

## NIMBioS Webinar Series on Cultural Evolution Oct 13, 2020

### Questions from *The discovery and reach of animal cultures* with Andrew Whiten

1. Do the traditions come in "packages" or are each of them independent from the others? Is there a concept that reflects this measure?
2. Does in-group/out-group play any role in chimp inter-group cultural diffusion (rather than just learning opportunities)? What is your sense of the current evidence concerning whether or not non-human animal culture includes social norms, i.e. rules that are stabilized by enforcement (including crucially, third party punishment)?
3. What is your response to the argument by Hill (in Laland et al 2009, "Question of Animal Culture") that the bar for using the term "culture" needs to be set not just at social learning, but also require the existence of norms & ritual, namely (a) valued expectations of behavior whereby social groups adjust evolutionary payoffs by cultural means, and (b) symbolic performances that reinforce them? On this account, unless and until norms and symbolic performances are present, we could talk about "animal traditions" rather than "culture."
4. Alternatively, from the POV of cultural anthropology, one would reserve "culture" for social learning which relies on symbol systems employing arbitrary signs, such as language. Arbitrary symbol systems can easily refer to phenomena not immediately present (displacement), communicate about abstractions, and be used to generate new signs and combinations of signs with relative ease (productivity). As such, they could be expected to facilitate & co-evolve with cumulative cultural evolution. What, if any, research has there been in this direction?
5. Would the horizontal spread of cultural traditions occur so readily in the wild, where chimps do a lot of their foraging separately, than in research facilities? Do you think most chimp culture is spread vertically - from mothers to offspring?
6. I'm curious what you think of the "zone of latent solutions" hypothesis, that animals often have the prerequisite behavioral topographies in their behavioral repertoire, and that social transmission facilitates the use of these repertoires in a new situation? i.e., the behavior isn't being directly transmitted socially, but it's something else about social groups that lets behaviors spread?
7. Given the evidence of culture in primates as well as Neanderthals, what do you think of the argument that our species really took off through a major transition in cooperation? In this account, our form of cumulative cultural evolution is contingent upon new "sociological" arrangements (i.e. Boehm's "reverse dominance" hypotheses). *Survival of the Friendliest* by Brian Hare and Vanessa Woods also points to self-domestication as the key distinguishing force between us and other hominum species.
8. The main difference between human and non-human culture seems to be the cumulative nature of the first. What could be the reason for that? Or is there cumulative culture among non-human animals as well?
9. One issue here seems to be how culture is defined. Is it only social learning and the transmission of behavior, or is there something else involve, more even than cumulative culture, that perhaps depends on things like the psychological capacities of individuals (such as the recognition of self as both a distinct identity and simultaneously a member of a social group)?
10. What is your sense of the current evidence concerning whether or not non-human animal culture includes social norms, i.e. rules that are stabilized by enforcement (including crucially, third party punishment)?

11. Can we have a word why 'peering' as discussed in Schuppli & van Shaik 2019 is insufficient for social learning on your view?
12. Given that culture is exceptionally advantageous in response to rapid environmental change, should we expect an explosion of animal cultures with the spread of anthropogenic climate change?
13. The concept of transmission seems to be used in two ways, to describe radiation, and to describe "heredity" in cultural evolution (animals and humans). But transmission of a cultural innovation doesn't seem to explain the creation of the innovation in the first place. How do you see the innovations occurring in the first place?
14. What do you think is the most basic mechanism for social learning? Mirror neurons and pattern habituation?
15. Andy, you jump from endothermic vertebrates 'down' to fishes. But what about reptiles (and even dinosaurs) and their role in the evolution of culture, since social learning has been demonstrated in several species of nonavian reptiles?
16. How could model-based social learning affect the formation or maintenance of traditions?
17. Two days ago, Tennie et al. published 'The zone of latent solutions [ZLS] and its relevance to understanding ape cultures'. Since the ZLS is becoming increasingly prominent in the literature and gains followers, what would you say will be its role in future research in the field?
18. Should we take "social learning" to be a basic/single psychological mechanism, or would it be fruitful to distinguish between different forms of social learning?