

Dieter Lukas



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I am an evolutionary biologist focused on social systems of past and present populations from a comparative perspective. My key research achievements resolve long standing questions about the evolution of societies and advance novel statistical approaches to gain insights into the factors shaping individual behavior.

I established how environmental conditions shape competition among individuals, and how this leads to the evolution of different societies. This research highlighted the role of kinship in structuring social behavior and the different forms of cooperation and competition that occur when individuals interact either with related or unrelated partners. I revealed how the factors shaping social interactions lead to inequality in resource access and power imbalances within societies. Building on this, I unraveled the fundamental assumptions underlying the field of human behavioral ecology, showing that human societies appear to be constrained by many of the same environmental factors that shape behavior in other mammals and birds. My interdisciplinary research has shown that understanding the cognition that underlies how individuals solve problems in their environment needs to be based on methods, including those I developed, that uncover individual variation in a consistent manner.

My comparative approach integrates research across different departments of the Max Planck Institute (MPI) for Evolutionary Anthropology. I contributed to projects on Comparative Cultural Psychology (statistical analyses for ManyPrimates 3), Primate Behavior and Evolution (evolution of menopause, White et al. 2025), Evolutionary Genetics (social systems of ancestral populations, Skov et al. 2022), Primate Behavioural Ecology (cognitive evolution, Amici et al. 2021), and Human Behavior, Ecology and Culture (human kinship structure, Koster et al. 2019).

ACADEMIC POSITIONS AND EDUCATION

- 2017 - now **Senior Researcher and Leader of the Comparative Behavioral Ecology Group**, Department of Human Behavior, Ecology & Culture, MPI for Evolutionary Anthropology, Germany
- 2008 - 2017 **Postdoctoral Research Associate**, Department of Zoology, University of Cambridge, UK, with Prof. Clutton-Brock
- 2004 - 2008 **Ph.D.**, Department of Primatology, MPI for Evolutionary Anthropology and Department of Biology, Leipzig University, Germany
Thesis: Comparative study of genetic variation in relation to social structures of animals with Prof. Boesch and Dr. Vigilant
- 1998 - 2003 **Masters**, Department of Biology, University of Münster, Germany
Thesis: Genetic variation in wild gorilla populations with Prof. Michiels and Dr. Vigilant

AWARDS AND GRANTS

- 2022 – 2026 **Project grant** from the French (ANR) and German (DFG) National Research Agencies “The evolution of despotic societies in mammals”, co-PI with Dr. Höner (IZW Berlin), Dr. Huchard, and Dr. Charpentier (ISEM Montpellier) (€856,394)
- 2017 **Ranked #1** in the selection process for CNRS senior researcher permanent positions (CR1 chercheurs permanents) (declined)
- 2016 **University Academic Fellow** at the University of Leeds (declined)
- 2012 - 2014 **Visiting Scholar** at the National Center for Ecological Analysis and Synthesis, USA
- 2012 - 2017 **Named postdoc on European Research Council** Advanced Grant to Prof. Clutton-Brock: involved in writing and methodological design
- 2008 - 2010 **Postdoctoral Research Associate** at Trinity Hall College, UK
- 2004 - 2008 **PhD salary** funded by the MPI for Evolutionary Anthropology

LEADERSHIP

Representative

- *For scientific staff of the MPI for Evolutionary Anthropology (2020-2023)*
 - *Within the institute:* organized the election for a postdoc representative, and achieved greater flow of information within the institute by sharing section-wide news with institute
 - *Within the Max Planck Society:* member of selection committees for directorship positions and discussion groups to improve working conditions
- *For postdoctoral researcher interests in the Department of Zoology at the University of Cambridge (2014-2017):* organized career planning events, clarified rights for independently funded postdocs
- *Co-founder of the Max Planck PhDNet (2003-2008):* a network within the society to highlight students' rights, and optimize education and exchange

Organizer

- *Member of the commission for Open Science* initiated by the vice-president of the Max Planck Society (2022-2024)
- *Organized and chaired a workshop on “Research Ethics in Evolutionary Biological Sciences”* at the MPI for Evolutionary Anthropology (2019)
- *Co-organized Max Planck Institute Innovators workshop* at MPI for Evolutionary Anthropology (2019)

- Organized three seminar series in the Department of Zoology at the University of Cambridge (2013-2017)
- Organized and chaired the 5th general meeting of PhDNet at the MPI for Evolutionary Anthropology (2006)

Peer reviewer

- Grant review panel member for the French (ANR, 2011 and 2015) and German National Research Foundations (DFG, 2021 and 2025)
- Grant reviewer for 9 organizations including the US (NSF), French (ANR), and German (DFG) National Research Foundations and the European Research Council (ERC) (2012-now)
- Peer reviewer for >45 journals (Top Reviewer for Molecular Ecology 2013 & 2014 and Proceedings B 2015)
- Book proposal reviewer for Cambridge University Press and University of Chicago Press

Editor

- Recommender (Editor) at Peer Community in Registered Reports (2021-now)
- Recommender (Editor) at Peer Community in Ecology (2018-now)
- Associate editor at PeerJ (2021-2024)
- Associate editor at Royal Society Open Science (2020-2023)

Inclusive academia

- Gave career planning seminars at five universities on how to plan next steps after a PhD
- Created a database listing postdoctoral research fellowships which has been shared several thousand times
- Ran “Bursting the Academic Bubble” roundtable at MPI for Evolutionary Anthropology
- Participated in university-wide mentoring committee at the University of Cambridge and started a new mentoring program matching graduate students with postdocs
- Performed a study to document and mitigate the lower visibility of women in academic seminars (covered by news outlets, including The Economist, Forbes, and BBC, and used by conference organizers worldwide)
- Performed a study to document gender biases in the impact of the COVID19 pandemic on research activities
- Collated evidence of and advice for improving diversity in academia

Invited Presentations

- *Selected invited seminars at research institutions*
 - Evolutionary Anthropology, CNRS ISEM Montpellier France (April 2025)
 - Primate Behavior and Evolution, MPI for Evolutionary Anthropology Leipzig Germany (October 2023)
 - Centre for Research in Animal Behaviour, University of Exeter UK (February 2023)
 - Animal Ecology, University of Potsdam Germany (November 2021)
 - Evolution & Ecology, Australian National University Canberra Australia (April 2021)
 - Zoology, Charles University Prague Czech Republic (March 2021)
 - Biological Anthropology, University College London UK (October 2020)
 - Anthropology, University of New Mexico USA (November 2018)
 - Human Evolution and Social Change, Arizona State University USA (October 2017)
 - Biological Anthropology, Harvard University USA (April 2017)
- *Invited speaker at workshops*
 - 'Comparative Social Evolution' symposium, Bern University (August 2018)
 - 'Inclusive Fitness' workshop, University of Cambridge (May 2016)
 - 'Behaviour & Cognition' symposium, University of Göttingen (October 2015)
 - 'Family Living' workshop, University of Zurich (February 2015)
- *Invited speaker at conferences*
 - International Society of Behavioural Ecology conference, Exeter University (August 2016)
 - 'Freilandtage' conference, University of Göttingen (December 2011)

Outreach

- Created a [guide on how to engage with the press](#) for researchers and gave seminars on interacting with the press which were organized by the University of Cambridge Press Office
- Organized and participated in interactive public outreach activities at MPI for Evolutionary Anthropology (September 2005, 2006, 2007 and June 2025), the Royal Society Summer Science Exhibition London (June 2010), and Cambridge Science Festival (March 2011, 2016)

Press Coverage

- *Provided scientific consultation for WDR Quarks (video report), ZDF Terra X (TV episode in production), and BBC iWonder (interactive science website)*
- *Provided interviews and materials for the press, resulting in more than 250 news stories about my research, including in NPR, BBC News, NY Times, Le Monde, National Geographic, CNN, Reuters, Science News, Nature News, Die Zeit, Der Spiegel, Neue Zuercher Zeitung, CBC, and Wired Science*
- *My research is cited in 16 wikipedia articles*
- *Interviewed for live radio and podcasts on the behavior of humans and other mammals, including on ScienceVS (Spotify's Top Science podcast in the US), CBC, Newstalk, and BreakingBio*

TEACHING

- **PhD supervisor**, Department of Human Behavior, Ecology, and Culture, MPI for Evolutionary Anthropology and Leipzig University, Germany (A. Dalzero, defended June 2024; P. Varas Enriquez, defended March 2025)
- **External PhD thesis examiner**, University of Oxford, UK (P. Downing), University of Tasmania, Australia (B. Halliwell), University of Exeter, UK (A. Pereira) (2016-now)
- **Project supervisor** for postgraduate and undergraduate research projects at the University of Cambridge, UK and the MPI for Evolutionary Anthropology, Germany (18 students): 8 of the students obtained independent funding, all moved to graduate programs (2011-now)
- **Design and teach 2-year undergraduate courses** for the Deutsche Studienstiftung (German Academic Scholarship Foundation) (2022-2025)
- **Design and teach courses** for undergraduates including two Msc modules for the MPI for Evolutionary Anthropology at the Leipzig University (13 courses at Leipzig University, Germany; 2 courses at the Department of Zoology, University of Cambridge, UK) and for graduate students (two units at the International Max Planck Research School of Human Origins, Germany) (2007-now)
- **Admissions interviewer** for Natural Sciences undergraduates for Magdalene College, Cambridge, UK (2014-2015) and for IMPRS graduate candidates for Leipzig University (2024)

PUBLICATIONS

I am actively engaged in changing scientific practices to be more open. Since my move to the MPI for Evolutionary Anthropology, articles where I make substantial contributions are published in community driven journals. PDFs of all articles, associated data, code, and press releases are available at my website. I published seventeen data sets at public repositories, which have been downloaded more than 1500 times.

(+ = in review, * = undergraduate co-author, (rr) = started as a registered report)

- 50.+ Varas Enríquez PJ, Redhead D, Borgerhoff Mulder M, Colleran H, Lukas D (2025) **The role of resource dynamics in the distribution of life cycles within a female human population**. Peer Community in Registered Reports doi:10.17605/osf.io/24C7Z (rr)
- 49.+ Varas Enríquez PJ, Minocher R, Lukas D, Colleran H, Borgerhoff Mulder M (2025) **How material wealth influences age at first birth among Pimbwe women from Tanzania**. Evolutionary Human Sciences doi:10.31219/osf.io/zj528
- 48.+ Lukas D, Blackwell AD, *Edrisi M, *Hardy K, Marfori Z, McCune K, *Sevchik A, *Smith C, Logan C (2025) **Reduced levels of relatedness indicate that great-tailed grackles disperse further at the edge of their range**. Peer Community in Ecology doi:10.32942/X2ND0N (rr)
- 47.+ Logan C, McCune K, Rowney C, Lukas D (2025) **Behavioral flexibility is similar in two closely related species where only one is rapidly expanding its geographic range**. Peer Community in Registered Reports doi:10.32942/X2Q038 (rr)
- 46. Huchard E, Kappeler P, Smit N, Fichtel C, Lukas D (2025) **The evolution of male-female dominance relations in primate societies**. PNAS. doi:10.1073/pnas.2500405122
- 45. White L, Lukas D, Langergraber K, Vigilant L (2025) **Avoidance of reproductive conflict and the evolution of menopause in chimpanzees**. Royal Society Open Science. doi:10.1098/rsos.250385
- 44. McKune K, Lukas D, MacPherson M, Logan C (2025) **Behavioral flexibility is related to exploration and persistence, but not boldness or motor diversity**. Plos One. doi:10.32942/X2H33F (rr)
- 43. Logan C, Lukas D, Geng X, Hardy K, LeGrande-Rolls C, Marfori Z, MacPherson M, Rowney C, Smith C, McCune K (2024) **Behavioral flexibility is related to foraging, but not social or habitat use behaviors, in a species that is rapidly expanding its range**. Peer Community Journal doi:10.32942/X2T036 (rr)

42. Dezeure J, Dagorrette J, Burtschell L, Chowdhury S, Lukas D, Swedell L, Huchard E (2024) **The climatic determinants of flexible reproductive seasonality in Africa-dwelling papionins**. Peer Community Journal [doi:10.24072/pcjournal.464](https://doi.org/10.24072/pcjournal.464)
41. Lukas D, McCune KB, Blaisdell AP, Johnson-Ulrich Z, MacPherson M, Seitz BM, *Sevchik A, Logan CJ (2024) **Bayesian reinforcement learning models reveal how great-tailed grackles improve their behavioral flexibility in serial reversal learning experiments**. Peer Community Journal [doi:10.24072/pcjournal.456](https://doi.org/10.24072/pcjournal.456) (rr)
40. Dalzero A, Geheim BA, Kaplan H, Stieglitz J, Hooper PL, Ross CT, Gurven M, Lukas D (2024) **Cross-cousin marriage among Tsimane forager-horticulturalists during demographic transition and market integration**. Evolutionary Human Sciences [doi:10.1017/ehs.2024.11](https://doi.org/10.1017/ehs.2024.11)
39. Logan CJ, McCune KB, LeGrande-Rolls C, Martori Z, Hubbard J, Lukas D (2023) **Implementing a rapid geographic range expansion - the role of behavior changes**. Peer Community Journal [doi:10.24072/pcjournal.320](https://doi.org/10.24072/pcjournal.320) (rr)
38. *Lee KGL, Mennerat A, Lukas D, Dugdale HL, Culina A (2023) **The effect of the COVID-19 pandemic on the gender gap in research productivity within academia**. eLife [doi:10.7554/eLife.85427](https://doi.org/10.7554/eLife.85427)
37. Logan CJ, Lukas D, Blaisdell AP, Johnson-Ulrich Z, MacPherson M, Seitz BM, *Sevchik A, McCune KB (2023) **Behavioral flexibility is manipulable and it improves flexibility and innovativeness in a new context**. Peer Community Journal [doi:10.32942/osf.io/5z8xs](https://doi.org/10.32942/osf.io/5z8xs) (rr)
36. McCune KB, Blaisdell AP, Johnson-Ulrich Z, Lukas D, MacPherson M, Seitz BM, *Sevchik A, Logan CJ (2023) **Using repeatability of performance within and across contexts to validate measures of behavioral flexibility**. PeerJ [doi:10.7717/peerj.15773](https://doi.org/10.7717/peerj.15773) (rr)
35. Summers J, Lukas D, Logan C, Chen N (2023) **The role of climate change and niche shifts in divergent range dynamics of a sister-species pair**. Peer Community Journal [doi:10.24072/pcjournal.248](https://doi.org/10.24072/pcjournal.248) (rr)
34. Dalzero A, Ross CT, Lukas D (2022) **Fitness consequences of cousin marriage: a life-history assessment in two populations**. Evolutionary Human Sciences [doi:10.1017/ehs.2022.55](https://doi.org/10.1017/ehs.2022.55)
33. Davidian E, Surbeck M, Lukas D, Kappeler PM, Huchard E (2022) **The eco-evolutionary landscape of power relationships between males and females**. Trends in Ecology and Evolution [doi:10.1016/j.tree.2022.04.004](https://doi.org/10.1016/j.tree.2022.04.004)
32. *Shivani, Huchard E, Lukas D (2022) **The effect of dominance rank on female reproductive success in social mammals**. Peer Community Journal [doi:10.24072/pcjournal.158](https://doi.org/10.24072/pcjournal.158) (rr)

31. Barsbai T, Lukas D, Pondorfer A (2021) **Local convergence of behavior across species.** Science [doi:10.1126/science.abb7481](https://doi.org/10.1126/science.abb7481)
30. *Sevchik A, Logan CJ, Bergeron L, McClune K, Blackwell A, Rowney C, Lukas D (2021) **Investigating sex differences in genetic relatedness in great-tailed grackles in Tempe, Arizona to infer potential sex biases in dispersal.** Peer Community Journal [doi:10.26451/abc.09.01.04.2022](https://doi.org/10.26451/abc.09.01.04.2022) (rr)
29. Lukas D, Towner M, Borgerhoff Mulder M (2021) **The Potential to Infer the Historical Pattern of Cultural Macroevolution.** Phil Trans B [doi:10.1098/rstb.2020.0057](https://doi.org/10.1098/rstb.2020.0057)
28. Lukas D, Clutton-Brock T (2020) **Monotocy and the evolution of plural breeding in mammals.** Behavioural Ecology [doi:10.1093/beheco/araa039](https://doi.org/10.1093/beheco/araa039)
27. Koster J, Lukas D, Nolin D, Power EA, Alvergne A, Mace R, Ross C, Kramer K, Greaves R, Caudell M, MacFarlan S, Schniter E, Quinlan R, Mattison S, Reynolds A, Yi-Sum C, Massengill E (2019) **Kinship across the lifespan in human communities.** Phil Trans B [doi:10.1098/rstb.2018.0069](https://doi.org/10.1098/rstb.2018.0069)
26. Lukas D & Huchard E (2019) **The evolution of infanticide by females in mammals.** Phil Trans B [doi:10.1098/rstb.2018.0075](https://doi.org/10.1098/rstb.2018.0075)
25. Kappeler PM, Clutton-Brock T, Shultz S, Lukas D (2019) **Social complexity: patterns, processes, and evolution.** Behavioral Ecology and Sociobiology [doi:10.1007/s0026](https://doi.org/10.1007/s0026)
24. Carter A, Croft A, Lukas D & Sandstrom G (2018) **Women's visibility in academic seminars: women ask fewer questions than men.** Plos One [doi:10.1371/journal.pone.0202743](https://doi.org/10.1371/journal.pone.0202743)
23. Lukas D & Clutton-Brock TH (2018) **Social complexity and kinship in animal societies.** Ecology Letters [doi:10.1111/ele.13079](https://doi.org/10.1111/ele.13079)
22. Montgomery SH, Currie A, Lukas D, Boogert N, Buskell A, Cross FR, Jelbert S, Avin S, Mares R, Navarrete AF, Shigeno S & Logan C (2018) **Ingredients for Understanding Brain and Behavioral Evolution: Ecology, Phylogeny, and Mechanism.** CCBR [doi:10.3819/CCBR.2018.130011](https://doi.org/10.3819/CCBR.2018.130011)
21. Logan CJ, Avin S, Boogert N, Buskell A, Cross FR, Currie A, Jelbert S, Lukas D, Mares R, Navarrete AF, Shigeno S & Montgomery SH (2018) **Beyond brain size: uncovering the neural correlates of behavioral and cognitive specialization.** CCBR [doi:10.3819/CCBR.2018.130008](https://doi.org/10.3819/CCBR.2018.130008)
20. *Dixit T, English S & Lukas D (2017) **The relationship between egg size and helper number in cooperative breeders: a meta-analysis across species.** PeerJ [doi:10.7717/peerj.4028](https://doi.org/10.7717/peerj.4028)

19. Lukas D & Clutton-Brock (2017) **Reply: Comparative studies need to rely both on sound natural history data and on excellent statistical analysis.** Royal Society Open Science [doi:10.1098/rsos.171211](https://doi.org/10.1098/rsos.171211)
18. Lukas D & Clutton-Brock T (2017) **Climate and the distribution of cooperative breeding in mammals.** Royal Society Open Science [doi:10.1098/rsos.160897](https://doi.org/10.1098/rsos.160897)
17. Lukas D & Huchard E (2014) **The evolution of infanticide by males in mammalian societies.** Science [doi:10.1126/science.1257226](https://doi.org/10.1126/science.1257226)
16. MacLeod KJ & Lukas D (2014) **Revisiting non-offspring nursing: allonursing evolves when the costs are low.** Biology Letters [doi:10.1098/rsbl.2014.0378](https://doi.org/10.1098/rsbl.2014.0378)
15. Lukas D & Clutton-Brock TH (2014) **Costs of mating competition limit male lifetime breeding success in polygynous mammals.** Proceedings B [doi:10.1098/rspb.2014.0418](https://doi.org/10.1098/rspb.2014.0418)
14. Carter AJ, Horrocks NP, Huchard E, Logan CJ, Lukas D, MacLeod KJ, Marshall HM, Peck HL, Sanderson JL & Sorensen MC. (2014) **Junior scientists are sceptical of sceptics of open access: a reply to Agrawal.** Trends in Plant Sciences [doi:10.1016/j.tplants.2014.04.005](https://doi.org/10.1016/j.tplants.2014.04.005)
13. Lukas D & Clutton-Brock TH (2014) **Evolution of social monogamy in primates is not consistently associated with male infanticide.** PNAS [doi:10.1073/pnas.1401012111](https://doi.org/10.1073/pnas.1401012111)
12. Lukas D & Clutton-Brock TH (2013) **The evolution of social monogamy in mammals.** Science [doi:10.1126/science.1238677](https://doi.org/10.1126/science.1238677)
11. Thornton A & Lukas D (2012) **Individual variation in cognitive performance: developmental and evolutionary perspectives.** Phil Trans B [doi:10.1098/rstb.2012.0214](https://doi.org/10.1098/rstb.2012.0214)
10. Lukas D & Clutton-Brock TH (2012) **Life histories and the evolution of cooperative breeding in mammals.** Proceedings B [doi:10.1098/rspb.2012.1433](https://doi.org/10.1098/rspb.2012.1433)
9. Lukas D & Clutton-Brock TH (2012) **Cooperative breeding and monogamy in mammalian societies.** Proceedings B [doi:10.1098/rspb.2011.2468](https://doi.org/10.1098/rspb.2011.2468)
8. Clutton-Brock TH & Lukas D (2012) **The evolution of social philopatry and dispersal in female mammals.** Molecular Ecology [doi:10.1111/j.1365-294X.2011.05232.x](https://doi.org/10.1111/j.1365-294X.2011.05232.x)
7. Lukas D & Clutton-Brock TH (2011) **Group structure, kinship, inbreeding risk and habitual female dispersal in plural-breeding mammals.** Journal of Evolutionary Biology [doi:10.1111/j.1420-9101.2011.02385.x](https://doi.org/10.1111/j.1420-9101.2011.02385.x)
6. Schubert G, *Stoneking CJ, Arandjelovic M, Boesch C, Eckhard N, Hohmann G, Langergraber K, Lukas D, Vigilant L (2011). **Male-mediated gene flow in patrilocal primates.** Plos One [doi:10.1371/journal.pone.0021514](https://doi.org/10.1371/journal.pone.0021514)

5. Eriksson J, Siedel H, Lukas D, Kayser M, Erler A, Hashimoto C, Hohmann G, Boesch C & Vigilant L (2006) **Y-chromosome analysis confirms highly sex-biased dispersal and suggests a low male effective population size in bonobos (*Pan paniscus*)**. Molecular Ecology doi:10.1111/j.1365-294X.2006.02845.x
4. Lukas D, Reynolds V, Boesch C & Vigilant L (2005) **To what extent does living in a group mean living with kin?** Molecular Ecology doi:10.1111/j.1365-294X.2005.02560.x
3. Thalmann O, Serre D, Hofreiter M, Lukas D, Eriksson J & Vigilant L (2005) **Nuclear insertions help and hinder inference of the evolutionary history of gorilla mtDNA**. Molecular Ecology doi:10.1111/j.1365-294X.2004.02382.x
2. Bradley BJ, Doran-Sheehy DM, Lukas D, Boesch C & Vigilant L (2004) **Dispersed male networks in western gorillas**. Current Biology doi:10.1016/j.cub.2004.02.062
1. *Lukas D, Bradley BJ, Nsubuga AM, Doran-Sheehy D, Robbins M & Vigilant L (2004) **Major histocompatibility complex and microsatellite variation in two populations of wild gorillas**. Molecular Ecology doi:10.1111/j.1365-294X.2004.02353.x