

## CURRICULUM VITAE

### ROBERT BOYD

**Born:** February 11, 1948  
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#### **Education:**

1970 B.A. in Physics with high honors, University of California at San Diego.

1975 Ph.D. in Ecology, University of California at Davis

#### **Employment:**

August 2012–present, Professor, School of Human Evolution and Social Change, Arizona State University, Phoenix

June 2011–June 2014 Cowan Professor, Santa Fe Institute

July 2009–July 2012, Distinguished Professor, Department of Anthropology, University of California, Los Angeles.

July 1989–July 2009, Professor, Department of Anthropology, University of California, Los Angeles.

July 1988–June 1989, Associate Professor, Department of Anthropology, University of California, Los Angeles.

July 1986–June 1988, Assistant Professor, Department of Anthropology, University of California, Los Angeles.

September 1984–July 1986: Assistant Professor, Department of Anthropology, Emory University.

September 1980–August 1984: Assistant Professor, School of Forestry and Environmental Studies, Duke University (on leave 1981-1982).

June 1981–June 1982: National Science Foundation postdoctoral fellow, Department of Biology, University of Chicago.

September 1978–August 1980: Assistant Research Ecologist, Institute of Ecology, University of California, Davis.

September 1976– September 1978: Special Consultant, California State Energy Commission

December 1975–August 1976: Senior Consultant, California Assembly Committee on Resources, Land Use, and Energy.

**Professional Activities:**

November 2015–present: Scientific Council, Institute for Advanced Study, Toulouse.

March 2015–present: Scientific Advisory Board, Canadian Institute for Advanced Research, Program on Institutions, Organizations & Growth

November 2013–present: Scientific Advisory Board, Max Planck Institute for Evolutionary Anthropology, Leipzig

January 2013–Present: Scientific Advisory Board, Ernst Strungmann Forum

January 1997–Present: Associate Editor for *Evolution and Human Behavior*

January 2008–Jan 2011: *Board Member, Proceedings of the Royal Society, Series B*

March 1997–2008: Co-director, MacArthur Foundation Preferences Project.

## **Awards and Honors:**

- 2024 Member of the American Academy of Arts and Sciences
- 2016 Tanner Lectures, Princeton University
- 2009–2022 External Faculty, Santa Fe Institute
- 2005–06 Leverhulme Visiting Professor, University of Cambridge
- 2001–02 Invited fellow at the Wissenschaftskolleg zu Berlin
- 1991–92 Invited fellow at the Zentrum für interdisziplinäre Forschung, University of Bielefeld
- 1988–89 John Simon Guggenheim Fellowship
- 1989 J. I. Staley Prize for *Culture and the Evolutionary Process*.
- 1981-82 NSF Postdoctoral Fellowship, University of Chicago

## **Publications:**

### ***Books***

- R. Boyd, 2018. *A Different Kind of Animal*, Princeton University Press, Princeton NJ
- R. McElreath and R. Boyd, 2007. *Mathematical Models of Social Evolution: A guide for the perplexed*, University of Chicago Press, Chicago.
- P. J. Richerson and R. Boyd, 2005, *Not by Genes Alone: How culture transformed human evolution*, University of Chicago Press, Chicago, IL. (Translated into Korean and Italian)
- R. Boyd, and P. J. Richerson, 2005. *The Origin and Evolution of Cultures*, Oxford University Press, New York
- J. Henrich, R. Boyd, S. Bowles, C. Camerer, E. Fehr, & H. Gintis. 2004. *The Foundations of Human Sociality: Economic experiments and ethnographic evidence from fifteen small-scale societies*, Oxford University Press, New York
- H. Gintis, S. Bowles, E. Fehr, & R. Boyd 2004. *Moral Sentiments and Material Interests: The foundations of cooperation in economic life*, MIT Press Cambridge
- R. Boyd and J. B. Silk, 1997, *How Humans Evolved*, W. W. Norton, Co. NY. (A substantially revised 8th edition was published in October 2017)

R. Boyd, and P. J. Richerson, 1985, *Culture and the Evolutionary Process*, University of Chicago Press, Chicago, IL.

### **Journal Articles**

Lenfesty H, Mathew S, Fikes T, Ross CT, Boyd R. Third-party arbitration and forgiving strategies increase cooperation when perception errors are common. *Proceedings of the Royal Society B*. 2024 291:20240861, 2024.

P.J. Richerson, R. Boyd, and C. Efferson, Agentic processes in cultural evolution: relevance to Anthropocene sustainability. *Philosophical Transactions of the Royal Society B*, 379(1893), p.20220252, 2024.

M. Yan, S. Mathew, and R. Boyd, “Doing what others do” does not stabilize continuous norms. *PNAS nexus*, 2(3), p.pgad054, 2023.

P.J. Richerson, and R.T. Boyd, What Sort of Mind/Brain Is Compatible with Cultural Adaptation? *Journal of Cognition and Culture*, 22(5), pp.390-405, 2022

R. Boyd and P.J. Richerson, Large-scale cooperation in small-scale foraging societies. *Evolutionary Anthropology: Issues, News, and Reviews*, 31(4), pp.175-198, 2022.

C. Perreault, and R. Boyd, Evolution of Social Learning with Payoff and Content Bias. *Games*, 13(1), p.7, 2021.

R. Boyd, and S. Mathew, Arbitration supports reciprocity when there are frequent perception errors. *Nature Human Behaviour*, 5(5), pp.596-603, 2021.

J. A. Harris, R. Boyd, and B. M. Wood, The role of causal knowledge in the evolution of traditional technology. *Current Biology*, 31(8), pp.1798-1803, 2021.

P.J. Richerson and R. Boyd, The human life history is adapted to exploit the adaptive advantages of culture. *Philosophical Transactions of the Royal Society B*, 375(1803), p.20190498, 2020.

R. Boyd and P.J. Richerson, 2020. Culture and the evolution of the human social instincts. *Roots of human sociality*, pp.453-477.

P. J. Richerson and R. Boyd, R.,. The human life history is adapted to exploit the adaptive advantages of culture. *Philosophical Transactions of the Royal Society B*, 375(1803), p.20190498, 2020.

M. Derex and R. Boyd,. Technical reasoning alone does not take humans this far. *Behavioral and Brain Sciences*, 43, 2020.

M. Derex and R. Boyd, Causal understanding is not necessary for the improvement of culturally evolving technology, *Nature Human Behaviour*, [doi.org/10.1038/s41562-019-0567-9](https://doi.org/10.1038/s41562-019-0567-9), 2019.

- M. Kline, M. Gervais, C. Moya, and R. Boyd, Irrelevant-action imitation is short-term and contextual: from two under-studied populations, *Developmental Science*, DOI: 10.1111/desc.12903, 2018.
- M. Derex and R. Boyd, Social information can potentiate understanding despite inhibiting cognitive effort, *Scientific Reports*, DOI:10.1038/s41598-018-28306-z, 2018.
- M. Derex, C. Perreault, and R. Boyd, Divide and conquer: intermediate levels of population fragmentation maximize cultural accumulation, *Philosophical Transactions of the Royal Society (B)*, 373, DOI: 10.1098/rstb.2017.0062, 2018
- M. Derex and R. Boyd, Partial connectivity increases cultural accumulation within groups, *Proceedings of the National Academy of Sciences (USA)*, 113, 2982-2987, 2016.
- R.H. Schonmann and R. Boyd, A simple rule for the evolution of contingent cooperation in large groups, *Philosophical Transactions of the Royal Society (B)*, 317, DOI: 10.1098/rstb.2015.0099, 2016
- C. Moya and R. Boyd, The evolution and development of inferential reasoning about ethnic markers: Comparisons between urban United States and rural highland Peru, *Current Anthropology*, 37, S135-S151, 2016.
- J. Henrich, M. Chudek and R. Boyd, The Big Man Mechanism: how prestige fosters cooperation and creates prosocial leaders, *Philosophical Transactions of the Royal Society (B)*, DOI: 10.1098/rstb.2015.0013, 2015.
- C. Moya and R. Boyd, Different selection pressures give rise to distinct ethnic phenomena: A functionalist framework with illustrations from the Peruvian Altiplano. *Human Nature*, 26(1). doi:10.1007/s12110-015-9224-9, 2015.
- C. Moya, R. Boyd, and J. Henrich. Reasoning about cultural and genetic transmission: Developmental and cross-cultural evidence from Peru, Fiji, and the United States on how people make inferences about trait transmission, *Topics in Cognitive Science*, 7, 1-16, 2015.
- R. Boyd and S. Mathew. Third-party monitoring and sanctions aid the evolution of language, *Evolution and Human Behavior*, 36, 475-479, 2015.
- R. Boyd, R. H. Schonmann and R. Vicente, Hunter–Gatherer population structure and the evolution of contingent cooperation, *Evolution and Human Behavior*, 35, 219–227, 2014.
- K. Hill, B. M. Wood, J. Baggio, A. M. Hurtado, R. Boyd, Hunter-Gatherer Inter-Band Interaction Rates: Implications for Cumulative Culture, *PLoS One*, 9, 1-9, 2014.

- S. Mathew and R. Boyd, The cost of cowardice. *Evolution and Human Behavior*, 35, 58–64. 2014
- R. Boyd, P. J. Richerson and J. Henrich, The cultural evolution of technology, facts and theories, *Cultural Evolution, Society, Technology, Science and Religion*, M. Christiansen and P.J. Richerson, eds., MIT Press, 119–142, 2013
- M. Kline, R. Boyd, and J. Henrich, Teaching and the life history of cultural transmission in Fijian villages, *Human Nature*, 24, 351–374, 2013.
- C. Perrault, C. Moya, and R. Boyd, A Bayesian approach to the evolution of social learning, *Evolution and Human Behavior*, 33:449–459, 2013.
- J. Henrich, R. Boyd, and P. J. Richerson, The puzzle of monogamous marriage, *Philosophical Transactions of the Royal Society (B)*, 367: 657–669, 2012.
- R. Boyd, P. J. Richerson, and J. Henrich. The cultural niche: Why social learning is essential for human adaptation, *Proceedings of the National Academy of Sciences (USA)* 108: 10918–10925, 2011
- Mathew, S. and R. Boyd. Punishment sustains large-scale cooperation in prestate warfare. *Proceedings of the National Academy of Sciences (USA)* 108: 11375–11380, 2011.
- Boyd, R., P. J. Richerson, and J. Henrich. Rapid cultural adaptation can facilitate the evolution of large-scale cooperation, *Behavioral Ecology and Sociobiology*, 65, 431–444, 2011.
- Boyd, R. and P. J. Richerson, Transmission coupling mechanisms: cultural group selection. *Philosophical Transactions of the Royal Society (B)*, 365, 3787–3795, 2010.
- Kline, M. and R. Boyd, Population size predicts technological complexity in Oceania, *Proceedings of the Royal Society (B)*, 277, 2559–2564, 2010.
- Richerson, P. J., R. Boyd, and J. Henrich, Gene-culture coevolution in the age of genomics, *Proceedings of the National Academy of Sciences (USA)*. 107, 8985–8992, 2010.
- Boyd, R., H. Gintis, and S. Bowles, Coordinated punishment of defectors sustains cooperation and can proliferate when rare, *Science*, 328, 617–620, 2010.
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- R. Boyd and P. J. Richerson, Culture and the evolution of human cooperation, *Philosophical Transactions of the Royal Society (B)*, 364:3281–3288, 2009.

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- Boyd, R. and P. J. Richerson, Voting with your feet: Payoff biased migration and the evolution of group beneficial behavior, *Journal of Theoretical Biology*, 257: 331–339, 2009.
- J. Henrich and R. Boyd, Division of Labor, Economic Specialization and the Evolution of Social Stratification, *Current Anthropology*, 49: 715–724, 2008.
- J. Henrich, R. Boyd, and P. J. Richerson. Five Misunderstandings about Cultural Evolution. *Human Nature*, 19: 119–137, 2008.
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- J. Henrich, R. Boyd, S. Bowles, C. Camerer, E. Fehr, H. Gintis, R. McElreath, M. Alvard, A. Barr, J. Ensminger, K. Hill, F. Gil-White, M. Gurven, F. Marlowe, J. Q. Patton, N. Smith, and D. Tracer, 'Economic Man' in Cross-cultural Perspective: Behavioral Experiments in 15 Small-scale Societies, *Behavioral and Brain Sciences*, 28: 795–855, 2005
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- H. Gintis, S. Bowles, R. Boyd, & E. Fehr, Explaining Altruistic Behavior in Humans, *Evolution and Human Behavior*, 24: 153–172, 2003
- R. McElreath, R. Boyd and P. J. Richerson. Shared Norms Can Lead to the Evolution of Ethnic Markers. *Current Anthropology*, 44: 122–130, 2003.
- K. Panchanathan and R. Boyd. A Tale of Two Defectors: The Importance of Standing for the Evolution of Indirect Reciprocity. *Journal of Theoretical Biology*, 224:115–126, 2003.
- R. Boyd, H. Gintis, S. Bowles, and P. J. Richerson. The Evolution of Altruistic Punishment. *Proceedings of the National Academy of Sciences (USA)* 100: 3531–3535, 2003.
- J. Henrich and R. Boyd, On Modeling Cognition and Culture: Why cultural evolution does not require replication of representations, *The Journal of Cognition and Culture*, 2: 87–112, 2002.

- R. Boyd and P. J. Richerson, Group Beneficial Norms Spread Rapidly in a Structured Population, *Journal of Theoretical Biology*, 215: 287–296, 2002.
- P. J. Richerson and R. Boyd. Built for Speed, Not for Comfort, Darwinian Theory and Human Culture, *History and Philosophy of the Life Sciences*, 23: 425–465, 2001.
- J. Henrich, R. Boyd, S. Bowles, C. Camerer E. Fehr, H. Gintis, and R. McElreath Cooperation, Reciprocity and Punishment in Fifteen Small-scale Societies, *American Economic Review*, 91: 73–78, 2001
- P. J. Richerson, R. Boyd, and R. L. Bettinger Was Agriculture Impossible During the Pleistocene but Mandatory during the Holocene? A Climate Change Hypothesis, *American Antiquity* 66: 387–411, 2001
- Henrich and R. Boyd. Why people punish defectors: Weak conformist transmission can stabilize costly enforcement of norms in cooperative dilemmas. *Journal of Theoretical Biology*, 208: 79–89. 2001.
- J. B. Silk, E. Kaldor, and R. Boyd, Cheap Talk When there are Conflict of Interest. *Animal Behaviour*, 59: 423–432, 2000.
- P. J. Richerson and R. Boyd. The Evolutionary Dynamics of a Crude Super Organism. *Human Nature*. 10: 253–289, 1999.
- P. J. Richerson and R. Boyd. Homage to Malthus, Ricardo, and Boserup: Toward a General Theory of Population, Economic Growth, Environmental Deterioration, Wealth, and Poverty. *Human Ecology Review*, 4: 83–88, 1998.
- J. Henrich and R. Boyd. The Evolution of Conformist Transmission and the Emergence of Between-Group Differences. *Evolution and Human Behavior* 19: 215–242, 1998.
- P. J. Richerson and R. Boyd, Built for Speed, Not for Comfort, Darwinian Theory and Human Culture. *Philosophica*, 60: 13–43, 1997.
- R. Boyd and P. J. Richerson, Why culture is common, but cultural evolution is rare, *Proceedings of the British Academy*, 88: 77–93, 1996.
- J. Soltis, R. Boyd, and P.J. Richerson, Can group functional behaviors evolve by cultural group selection? An empirical test. *Current Anthropology*. 36: 473–494, 1995.
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- Richerson, Peter J. and Robert Boyd. Fets per la Velocitat, No Per al Confort: la Teoria Darwiniana i la Cultura Humana. In *Poblacions, Societats i Entorn*, Taula de Disseny, Jordi Perera Garcia, and Josep Pujol Mas (eds). Estudios Insitut D'Humanitats, Club de Barcelona, Barcanova, Barcelona, Spain, pp. 58-101, 1991.
- R. Boyd and P. J. Richerson, Group Selection Among Alternative Evolutionarily Stable Strategies. *Journal of Theoretical Biology*, 145: 331–342, 1990.
- R. Boyd and P.J. Richerson, The Evolution of Indirect Reciprocity. *Social Networks*, 11:213–236, 1989.
- R. Boyd, Mistakes Allow Evolutionary Stability in the Repeated Prisoner's Dilemma Game. *Journal of Theoretical Biology*, 136: 47–56, 1989.
- R. Boyd and P.J. Richerson, The Role of Evolved Predispositions in Cultural Evolution. *Ethology and Sociobiology*, 10: 195–219, 1989.
- R. Boyd and P.J. Richerson, The Evolution Reciprocity in Sizable Groups. *Journal of Theoretical Biology*, 132: 337–356, 1988.
- R. Boyd, Is the Repeated Prisoner's Dilemma Game a Good Model of Reciprocal Altruism? *Ethology and Sociobiology*, 9: 211–221, 1988.
- R. Boyd and J. Lorberbaum, No Pure Strategy Is Evolutionarily Stable in the Repeated Prisoner's Dilemma Game. *Nature*. 327: 58–59, 1987.
- R. Boyd and P.J. Richerson, The Evolution of Ethnic Markers. *Cultural Anthropology*. 2: 65–79, 1987
- P.J. Richerson and R. Boyd, The Natural Selection of Culture. *BioScience*, 34: 430–434, 1984.
- R. Boyd and P.J. Richerson, Why is Culture Adaptive? *Quarterly Review of Biology*, 8:209–214, 1983.
- R. Boyd and P.J. Richerson, The Cultural Transmission of Acquired Variation: Effects on Genetic Fitness, *Journal of Theoretical Biology*, 100: 567–596, 1983.

- R. Boyd and J. B. Silk, A Method for Assigning Cardinal Indices of Dominance Rank. *Animal Behavior*, 31: 45-58, 1983.
- J.B. Silk and R. Boyd, Female Cooperation, Competition, and Mate choice in Matrilineal Macaque Groups. In: *Female Reproductive Strategies*, S. Wasser (ed.), Academic Press, pp. 315-347, 1983.
- R. Boyd, Density Dependent Mortality and the Evolution of Social Behavior. *Animal Behavior*. 30: 972-982, 1982.
- R. Boyd and P.J. Richerson, Cultural Inheritance and the Evolution of Cooperative behavior. *Human Ecology*, 10: 325-352, 1982.
- R. Boyd, and P.J. Richerson, Effect of Phenotypic Variation on Kin Selection. *Proceedings of the National Academy of Sciences U.S.A.* 77: 7506-7509, 1980.
- R. Boyd, and P.J. Richerson, Sociobiology, Culture, and Economic Theory. *Journal of Economic Behavior and Organization*. 1: 97-121, 1980.
- R. Boyd, and R. Thompson, The Effects of Uncertainty on the Relative Economics of Electrical Generation Technologies with Differing Lead Times. *Energy Systems and Policy* 4: 9-124, 1980.
- R. T. Laird, J. B. Perkins, D. A. Bainbridge, J. B. Baker, R. T. Boyd, D. Huntsman, P. E. Staub, and M. Zucker, Quantitative Land Capability Analysis--A Method of Applying Earth Science Information to Planning and Decision Making. United States Geological Survey Professional Paper No. 945, contributing author.
- P. J. Richerson, and R. Boyd, A Dual Inheritance Model of the Human Evolutionary Process. *Journal of Social and Biological Structures* 1: 127-154, 1978.
- P. J. Richerson, and R. Boyd, A Simple Dual Inheritance Model of the Conflict Between Social and Biological Evolution. *Zygon* 11: 254-262, 1976.
- R. Boyd, World Dynamics: A Note. *Science* 177: 516-519, 1972.

### **Book Chapters**

- Mathew, S., R. Boyd, and M. van Veelen. 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, pp 45-60, 2013
- R. Boyd, P. J. Richerson, and J. Henrich The cultural evolution of technology: Facts and theories. In: *Cultural Evolution*, ed. P. J. Richerson and M. Christiansen. Strüngmann Forum Report 12, series editor J. Lupp, Cambridge, MA: MIT Press, pp 119-142, 2013
- A. Mesoudi, K. N. Laland, R. Boyd, B. Buchanan, E. Flynn, R. N. McCauley, J. Renn, V. Reyes-García, S. Shennan, D. Stout, and C. Tennie, The Cultural evolution of technology and science, In: *Cultural Evolution*, ed. P. J. Richerson and M. Christiansen. Strüngmann Forum Report 12, series editor J. Lupp, Cambridge, MA: MIT Press, pp. 193-216, 2013
- P. Hammerstein and R. Boyd, Learning, Cognitive Limitations and the Modeling of Social Behavior, *Evolution and the Mechanisms of Decision Making*, P. Hammerstein and J. Stevens, eds. MIT Press, Cambridge MA, 2012.
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- P. J. Richerson and R. Boyd, The Evolution of Free Enterprise values. In *Moral Markets: The Critical Role of Values in the Economy*, edited by Paul Zak. Princeton University Press. Pp. 107-141. 2008.
- R. McElreath, R. Boyd, G. Gigerenzer, A. Glockner, P. Hammerstein, R. Kurzban, S. Magen, P. J. Richerson, A. Robson, and J. R. Stevens. Individual Decision Making and the Evolutionary Roots of Institutions, In: *Better than Conscious? Decision Making, the Human Mind, and Implications for Institutions*. C. Engel and W. Singer eds, MIT Press, Cambridge. Pp 305-324, 2008.
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