Educational Administration: Theory and Practice
2024, 30(10), 913-916
ISSN: 2148-2403
https://kuey.net/

Research Article

Animal Cognition and Ecohumanism: Valuing Non-Human Intelligence

Jisha Jacob[1*]

[1*]Assistant Professor, Department of Zoology, Newman College, Thodupuzha, jishajaiji1981@gmail.com

Citation: Jisha Jacob (2024). Animal Cognition and Ecohumanism: Valuing Non-Human Intelligence, *Educational Administration: Theory and Practice*, 30(10) 913-916
Doi: 10.53555/kuey.v30i10.10527

ARTICLE INFO

ABSTRACT

Ecohumanism is a new ethical and philosophical approach that brings attention to the interdependence of all living beings and mankind's moral obligation to be compassionate toward nature. The most recent findings of zoological research have challenged conventional anthropocentric views of intelligence and consciousness, proving that numerous species of animals are endowed with exceptional mental abilities. This review examines the empirical record of animal minds—varied from the empathy exhibited by elephants to the problem-solving abilities of birds—along with its implications on an ecohumanist platform. By bringing zoological knowledge and ethical concerns together, this review call for moving away from utilitarian conservation practices towards an empathic and pluralistic model one that honors the inherent worth of non-human minds. This integration of science and ethics can transform conservation practices, animal welfare regulations, and the role of zoologists during the Anthropocene.

Introduction

A range of disciplines are re-evaluating how humans perceive and engage with non-human animals in a time of loss of biodiversity and environmental uncertainty. With scientific findings that numerous animal species, such as primates, birds, and cephalopods, have mental abilities like memory, self-awareness, problem-solving, empathy, and even cultural behaviours, the discipline of animal cognition has developed significantly (Griffin, 2001; De Waal, 2016; Marino et al., 2007). This collection of findings has profound ethical implications as well as pushing entrenched human-centered presumptions.

In this context, ecohumanism is a compelling interdisciplinary paradigm that values the moral worth of all sentient beings, not just as ecological entities or economic assets, but as agents with inherent value and agency (Curry, 2011; Bekoff & Pierce, 2009). Ecohumanism advocates for considerate coexistence and moral stewardship based on justice, respect, and empathy, as opposed to mainstream conservation paradigms that often focus on ecological gain or species persistence.

This review integrates recent developments in animal cognition and investigates how they overlap with ecohumanist philosophy. It encourages a shift in the science of zoological research, pedagogy, and conservation practice—towards a practice that preserves biodiversity alongside an awareness of cognitive and affective experiences of animals. By interweaving these elements, we aspire to provide more ethically sound and ecologically conscious relations between humans and the animal world.

Overview of Animal Cognition Research

Experiments in animal cognition have increasingly expanded our understanding of non-human intelligence, revealing mental capacities like self-awareness, memory, empathy, foresight, and social learning. Bekoff (2007) and De Waal (2016) argue that these findings falsify human-centered theories of intelligence and are in line with the ecohumanist perspective, which highlights moral consideration of non-human animals.

Ape specimens exhibit a broad scope of cognitive abilities. Chimpanzees, for example, employ tools for the procurement of food and are capable of social learning and planning behaviors (Boesch & Boesch, 1990). Mirror self-recognition—used as an assessment of self-awareness—has been reported in chimpanzees and orangutans (Gallup, 1970). Primates also exhibit empathy, dishonesty, and conflict negotiation (De Waal, 2005).

Elephants have been noted for their extraordinary memory, social behavior, and funeral rites (McComb et al., 2000). They have also been reported to return to carcass locations and show emotional reactions towards dead

friends (Douglas-Hamilton et al., 2006). The self-awareness of elephants has also been established through mirror tests (Plotnik et al., 2006).

Bottlenose dolphins utilize signature whistles to recognize individuals, much like the use of names in human beings (Janik et al., 2006). These cetaceans also possess problem-solving abilities, self-recognition, and cultural transmission of behavior (Marino et al., 2007). New Caledonian crows fashion tools from leaves and twigs and exhibit complex problem-solving that requires sequential planning and causality (Hunt, 1996; Taylor et al., 2007). Ravens have exhibited theory of mind skills, for example, seeing what others perceive or are aware of (Bugnyar & Heinrich, 2005).

The African grey parrot Alex, researched by Irene Pepperberg, exhibited sophisticated cognitive and communicative skills. He was able to identify objects on the basis of color, shape, and quantity and employed language in meaningful ways within social situations (Pepperberg, 2002).

Octopuses have large brains and a distributed nervous system. They exhibit skills in maze learning, problem-solving, and personality differences at the individual level (Mather, 2008). Their exploration, play, and fast learning abilities question the conventional ideas of invertebrate intelligence. Honeybees have been demonstrated to count, learn to recognize patterns, and equate symbols with rewards (Howard et al., 2018). Their iconic 'waggle dance' is an example of symbolic communication regarding distance and direction to food sources (von Frisch, 1967).

Cleaner wrasses (Labroides dimidiatus) have undergone the mirror self-recognition test—which implies self-awareness (Kohda et al., 2019). Fish also display social learning, memory, and even facial recognition (Newport et al., 2016), defying long-standing assumptions about their mental abilities.

Ethical and Ecohumanist Implications

The evidence for advanced cognition, emotion, and self-awareness in non-human animals raises significant ethical concerns, especially when viewed through the lens of ecohumanism. Ecohumanism emphasizes not only ecological interconnectedness but also moral consideration for all sentient beings, irrespective of their utility to humans (Bekoff, 2007; Curry, 2011). As animal cognition research dismantles long-held notions of human intellectual supremacy, it compels a re-evaluation of human responsibilities toward non-human life forms.

Most conservation efforts today are grounded in instrumental value—protecting species for their ecological services, economic benefit, or aesthetic appeal. Ecohumanism proposes a move toward recognizing the intrinsic value of animal life, especially when cognitive research confirms that animals experience the world with complexity, purpose, and emotion (Rolston, 1988).

Traditional Western ethical frameworks have long privileged human interests over those of other species—a perspective known as speciesism (Singer, 1975). This belief system justifies exploitation of animals based on the assumption of inferior intelligence or lack of consciousness. However, scientific findings showing animal tool use, self-awareness, and emotional depth (De Waal, 2016; Marino et al., 2007) directly challenge these assumptions.

Scientific findings on cognition have also fueled movements advocating for animal rights and legal personhood for certain species. Notable cases include the Nonhuman Rights Project's legal petitions in the U.S. for chimpanzee personhood and Indian court rulings recognizing dolphins and elephants as non-human persons with certain legal protections (Wise, 2013).

Integrating Ethics into Zoological Research

Zoologists have a unique responsibility to act as both scientists and stewards. Ecohumanist principles encourage non-invasive methodologies. Ethical review protocols are not just for vertebrates, but also for invertebrates like octopuses and bees. Perhaps the most transformative implication of animal cognition research is the potential to reconnect humans emotionally and morally with the natural world. By recognizing intelligence and awareness in animals—from elephants to fish—humans are invited to shift from a dominion-based view of nature to a relationship-based view grounded in respect and reciprocity (Curry, 2011; Bekoff & Pierce, 2009).

Conservation Reframed: From Instrumentalism to Ethical Stewardship

Conservation biology has traditionally relied on anthropocentric and utilitarian justifications—protecting species and ecosystems because of their utility to humans in the form of ecosystem services, economic resources, or aesthetic value. While effective in policy contexts, this approach can overlook the intrinsic worth of non-human beings and may fail to resonate with deeper moral concerns (Rolston, 1988; Soulé, 1985).

The growing body of research in animal cognition calls for a paradigm shift in conservation philosophy, one that aligns with the principles of ecohumanism: valuing non-human life for its own sake, recognizing sentience and subjectivity, and fostering interspecies coexistence rooted in empathy and justice. Modern conservation often prioritizes species based on their ecological or economic importance. Pollinators, keystone species, and apex predators receive significant attention due to their roles in ecosystem functioning. However, many cognitively complex species—such as octopuses, corvids, and elephants—face threats from habitat loss, climate change, and exploitation, despite their clear signs of advanced intelligence (Mather, 2008; McComb et al., 2000). Animal Agency in Conservation Traditional wildlife management takes a passive view of animals as

recipients of conservation measures. Yet, research indicates that animals themselves change, improvise, and act on their environments—meaning they are not simply ecological units, but agents (Wolch, 2002). Studies in cognition have questioned the moral justification of zoos, circuses, and other captivity systems, particularly for conscious and intelligent species. For example, keeping dolphins or great apes in empty enclosures might fail to satisfy their rich psychological and social requirements (Marino et al., 2007; De Waal, 2016).

Conservation Education and Public Engagement

Ecohumanism provides strong weapons for redefining conservation education and outreach. By emphasizing animals' inner lives—intelligences, feelings, and social relationships—teachers can build greater public sympathy and support for conservation efforts (Bekoff & Pierce, 2009). During the Anthropocene era, when human activities predominate ecological processes, conservation can no longer be described in technical or economic perspectives. It needs to be based on moral obligation, particularly towards cognitively sophisticated and vulnerable species. Ecohumanist conservation upholds the entitlement of animals to thrive in natural environments, the value of maintaining culture within animal societies, and the moral duty of humans to reduce suffering and disruption in nature.

The Zoologists' and Educators' Role in Promoting Ecohumanist Values

Zoologists stand in a special position at the nexus of science, ethics, and society. As scientists who directly interact with animal life—frequently in wild as well as controlled environments—their immense responsibility is to ensure that their operations and instructions portray both empirical integrity as well as ethical sensitivity. Ecohumanism provides a framework that challenges zoologists and teachers to transcend boundaries and take on a role as ethical custodians and conveyors. Traditional animal experimentation, frequently emphasizing objectivity and replicability at the expense of animal well-being, no longer has a place in an age of growing data on non-human cognition. Ethical standards should no longer categorize "higher" versus "lower" forms on the basis of phylogeny. Instead, behavior and evidence of cognition should inform research protocols. In a world of disinformation and environmental crisis, zoologists must take on the role of public educators and ethical champions. The translation of animal cognition studies in clear, emotionally resonant language has the potential to change public values towards wildlife.

The university and school curriculum are still influential sites to imbue ecohumanist values. While more classical zoology curricula center on morphology, taxonomy, and physiology, incorporation of modules on animal cognition, behavioral ecology, ethics in wildlife research, and conservation psychology can encourage a more ecological and humane comprehension of non-human life. Perhaps the most revolutionary thing that zoologists and teachers can do is to cultivate interspecies empathy—the capacity to feel deeply connected to non-human animals without anthropomorphism or sentimentality. It is not a substitute for scientific rigor but an accompaniment to it. The Anthropocene calls not only for scientific greatness but also moral authority. As the keepers of knowledge regarding the animal world, zoologists and teachers need to assist in redefining human existence with nature—inclusive, empathetic, and ethically based. By promoting ecohumanism, zoologists can become forces of transformation—not merely discovering life, but advocating its right to live with dignity and liberty.

Conclusion

Zoological inquiry and ecohumanist ethics provides a contemporary and revolutionary perspective for reconsidering human-animal relationships. As the evidence for non-human intelligence and consciousness mounts, so does the need to act with compassion, humility, and ethical obligation towards the broader animal world. From elephants grieving their dead to octopuses defying complex puzzles, animals are disclosing minds that compel us to stretch our moral community. Ecohumanism offers the philosophical framework to accept this broadened perspective. It calls on scientists, teachers, policymakers, and the public to understand that intelligence and emotional complexity are not uniquely human characteristics but are shared in ways that cross species boundaries. This change requires not merely policy changes but a cultural shift in how we understand and interact with non-human life.

References

1. Bekoff, M. (2007). The emotional lives of animals: A leading scientist explores animal joy, sorrow, and empathy—and why they matter. New World Library.
2. Bekoff, M., & Pierce, J. (2009). Wild justice: The moral lives of animals. University of Chicago Press.
3. Boesch, C., & Boesch, H. (1990). Tool use and tool making in wild chimpanzees. Folia Primatologica, 54(1-2), 86–99.
4. Brown, C. (2015). Fish intelligence, sentience and ethics. Animal Cognition, 18(1), 1–17.
5. Bugnyar, T., & Heinrich, B. (2005). Ravens, Corvus corax, differentiate between knowledgeable and ignorant competitors. Proceedings of the Royal Society B, 272(1573), 1641–1646.
6. Curry, P. (2011). Ecological ethics: An introduction (2nd ed.). Polity Press.
7. De Waal, F. B. M. (2005). Our inner ape. Riverhead Books.

8. De Waal, F. B. M. (2016). Are we smart enough to know how smart animals are? W. W. Norton & Company.
9. Douglas-Hamilton, I., Bhalla, S., Wittemyer, G., & Vollrath, F. (2006). Behavioural reactions of elephants towards a dying and deceased matriarch. Applied Animal Behaviour Science, 100(1–2), 87–102.
10. Gallup, G. G. Jr. (1970). Chimpanzees: Self-recognition. Science, 167(3914), 86–87.
11. Griffin, D. R. (2001). Animal minds: Beyond cognition to consciousness. University of Chicago Press.
12. Howard, S. R., Avarguès-Weber, A., Garcia, J. E., Greentree, A. D., & Dyer, A. G. (2018). Numerical ordering of zero in honey bees. Science, 360(6393), 1124–1126.
13. Hunt, G. R. (1996). Manufacture and use of hook-tools by New Caledonian crows. Nature, 379(6562), 249–251.
14. Janik, V. M., Sayigh, L. S., & Wells, R. S. (2006). Signature whistle shape conveys identity information to bottlenose dolphins. PNAS, 103(21), 8293–8297.
15. Kohda, M., Hotta, T., Takeyama, T., Awata, S., Tanaka, H., Asai, J., & Jordan, A. L. (2019). If a fish can pass the mark test, what are the implications for consciousness and self-awareness testing in animals? PLoS Biology, 17(2), e3000021.
16. Marino, L., et al. (2007). Cetaceans have complex brains for complex cognition. PLoS Biology, 5(5), e139.
17. Mather, J. A. (2008). Cephalopod consciousness: Behavioural evidence. Consciousness and Cognition, 17(1), 37–48.
18. McComb, K., Moss, C., Durant, S. M., Baker, L., & Sayialel, S. (2000). Matriarchs as repositories of social knowledge in African elephants. Science, 292(5516), 491–494.
19. Newport, C., Wallis, G., & Siebeck, U. E. (2016). Familiar face recognition in fish. Scientific Reports, 6, 21012.
20. Pepperberg, I. M. (2002). The Alex studies: Cognitive and communicative abilities of grey parrots. Current Directions in Psychological Science, 11(3), 83–87.
21. Plotnik, J. M., de Waal, F. B. M., & Reiss, D. (2006). Self-recognition in an Asian elephant. PNAS, 103(45), 17053–17057.
22. Rolston, H. (1988). Environmental ethics: Duties to and values in the natural world. Temple University Press.
23. Singer, P. (1975). Animal liberation: A new ethics for our treatment of animals. HarperCollins.
24. Smith, J. A., Andrews, P. L. R., & Hawkins, P. (2013). Cephalopod research and EU Directive 2010/63/EU: Requirements, impacts and ethical review. Journal of Experimental Marine Biology and Ecology, 447, 31–45.
25. Soulé, M. E. (1985). What is conservation biology? BioScience, 35(11), 727–734.
26. Taylor, A. H., Hunt, G. R., Medina, F. S., & Gray, R. D. (2007). Cognitive adaptation of tool design in New Caledonian crows. Proceedings of the Royal Society B, 274(1624), 1055–1060.
27. Von Frisch, K. (1967). The dance language and orientation of bees. Harvard University Press.
28. Wise, S. M. (2013). Rattling the cage: Toward legal rights for animals. Basic Books.
29. Wolch, J. R. (2002). Anima urbis. Progress in Human Geography, 26(6), 721–742.