

Author's Accepted Manuscript

From cultural traditions to cumulative culture: parameterizing the differences between human and nonhuman culture

Marius Kempe, Stephen J. Lycett, Alex Mesoudi



www.elsevier.com/locate/jtbi

PII: S0022-5193(14)00335-X
DOI: <http://dx.doi.org/10.1016/j.jtbi.2014.05.046>
Reference: YJTBI7765

To appear in: *Journal of Theoretical Biology*

Received date: 28 February 2014

Revised date: 23 April 2014

Accepted date: 30 May 2014

Cite this article as: Marius Kempe, Stephen J. Lycett, Alex Mesoudi, From cultural traditions to cumulative culture: parameterizing the differences between human and nonhuman culture, *Journal of Theoretical Biology*, <http://dx.doi.org/10.1016/j.jtbi.2014.05.046>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting galley proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

From cultural traditions to cumulative culture: parameterizing the differences between human and nonhuman culture

Marius Kempe¹, Stephen J. Lycett², Alex Mesoudi^{1*}

¹Department of Anthropology and Centre for the Coevolution of Biology and Culture, Durham University, Dawson Building, South Road, Durham, DH1 3LE, UK

²Department of Anthropology, School of Anthropology and Conservation, Marlowe Building, The University of Kent, Canterbury, Kent, CT2 7NR, UK

*Author for correspondence (a.a.mesoudi@durham.ac.uk).

Running head: Human and nonhuman culture

ABSTRACT

Diverse species exhibit cultural traditions, i.e. population-specific profiles of socially learned traits, from songbird dialects to primate tool-use behaviors. However, only humans appear to possess cumulative culture, in which cultural traits increase in complexity over successive generations. Theoretically, it is currently unclear what factors give rise to these phenomena, and consequently why cultural traditions are found in several species but cumulative culture in only one. Here, we address this by constructing and analyzing cultural evolutionary models of both phenomena that replicate empirically attestable levels of cultural variation and complexity in chimpanzees and humans. In our model of cultural traditions (Model

Download English Version:

<https://daneshyari.com/en/article/6370319>

Download Persian Version:

<https://daneshyari.com/article/6370319>

[Daneshyari.com](https://daneshyari.com)