

Cultural Frontiers in Research on Non-Human Primates

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ABSTRACT

This literature review explores recent research on primate communication, social learning, and the presence of social norms in non-human animals. It highlights significant findings, including group-specific communication patterns, the adaptive benefits of social learning through imitation and rapid behavioural mimicry, and the existence of socially maintained behaviours akin to human norms. These studies collectively illustrate the complex social lives of primates and offer valuable insights into the evolutionary origins of human culture and social norms. The review also delves into the philosophical implications of these findings, challenging traditional views of human uniqueness and expanding our understanding of animal behaviour and cognition.

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1. Introduction and Objectives

The idea that humans are radically distinct from non-human animals has been a dominant force in the history of ideas, often suggesting a significant evolutionary gap. Recent research in primate social behaviour challenges this notion by revealing that many traits once thought to be uniquely human, such as tool use, social norms, and cultural transmission, are also present in some non-human species, including primates. Understanding these similarities can help us appreciate the continuity between human and non-human behaviours, and reassess human exceptionalism within the broader context of evolution. It also helps us improve our interactions with non-human primates, both in captivity and in the wild.

The three articles reviewed are helpful for advancing our understanding of primate social behaviour and its implications for human evolution. Kalan et al. (2) sheds light on cultural communication in great apes, revealing group-specific vocal and gestural behaviours. Harrison et al. (1) emphasizes the social benefits of social learning, such as increased affiliation and cohesion through mimicry and imitation. Westra et al. (3) challenges the exclusivity of social norms to humans, presenting evidence that non-human animals exhibit behaviours governed by social norms. Together, these studies highlight the complex social dynamics of primates, offering insights into the evolutionary roots of human culture and social norms, and underscoring the importance of social learning in animal communities.

Nomenclature

Conformity: The act of matching attitudes, beliefs, and behaviours to group norms.
Cultural Communication: The exchange of information and behaviours that are learned socially within a group, rather than being genetically inherited.
Cumulative Culture: The ability to build upon previous knowledge and innovations over time, leading to increasingly complex cultural practices.
Human Exceptionalism: The belief that humans are fundamentally different from, and superior to, other animals due to unique attributes like higher cognitive abilities, complex language, moral reasoning, and cultural sophistication.
Normativity: The idea that certain behaviours are considered accepted, appropriate, or otherwise normal within a group. In the context of these articles, it's about understanding how social expectations or standards might exist in animal societies.
Social Learning: The process by which animals learn from observing and imitating others in their social group.

1. Methodology

A Google Scholar search was performed on publications from 2023 and 2024 using three keywords: 'primate,' 'culture,' and 'philosophy.' Of the top results, three articles were selected due to their methodological and thematic similarities. All three articles involve literature reviews of animal studies regarding non-human primate culture and analyses of under-developed branches of investigation. Additionally, the findings of all three articles lead the authors to advocate for additional focus on the continuity of behaviour between human and non-human primates, suggesting that further investigations along these lines will be fruitful for advancing scientific understanding of not only non-human animals but also of human culturally-driven behaviours. The philosophical implications of these three branches of investigation include the scope of human exceptionalism as well as the responsibilities that humans have to non-human primates.

2. Results

Great Ape Cultural Communication: Kalan et al. (2) reviews the cultural communication of wild great apes, focusing on vocal and gestural behaviours of chimpanzees, bonobos, gorillas, and orangutans. Key findings indicate significant population-specific variations, suggesting a cultural component. The article highlights how these socially learned and often subtle behaviours suggest a complex form of culture in non-human primates. For example, pant hooting, a unique vocal communication in chimpanzees (*Pan troglodytes*), is highlighted as an excellent subject for studying socially learned variations (2, p. 3). Different populations exhibit distinct characteristics in the build-up phase of the pant hoot, including variations in length and duration of call elements. Additionally, there are systematic population differences in combining pant hoots with other vocal signals.

Social Benefits of Social Learning: Harrison et al. (1) examines the often-overlooked social benefits of social learning in animals, emphasizing enhanced social bonds through imitation and mimicry. It discusses how conformity aids in the social integration of immigrant animals, promoting acceptance and cohesion. Conformity, or "copying the majority," facilitates low-conflict assimilation and affiliation for new group members. To illustrate, when two new chimpanzees were introduced into a group whose members characteristically exhibited a behaviour referred to as "cross-arm walking," the conforming individual integrated more readily than the non-conforming one (1, p. 1644).

Conformity manifests through imitation and rapid behavioural mimicry. In many primate species, individuals favour others who selectively imitate their behaviours. Rhesus macaques (*Macaca mulatta*) pay more attention to frequent imitators, such as those who displace objects in ways that have been recently done by others, follow others closely, or gather food in a location (1, p. 1641). Capuchin monkeys (*Cebus apella*) engage more often in token exchange with those who imitate them (1, p. 1641). Rapid behavioural mimicry, also known as "rapid facial mimicry" or "simple imitation," involves spontaneous and subtle behaviours, frequently involving mouth expressions and eye movements (1, p. 1642). This mimicry facilitates social affiliation, and it has been linked to increased play in Gelada baboons (*Theropithecus gelada*) and macaques (*Macaca tonkeana* and *Macaca fasciata*) (1, p. 1642, 1645).

Social Norms in Non-Human Animals: West et al. (3) presents a framework for studying social norms in non-human animals, challenging the idea that such norms are uniquely human. It proposes focusing on normative regularities, which are socially maintained patterns of behaviour, rather than difficult-to-measure psychological characteristics.

In many primate species, grooming goes beyond hygiene, reinforcing group cohesion and hierarchical structures. Evidence shows that chimpanzees track how often group members share food, groom others, and engage in cooperative behaviours, and that they prefer to engage in reciprocal activities with those who have been generous. Moreover, non-cooperative behaviour results in policing or punishment by third parties in groups of chimpanzees, vervet monkeys (*Chlorocebus pygerythrus*) (3, p. 1060), and pigtailed macaques (*Macaca nemestrina*) (3, p. 1061).

These findings collectively emphasize the research benefits of an evolutionary continuity perspective, challenging human uniqueness.

3. Discussion

These three articles collectively underscore the complexity and richness of primate social interactions, offering deep insights into the evolutionary origins of human culture and social norms. The discovery of group-specific vocal and gestural behaviours among great apes highlights their capacity for cultural transmission, suggesting that the roots of human culture extend deep into our evolutionary past. This supports a comparative framework for studying the development of complex social behaviours across species.

Social learning plays a crucial role in enhancing social bonds and fostering cohesion within primate communities. Behaviours such as imitation and mimicry not only facilitate the acquisition of new skills but also strengthen social connections and help integrate individuals into new groups. This aligns with theories in social psychology and anthropology, emphasizing the importance of social learning in maintaining social harmony and cohesion.

Furthermore, the presence of social norms in non-human animals challenges the traditional view of human exceptionalism. The evidence suggests that animals exhibit behaviours governed by social expectations, expanding our understanding of normativity. However, it is more effective to study these norms using behavioural criteria rather than the psychological criteria typically applied to human studies. This shift in research approach opens new avenues for exploring how social norms evolve and function in different species.

Overall, the articles collectively highlight the interconnectedness of human and non-human animal societies, suggesting that the sophisticated social structures observed in primates offer valuable insights into the evolutionary foundations of human behaviour. Integrating these insights from primate research into the broader study of social behaviour and evolution enriches our understanding of both human and non-human animal societies, emphasizing the continuity and complexity of social interactions across species.

4. Conclusion

This literature review emphasizes the continuity between human and non-human primate cultures, revealing evolutionary connections in cultural attributes such as cumulative culture and social norms. Recognizing this continuity can enhance our understanding of both domains without necessitating identical research strategies.

The research presented in the three articles reviewed challenges human uniqueness and emphasizes the importance of understanding primate social behaviours to gain insights into human culture and cognition. Ultimately, these studies prompt us to re-evaluate assumptions about human uniqueness, expand our ethical frameworks, and appreciate the complex social lives of primates, offering valuable insights into the origins of human culture and cognition.

5. Implications and Future Research

The implications of these findings are vast, challenging our understanding of human uniqueness and highlighting the complex social lives of primates. Future research questions can build on the foundation of these articles to shed light on evolutionary continuity, ethical considerations, and the broader definition of culture and social norms across species. Research questions arising from this work include:

- How can studying the communication and social behaviours of primates help us understand the similarities between humans and other primates?
- What specific skills do primates share with humans that show an evolutionary link?
- What does the complexity of primate social behaviour mean for how we should interact with them in the wild and in captivity?
- How can understanding the history of cultural traits in primates inform theories about how human societies developed?
- How can insights from fields like philosophy, anthropology, psychology, and biology help us understand social behaviours in both humans and animals?
- What new research methods can be developed to study social behaviour across different species?

By addressing these questions, future research can build on current findings, offering deeper insights into the complex social lives of primates and their implications for understanding human evolution and behaviour.

6. References

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