

GOVERNING AI'S IMPACT ON NONHUMAN ANIMALS: A NOVEL ETHICAL-LEGAL FRAMEWORK

This contribution presents groundbreaking work on a novel ethical-legal framework for Artificial Intelligence systems (AI) for nonhuman animals. Existing AI law and ethics scholarship has focused largely on how AI impacts human beings. It is increasingly recognised that AI can also have a significant impact on environmental sustainability. In this paper we extend this nonhuman concern to how sentient animals are impacted by AI. AI technologies' growing capacity to augment and automate human activities gives its creators and users extraordinary power to affect, for better or worse, countless animals in households, farms, science, entertainment, and the wild.

Much technical research is currently exploring ways of using AI to observe, analyse, and care for animals across four key domains. In industrial farming (Domain 1), precision tools and agents can increasingly monitor and automate farming activities for billions of land and sea animals while potentially reducing human oversight and intensifying production. AI deployed in automated vehicles like cars, trucks, delivery robots, and drones (Domain 2) could either kill or protect millions of wild and domestic animals according to how it is developed and governed. General purpose systems such as LLM chatbots and digital assistants (Domain 3) might either greatly promote or damage animal welfare in line with how they depict animals (e.g. by reproducing anti-animal prejudices from training data) and act on their wellbeing (e.g. through purchasing animal-friendly products).

Finally, AI is being designed for animals in conservation and habitat protection, healthcare, and interspecies communication (Domain 4); which could significantly assist many animals and species—and the ecosystems in which they live—or could create intentional or unintentional harm. As with humans, animal harm from AI can arise through bias, inaccuracy, opacity, misalignment, misuse, and abuse. To help ensure that AI improves rather than undermines animal welfare, human-animal relations, and environmental wellbeing, an effective ethical-legal response is urgently needed.

We are developing a first-of-its-kind ethical-legal framework for this purpose. Because law in the above areas is absent or limited, a substantial ethical analysis of AI's impacts on animals is required to guide regulation and governance. Our ethical analysis adopts a pluralistic approach that incorporates major moral theories and adapts core principles from AI ethics. It also encompasses a fit-for-purpose conception of 'animal welfare', ethical lessons drawn from the emerging field of Animal-Computer Interaction (ACI), and insights from theories of relational entanglement with their focus on the interdependence of human, animal, and environmental wellbeing, and the way AI technologies reconfigure these interdependencies.

Our legal approach applies key concepts from animal law, multi-species justice and ecological regulation to identify opportunities in AI law and governance, as well as

domain specific regulation (e.g. car safety design and farm animal welfare standards) to: (1) recognise that non-human animals have a legitimate interest in how AI systems are developed and used; (2) embed elements of animal-centred risk assessment in AI governance; (3) ensure those developing and deploying these technologies show responsibility and care for nonhuman animals; and (4) create institutions to permanently represent animals and their rights and interests in AI governance.

Bibliography

Coghlán, S & Parker, C., 2023, 'Harm to Nonhuman Animals from AI: a Systematic Account and Framework', *Philosophy & Technology*, 36(2) doi:10.1007/s13347-023-00627-6

Singer, P., Tse, Y.F., 2023. AI ethics: the case for including animals. *AI Ethics* 3. 539–551 <https://doi.org/10.1007/s43681-022-00187-z>

Bossert, L.N. and Coeckelbergh, M., 2024. From MilkingBots to RoboDolphins: How AI changes human-animal relations and enables alienation towards animals. *Humanities and Social Sciences Communications*, 11(1), pp.1-7.

Caviola, L., Brewster, D.A. and Hagendorff, T., 2025. Speciesism in AI: Evaluating Discrimination Against Animals in Large Language Models. *arXiv preprint arXiv:2508.11534*.

Dawkins, M.S., 2025. Smart farming and Artificial Intelligence (AI): How can we ensure that animal welfare is a priority? *Applied Animal Behaviour Science*, 283, p.106519.