

Bret Alexander Beheim

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🕒 August 12, 2024

Employment

- 2020-pres. · Group Leader, MOSAIC Research Group, Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany
- 2016-2020 · Senior Researcher, Department of Human Behavior, Ecology, and Culture, Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany
- 2012-2016 · Post-doctoral Researcher, Department of Anthropology, University of New Mexico, USA

Education

- 2007-2012 · Ph.D. in Evolutionary Ecology, University of California at Davis, USA
- 2005-2006 · M.A. in Social Sciences, University of Chicago, Illinois, USA
- 2000-2004 · B.A. in History and Anthropology. University of California at Santa Barbara, USA *with honors/Phi Beta Kappa*

Research

Publications in Print

- 2024
 1. Beheim, B.A., Bell, A.V. (2024) Why cultural distance can promote — or impede — group-beneficial outcomes *Evolutionary Human Sciences*, 6(e14). DOI: 10.1017/ehs.2024.8
 2. Dalzero, A., Beheim, B.A., Ross, C., Hooper, P., Kaplan, H., Gurven, M., Lukas, D. (2024) Cross-cousin marriage among Tsimane forager-horticulturalists during demographic transition and market integration *Evolutionary Human Sciences*, 6(e18). DOI: 10.1017/ehs.2024.11
 3. Ready, E., Ross, C.T., Beheim, B., Parrott, J. (2024) Indigenous food production in a carbon economy *Proceedings of the National Academy of Sciences*, 121(32), e2317686121. DOI: 10.1073/pnas.2317686121
- 2023
 4. Kaplan, H.K., *et al.* (2023) Brain volume, energy balance and cardiovascular health in two non-industrial South American populations *Proceedings of the National Academy of Sciences*, 120(13), e2205448120. DOI: 10.1073/pnas.2205448120
 5. Ross, C.T., Hooper, P., Smith, J.E., Jaeggi, A.V., Smith, E.A., Gavrillets, S., *et al.* (2023) Reproductive inequality in humans and other mammals. *Proceedings of the National Academy of Sciences*, 120(22), e2220124120. DOI: 10.1073/pnas.2220124120
 6. Mattison, S.M., Liu, R., Mattison, P.M., Beheim, B.A., Shenk, M.K., Blumenfield, T., Sum, C.Y., Seabright, E., Alami, S. (2023) Gender disparities in material and educational resources differ by kinship system, 378(1883), 20220299. DOI: 10.1098/rstb.2022.0299
 7. Kraft, T.S., *et al.* (2023) Metapopulation dynamics of infectious disease (SARS-CoV-2) transmission in a small-scale human society, 21(8), e3002108. DOI: 10.1371/journal.pbio.3002108

8. Trumble, B., Pontzer, H., Stieglitz, J., Cummings, D.K., Wood, B., Emery Thompson, M., Raichlen, D., Beheim, B., Yetish, G., Kaplan, H., Gurven, M. (2023) Energetic costs of testosterone in two physically active foraging populations. *American Journal of Human Biology*, e23949. DOI: 10.1002/ajhb.23949
9. Stieglitz, J., Buoro, Y., Beheim, B., Trumble, B., Kaplan, H., Gurven, M. (2023) Labour's pain: strenuous subsistence work, mechanical wear-and-tear and musculoskeletal pain in a non-industrialized population *Proceedings of the Royal Society B*, 290(1998), 20222497. DOI: 10.1098/rspb.2022.2497
10. Hillemann, F., Beheim, B.A., Ready, E. (2023) Socio-economic predictors of Inuit foraging strategies and their implications for climate change adaptation *Philosophical Transactions of the Royal Society B*, 378(1889), 20220395. DOI: 10.1098/rstb.2022.0395
11. Trumble, B.C., *et al.* (2023) Apolipoprotein-ε4 is associated with higher fecundity in a natural fertility population *Science Advances*, 9(32), eade9797. DOI: 10.1126/sciadv.ade9797
- 2022 12. Fedorova, N., McElreath, R., Beheim, B. (2022) The complex life course of mobility: Quantitative description of 300,000 residential moves in 1850-1950 Netherlands. *Evolutionary Human Sciences*, 4, E39. DOI: 10.1017/ehs.2022.33
13. Kraft, T.S., Cummings, D., Venkataraman, V., Alami, S., Beheim, B., Hooper, P. Seabright, E., Trumble, B., Stieglitz, J., Kaplan, H., Endicott, K.L., Endicott, K.M., Gurven, M. (2022) Female cooperative labor networks in hunter-gatherers and horticulturalists. *Philosophical Transactions of the Royal Society B*, in press. DOI: 10.1098/rstb.2021.0431
- 2021 14. Minocher, R., Atmaca, S., Bavero, C., McElreath, R., Beheim, B. (2021) Estimating the reproducibility of social learning research published between 1955 and 2018. *Royal Society Open Science*, 8:210450. DOI: 10.1098/rsos.210450
15. Garcia, A.R., *et al.* (2021) APOE4 is associated with elevated blood lipids and lower levels of innate immune biomarkers in a tropical Amerindian subsistence population. *eLife*, 10:e68231. DOI: 10.7554/eLife.68231
16. Tran, N.H., Kucharský, S., Waring, T., Atmaca, S., Beheim, B. Limited scope for group coordination for stylistic variations in kolam art. *Frontiers in Psychology* 12, p.4770. DOI: 10.3389/fpsyg.2021.742577
17. Beheim, B., *et al.* (2021) Treatment of missing data determines conclusions regarding moralizing gods. *Nature*, 595. DOI: 10.1038/s41586-021-03655-4
18. Jaeggi, A.V., *et al.* (2021) Relative wealth and inequality associate with health in a small-scale subsistence society. *eLife*, 10:e59437. DOI: 10.7554/eLife.59437
19. Rowan, C., *et al.* (2021) Very Low Prevalence and Incidence of Atrial Fibrillation among Bolivian Forager-Farmers. *Annals of Global Health*, 87(1), p.18. DOI: 10.5334/aogh.3252
20. Tran, N.H., Waring, T., Atmaca, S., & Beheim, B. (2021) Entropy trade-offs in artistic design: A case study of Tamil kolam. *Evolutionary Human Sciences*, 3(E23). DOI: 10.1017/ehs.2021.14
- 2020 21. Broesch, T., *et al.* (2020) Navigating cross-cultural research: methodological and ethical considerations. *Proc. R. Soc. B*. 287:20201245. DOI: 10.1098/rspb.2020.1245
22. Gurven, *et al.* (2020) Rapidly declining body temperature in a tropical human population *Science Advances* Vol. 6, no. 44, eabc6599. DOI: 10.1126/sciadv.abc6599 (*credited for data*)

curation)

23. Wood, *et al.* (2020) Step Counts From Satellites: Methods for Integrating Accelerometer and GPS Data for More Accurate Measures of Pedestrian Travel. *Journal for the Measurement of Physical Behaviour*. 3(1), pp. 58-66.10. DOI: 1123/jmpb.2019-0016
- 2019 24. Borgerhoff Mulder, *et al.* (2019) Differences between sons and daughters in the intergenerational transmission of wealth. *Philosophical Transactions of the Royal Society B*. 374:20180076. DOI: 10.1098/rstb.2018.0076
- 2018 25. Ross, C. T., *et al.* (2018) Greater wealth inequality, less polygyny: Rethinking the polygyny threshold model. *Journal of The Royal Society Interface*. 15(144). DOI:10.1098/rsif.2018.0035
26. Trumble, Benjamin C., *et al.* (2018) Parental hormones are associated with crop loss and family sickness following catastrophic flooding in lowland Bolivia. *Physiology & Behavior*. 193(A), pp. 101-107. DOI: 10.1016/j.physbeh.2018.02.028
27. Schniter, Eric, *et al.* (2018) Information transmission and the oral tradition: Evidence of a late-life service niche for Tsimane Amerindians. *Evolution and Human Behavior*. 39.1: 94-105. DOI: 10.1016/j.evolhumbehav.2017.10.006
- 2017 28. Kaplan, H., Thompson, R.C., Trumble, B.C., Wann, L.S., Allam, A.H., Beheim, B., Frohlich, B., Sutherland, M.L., Sutherland, J.D., Steiglitz, J. *et al.* (2017) Coronary atherosclerosis in indigenous South American Tsimane: a cross-sectional cohort study. *The Lancet*. 389(10080), pp. 1730-1739. DOI: 10.1016/S0140-6736(17)30752-3
29. Gurven, M., Fuerstenberg, E., Trumble, B., Steiglitz, J., Beheim, B., Davis, H., Kaplan, H. (2017) Cognitive performance across the life course of Bolivian forager-farmers with limited schooling. *Developmental Psychology*. 53(1), pp. 160-176. DOI: 10.1037/dev0000175
30. Blackwell, A.D., Urlacher, S., Beheim, B., von Rueden, C., Jaeggi, A., Stieglitz, J., Trumble, B.C., Gurven, M., Kaplan, H. (2017) Growth references for Tsimane forager-horticulturalists of the Bolivian Amazon. *American Journal of Physical Anthropology*. 162(3), pp. 441-461. DOI: 10.1002/ajpa.23128
31. Gurven, M., Stieglitz, J., Trumble, B., Blackwell, A.D., Beheim, B., Davis, H., Hooper, P., Kaplan, H. (2017) The tsimane health and life history project: Integrating anthropology and biomedicine. *Evolutionary Anthropology*. 26(2) pp. 54-73. DOI: 10.1002/evan.21515
32. Trumble, B. C., Stieglitz, J., Blackwell, A. D., Allayee, H., Beheim, B., Finch, C. E., Gurven, M., and Kaplan, H. *et al.* (2017) "Apolipoprotein E4 is associated with improved cognitive function in Amazonian forager-horticulturalists with a high parasite burden." *The FASEB Journal*. 31.4, pp. 1508-1515. DOI: 10.1096/fj.201601084R
- 2016 33. Gurven, M., Costa, M., Eid Rodriguez, D., Stieglitz, J., Beheim, B., Trumble, B., & Kaplan, H. (2016). Health costs of reproduction are minimal despite high fertility, mortality and subsistence lifestyle. *Nature Scientific Reports*. 6(30056). DOI: 10.1038/srep30056
34. Jaeggi, A.V., Hooper, P.L., Beheim, B., Kaplan, H., Gurven, M. (2016) Reciprocal exchange patterned by market forces helps explain cooperation in a small-scale society. *Current Biology*. 26(16), pp. 2180-2187. DOI: 10.1016/j.cub.2016.06.019
35. Gurven, M., Trumble, B.C., Stieglitz, J., Yetish, G., Cummings, D., Blackwell, A.D., Beheim, B., Kaplan, H., Pontzer, H. (2016) High resting metabolic rate among Amazonian

- forager-horticulturalists experiencing high pathogen burden. *American Journal of Physical Anthropology*. 161(3), pp. 414-425. DOI: 10.1002/ajpa.23040
36. Blackwell, A., Trumble, B.C., Maldonado Suarez, I., Stieglitz, J., Beheim, B., Snodgrass, J., Kaplan, H., Gurven, M. (2016) Immune Function in Amazonian Horticulturalists. *Annals of Human Biology*. 43(4), pp. 382-396. DOI: 10.1080/03014460.2016.1189963
 37. Mattison, S.M., *et al.* (2016) The evolution of inequality. *Evolutionary Anthropology: Issues, News, and Reviews*. 25(4), pp. 184-199. (acknowledged as data analyst, figure author) DOI: 10.1002/evan.21491
 38. Mattison, S.M., Beheim, B., Chak, B., Buston, P. (2016) Offspring sex preferences among patrilineal and matrilineal Mosuo in Southwest China revealed by differences in parity progression. *Royal Society Open Science*. 3(9), 160526. DOI: 10.1098/rsos.160526
 - 2015 39. Stieglitz, J., Beheim, B., Trumble, B.C., Madiemenos, F.C., Kaplan, H. & Gurven, M. (2015) Low Mineral Density of a Weight-Bearing Bone Among Adult Women in a High Fertility Population. *American Journal of Physical Anthropology*. 156(4), pp.637-648. DOI: 10.1002/ajpa.22681
 40. Blackwell, A.D., Tamayo, M.A., Beheim, B., Trumble, B.C., Stieglitz, J., Hooper, P.L., Martin, M., Kaplan, H., Gurven, M. (2015) Helminth infection, fecundity, and age of first pregnancy in women. *Science*. 350(6263) pp. 970-972. DOI: 10.1126/science.aac7902
 - 2014 41. Beheim, B., Thigpen, C. & McElreath, R. (2014) Strategic social learning and the population dynamics of human behavior: the game of Go. *Evolution and Human Behavior*. 35(5), pp. 351-357. DOI: 10.1016/j.evolhumbehav.2014.04.001
 - 2012 42. Beheim, B. & Baldini, R. (2012) Evolutionary decomposition and the mechanisms of cultural change. *Cliodynamics*. 3(2). DOI: 10.21237/C7clio3212123
 - 2011 43. Beheim, B. & Bell, A.V. (2011) Inheritance, ecology and the evolution of the canoes of East Oceania. *Proc. R. Soc. B*. 278(1721), pp. 3089-3095. DOI: 10.1098/rspb.2011.0060
 44. Borgerhoff Mulder, M. & Beheim, B. (2011) Understanding the nature of wealth and its effects on human fitness. *Phil. Trans. R. Soc. B*. 366, pp. 344-35. DOI: 10.1098/rstb.2010.0231
 - 2009 45. Borgerhoff Mulder, Monique, *et al.* (2009) Intergenerational wealth transmission and the dynamics of inequality in small-scale societies. *Science*. 326.5953 (2009): pp. 682-688. (*as data analyst*) DOI: 10.1126/science.1178336

Grants, Fellowships, Awards

- 2016 · MPI-EVA Senior Researcher Funding Line. \$56,754 startup, \$56,754 annual budget over five years.
- 2015 · “The Human Life Course and the Biodemography of Aging”, Co-Investigator, National Institutes of Health / National Institute on Aging. \$590,659.
- 2014 · Administrative Supplement to “The Human Life Course and the Biodemography of Aging”, Co-Investigator National Institutes of Health / National Institute on Aging. \$15,000.
- “Surviving the Flood: Vulnerability, Risk Management, and Resilience among Tsimane Forager-Farmers of Bolivia”, Co-Investigator, National Science Foundation. \$126,000.
- 2009 · Graduate Fellowship Block Grant, The University of California. \$10,800.
- 2007 · Graduate Scholars Fellowship in Ecology, The University of California. \$34,022.
- 2004 · Phi Beta Kappa Honors Society

Paper Presentations

- 2022 · “Strategic Social Learning in the Era of Superhuman Artificial Intelligence: A Large-Scale, Longitudinal Case Study using the Game of Go”, Cultural Evolution Society Meeting
- 2020 · “Improving Reproducibility in Evolutionary Anthropology”, Santa Fe Institute ENDOW workshop
- 2019 · “Open Science in the Field”, Open Science and Reproducibility workshop, Interacting Minds Centre, Aarhus University
- “The Adaptive Logic of False Beliefs”, Human Behavior and Evolution Society Meeting
- 2018 · Beheim, B. “Milk consumption is globally widespread and increasing: Time to rewrite the textbooks?” Cultural Evolution Society Meeting.
- Beheim, B., Takezawa, M. “Japanese Milk Consumption: Asymptomatic Lactose Intolerance Following a Recent Cultural Diffusion.” Human Behavior and Evolution Society Meeting.
- Beheim, B. “Atherosclerosis as a Culturally-Transmitted Disease among Acculturating Horticulturalists.” European Human Behavior and Evolution Association Meeting.
- 2017 · Beheim, B., Baldini, R. “What evolutionary mechanisms drive cultural change?” Poster presented at the European Human Behavior and Evolution Association Meeting.
- Beheim, B. “Beyond conformity in cultural diffusion: Knowledge, opportunity and motivation.” Cultural Evolution Society Meeting.
- Beheim, B. “Advances in studying cultural diffusions”, Department of Behavioral Sciences, Hokkaido University.
- 2015 · Beheim, B., Ross, C., Thigpen, C., McElreath, R. “Cultural Evolution in Games of Chess and Go.” American Anthropological Association Meeting.
- Rowan, C., Sangodkar, S., Achrekar, A., Tolstrup, K., Beheim, B., Stieglitz, J., Trumble, B., Gurven, M., Kaplan, & H. “Left Ventricular Systolic and Diastolic Dysfunction is an Uncommon Finding in a Pre-Industrial Society with High Inflammation and Low Atherosclerotic Risk Factors.” American Heart Association Meeting.

- Blackwell, A.D., Tamayo, M., Beheim, B., Trumble, B.C., Stieglitz, J., Hooper, P., Kaplan, H. & Gurven, M. "Different parasites, different human life histories: Roundworm increases human fecundity and leads to earlier reproduction, while hookworm entails costs to reproduction." Human Behavior and Evolution Society Meeting.
- 2014 · Beheim, B., Gurven, M. & Kaplan, H. "What evolutionary processes drive cultural change?", Evolutionary Demography Society Meeting.
- Gurven, M., Costa, M., Eid Rodriguez, D., Stieglitz, J., Beheim, B., Trumble, B., Kaplan, H. "Costs of reproduction and maternal depletion in a high mortality and fertility population." Population Association of America Meeting.
- Trumble, B.C, Cummings, D., Beheim, B., Stieglitz, J., Yetish, G. Pontzer, H., Kaplan, H., & Gurven, M. "Energetic costs of testosterone: higher testosterone is associated with greater lean muscle mass and total energetic expenditure among Tsimane forager-horticulturalists." American Association of Physical Anthropologists Meeting.
- Kaplan, H., Gurven, M., Cortez, E., Eid, D., Beheim, B., Stieglitz, J., Rowan, C., Tolstrup, K., & Achrekar, A. "Slow cardiovascular aging and rare infarcts among Tsimane forager-horticulturalists." American Association of Physical Anthropologists Meeting.
- 2013 · Thompson, M.E, Beheim, B., Blackwell, A.D., Stieglitz, J., Trumble, B.C., Gurven, M. & Kaplan, H. "Immunosenescence in Tsimane forager-horticulturalists." American Association of Physical Anthropologists Meeting.
- Beheim, B., Thigpen, C., & McElreath, R. "Evolutionary dynamics in the Game of Go." Institute for Pure and Applied Mathematics, University of California at Los Angeles.
- 2009 · Beheim, B.A., Bell, A.V. "Inheritance and Ecology: Canoe Evolution in Fiji and Polynesia." 3UC Evolutionary Anthropology Conference.
- 2008 · Beheim, B. "Japan's Cultural Inoculation: The Radiation and Retreat of Firearms and Christianity." Human Behavior and Evolution Society Meeting.

Fieldwork

- 2024 · Mayangna and Miskito Communities, Nicaragua (4 weeks)
- 2023 · Tsimane' Near-river Communities, Bolivia (2 weeks)
- 2019 · Tsimane' Near-river Communities, Bolivia (3 weeks)
- 2018 · Tsimane' Near-river Communities, Bolivia (6 weeks)
- 2017 · Tsimane' Near-river Communities, Bolivia (5 weeks)
- Hokkaido Dairy Communities, Japan (11 weeks)
- 2014 · Tsimane' Near-river Communities, Bolivia (2 months)
- 2013 · Tsimane' Upriver Communities, Bolivia (2 months)

Teaching

Primary Instructor

1. *Scientific Computing in Evolutionary Anthropology*, taught annually 2019-2023
2. *The Human Life Course* (ANTH 160), taught 2013, 2014, 2015
3. *Human Behavioral Ecology* (ANTH 360), taught 2014
4. *Research Computing in Evolutionary Anthropology* (ANTH 560), taught 2014
5. *Workshop on Statistical Rethinking*, taught at UNM in 2016
6. *Evolution and Human Nature* (ANT 50), taught 2011
7. *Applied Research Methods* (ESP 178), taught 2011, 2012
8. *Cultural Ecology* (ANT 102), taught 2010

Service to the Profession

Supervision, Training, Mentorship

- Dr. Oleg Sobchuk, Postdoctoral Supervisor (Feb. 2023-present), MPI-EVA
- Dr. Daniel Redhead, Postdoctoral Supervisor (Sept. 2018 - August 2020), MPI-EVA
- Dr. Riana Minocher, Doctorate Supervisor (Jan. 2018 - Nov. 2022), University of Leipzig / MPI-EVA
- Dr. N.Han Tran, Doctorate Supervisor (Oct. 2018 - Feb. 2022), University of Leipzig / MPI-EVA
- Natalia Federova, Doctoral Committee Member (Aug. 2017 - present), University of Leipzig / MPI-EVA
- Anja Becker, Master's Thesis Supervisor, completed Nov. 2018, University of Leipzig
- Leonie Ette, Master's Thesis Supervisor, completed Nov. 2020, University of Leipzig

Service Positions Held

- Data Director, Tsimane Health and Life History Project, 2012-present
- Data Operations Supervisor, Department of Human Behavior, Ecology and Culture, MPI-EVA
- MPI-EVA Worker's Council (*Betriebsrat*) reserve member, elected Nov. 2018
- MPI-EVA Seminar Selection Committee
- Webmaster, Evolutionary Anthropology Society, evanthsoc.org

Public White Papers & Tutorials

- Beheim, B. (2017) Text Mining the Human Behavioral Ecology Bibliography, <http://babeheim.com/2017/06/15/text-mining-the-HBEB.html>
- Beheim, B. (2017) Generating Ties to Explore Social Network Connectivity, <http://babeheim.com/2017/06/02/modeling-network-tie-counts.html>
- Lubell, M., Beheim, B., Hillis, V. & Handy, S. (2009) Achieving Sustainability in California's Central Valley. UC Davis Sustainable Transportation Center
- Beheim, B. & Reis, M. (2003) A Theory of Social Formalism: The Four Horsemen and the New Deal. *Law and Society Review at the University of California, Santa Barbara* II, pp. 85-94.

Symposium & Seminar Participation

- 2018 · "The Evolutionary Anthropology Reproducibility Study, Phase I", MPI-EVA departmental workshop

- “The Future of Fieldsite Management”, MPI-EVA departmental workshop
- 2017 · “The Social Diffusion of Gasoline Motors in the Bolivian Amazon”, MPI-EVA departmental workshop
- “The Nine Circles of Database Hell”, MPI-EVA departmental workshop
- 2016 · “Transparency and reproducibility in observational research: lessons from anthropology”, Yale’s Day of Data, co-presented with Melanie Martin
- “Anthropological Research as Software Development” Yale Department of Anthropology
- “Insights from other anthropologists: Social diffusion of gasoline motors in the Bolivian Amazon”, American Anthropological Association Conference
- 2015 · “Estimating Heritability of Reaction Norms” Dynamics of Wealth Inequality and Family Structure, Santa Fe Institute
- 2012 · “Strategic Social Learning and Evolutionary Arms Races in the Game of Go” Invited talk, Santa Fe Institute, Santa Fe, New Mexico
- “Inferring General Mechanisms of Cultural Evolution in Observational Settings” Dissertation Exit Seminar, UC Davis, Davis, California
- “Evolutionary Decomposition and the Dynamics of Inequality”. Santa Fe Institute, Santa Fe, New Mexico
- 2011 · “Developing Measures of Cultural Variation and Dynamics in Hokkaido, Japan”. Radcliffe Institute, Harvard University, Cambridge, Massachusetts

Article Reviews

- Journal of Theoretical Biology
- Advances in Complex Systems
- Human Nature
- Science Advances
- Cliodynamics
- Plos ONE
- Evolution and Human Behavior

Professional Memberships

- Software Carpentry / Data Carpentry certification, expected December 2018
- American Anthropological Association (since 2015)
- Human Behavior and Evolution Society (since 2018)
- European Human Behavior and Evolution Association (since 2017)
- American Association of Physical Anthropologists (since 2015)
- California Undergraduate Anthropology Conference (Principle Organizer), May 2004
- Anthropology Student Union President (2003-2004)