Laurel Fogarty Ph.D

Research Interests

My research focuses on mathematical models of social learning and cultural evolution. I have been involved in constructing agent-based simulation models, analytical population genetic models and demographic age-structured models of cultural evolution and social learning systems. I hope to build on this experience by investigating new techniques for modelling cultural evolution, gene-culture co-evolution and cultural niche construction.

Employment

2012 – present	Post Doctoral Scholar, Stanford University. Mathematical models of cultural evolution. Supervised by Professor Marcus. W. Feldman.

Education

2008-2012	PhD. 'Social learning: mathematical models and empirical studies' School of Biology, University of St.Andrews. Supervised by Professor Kevin N. Laland
2004-2008	BSc. Double honours in Biology and Theoretical Physics, National University of Ireland Maynooth.1st class honours.
2003-2004	Completed one year of a BA in Journalism, Dublin City University

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Peer Reviewed Articles

Fogarty,L. and Feldman, M.W., (2012) The cultural and demographic evolution of son preference and marriage type in contemporary China., *in press Biological Theory*.

Fogarty, L., Creanza, N. & Feldman, M.W. (2012) Models of Cultural Niche Construction with Selection and Assortative Mating. *PLoS ONE,* vol. 7, no. 8, e42744 (Joint first authorship)

Fogarty, L, Rendell, L.E. & Laland, K.N. (2012) The importance of space in models of social learning, cultural evolution and niche construction, *Advances in Complex Systems* vol. 15, no. 1&2.

Fogarty, L., Rendell, L. & Laland, K.N. (2012) Mental time travel, memory and the social learning strategies tournament, *Learning and Motivation,* vol. 43, no. 4, pp. 241–246

Fogarty, L, Strimling, P & Laland, K.N. (2011) The evolution of teaching, *Evolution*, vol. 65, no. 10, pp. 2760-2770.

Rendell, L.E., Boyd, R, Enquist, M., Feldman, M.W., Fogarty, L & Laland, K.N. (2011) How copying affects the amount, evenness and persistence of cultural knowledge: insights from the social learning strategies tournament, *Philosophical Transactions of the Royal Society B: Biological Sciences* , vol. 366, pp. 1118-1128.

Rendell, L.E., Fogarty, L., Hoppitt, W.J.E., Morgan, T.J.H., Webster, M.M. & Laland, K.N. (2011) Cognitive culture: Theoretical and empirical insights into social learning strategies, *Trends in Cognitive Sciences*, vol. 15, pp. 68-76.

Rendell, L, Fogarty, L & Laland, KN (2011) Runaway cultural niche construction, *Philosophical Transactions of the Royal Society B: Biological Sciences*, vol. 366, no. 1566, pp. 823-835

Rendell, L, Boyd, R, Cownden, D, Enquist, M, Eriksson, K, Feldman, MW, Fogarty, L, Ghirlanda, S, Lillicrap, T & Laland, KN (2010) Why Copy Others? Insights from the Social Learning Strategies Tournament, *Science*, vol. 328, no. 5975, pp. 208-213.

Rendell, L, Fogarty, L & Laland, KN (2010) Rogers' paradox recast and resolved: population structure and the evolution of social learning strategies, *Evolution*, vol 64, no. 2, pp. 534-548.

Other Articles

Fogarty, L. Appropriate Religion, Letter to New Scientist, Volume 205, Issue 2744, 20 January 2010, Page 24

Conferences Attended

2011 Eco-Evo Student seminar series speaker, Stanford University.

2011 ASAB summer meeting, St.Andrews . Presentation of a talk: 'The evolution of teaching'

2010 Culture Evolves satellite meeting, Kavli. Presentation of a poster 'The evolution of teaching'

2010 European Human Behaviour and Evolution Association conference. Presentation of a poster 'The evolution of teaching'

2009 Mathematical Models in Ecology and Evolution. Presentation of a talk 'The evolution of teaching'

2009 European Human Behaviour and Evolution Association conference. Presentation of a poster 'Rogers' in Space: Rogers' paradox recast and resolved'

2009 St Andrews Postgraduate Conference. Presentation of a poster 'The evolution of teaching'

Experience

- Research assistant with the Laland Lab University of St. Andrews, Scotland, June-November 2008

- Field research assistant with the University of Auckland, New Zealand on Mare, New Caledonia, August-September 2007.

- Research assistant with the Coral Reef Targeted Research Group (CRTRG) 'modelling and decision support' working group in CoMPLEX, the Centre of Mathematics and Physics in Life Science and Experimental Biology based in University College London. June and July 2007.

- Research assistant with the Environmental Science laboratory in the National University of Ireland (NUI) Maynooth, Ireland, June to September 2006. Funded by a Science Foundation Ireland UREKA grant for undergraduate research.