

Dr Stephen Francis Mann



<withheld>

<withheld>

stephenfmann@gmail.com

stephenmann.isaphilosopher.com

EDUCATION

- FEB 2016 **Doctor of Philosophy**
-DEC 2020 AWARDED DECEMBER 2020
Philosophy
Australian National University (ANU)
- SEPT 2013 **Doctor of Philosophy**
-JAN 2016 CANDIDACY WITHDRAWN TO ATTEND ANU
Philosophy
King's College London (KCL)
- SEPT 2006 **Master in Science**
-JUNE 2010 FIRST CLASS HONOURS
Mathematics and Philosophy
University of Bristol, UK

Areas of specialisation: Philosophy of biology, Philosophy of science, Computational modelling.

Areas of competence: Cultural evolution, Ethics of artificial intelligence, Philosophy of cognitive science.

CURRENT POSITIONS

AUGUST 2021 - PRESENT

Postdoctoral Researcher
Surrey Morphology Group, University of Surrey

I am developing computational models of language change using the Python and R programming languages. In particular, with collaborators I study the evolution of inflectional systems. We ask, what kinds of features account for the similarities and differences in verb and noun forms? For example, in English, why do we say *sing, sang, sung* and *ring, rang, rung* but not *bring, brang, brung*? We seek to produce a framework that can help discover plausible answers to these questions.

APRIL 2021 - PRESENT

Guest Researcher
Max Planck Institute for Evolutionary Anthropology

I am a guest in the Department of Linguistic and Cultural Evolution within MPI-EVA. The department focuses on evolutionary approaches to culture, especially language, and its members have pioneered the use of phylogenetic techniques outside biology. I am working on a critical evaluation of the *free energy principle*, an explanatory framework that seeks to generalise evolutionary accounts of behaviour to many different kinds of system.

PREVIOUS ACADEMIC EMPLOYMENT

FEB 2020 - MARCH 2020

Research Assistant
Centre of Excellence for the Dynamics of Language (ANU)

I was awarded funding to work on an independent project, and began an analysis and computational model of the dynamics of cultural change in the songs of humpback whales. Unfortunately, due to the COVID-19 pandemic I left Australia earlier than planned. Funding rules meant this position was cut short.

PUBLICATIONS

- Mann, S. F.** and Pain, R. (2021). Teleosemantics and the Hard Problem of Content. *Philosophical Psychology*.
10.1080/09515089.2021.1942814
- Roberts, S., ... **Mann, S. F.**, ... (2020). CHIELD: The Causal Hypotheses in Evolutionary Linguistics Database. *Journal of Language Evolution* 5(2), 101-120. 10.1093/jole/lzaa001
- Mann, S. F.** (2020). Consequences of a functional account of information. *Review of Philosophy and Psychology* 11(3), 669-687.
10.1007/s13164-018-0413-4
- Mann S. F.** (2018). Attribution of information in animal interaction. *Biological Theory* 13(3), 164-179.
10.1007/s13752-018-0299-5

BOOK REVIEWS

- Mann S. F.** and Pfeifer, J. (2018). Review of *Studying Animal Languages Without Translation: An Insight from Ants* by Zhanna Reznikova. *Quarterly Review of Biology*, 93(1), 38.
10.1086/696753

IN PROGRESS

- Mann, S. F.**, Pain, R., and Kirchhoff, M. (invited, in progress). Free Energy: A User's Guide. Introduction to the Topical Collection 'The Free Energy Principle: From Biology to Cognition'. *Biology & Philosophy*.

AFFILIATIONS

JULY 2019 - MARCH 2020

Humanising Machine Intelligence
Affiliate (ANU)

The Humanising Machine Intelligence (HMI) project pursues novel ethical and legal solutions to problems emerging with the prevalence of artificial intelligence and other digital technologies. I wrote and produced video interviews supporting the project (sample: [YouTube playlist](#)), reaching out across disciplinary lines to seek expert opinions on crucial ethical, legal and technical questions.

FUNDING

- FEB 2016 **Australian Government Research Training Program (RTP) Scholarship**
-AUG 2019 Doctoral program funding (partial)
- FEB 2016 **Australian Research Council Laureate Fellowship Grant FL130100141**
-AUG 2019 Doctoral program funding (partial)

TEACHING

- MARCH 2020 - APRIL 2020
Philosophy of Cognitive Science (3rd year)
Guest Lecturer (ANU)
- JULY 2019 - JAN 2020
The Moral and Political Philosophy of Artificial Intelligence (3rd year)
Co-convenor (ANU)
- JULY 2017 - NOV 2017
Biology, Society and Ethics (3rd year)
Tutor/Guest Lecturer (ANU)
- JULY 2017 - NOV 2017
Philosophy of Biology (2nd year)
Tutor/Guest Lecturer (ANU)
- SEPT 2014 - JAN 2015
Philosophy of Science (2nd year)
Intermediate Logic (2nd year)
Elementary Logic (1st year)
Tutor (KCL)

SERVICES TO THE PROFESSION

Ad hoc reviewing

Philosophy of Science, Biology & Philosophy, Ergo, Biological Theory, Phenomenology and the Cognitive Sciences, AVANT

Guest editing

- 2021 *Biology & Philosophy*
Topical Collection
The Free Energy Principle: From Biology to Cognition (with Ross Pain and Michael Kirchhoff)

Public outreach

- 2019 *HMI Interviews*
Conducted a series of filmed interviews with members of the Humanising Machine Intelligence project.
Sample: [YouTube playlist](#)
- 2019 *Radio appearance*
MAR Guest on *Talk the Talk* linguistics radio show (Perth, Australia) and podcast (global), speaking on animal communication and human language.

Conference organisation

- 2016 *ANU Philosophy Graduate Conference*
NOV Lead Organiser
Duties included liaising with accommodation and conference facilities management, communicating with attendees, and chairing presentations.
- 2016 *Australasian Postgraduate Philosophy Conference*
SEPT Co-organiser
Duties included communicating with attendees, chairing sessions, and coordinating small social events.

SELECTED PRESENTATIONS

- NOV 2019
PEER
REVIEW
The mechanics of representation: teleosemantics meets the free energy principle (with Ross Pain)
Mental Representations in a Mechanical World
Ruhr-Universität Bochum
Bochum, Germany
- SEPT 2018
PEER
REVIEW
Studying language change with evolutionary methods
Evolving Minds
Charles Darwin University
Darwin, Australia
- JUNE 2018
INVITED
Communication and selection
Department of Linguistic and Cultural Evolution
Max Planck Institute for the Science of Human History
Jena, Germany
- FEB 2018
PEER
REVIEW
Unitrackerers in artificial and natural cognition
Naturally Evolving Minds
University of Wollongong
Wollongong, Australia
- DEC 2016
PEER
REVIEW
Natural information and naturalistic intentionality
10th LOGOS workshop
University of Barcelona
Barcelona, Spain

PROFESSIONAL EXPERIENCE

SEPT 2010 - MARCH 2013

Weaveability Limited *Developer*

Software Company based near Manchester, UK specialising in SAP eCommerce and Netweaver Solutions. Skills gained include:

- Fluency with **Python**, **GitHub**, **HTML** and **JavaScript**, website deployment with **Hugo** and **Google Cloud** services.
- Responsibility for own projects, delivering consistently on time or ahead of schedule
- Responsibility for own learning and progress during projects
- Inference of abstract patterns from concrete examples
- Quickly learned programming skills without prior experience
- Helped to teach others in a holistic work environment
- Gained experience in design and execution of both server-side and web-based software.