

Sarah Mathew

Associate Professor
School of Human Evolution and Social Change
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February 18, 2026

Education

- 2011 University of California, Los Angeles
Ph.D. in Anthropology
- 2003 Princeton University
A.B. (with Honors) in Ecology and Evolutionary Biology

Academic Appointments

- 2020 – now Associate Professor, School of Human Evolution and Social Change,
Arizona State University
- 2013 – 2020 Assistant Professor, School of Human Evolution and Social Change,
Arizona State University
- 2012 – 2013 Assistant Professor, Department of Anthropology, Stony Brook University
- 2011 – 2012 Postdoctoral Fellow, Center for the Study of Cultural Evolution
Stockholm University

Additional Institutional Affiliations

Research faculty, Institute of Human Origins
Faculty affiliate, Center for Evolution and Medicine
Core faculty, Adaptation, Behavior, Culture and Society Research Group

Professional Scientific Societies

Cultural Evolution Society | Human Behavior and Evolution Society | European Human
Behavior and Evolution Association | Evolutionary Anthropology Society

Expertise areas

Cooperation | Norms | Warfare | Cultural Transmission | Turkana | Pastoralists (Kenya)

I. RESEARCH

Honors and Awards

2015 *Andrew Carnegie Fellowship*. One among 32 scholars nationally to receive an award of \$200,000 for outstanding scholars in the social sciences and humanities addressing “current and future challenges to U.S. democracy and international order”

Funded Grants

External

Under review *Project Leader* on “Virtue at scale: cultural evolution and the expansion of moral communities” submitted to *John Templeton Foundation* \$1,770,917 [invited to stage 2 – Oct 2025; full proposal submitted – Jan 2026].

Under review *Principal Investigator* on “Moral repair and flourishing among war-exposed Turkana pastoralists and American veterans” submitted to *Templeton Religion Trust* [authorized for further development – Dec 2025; proposal submitted – Jan 2026]

2025 – 27 *Principal Investigator* on “Using Natural Experiments to Identify the Causal Effects of Islamic Prosocial Norms on Everyday Cooperation Among Sama Marine Foragers” from *Templeton Religion Trust*; \$149,856 [in progress]

2025 – 26 *Co-Investigator* on “Risky meals: cultural and biological adaptations to reduce meat-borne disease risk” Leakey Foundation; (PI: Danson Mwangi Kareri); \$30,000; Recipient Institution – Kenya Institute of Primate Research; [in progress]

2023 – 24 *Principal Investigator* on “Normative infrastructure as a platform for reinventing social institutions” from *Cultural Evolution Society Transformation Fund* (sponsored by *John Templeton Foundation*); \$111,603 [completed]

2021 – 23 *Co-Investigator* on “Evaluating community perceptions and ethical considerations in genetics research in small-scale populations (PI: Anne Stone)” from *National Institutes of Health*; \$424,910 [completed]

2020 – 21 *Principal Investigator* on “RAPID: How social norms impact COVID-19 transmission behaviors” from *National Science Foundation*; \$66882 [completed]

- 2014 – 17 *Co-Investigator* on “Evolutionary Foundations of Human Uniqueness: Recovering Patterns of Cognition, Cumulative Culture and Cooperation” (PI: William Kimbel) from *John Templeton Foundation*. Grant total: \$4, 934,107; percent allocation: 11% [completed]
- 2014 – 15 *Collaborator Investigator* on “The Emergence of Prosocial Religions” (PI: Ara Norenzayan)” from *John Templeton Foundation* to University of British Columbia. Amount to ASU for subproject conducted by S. Mathew: CAD 16,675 [completed]

Internal

- 2025 – 26 *Principal Investigator* on “Risky meals: The Risky Meals: Cultural and Biological Adaptations for Managing Meat-Borne Disease Risk”, *Institute of Human Origins Founders Grant*; \$15,000 [in progress]
- 2015 – 21 *Principal Investigator* on "The evolution of human cooperation: field studies among Turkana pastoralists in Kenya", *President's Strategic Initiative Funds*; \$495,385 [completed]

Doctoral

- 2010 Harry Frank Guggenheim Dissertation Fellowship
 2009 NSF Doctoral Dissertation Improvement Grant
 2009 Leakey Foundation Dissertation Research Grant
 2007 Owen Aldis Award, International Society for Human Ethology
 2004 – 07 NSF Graduate Research Fellowship

Publications

Authorship explanation

Underline First or senior supervising author role. First authorship indicates major contribution in data collection/developing of model, data analysis and manuscript preparation. On papers with postdocs or students, last authorship indicates leadership in conceiving of and designing the study, and supervision of postdocs or students in conducting the study and writing the paper.

* Postdocs trainee (at the time published work was conducted)

** Graduate student trainee (at the time published work was conducted)

† Joint first or last authorship with † marked authors contributing equally

^a First author took lead. All other authors contributed equally with authorship order determined alphabetically.

CS CiteScore from Scopus indicating 4-year citation impact (2021–2024)

Peer-reviewed journal articles

- 30 **Mathew, S.**[†] Hadfield, G.[†] Mwangi, D., and Reynolds, S. 2025. Metanorms generate stable yet adaptable normative social order in a politically decentralized society. *Philosophical Transactions of the Royal Society B* 380 (1940): 20240260
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- 29 Kendal, R. L., Miltiadis, E., Asatsa, S., Boyette, A. H., Chimento, M., **Mathew, S.**, Reichard, B., Winship, L., and Wright, S. 2025. Introduction: Diversifying cultural evolution research and application to global futures. *Philosophical Transactions of the Royal Society B* 380 (1940): 20240256.
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- 28 Lea, A. J., Caldas, I. V., Garske, K. M., Gerlinger, E. R., Arroyo, J. P., Echwa, J., Gurven, M., Handley, C., Kahumbu, J. C., Kamau, J., Kinyua, P., Lotukoi, F., Lopurudoi, A., Lowasa, S., Njeru, S. N., Mallarino, R., Martins, D. J., Messer, P. W., Miano, C., Muhoya, B., Peng, J., Phung, T., Rabinowitz, J. D., Roichman, A., Siford, R., Stone, A. C., Taravella Oill, A. M., **Mathew, S.**, Wilson, M. A., and Ayroles, J. F. 2025. Adaptations to water stress and pastoralism in the Turkana of northwest Kenya. *Science* 389(6766): 1246–1251.
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- 27 Yan**, M. Li, Z., Li Y. Boyd, R. and **Mathew S** 2025. A norm about harvest division is maintained by a desire to follow tradition, not by social policing. *Proceedings of the National Academy of Sciences* 122 (25), e2413214122.
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- 26 Zefferman, M*, Baumgarten, M**. Trumble, B. and **Mathew, S.** 2025. Little evidence that posttraumatic stress is associated with diurnal hormone dysregulation in Turkana pastoralists. *Evolution, Medicine, and Public Health* 13.1 (2025): 77–91.
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- 25 Lenfesty, H*, **Mathew, S.**, Fikes, T., Ross, C., Boyd, R. 2024. Third-party arbitration and forgiving strategies increase cooperation when perception errors are common. *Proceedings of the Royal Society, B.* **291**: 20240861.
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- 24 Yan, M.**, **Mathew, S.** and Boyd, R. 2023 “Doing what others do” does not stabilize continuous norms, *PNAS Nexus* 2(3).
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- 23 Bendixen, T., Lightner, A.D., Apicella, C., Atkinson, Q., Bolyanatz, A., Cohen, E., Handley, C*, Henrich, J., Kundtová Klocová, E., Lesorogol, C., **Mathew, S.**, McNamara, R.A., Moya, C., Norenzayan, A., Placek, C., Soler, M., Vardy, T., Weigel, J., Willard, A.K., Xygalatas, D., Lang, M. and Purzycki, B.G. (2023) ‘Gods are watching and so what? Moralistic supernatural punishment across 15 cultures’, *Evolutionary Human Sciences*, 5, E18.
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- 22 **Mathew, S.** 2022. Turkana warriors' call to arms: how an egalitarian society mobilizes for cattle raids. *Philosophical Transactions of the Royal Society, B.* 377 (1851) 20210144.
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- 21 Taravella Oill**, A.M., Handley, C., Howell, E. K., Stone, A. C., **Mathew, S[†]**, Wilson, M. A[†]. 2022. Genomic analysis reveals geography rather than culture as the predominant factor shaping genetic variation in northern Kenyan human populations. *American Journal of Biological Anthropology* 178(3), 488–503.
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- 20 Purzycki, B.G., Willard, A.K., Kundtová Klocová, E., Apicella, C., Atkinson, Q., Bolyanatz, A., Cohen, E., Handley, C.*, Henrich, J., Lang, M., Lesorogol, C., **Mathew, S.**, McNamara, R.A., Moya, C., Norenzayan, A., Placek, C., Soler, M., Vardy, T., Weigel, J., Xygalatas, D. and Ross, C.T. 2022. The moralization bias of gods' minds: a cross-cultural test, *Religion, Brain & Behavior*, 12:1–2, 38–60.
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- 19 Vardy, T., Moya, C., Placek C.D, Apicella, C., Bolyanatz, A., Cohen, E., Handley, C.*, Klocová E.K., Lesorogol, C., **Mathew, S.**, McNamara, S. A., Purzycki, B. G., CS 4.8 Soler, M., Weigel, J. L., Willard, A. K., Xygalatas, D., Norenzayan, A., Henrich, J., Lang, M., Atkinson Q. D. 2022. The religiosity gender gap in 14 diverse societies. *Religion, Brain & Behavior* 12 (1–2): 18–37.
- SM attended preliminary workshop where cross-cultural study design was developed. SM and postdoc CH adapted study design for Turkana cultural context. CH collected data from Turkana study site supervised by SM. SM and CH commented on manuscript.
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- 18 Baimel, A., Apicella, C., Atkinson, Q., Bolyanatz, A., Cohen, E., Handley, C.*, Henrich, J., Klocová, E.K., Lang, M., Lesogorol, C., **Mathew, S.**, McNamara, R., Moya, C., Norenzayan, A., Placek, C. D., Soler, M., Vardy, T., Weigel, J., Willard, A., Xygalatas, D., Purzycki, B. 2022. Material insecurity predicts greater commitment to moralistic and less commitment to local deities: a cross-cultural investigation. *Religion, Brain & Behavior* 12(1–2): 4–17.
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- 17 Zefferman, M.* and **Mathew, S.** 2021. Combat stress in a small-scale society suggests divergent evolutionary roots for posttraumatic stress disorder (PTSD) symptoms. *Proceedings of the National Academy of Sciences* 118:15 e2020430118.
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- 16 Boyd, R[†]. and **Mathew, S[†]**. 2021. Arbitration supports reciprocity when there are frequent perception errors. *Nature Human Behaviour* 5: 596–603.
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- 15 Zefferman, M.* and **Mathew, S.** 2020. An evolutionary theory of moral injury with insights from Turkana warriors. *Evolution and Human Behavior* 41(5): 341–353.
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- 14 Handley, C.* and **Mathew, S.** 2020. Human large-scale cooperation as a product of competition between cultural groups. *Nature Communications* 11:702.
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- 13 Lang, M., Purzycki, B., Apicella, C., Atkinson, Q., Bolyanatz, A., Colleran, H., Curtis, R., Handley, C*., Klocova, E., Lesorogol, C., **Mathew, S.**, Moya, C., Placek, C., Soler, M., Stagnaro, N., Vardy, T., Weigel, J., Xygalatas, D., Norenzayan, A. and Henrich, J. 2019. Moralizing gods, impartiality and religious parochialism across 15 societies. *Proceedings of the Royal Society, Series B* 286 (1898): 20190202.
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- 12 Ghrear S. E., Chudek M.*, Flung K., **Mathew, S.**, and Birch, S. A. J. 2019. Cultural variations in the Curse of Knowledge: the curse of knowledge bias in children from a nomadic pastoralist culture. *Journal of Cognition and Culture* 9 (3–4), 366–384.
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- 11 **Mathew, S.** 2017. How the second-order free rider problem is solved in a small-scale society. *American Economic Review: Papers & Proceedings* 107 (5) 578–81.
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- 10 **Mathew, S.**[†] and Perreault, C.[†] 2016. Cultural history, not ecological environment, is the main determinant of human behavior. *Proceedings of the Royal Society, Series B* 283 (1826): 20160177.
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- 9 ^aRicherson, P., Baldini, R., Bell, A., Demps, K., Frost, K., Hillis, V., **Mathew, S.**, Newton, E., Narr, N., Newson, L., Ross, C., Smaldino, P., Waring, T., Zefferman, M. 2016. Cultural group selection follows Darwin's classic syllogism for the operation of selection. *Behavioral and Brain Sciences* 39, e58.
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- 8 ^aRicherson, P., Baldini, R., Bell, A., Demps, K., Frost, K., Hillis, V., **Mathew, S.**, Newton, E., Narr, N., Newson, L., Ross, C., Smaldino, P., Waring, T., Zefferman, M. Cultural Group Selection Plays an Essential Role in Explaining Human Cooperation. A Sketch of the Evidence. 2016. *Behavioral and Brain Sciences* 39, e30.
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- 7 **Mathew, S.**[†] and Perreault, C.[†]. 2015. Behavioral variation in 172 small-scale societies indicates social learning to be the main mode of human adaptation. *Proceedings of the Royal Society, Series B* 282 (1810): 20150061.
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- 6 Boyd, R. and **Mathew S.** 2015. Third-party monitoring and sanctions aid the evolution of language. *Evolution and Human Behavior* 36(6): 475–479.
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- 5 Zefferman, M. and **Mathew, S.** 2015. An Evolutionary Theory of Large-scale Human Warfare: Group-structured Cultural Selection. *Evolutionary Anthropology: Issues, News and Reviews* 24(2): 50–61.
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- 4 **Mathew, S.** and Boyd, R. 2014. The cost of cowardice: third-party punitive sentiments towards free riders in Turkana raids. *Evolution and Human Behavior* 35: 58–64.
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- 3 Perreault, C.[†] and **Mathew, S.**[†] 2012. Dating the origin of language using phonemic diversity. *PLoS ONE* 7(4): e35289.
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- 2 **Mathew, S.** and Boyd, R. 2011. Punishment sustains large-scale cooperation in prestate warfare. *Proceedings of the National Academy of Sciences* 108 (28): 11375–80.
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- 1 **Mathew, S.** and Boyd, R. 2009. When does optional participation allow the evolution of cooperation? *Proceedings of the Royal Society, Series B* 276: 1167–74.
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Chapters in edited volumes

- 4 Zefferman, M*. and **Mathew S.** In press. Intergroup violence without essentialist beliefs: the case of Turkana cattle raiders. In *Culture, Identity, and Essentialism: Anthropological and Psychological Perspectives*, edited by Wagner W. and Moya. C.
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- 3 **Mathew, S.** In press. Between-group contest competition among pastoralists. *Routledge Handbook of Pastoralism*, edited by Moritz M., Samuels I., Schareika N. and Schlecht E.
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- 2 **Mathew, S.**, Boyd, R. and van Veelen, M. 2013. Human cooperation among kin and close associates may require enforcement of norms by third parties. In: *Cultural Evolution*, ed. P. J. Richerson and M. Christiansen. *Strüngmann Forum Report 12*, series editor J. Lupp. Cambridge, MA: MIT Press.
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- 1 ^a Jordan, F. M., C. van Schaik, P. François, H. Gintis, D. B. M. Haun, D. J. Hruschka, M. A. Janssen, J. A. Kitts, L. Lehmann, **S. Mathew**, P. J. Richerson, P. Turchin, and P. Wiessner. 2013. Cultural evolution of the structure of human groups. In: *Cultural Evolution*, ed. P. J. Richerson and M. Christiansen. *Strüngmann Forum Report 12*, series editor J. Lupp. Cambridge, MA: MIT Press.
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Comments and Invited Articles

- 7 **Mathew, S.** 2024. Why reciprocity is common in humans but rare in other animals. *Nature* 626, 955–956.
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6 **Mathew S.** and Zefferman M. 2024. Group-structured cultural selection can explain both war and peace. *Behavioral and Brain Sciences*. 2024; 47: e18.

5 Zefferman M., Baldini R. and **Mathew, S.** 2015. Solving the puzzle of human warfare requires an explanation of battle raids and cultural institutions. *Proceedings of the National Academy of Sciences* 112(20): E2557.

4 Panchanathan, K., **Mathew, S.** and Perreault, C. 2014. Explaining group-level traits requires distinguishing process from product. *Behavioral and Brain Sciences* 37(3): 269–270.

3 Bowles, S., Boyd, R. **Mathew, S.** and Richerson, P. J. 2012. The punishment that sustains cooperation is often coordinated and costly. *Behavioral and Brain Sciences* 35(1): 20–21.

2 **Mathew, S.** and Boyd, R. 2011. Mechanistic accounts need to specify why reputation systems yield cooperative outcomes on observed scales. *Proceedings of the National Academy of Sciences* 108(39): E754.

1 Boyd, R. and **Mathew, S.** 2007. A Narrow Road to Cooperation, *Science*, 316: 1858–1859.

Invited Talks

Keynotes at Annual Meeting of Major Academic Societies

- 2024 Plenary: European Human Behavior and Evolution Association Annual Meeting, Montpellier, France (Apr 14–16)
 “The normative underpinnings of human sociality”
- 2023 Keynote: Society for Institutional and Organizational Economics Annual Meeting, Goethe University, Frankfurt, Germany (Aug 24–26)
 “Self-governance in pastoral Kenya: examining norms and meta-norms that support decentralized social order among Turkana herders”

Invited Speaker – International Workshops/Symposia/Conferences

- 2023 Complexity Science Hub at Vienna Winter School, (Jan 14–19); Obergurgl, Austria [virtual]
 “Integrative and disintegrative norms in a cattle raiding complex”
- 2021 Absolutely Interdisciplinary Conference: Human and Machine Normativity – New Connections, University of Toronto, Canada (Nov 4–6) [virtual]
 “‘What are the minimal components that a system requires for the emergence of a human-like normative system?’”

- 2017 Descent of Moral Sentiments Symposium, Utrecht University, Utrecht, Netherlands (Feb 13–15)
“Is the cultural boundary also the moral boundary?”
- 2016 Toulouse Economics and Biology Workshop, Toulouse School of Economics & Institute for Advanced Study in Toulouse, Toulouse, France
“Altruistic warriors and moral citizens: conflict and cooperation in a pastoral society shows that cultural transmission enabled the evolution of human prosociality”
- 2013 International Max Planck Research School on Retaliation, Mediation and Punishment, Winter University, Heppenheim, Germany
“Punitive sentiments towards free riders in Turkana raids”

Invited Speaker – National Workshops/Symposia/Conferences

- 2023 *Towards an Economics of Culture in Organizations Workshop*, Massachusetts Institute of Technology, Boston, MA (Dec 7–8)
“Normative infrastructure as a platform for reinventing social institutions”
- 2022 *Santa Fe Institute Workshop: Constructing and Deconstructing Collectives: Signals to Space and Society*, Santa Fe, NM. (Jan 19–21) [virtual]
“Cultural evolution of cooperative norms: insights from Kenyan pastoralists”
- 2021 *Dynamics of Social Complexity Webinar on Human Origins and Cultural Evolution* (Mar 23) [virtual]
“War and peace: the cultural evolution of conflict and cooperation”
- 2020 *Canadian Institute for Advanced Research Interdisciplinary Workshop on Culture and Preference Formation*. University of California Los Angeles, CA (Feb 6–7)
“The cultural evolution of cooperative norms: insights from pastoral Kenya”
- 2019 *Human Behavior and Evolution Society Pre-conference: Integrated Approaches to Research on Culture: Professional and Practical Considerations*, Boston, MA
“Three recent projects, three unique challenges”
- 2016 *Workshop on African History and Economics: Towards a Deeper Understanding of African Culture and Society*, Hutchins Center for African and African American Research, Harvard University, Boston, MA
“Conflict and cooperation in a pastoral society shows that cultural transmission enabled the evolution of human prosociality”

- 2014 *Collective Intentionality Conference*, Indiana University, Bloomington, IN
“Group-functional design in informal institutions: cooperation & punishment among acephalous Turkana herders”
- 2012 *Modeling Social Complexity Workshop*, National Institute for Mathematical and Biological Synthesis & National Evolutionary Synthesis Center, Knoxville
Has cultural group selection enabled human ultrasociality?
- 2010 *Workshop: Evolutionary Perspectives of Human Behavior*, San Luis Obispo, CA
“Warfare and collective action: cattle raiding among Turkana pastoralists”
- 2010 *Workshop: Coevolution of Behaviors and Institutions*, Santa Fe Institute, NM
“Collective action in pre-state warfare: cooperative cattle-raiding among Turkana pastoralists”

Invited Departmental Colloquia

- 2023 Institute of Advanced Studies, *Toulouse School of Economics*, Toulouse, France (May 11)
“How cultural evolution drives human cooperation: insights from informal order among acephalous pastoralists”
- 2021 Amsterdam-Copenhagen Cooperation Colloquia, *Vrije Universiteit*, Amsterdam, and *University of Copenhagen*, Denmark (Dec 10) [virtual]
“The cultural evolution of cooperative norms”
- 2021 *Institute of Advanced Studies*, Toulouse, France (Oct 8) [virtual]
“The cultural evolution of cooperative norms”
- 2021 Schwartz Reisman Institute, *University of Toronto*, Canada (Mar 10) [virtual]
“The cultural evolution of cooperative norms”
- 2021 Evolutionary Anthropology Webinar Series, *University of Liverpool*, England (Feb 25) [virtual]
“The cultural evolution of cooperative norms: insights from pastoral Kenya”
- 2012 The Research Group for Evolutionary Theory, *Max Planck Institute for Evolutionary Biology*, Plön, Germany
“Evolution of cooperation via enforcement of cultural norms: cattle-raiding among acephalous Turkana pastoralists”

Invited Departmental Colloquia - *National*

- 2024 Evolution and Human Behavior Seminar Series, Research Center for Group Dynamics and Evolution and Human Adaptation Program *University of Michigan*, Ann Arbor. (Mar 4)
“How cultural norms structure the evolution of human behavior and psychology”
- 2022 Center for Advanced Study in the Behavioral Sciences at *Stanford University* (Jul 21) [virtual]
“The cultural evolution of cooperative norms”
- 2021 Club Ev Med: Virtual Evolutionary Medicine Conversations (May 17)
“Divergent evolutionary roots for post-traumatic stress disorder symptoms” (co-presented with Matthew Zefferman)
- 2019 Evolutionary Anthropology Department, *Duke University* (Feb 11)
“The evolution of cooperation and conflict: insights from pastoral Kenya”
- 2019 Mind, Technology and Society Series, *University of California Merced* (Apr 22)
“Is the cultural boundary also the moral boundary? An empirical test of cultural group selection”
- 2017 Center for Behavior, Evolution and Culture, *University of California Los Angeles*
“Peer sanctioning and cultural group selection promotes large-scale cooperation: Evidence from Kenyan pastoralists”
- 2017 Anthropology Department Colloquium, *University of Missouri*
“Conflict and cooperation in a pastoral society shows that cultural transmission enabled the evolution of human prosociality”
- 2016 Center for Philosophy, Arts and Literature and the Franklin Humanities Institute, *Duke University*
“How Turkana pastoralists cooperate, and what it means for the origins of human prosociality”
- 2014 Anthropology Colloquium, *University of California, Davis*
“The evolution of large-scale cooperation in humans: insights from Turkana warfare”
- 2011 *California Polytechnic University*, San Luis Obispo
“Warfare, collective action and the scale of human cooperation”
- 2009 *Leakey Foundation* Board Meeting, San Francisco
“Altruistic warriors: cooperative cattle-raiding among Turkana pastoralists”

Internal Invited Talks

- Fall 2025 *Institute of Human Origins Board Meeting, ASU*
“Adaptations to water stress and pastoralism in northwest Kenya”
- Spring 2024 *Lucy 50 Monthly Lecture Series: Common Origins-Shared Futures, ASU*
“How contemporary human populations have adapted to the semi-arid savanna”
- Spring 2022 *Institute of Human Origins Board Meeting, ASU*
“Turkana warriors’ call to arms: how an egalitarian society mobilizes for cattle raids”
- Spring 2017 *Faculty Cross-Talks on Health in the Social Sciences: Mental Health, College of Liberal Arts and Sciences, ASU*
“Finding the roots of PTSD and Moral Injury in warriors of small-scale societies”
- 2016 *Institute of Human Origins Board Meeting, ASU*
How Turkana pastoralists cooperate, and what it means for the origins of human prosociality
- 2014 *Center for the Study of Institutional Diversity, ASU*
Informal sanctions solve the collective action problem in acephalous warfare

Conferences and Workshops

Peer-reviewed Conference Presentations

(As presenting author)

- 2026 Testing cultural evolution in the field: theory-driven ethnography, *Cultural Evolution Society Conference, Rabat, Morocco (May 11–13)*
- 2024 Normative versus prosocial underpinnings of human decision making. *Cultural Evolution Society Conference, Durham, UK (Sep 9–11)*
- 2021 Commanded by culture: how decentralized cattle raids are organized. *Cultural Evolution Society Conference, Sapporo, Japan [virtual] (Jun 9–11)*.

- 2019 Is the cultural boundary also the moral boundary? An empirical test of cultural group selection among pastoral populations in Kenya.
Human Behavior and Evolution Society Conference, Boston, MA (May 31–Jun)
- 2017 Is the cultural boundary also the moral boundary? A cross-cultural test of cultural group selection.
Cultural Evolution Society Inaugural Meeting, Jena, Germany (Sep 12–15)
- 2017 Conflict and cooperation in a pastoral society shows that selection among cultural groups enabled the evolution of human cooperation
American Economic Association Annual Meeting Chicago IL (Jan 6–8)
- 2014 Mechanisms of self-regulation in moral norms and psychology: a study of meta-norms governing punishment in Turkana society
American Anthropological Association Conference, Washington D. C.
- 2010 A causal understanding of warfare, based on the origins of human cooperation: case study of cattle raiding among Turkana pastoralists in East Africa
American Anthropological Association Conference, New Orleans, LA
- 2010 The collective action problem in warfare: data from cattle raiding among Turkana pastoralists
Human Behavior and Evolution Society Conference, Eugene, OR
- 2009 Cooperation and human warfare: case study of cattle raiding among Turkana pastoralists
American Anthropological Association Conference, Philadelphia, PA
- 2008 The empirical details of cooperation are key to its origins: some types of cooperative interactions evolve more easily than others, CS participation is optional. [Poster]
American Anthropological Association Conference, San Francisco, CA
- 2008 When does optional participation allow the evolution of cooperation?
European Human Behavior and Evolution Society, Montpellier, France
- 2007 Does optional participation favor large-scale cooperation?
Human Behavior and Evolution Society Conference, Williamsburg, VA
- 2007 Modeling the role of solitary strategies, resource excludability and resource exhaustibility on the evolution of altruistic behavior
South. Calif. Animal Behavior Society Conference, Santa Barbara, CA
- 2006 The effect of excludability in stabilizing cooperation in an n-person public goods game.
Human Behavior and Evolution Society Conference, Philadelphia, PA

Sessions Chaired

- 2014 Empathy, conformity, and (im)moral killing: anthropology at the limits of knowledge. Co-chaired session with Carolyn R. Nordstrom. *American Anthropological Association*. Washington D. C.

Workshops Attended

- 2025 *Social Consequences of Religion* Methodology Workshop on Causal Inference, University of California, San Diego (Aug 11–12)
- 2017 *National Science Foundation* Workshop, “Enhancing robustness and generalizability in the social and behavioral sciences”, Washington D. C.
- 2014 The Origin of Violence: From Brain to World War, *The Origins Project*, ASU, Tempe, AZ
- 2014 The Evolution of Institutions, *National Institute for Mathematical and Biological Synthesis (NIMBioS)*, Knoxville, TN
- 2012 *Ernst Strüngmann Forum* on Cultural Evolution, Frankfurt, Germany
- 2012 Modeling Social Complexity, *National Institute for Mathematical and Biological Synthesis (NIMBioS) & National Evolutionary Synthesis Center (NESCent)* Investigative Workshop, Knoxville, TN
- 2012 Cooperation in Multi-partner Settings: Biological Markets & Social Dilemmas, *Lorentz Center*, Leiden, The Netherlands
- 2010 Coevolution of Behaviors and Institutions, *Santa Fe Institute*, NM

II. TEACHING

Recognition

- 2020 Excellence in Undergraduate Teaching Award, School of Human Evolution and Social Change
- 2020 Nominee, College of Liberal Arts and Sciences *Zebulon Pearce Distinguished Teaching Award*
- 2018 Nominee, College of Liberal Arts and Sciences *Zebulon Pearce Distinguished Teaching Award*

- 2018 Nominee, Graduate & Professional Student Association *Centennial Professorship Award*
- 2018 Nominee, Graduate College *Outstanding Faculty Mentor Award* (Outstanding Master's Mentor Category)

Courses

Arizona State University

Undergraduate

- ASM 310 War and Peace—The Evolution of Conflict and Cooperation
- Fall 2016, Fall 2019, Fall 2022, Fall 2023, Fall 2024
 - Spring 2015
- ASM 342 Evolution and Human Behavior
- Spring 2014, 2016, 2019, 2020, 2022, 2023, 2024, 2025
 - Fall 2014
- ASM 300 Anthropological Sciences
- Fall 2018 (in person), Fall 2025 (online)
- ASB 210 Human Sexuality (online)
- Spring 2017, Fall 2017

Graduate

- ASM 591 Behavior, Culture, Cognition
- Spring 2022, Spring 2026
- ASM 579 Proposal Writing
- Fall 2021; Fall 2023
- ASB 501 Professionalism
- Fall 2025
- ASM 590 Reading and Conference Graduate Course
- Recurring

Stony Brook University

- ANP 403 Seminar in Bio Anthropology: The evolution of cooperation (Fall 2012)
- ANP 200 Evolution of Human Behavior (Spring 2013)
- ANP 391 Behavioral Ecology (Spring 2013)

Mentoring

Post-doctoral Supervision

4. Danson Kareri Mwangi Metanorms and informal legal infrastructure in Turkana
(Jan 2023–Jun 2024)
Placement: Research Scientist, Institute of Primate Research,
Kenya & Co-director, Nadome Research Center, Turkana
County

3. Matthew Zefferman Post Traumatic Stress and Moral Injury in Turkana warriors
(Nov 2015–Aug 2017)
Placement: Assistant Professor at the Naval Postgraduate
School in Monterey, CA

2. Carla Handley Cooperation and population structure among pastoralists
(Dec 2014–Aug 2017)
Placement: Research consultant, Indica Consulting,
Washington D.C.

1. Hillary Lenfesty Economic experiments assessing the role of arbitration on
reciprocal cooperation when errors are common
(Aug 2015–Aug 2017).
Placement: Assistant Research Professor, School of
Human Evolution and Social Change, ASU

Doctoral Supervision – Chair/Co-chair

3. Michael Baumgarten Chair (Fall 2021–now)
 - Completed MA requirement in Spring 2023
 - Completed dissertation proposal defense Spring 2025

2. Minhua Yan Co-chair (Fall 2016–Summer 2023)
 - Graduated Summer 2023
 - Placement: Postdoctoral fellow (2023–2025) at *Institute for
Advanced Studies in Toulouse*, Toulouse, France

1. Liam Gleason Chair (Fall 2017–2021)
 - Completed MA requirement in Spring 2019
 - Transfer (2021) to Ph.D. in sociocultural anthropology

Doctoral – Committee Member

5. Pietro Beltrame	Spring 2023–now
4. Hovig Artinian	Spring 2021–now
3. Julia Phelps	Spring 2021–now
2. Rebecca Siford	Spring 2019–2025
1. Angela Taravella	Spring 2017–2022

External Reader

1. Asli Akdeniz	University of Amsterdam, Amsterdam, Netherlands Ph.D. Economics (Spring 2023)
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Master’s Committee Member

5. Maggie Hassler	2024–now
4. Melanie Foreman	2019–22
3. Scott Collins	2018–19
2. Leonid Tiokhin	2015–16
1. Kelly Reina	2015–16

Fieldwork supervision: *Nadome Research Center, Turkana County, Kenya*

Postdoctoral

5. Danson Mwangi	Conducted study of how metanorms structure informal legal order in politically uncentralized pastoral communities. (4 months; April 2023–Jun 2024)
4. Matt Zefferman	Conducted study of post-traumatic stress disorder and moral injury among warriors at the Turkana field site (3 visits of 2 months each between Nov 2015–Aug 2017).
3. Bailey House	Conducted study of the development of prosocial sentiments at the Turkana field site to pilot field methods to use in a larger cross-cultural study (Apr–May 2016)
2. Carla Handley	Conducted study of cooperation among Turkana, Borana, Rendille and Samburu pastoralists in Kenya (4 visits of 2–3 months each between Dec 2014–Aug 2017).
1. Matthew Chudek	Conducted study of indirect reciprocity assessing how goodness is determined among Turkana and Canadian subjects (Jun–Jul 2014)

Graduate students

4. Mike Baumgarten Scheduled to conduct field study (funding obtained, approvals and permits in progress) on post-traumatic stress in Turkana warriors and its links to early childhood adversity, moral norms, and communal rituals. (planned schedule: 8 weeks; May – Jul 2026)
3. Rebecca Siford Conducted dissertation research on community perceptions and ethical considerations of genetic research in small-scale societies (6 months; Jun 2022–Nov 2023)
2. Angela Taravella Conducted two-week science outreach and dissemination effort to communicate lab DNA methods and preliminary results to communities who contributed DNA samples for genetic analysis (Jul–Aug 2018).
1. Liam Gleason Conducted six-week study of the role of gossip and reputation in sustaining cooperation among Turkana warriors (Jul–Sep 2018)

Dissertation Grants

(Secured as PI with graduate student as Co-I)

- 2022 – 2023 *National Science Foundation Doctoral Dissertation Research Grant* \$25,199
“Drivers of Cooperative Behavior in Situations of Conflict” [Co-I: Gleason, L.]
- 2020 – 2022 *National Science Foundation Doctoral Dissertation Research Grant* \$14,806
“Norm stasis and change in the context of cooperative farming” [Co-I: Yan, M]

Select Conference Presentations Co-authored with Mentees

Postdoctoral

- 2018 Situating anthropological genetics within local beliefs in pastoral Kenya, AAAS Dialogue on Science, Ethics and Religion (DoSER) session "Biological Anthropology and Dialogue with Diverse Publics" American Association of Physical Anthropology Annual Meeting (Apr 11-14) (Presenting author: Carla Handley)
- 2017 Is the cultural boundary also the moral boundary? A cross-cultural test of cultural group selection, Human Behavior and Evolution Society Annual Meeting, Boise, ID (May 31-Jun 3) (Presenting author: Carla Handley)
- 2024 How do people make and change rules? Capstone Conference - Cultural Evolution Society Transformation Fund, Durham, UK (Sep 12-13, 2024). (Presenting author: Danson Kareri Mwangi)

Graduate student

- 2026 Sex Chromosome Variation in Turkana. *Annual Meeting of American Association for Biological Anthropology*, Denver, CO (Mar 18–21) (Presenting author: Maggie Hassler)
- 2025 Genetic research dissemination methods, perspectives, and preferences in genetic research in small scale northern Kenyan populations. *American Association for Biological Anthropology Annual Meeting*, Baltimore, MD (Mar 12–15) (Presenting author: Rebecca Siford)
- 2025 Little evidence that posttraumatic stress is associated with diurnal hormone dysregulation in Turkana pastoralists. *American Association for Biological Anthropology Annual Meeting*, Baltimore, MD (Mar 12–15) (Presenting author: Michael Baumgarten)
- 2024 Evaluating community perceptions and ethical considerations in genetics research in small scale Kenyan populations. *Society for Molecular Biology and Evolution Annual Meeting*, Mexico (July 7–11) (Presenting author: Rebecca Siford)
- 2024 Poster: Evaluating community perceptions and ethical considerations in genetics research in small scale northern Kenyan populations. *Annual Meeting of the American Society of Human Genetics*, Denver, CO (Nov 5–9) (Presenting author: Rebecca Siford)
- 2024 How are norms maintained and how do they change? A theoretical model and a field study. *European Human Behavior and Evolution Association Annual Meeting*, Montpellier, France (Apr 16–19) (Presenting author: Minhua Yan)
- 2023 Poster: Cortisol sensitivity and combat stress in Turkana pastoralist warriors. *International Society for Evolution, Medicine and Public Health Annual Meeting*, Irvine, CA (Presenting author: Michael Baumgarten)
- 2021 Does the naturalistic fallacy impede students' understanding of the evolution of human behavior? *Human Behavior and Evolution Society Annual Meeting*, virtual (Jun 24–Jul 2) (Presenting author: Liam Gleason)
- 2021 Coordination payoffs do not stabilize continuous norms. *Cultural Evolution Society Conference*, virtual (Jun 9–11) (Presenting author: Minhua Yan)
- 2021 How are norms maintained and how do they change? A case study of cooperative farming division rules in Derung villages, Yunnan, China. *European Human Behavior and Evolution Association Annual Meeting*, virtual (Mar 24–27) (Presenting author: Minhua Yan)

- 2021 How gossip and reputation shape high-stakes cooperative decisions among Turkana warriors. *European Human Behavior and Evolution Association Annual Meeting*, virtual (Mar 24–27) (Presenting author: Liam Gleason)

Pedagogical Publications

Encyclopedia entries

Mathew, S. 2026. Cooperation. In M. C. Frank & A. Majid (Eds.), *Open Encyclopedia of Cognitive Science*. MIT Press. <https://doi.org/10.21428/e2759450.9dd2a47d>

Mathew, S. 2015. The evolution of human cooperation. *International Encyclopedia of the Social and Behavioral Sciences 2nd edition* 11: 259–266.

Conference abstracts

Gleason, L. and Mathew, S. Does the naturalistic fallacy impede students' understanding of the evolution of human behavior? 2020 *American Journal of Physical Anthropology* 171: 101

III. SERVICE

Professional Service

Leadership Roles

- 2022 – 2023 President, *Cultural Evolution Society* (Jan 1, 2022 – Dec 31, 2023)
- Elected by members to steer the field of cultural evolution's flagship professional scientific society (global membership of 1000 scholars and practitioners)
- 2013 – now Founder and Director, *Nadome Research Center*, Turkana County, Kenya
- Overseeing remote field station engaged in long-term mixed-methods anthropological research in north Turkana and training postdoctoral researchers and graduate students in fieldwork methods. (Co-director with Gilbert Eweet Topos and Danson Mwangi since 2023)

Editorial Service

- 2024 – 2025 Co-editor, Special Issue “Transforming cultural evolution research and its application to global futures”, *Philosophical Transactions of the Royal Society, B*

Dec 2020 Guest Editor, *Proceedings of the National Academy of Sciences*
2015 – 2016 Consulting Editor, *Evolution and Human Behavior*

Journal Referee (ad-hoc)

1. Adaptive Behavior,
2. Behavioral Ecology and Sociobiology
3. Biology Letters
4. Biological Reviews
5. Current Biology
6. Evolution and Human Behavior
7. Evolutionary Human Sciences
8. Human Nature
9. Journal of the Commons
10. Journal of the Royal Society Interface
11. Journal of Theoretical Biology
12. Nature
13. PLoS Computational Biology
14. PLoS ONE
15. Philosophical Transactions of the Royal Society B
16. Proceedings of the Royal Society B
17. Psychological Review
18. Science

Committee Service

2025 – now Executive Board Member, *ADAKAR – Adaptation, Diversity, and Anthropology of Knowledge in Ateker Rangelands*, a registered community-based organization in Kenya facilitating participatory research practices and knowledge co-production in Turkana pastoral communities.

Spring 2024 Program Committee, *Human Behavior and Evolution Society Conference* Aarhus University, Aarhus, Denmark (May 22–25)

Spring 2024 Executive Program Committee, *Society for Institutional and Organizational Economics Conference*, University of Chicago (Jun 27–29)

2024 – 2025 Past President, *Cultural Evolution Society*

2021 – 2022 President Elect, *Cultural Evolution Society*

Spring 2021	Inclusiveness committee, <i>Cultural Evolution Society Conference</i> , Hokkaido, Japan [virtual] (Jun 9–11)
Spring 2021	Postdoc Award Committee, <i>Human Behavior and Evolution Society</i>
2019–2021	Executive committee (elected), <i>Cultural Evolution Society</i>
Fall 2018	Inclusiveness committee, <i>Cultural Evolution Society Conference</i> , Tempe, AZ (Oct 22–24)
Spring 2016	Election committee, inaugural election of the <i>Cultural Evolution Society</i>

University Service

University-level

Reviewer, Graduate College Enrichment Fellowship	Spring 2026 2025 2024
Reviewer, Outstanding Faculty Mentor Award	Fall 2024

Department-level

Leadership

Approach Convener for Evolutionary Anthropology	Spring 2024 – Fall 2025
Organizer, <i>Behavior, Cognition and Development Lab Meets</i>	Spring 2024
Organizer, <i>Evolution of Social Complexity</i> Colloquium	Spring 2024 2020 2017
Chair, SHESC Graduate research awards committee	Fall 2017
Organizer, <i>Adaptation, Behavior, Culture & Society</i> Journal Club	Spring 2017

Committee member

AI working group for SHESC	Fall 2025 – now
Planning committee for human biology major	Spring 2025 – now
Search committee, Presidential Postdoc faculty hire	Spring 2026
Probationary review committee (1)	2024
Promotion and tenure committee (2)	2021 2024
Search committee for SHESC director hire	Fall 2019 – Spring 2020
Search committee, evolutionary anthropology faculty hire	Fall 2017 – Spring 2018
SHESC graduate research awards committee	Fall 2016 – Spring 2017
Search committee for SHESC director hire	Fall 2016
Search committee for target hire opportunity	Spring 2016
Diversity task force	Spring & Fall 2015
Personnel committee	Spring 2015
Professional conduct committee	Fall 2015

Search committee for Southwest Borderlands hiring initiative Fall 2014
Search committee for two evolutionary anthropology faculty hires Spring 2014

Organizing international conference or workshop at ASU

- 2025 Co-organized international workshop, *AI and Evolutionary Reasoning*, convening industry and academic researchers to discuss AI's future trajectories using insights from biological and cultural evolution; hosted by Institute of Human Origins at ASU, Johns Hopkins University and Fathom (Oct 16–17, 2025)
- 2018 Co-organized international workshop, *Understanding the Origins of Combat Stress and Moral Injury through Cross-cultural Research*, to foster cross-disciplinary dialogue between anthropology, evolutionary medicine, and veteran studies; hosted by Center for Evolution and Medicine, ASU (Mar 1–2, 2018)
- 2018 Local organizing committee member for the 2nd international annual meeting of the *Cultural Evolution Society* hosted by ASU in Tempe, AZ (Oct 22–24, 2018)

Public Engagement

Interviews

- *Transmissions*, Talk Series by Cultural Evolution Society: Episode 2 [What is WEIRD about human warfare](#). Jan 2026
- *Evolutionary Psychology (The Podcast)*: [Culture, killing, and PTSD](#), Dec 2025
- *Game Changer Podcast by TWS Partners*: [How to achieve cooperation: learnings from fieldwork with the Turkana people](#), Feb 25, 2025
- *The Dissenter* Episode 725: [Human sociality, cooperation, reciprocity and warfare](#), Oct, 2022

Select News and Media Coverage

- CS you donate DNA what should scientists give in return? A pathbreaking new model. *NPR Goats and Soda & NPR All Things Considered*, Jan 2024
- “Why are we nice? Altruism’s origins are put to the test.” *Nature Podcast*, Benjamin Thompson & Nick Petric Howe, Feb 21 2024
- Engaging underrepresented communities in research. ELSIhub, Ethical, Legal and Social Implications Research Program, National Human Genome Research Institute, May 2023
- “It’s not easy to take a life’: is coping with PTSD harder for US soldiers?” Manvir Singh, *The Guardian*, Jun 2021

- “Shared Truth Is Key to Human Cooperation”, Arunas Radzvilavicius, *Psychology Today*, Feb 2021
- “Do wild animals get PTSD? Scientists probe its evolutionary roots”, Sharon Levy, *Knowable Magazine*, Aug 2021
- “What do babies and warring groups have in common? Altruism”, Eoin O’Carroll, *Christian Science Monitor*, Feb 2020
- “Evolution is evolving: 13 ways we must rethink the theory of nature”, Michael Le Page et al, *New Scientist*, Sep 2020
- “The Evolution of Shaming”, Ed Yong, *The Atlantic*, Feb 2016
- “Why Its Brave To Think Like A Coward”, Chris Walsh, *Aeon*, Feb 2015
- “Friends, not foes, boost warriors’ success”, Elizabeth Wade, *Science*, Nov 2014
- “Transformers: 10 revolutions that made us human”, Colin Barras, *New Scientist*, Oct 2014
- “It Is Human Nature to Cooperate With Strangers”, Michael Marshall, *New Scientist*, Jun 2011

Blog Contributions

- “[The Paradox of Human Warfare Explained](#)” Social Evolution Forum Blog, *The Evolution Institute* (2016)

Public Talks

- “Contemporary behavioral adaptations in a semi-arid savanna population.” *Institute of Human Origins Lucy 50th Anniversary Lecture*, Walton Center for Planetary Health at ASU (Mar 2024) [Link to recording](#)
- “Is the cultural boundary also the moral boundary?” Project presentation for the *Evolution of Human Uniqueness Research Symposium*, Tempe Center for the Arts (Apr 2017) [Link to recording](#)
- Panelist, *Origins Project Great Debates “Transcending Our Origins: Violence, Humanity and the Future”*, Gammage Memorial Auditorium at ASU (Apr 2014) [Link to recording](#)