Michal Arbilly

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POSITIONS HELD

2019–present	Assistant teaching professor, Department of Biology and Department of Quantitative Theory and Methods, Emory University
2016–2018	Instructor, Department of Biology, Emory University
2015–2016	Independent postdoctoral fellow, Department of Biology, Emory University
2014–2015	Visiting Scholar, Department of Psychology, University of California, Berkeley. Host: Lucia Jacobs
2012–2013	Postdoctoral fellow, School of Biology, University of St Andrews. With Kevin Laland
2010–2011	Postdoctoral fellow, Department of Biology, Stanford University. With Marc Feldman

EDUCATION

2011	PhD in Zoology, Tel Aviv University. Thesis title: *Evolution of individual and social learning in a social foraging game: Theoretical analysis.* With Arnon Lotem and Uzi Motro
2005	MSc in Genetics, The Hebrew University of Jerusalem. Thesis title: *An integrative approach to mapping genes affecting complex traits: Application for neuropathic pain in a mouse model.* With Ariel Darvasi
2003	BSc in Life Sciences and Psychology, The Hebrew University of Jerusalem

Pedagogical Training

3–4/2021   *Teaching Enhancement Workshop*, Emory College. Led by Arri Eisen, Hiram Maxim, and Tom Rogers.

6–7/2021   *The Inclusive STEM Teaching Project.* Boston University online Course, and local Emory learning community.

8/2021   *Fundamentals of POGIL: Process Oriented Guided Inquiry Learning*, virtual workshop by the POGIL project.

Teaching

Instructor

2022–2023   *Data Justice* (team-taught). Department of Quantitative Theory and Methods, Emory University

2020–23   *Evolutionary Biology.* Department of Biology, Emory University

2019–22   *Introduction to Statistical Inference.* Department of Quantitative Theory and Methods, Emory University

2019–21   *Evolutionary Game Theory.* Department of Quantitative Theory and Methods, Emory University

2018   *Evolutionary Biology* (co-Instructor). Department of Biology, Emory University

2017   *Behavioral Ecology: A Quantitative Approach.* Department of Biology, Emory University

2016   *Supervised Reading.* Department of Biology, Emory University

2015–17, 2020   *Freshman Seminar: Evolutionary Approaches to Human Behavior.* Department of Biology, Emory University

2013   *Animal Behaviour: A Quantitative Approach* (co-Instructor). School of Biology, University of St Andrews

Teaching Assisstant

2009–2010   *Evolution.* Faculty of Life Sciences, Tel Aviv University

Guide

2007–2010   The I Meier Segals Garden for Zoological Research, Tel Aviv University

2006–2010 Dean's fellowship for outstanding graduate students, Faculty of Life Sciences, Tel Aviv University

2008 Adesman travel award, Department of Zoology, Faculty of Life Sciences, Tel Aviv University

2002 Summer research scholarship, Silberman Institute for Life Sciences, The Hebrew University of Jerusalem

2000–2001 Undergraduate full scholarship, The Hebrew University of Jerusalem

Publications

Lotem A, Kolodny O, **Arbilly, M** (In press) Gene-culture coevolution in the cognitive domain. In: *Oxford Handbook of Cultural Evolution.* Ed. by JR Kendal. Oxford: Oxford University Press.

Arbilly, M (2018) High-magnitude innovators as keystone individuals in the evolution of culture. Philosophical Transactions of the Royal Society B, Biological Sciences 373: 20170053.

Arbilly, M, Lotem A (2017) Constructive anthropomorphism: a functional evolutionary approach to the study of human-like cognitive abilities in animals. Proceedings of the Royal Society B, Biological Sciences 284: 20171616.

Arbilly, M, Laland KN (2017) The magnitude of innovation and its evolution in social animals. Proceedings of the Royal Society B, Biological Sciences 284: 20162385.

Burton-Chellew M, Kacelnik A, **Arbilly, M**, dos Santos M, Mathot KM, McNamara JM, Mengel F, van der Weele J, Vollan B (2017) The ecological and economic conditions of exploitation strategies. In: *Investors and Exploiters in Ecology and Economics: Principles and Applications.* Ed. by LA Giraldeau, P Heeb, M Kosfeld. Vol. 21. Strungmann Forum Reports. Series editor J Lupp. Cambridge, MA: MIT Press.

Arbilly, M (2015) Understanding the evolution of learning by explicitly modeling learning mechanisms. Current Zoology 61: 341–349.

Arbilly, M, Weissman DB, Feldman MW, Grodzinski U (2014) An arms race between producers and scroungers can drive the evolution of social cognition. Behavioral Ecology 25: 487–495.

Arbilly, M, Laland KN (2014) The local enhancement conundrum: in search of the adaptive value of a social learning mechanism. Theoretical Population Biology 91: 50–57.

Boogert NJ, **Arbilly, M**, Muth F, Seed AM (2013) Do crows reason about causes or agents? the devil is in the controls. Proceedings of the National Academy of Sciences of the United States of America 10: E273.

Arbilly, M, Motro U, Feldman MW, Lotem A (2011a) Recombination and the evolution of coordinated phenotypic expression in a frequency-dependent game. Theoretical Population Biology 80: 244–255.

Arbilly, M, Motro U, Feldman MW, Lotem A (2011b) Evolution of social learning when high expected payoffs are associated with high risk of failure. Journal of the Royal Society Interface 8: 1604–1615.

Arbilly, M, Motro U, Feldman MW, Lotem A (2010) Co-evolution of learning complexity and social foraging strategies. Journal of Theoretical Biology 267: 573–581.

Devor M, Gilad A, **Arbilly, M**, Nissenbaum J, Yakir B, Raber P, Minert A, Pisanté A, Darvasi A (2007) Sex-specific variability and a 'cage effect' independently mask a neauropathic pain quantitative trait locus detected in a whole genome scan. European Journal of Neuroscience 26: 681–688.

Arbilly, M, Pisanté A, Devor M, Darvasi A (2006) An integrative approach for the identification of quantitative trait loci. Animal Genetics 37, Suppl 1: 7–9.

Devor M, Gilad A, **Arbilly, M**, Yakir B, Raber P, Pisanté A, Darvasi A (2005) Pain1: a neuropathic pain qtl on mouse chromosome 15 in a c3hxc58 backcross. Pain 116: 289–293.

Recent contributions to scientific conferences

2018 The Physics of Behavior: Movement, Control and Learning, The Aspen Center for Physics. Aspen, CO, USA. Talk: *How thieves can promote cognitive evolution: hints from clever birds.*

2016 The 16th International Society for Behavioral Ecology meeting. Exeter, UK. Talk: *Pilfering may impose limits on cachers' long-term memory.*

2015 The Ernst Strüngmann Forum: *Evolutionary and Economic Strategies for Benefitting from Other Agents Investments.* Frankfurt, Germany

External referee for scientific journals

Animal Behaviour; Animal Cognition; Behavioral Ecology; Biology Letters; Frontiers in Communications; Journal of Evolutionary Biology; Journal of the Royal Society Open Science; Learning & Behavior; PLoS Computational Biology; Proceedings of the Royal Society B; Theoretical Population Biology.