Methodological Challenges in Animal History*, ed. Jennifer Bonnell and Sean Kheraj (Calgary: University of Calgary Press, 2022), 5.

99. Bonnell and Kheraj, “Introduction,” 5.

100. For an in-depth exploration of animal sources in archaeology, see esp. Hussain, “Deep Animal Prehistory: Gathering Feral Voices from Vanished Pleistocene Worlds.”

101. Tyler J. Murchie et al., “Collapse of the Mammoth-Steppe in Central Yukon as Revealed by Ancient Environmental DNA,” *Nature Communications* 12, no. 1 (8 December 2021): 7120.

a multitude of methods to directly examine animal diets, mobility, ecology, demography, and the bodily constitutions of animals. Many of these sources are animal sources by definition.

In large part because of this omnipresence of animal traces in the archaeological record—their evidential banality—“writing animals back into history” has not been considered a problem in the discipline. Yet interestingly, archaeologists, just like historians, and to recall Susan Nance’s poignant diagnostic, are traditionally equally trained to “edit animals [themselves] out of [the] analysis.”¹⁰² An example is social zooarchaeology’s openly one-sided engagement with animals to understand their uses and roles in past human societies,¹⁰³ another is archaeology’s long-standing obsession with taphonomy and site formation processes to parse out nonhuman agencies and eliminate them from the equation. By focusing on the question of anthropogenic origin, manipulation, or utilization, archaeologists, similar to historians before them, have almost entirely overlooked the possibility that the archaeological record itself ultimately *is* a human-animal co-construction. Some animal archaeologists have recently started to work on this issue, reinterpreting and reconsidering in detail how animals insert themselves into deep history and how their bodies and body parts—what may be called “zoomaterialities”—actively shape the material record.¹⁰⁴ Embedded animals are now also argued to directly contribute to the formation of “zoovisualities,” with traces of animal action sometimes deliberately being integrated into as well as motivating specific kinds of human visual culture.¹⁰⁵ These nascent animal archaeologies resonate with voices in animal history to factor in the historical efficacy of living animals, their associated materialities, and varied, sometimes precarious beings-in-the-world.¹⁰⁶ Importantly, animal archaeologies may thus provide animal historians with additional incentives and possibilities to revise their apprehension of the historical archive itself.

Another important research perspective emerging within archaeology broaches the coupled histories of humans, animals, and ecosystems. This ecosystem lens brings into focus how humans and animals assemble shared niches and how their respective impacts on ecosystem structure and functionality shape each other’s long-term histories.¹⁰⁷ This

102. Nance, *The Historical Animal*, 5.

103. Russell, *Social Zooarchaeology*.

104. Hill, “Humans, Birds and Burial Practices at Ipiutak, Alaska”; Hussain and Brusgaard, “Human-Beaver Cohabitation in the Early and Mid-Holocene of Northern Europe”; Shumon T. Hussain, “Animals and Humans in the Paleolithic,” in *Research Handbook on Animals and Society*, ed. Angela Mertig (Cheltenham, UK: Edward Elgar Publishing, in press).

105. Shumon T. Hussain, “The Animal Within: The Triple Inheritance of Late Pleistocene Rock Art,” in *Images, Gestures, Voices, Lives. What Can We Learn from Palaeolithic Art?*, ed. Miriam N. Haidle, Martin Porr, Sibylle Wolf, and Nicholas J. Conard (Heidelberg: Heidelberg University Publishing, in press).

106. Swart, “But Where’s the Bloody Horse?”

107. Lisa Yeomans et al., “Waterfowl Eggshell Refines Palaeoenvironmental Reconstruction and Supports Multi-Species Niche Construction at the Pleistocene-Holocene Transition in the Levant,” *Journal of Archaeological Method and Theory* 31 (17 February 2024): 1383–1429; Shumon T. Hussain and Chris Baumann, “The Human Side of Biodiversity: Coevolution of the Human Niche, Palaeo-Synanthropy and Ecosystem Complexity in the Deep Human Past,” *Philosophical Transactions of the Royal Society B: Biological Sciences* 379, no. 1902 (8 April 2024): 20230021.

brings us full circle as such perspectives pivot multi-species assemblages to the center of attention, engendering alternative structure-agency dynamics with long-term directionalities transcending the projects of the involved human *and* nonhuman agents. Archaeology's promise to elucidate the material-semiotic generativity of such dynamics should be of interest to animal historians, who have similarly turned to ecosystems as relevant contexts of historical investigation.¹⁰⁸ Yet the ecosystem lens also powerfully challenges our very concept of history and what it may mean to write human-animal histories. Because of the geographic fragmentation and distinct temporality of many of their sources and observations, archaeologists may primarily contribute to macro-history ("global history"), millennial-scale structural history ("big history"), or what Edmund Russell has called "evolutionary history."¹⁰⁹ The animal question accordingly brings us back to some of the basic challenges of animal history-writing as a human praxis: it does not necessarily change what informs our histories, but it challenges *how* we write them. The same observation applies to the sources: animal archaeologies do not necessarily engage with entirely new sources, but they may compel us to read and interpret them in fundamentally *new ways* to help us "see," that is, to make visible, specific (deep-)historical animals. It is here where animal archaeology and animal history can powerfully complement, inspire, and inform each other. ■

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108. E.g. John Robert McNeill, *Mosquito Empires: Ecology and War in the Greater Caribbean, 1620–1914* (New York: Cambridge University Press, 2010); Emily O'Gorman, *Wetlands in a Dry Land: More-than-Human Histories of Australia's Murray-Darling Basin*, Weyerhaeuser Environmental Books (Seattle: University of Washington Press, 2021).

109. Edmund Russell, *Evolutionary History: Uniting History and Biology to Understand Life on Earth*, Studies in Environment and History (Cambridge: Cambridge University Press, 2011).