

Stefano Ghirlanda – Curriculum vitæ

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drghirlanda@gmail.com

<http://www.intercult.su.se/~stefano>

Google Scholar: <http://scholar.google.com/citations?user=JN8kES0AAAAJ>

Academic curriculum

Current positions:

- Full Professor of Psychology, Biology, and Anthropology, Brooklyn College of the City University of New York, since August 2012
- Founder and fellow, Centre for the Study of Cultural Evolution, Stockholm University, since April 2007

Past positions:

- 2010–2012 Carol L Zicklin Endowed Chair in the Honors Academy, Brooklyn College, City University of New York (Visiting Full Professor of Interdisciplinary Studies)
- 2004–2012 Tenured researcher of General Psychology, University of Bologna
- July–December 2006. Visiting researcher, Program for Evolutionary Dynamics, Harvard University
- 2001–2003. Researcher, Group for Interdisciplinary Cultural Studies, Departments of History and Zoology, Stockholm University

Education:

- 1996–2001. PhD in Zoology with concentration in Ethology, Department of Zoology, Stockholm University, supervised by M Enquist. Final thesis *Towards a theory of stimulus control* (papers 33, 37, 38, 40, 41)
- 1991–1996. Degree in mathematical physics *cum laude*, the University of Rome “La Sapienza”. Final thesis on the statistical mechanics of disordered spin systems, supervised by F Guerra (paper 42)

Grants

- \$587,381: PI of the National Science Foundation project “Multi-ancestor coalescent theory for cultural evolution,” in collaboration with David Lahti, Queens College of CUNY (2011-2013).
- €2,000,000: Co-PI for the European Commission project “CULTAPTATION: Dynamics and adaptation in human cumulative culture”, contract FP6-2004-NEST-PATH-043434 (€300,000 to my research unit), in collaboration with Stockholm University, University of St. Andrews, and Mälardalens Högskola, Sweden (2007–2009).
- €75,000: PI for the University of Bologna Strategic Research Project “Cultural contact and adaptation in immigration and integration phenomena” (2007–2009).

Awards

- 2012. Carol L. Zicklin Award for excellence in teaching and mentoring, Brooklyn College
- 2003. IgNobel Prize for interdisciplinary research, for paper 35

Publications*

1. Enquist M, Ghirlanda S, Lind J. A new theory of thinking (working title). In preparation for Princeton University Press.
2. Acerbi A, Ghirlanda S, Enquist M. Regulatory traits: Cultural influences on cultural evolution. In *Artificial Life, Evolution, and Complexity*, edited by S Cagnoni, pp. 1–9. Berlin: Springer (2012).
3. Acerbi A, Ghirlanda S, Enquist M. Old and young individuals' role in cultural change. *Journal of Artificial Societies and Social Simulation* 15(4):1 (2012).
4. Acerbi A, Ghirlanda S, Enquist M. The logic of fashion cycles. *PLoS ONE* 7(3):e32541 (2012).
5. Aronsson H, Lind J, Ghirlanda S, Enquist M. Parental influences on sexual preferences: The case of attraction to smoking. *Journal of Evolutionary Psychology* 9:21–41 (2011). doi
6. Enquist M, Ghirlanda S, Eriksson, K. Modeling the evolution and diversity of complex cumulative culture. *Philosophical Transactions of the Royal Society B* 366:412–423 (2011). doi
7. Enquist M, Haronsson H, Ghirlanda S, Jansson L, Jannini EA. Exposure to mother's pregnancy and lactation in infancy is associated with sexual attraction to pregnancy and lactation in adulthood. *Journal of Sexual Medicine* 8:140–147 (2011). doi
8. Ghirlanda S, Enquist M, Perc M. Sustainability of culture-driven population dynamics. *Theoretical Population Biology* 77:181–188 (2010). doi
9. Rendell L, Boyd R, Cownden D, Enquist M, Eriksson K, Feldman MW, Fogarty L, Ghirlanda S, Lillcrap T, Laland KN. Why copy others? Insights from the Social Learning Strategies Tournament. *Science* 328:208–213 (2010). doi
10. Ghirlanda S, Acerbi A, Enquist M, Nakamaru M. The sometimes evitable route to conservatism and persuasiveness. A reply to Xue & Costopoulos. *Current Anthropology* 51:271–272 (2010). doi
11. De Sanctis L, Ghirlanda S. Shared culture needs large social networks. In D'Amore B, Contucci P, Buscema M (eds), *Applications of Mathematics in Models, Artificial Neural Networks and Arts*. Berlin: Springer (2010).
12. Contucci P, Gallo I, Ghirlanda S. Equilibria of culture contact derived from ingroup and outgroup attitudes. In D'Amore B, Contucci P, Buscema M (eds), *Applications of Mathematics in Models, Artificial Neural Networks and Arts*. Berlin: Springer (2010).
13. Acerbi A, Enquist M, Ghirlanda S. Cultural evolution and individual development of openness and conservatism. *Proceedings of the National Academy of Sciences of the USA* 106:18931–18935 (2009). doi
14. Lind J, Ghirlanda S, Enquist M. Insight learning or shaping? *Proceedings of the National Academy of Sciences of the USA* 106:E76 (2009). doi
15. Enquist M, Ghirlanda S, Hurd PL. Signaling. In Westneat DF, Fox CW (eds) *Evolutionary Behavioral Ecology*. Oxford University Press (2010).
16. Ghirlanda S, Frasnelli E, Vallortigara G. Intraspecific competition and coordination in the evolution of lateralization. *Philosophical Transactions of the Royal Society B* 364:861–866 (2009). doi

*See Google Scholar for citation counts. Summary bibliometrics: ~1200 citations, $h = 21$, $\frac{h}{\text{years active}} = 1.5$.

17. Enquist M, Ghirlanda S, Jarrick A, Wachtmeister C-A. Why does human culture increase exponentially? *Theoretical Population Biology* 74:46–55 (2008). doi
18. Bruzzo A, Borghi A, Ghirlanda S. Hand-object interaction in perspective. *Neuroscience Letters* 441:61–65 (2008). doi
19. Enquist M, Eriksson K, Ghirlanda S. Critical social learning: A solution to Rogers' paradox of non-adaptive culture. *American Anthropologist* 109:727–734 (2007). doi
20. Ghirlanda S, Enquist M. Cumulative culture and explosive demographic transitions. *Quality & Quantity* 41:581–600 (2007). doi
21. Contucci P, Ghirlanda S. Modeling society with statistical mechanics: an application to cultural contact and immigration. *Quality & Quantity* 41:569–578 (2007). doi
22. Enquist M, Ghirlanda S. Evolution of social learning does not explain the origin of human cumulative culture. *Journal of Theoretical Biology* 246:129–135 (2007). doi
23. Ghirlanda S, Enquist M. How training and testing histories affect generalization: a test of simple neural networks. *Philosophical Transactions of the Royal Society B* 362:449–454 (2007). doi
24. Eriksson K, Enquist M, Ghirlanda S. Critical points in current theory of conformist social learning. *Journal of Evolutionary Psychology* 5:67–88 (2007).
25. Scorolli C, Ghirlanda S, Enquist M, Zattoni S, Jannini EA. Relative prevalence of different fetishes. *International Journal of Impotence Research* 19:432–437 (2007). doi
26. Ghirlanda S, Nakamaru M, Enquist M. Cultural evolution developing its own rules—The rise of conservatism and persuasion, *Current Anthropology* 47:1027–1034 (2006).
27. Enquist M, Ghirlanda S. Neural networks and animal behavior. Princeton University Press (2005). www
28. Di Lazzaro V, Oliviero A, Pilato F, Saturno E, Dileone M, Marra C, Ghirlanda S, Ranieri F, Gainotti G, Tonali P. Neurophysiological predictors of long term response to AChE inhibitors in AD patients, *Journal of Neurology, Neurosurgery and Psychiatry* 76:1064–1069 (2005). doi
29. Ghirlanda S. Retrospective reevaluation as simple associative learning, *Journal of Experimental Psychology: Animal Behavior Processes* 31:107–111 (2005). doi
30. Kenward B, Wachtmeister C-A, Ghirlanda S, Enquist M. Spots and stripes: the evolution of repetition in visual signal form, *Journal of Theoretical Biology* 230:407–419 (2004). doi
31. Ghirlanda S, Vallortigara G. The evolution of brain lateralization: a game theoretical analysis of population structure, *Proceedings of The Royal Society of London B* 271:853–857 (2004). doi
32. Di Lazzaro V, Oliviero A, Pilato F, Saturno E, Dileone M, Marra C, Daniele A, Ghirlanda S, Gainotti G, Tonali PA. Motor cortex hyperexcitability to transcranial magnetic stimulation in Alzheimer's disease, *Journal of Neurology, Neurosurgery and Psychiatry* 75:555–559 (2004). doi
33. Ghirlanda S, Enquist M. A century of generalization, *Animal Behaviour* 66:15–36 (2003). doi
34. Arak A, Enquist M, Ghirlanda S, Wachtmeister C-A. Spectacular phenomena and limits to rationality in genetic and cultural evolution, *Philosophical Transactions of the Royal Society B* 357:1585–1594 (2002). doi

35. [Ghirlanda S](#), Jansson L, Enquist M, Chickens prefer beautiful humans, *Human Nature* 13:383–389 (2002).
36. Kamo M, [Ghirlanda S](#), Enquist M, The evolution of signal form: effects of learned versus inherited recognition, *Proceedings of the Royal Society of London* B269:1765–1771 (2002). doi
37. [Ghirlanda S](#), Intensity generalisation: physiology and modelling of a neglected topic, *Journal of Theoretical Biology* 214:389–404 (2002). doi
38. Enquist M, [Ghirlanda S](#), Wachtmeister C-A, Lundqvist D, An ethological theory of attractiveness, in *Advances in visual cognition: Facial attractiveness*, edited by Leslie A. Zebrowitz and Gillian Rhodes, Westport, CT: Ablex (2002).
39. [Ghirlanda S](#), Towards a theory of stimulus control, PhD thesis, Stockholm University, ISBN 91-87272-87-3 (2001).
40. [Ghirlanda S](#), Enquist M, The Geometry of Stimulus Control, *Animal Behaviour* 58:695–706 (1999). doi
41. [Ghirlanda S](#), Enquist M, Artificial neural networks as models of stimulus control, *Animal Behaviour* 56:1383–1389 (1998). doi
42. [Ghirlanda S](#), Guerra F, General properties of overlap probability distributions in disordered spin systems. Towards Parisi Ultrametricity, *Journal of Physics A: Mathematical and General* 31:9149–9155 (1998).
43. Enquist M, [Ghirlanda S](#), Hurd PL, Discrete conventional signalling of a continuous variable, *Animal Behaviour* 56:749–754 (1998). doi
44. Enquist M, [Ghirlanda S](#), The secrets of faces, *Nature* 394:826–827 (1998). doi

Teaching

- “Learning (PSYC 3510)” Undergraduate course at Brooklyn College (Fall 2012–ongoing)
- “Human thinking: Why are we smarter than animals?” Honors seminar at Brooklyn College (Spring 2012)
- “The science of beauty.” Honors seminar at Brooklyn College, (Spring 2011)
- “Cultural evolution in theory and practice.” Honors seminar at Brooklyn College (Fall 2010, Fall 2011)
- “Neural models of behavior.” Master’s course at the School of Psychology, University of Bologna (2007–2010)
- “Intelligent Systems.” Master’s course at the School of Psychology, University of Trieste (2005–2008)
- “History of psychology.” Undergraduate course at the School of Psychology, University of Bologna (2004–2007)
- “Mathematics and modelling in biology.” Graduate course at the Department of Zoology, Stockholm University (1998)

Organized events

- Psychology Colloquium, seminar series at the Department of Psychology, Brooklyn College, Spring 2013

- Conference “Hypotheses on Human Cognitive Uniqueness,” Brooklyn College, May 29-30, 2012 (<http://drghirlanda.com/thinking-conference>).
- Carol L. Zicklin seminar series on cultural evolution, Brooklyn College, Spring 2011 (<http://drghirlanda.com/cultural-evolution-seminars>).
- “Action, Perception, and Knowledge” Summer School on neural modeling in psychology, University of Bologna, July 13-19, 2005 (<http://www.intercult.su.se/~stefano/NeuralNetSchool2005.pdf>).

Selected presentations and lectures

• Conference ◇ Invited lecture

1. *The cultural evolution of culture-bound emotions.* ◇ Opening lecture of the Conference Cultural Evolution, Philosophy, and the Emotions, Institute of Philosophy, Catholic University of Leuven, May 28, 2013.
2. *The logic of fashion cycles.* ◇ Institute of Philosophy, Catholic University of Leuven, September 22, 2011.
3. *Cultural evolution of fashions and fads.* ◇ Department of Economics, New York University, February 25, 2011.
4. *Sexual preferences, culture, and evolution.* ◇ Institute of Philosophy, Catholic University of Leuven, May 18, 2009.
5. *Evolution of social learning does not explain the origin of human cumulative culture.* ◇ Max Planck Institute for Evolutionary Anthropology, Leipzig, May 2, 2008.
6. *Effects of training and testing procedures on generalization.* • XII Symposium on Associative Learning, Gregynog, Wales, April 22, 2008.
7. *Automated design of crucial learning experiments.* • XI Symposium on Associative Learning, Gregynog, Wales, April 5, 2007.
8. *Human sexual imprinting.* ◇ Cognitive Evolution Lab, Harvard University, December 5, 2006. ◇ Department of Neuroscience, Newcastle University, October 17, 2007.
9. *Generalization.* ◇ Lectures at the School of Psychology, University of Newcastle (Fall 2007).
10. *The logic of cumulative culture.* • Cultural Evolution Symposium, Archaeological Research Laboratory, Stockholm University, October 23, 2006.
11. *Sexual selection.* ◇ Lectures within MA Nowak’s Math 153 course, Harvard University (Fall 2006).
12. *Atypical sexual stimuli on the Internet.* ◇ IgNobel Prize informal lecture, MIT, Cambridge (MA), October 7, 2006.
13. *Simple neural network model of latent inhibition.* • X Symposium on Associative Learning, Gregynog, Wales, April 12, 2006.
14. *Retrospective revaluation as simple associative learning: a general analysis.* • IX Symposium on Associative Learning, Gregynog, Wales, March 23, 2005.

15. *The need for a theory of stimuli.* • Department of Experimental Psychology, University of Cambridge, May 28, 2004.
16. *Rationality and irrationality in evolved behavior.* • Department of Zoology, University of Oxford, May 27, 2004. ◊ Program for Evolutionary Dynamics, Harvard University, September 22, 2006.
17. *Beauty: noble or ignoble?* ◊ IgNobel Prize informal lecture, MIT, Cambridge (MA), October 4, 2003.
18. *Neural network models of animal behavior.* • Adaptive Signal Processing Laboratory, McMaster University, Hamilton, Ontario, September 5, 2002. ◊ Institute for Theoretical Computer Science, Technical University, Graz, Austria, November 24, 2005.
19. *Sexual preferences and fetishism.* ◊ School of Specialization in Psychiatry, Catholic University of Rome (2002).
20. *Sexual preferences and fetishism: biology and culture in interaction.* ◊ Conference of the Association of European Psychiatrists, Stockholm, May 5, 2002.
21. *Artificial neural networks as models of stimulus control.* • Scandinavian Ethology Conference. Varmaland, Iceland, May, 3, 1999.
22. *Stimulus geometry and the perception of human faces* ◊ Royal Polytechnic, Stockholm, Sweden, June 17, 1998.

Peer reviews

I have reviewed papers for *Adaptive Behavior* (1), *Animal Behaviour* (4), *Animal Cognition* (2), *American Naturalist* (2), *Behavioral Ecology and Sociobiology* (1), *Behavioral Processes* (1), *Current Anthropology* (1), *Evolution* (2), *Evolutionary Ecology* (1), *Evolution and Human Behavior* (2), *Journal of the Experimental Analysis of Behavior* (1), *Journal of Human Evolution* (1), *Journal of Experimental Psychology: Animal Behavior Processes* (1), *Journal of Theoretical Biology* (3), *Interface* (3), *Laterality* (3), *Learning & Motivation* (2), *Proceedings of the Royal Society of London B* (4), *Psychonomic Bulletin and Review* (1), *Mathematical Models and Methods in Applied Science* (1), *Ornis Svecica* (1), *Philosophical Transactions of the Royal Society B* (2), *Scientific reports* (3), *Theoretical Population Biology* (1), *Trends in Ecology & Evolution* (1).

I have evaluated research proposals for the National Science Foundation of the U.S.A. (1), the Austrian Science Fund (1), the Biotechnology and Biological Sciences Research Council of the U.K. (1), the Catholic University of Leuven (2), the Netherlands Organization for Scientific Research (1), the Wallenberg Foundation, Sweden (1).

I have evaluated books for publication by Princeton University Press (2), Oxford University Press (1).