

# Dr Stephen Francis Mann

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## EDUCATION

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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-JAN 2016 CANDIDACY WITHDRAWN TO ATTEND ANU  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, Computational modelling, Philosophy of science.

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

## CURRENT POSITIONS

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APRIL 2024 - PRESENT

Postdoctoral Researcher  
**Dept. of Linguistic and Cultural Evolution, Max Planck Institute for Evolutionary Anthropology**  
Developing agent-based models of language evolution to understand linguistic diversity in Oceania.

## PREVIOUS ACADEMIC EMPLOYMENT

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DECEMBER 2022 - MARCH 2024

Juan de la Cierva Postdoctoral Fellow  
**LOGOS Group, Universitat de Barcelona**  
Investigating the relationship between *teleosemantics*, a theory of representation, and *communication theory*, a mathematical and engineering approach to signalling systems.

AUGUST 2021 - JUNE 2022

Postdoctoral Researcher  
**Surrey Morphology Group, University of Surrey**  
Developed an agent-based computational model of language evolution using the Python and R programming languages.

FEB 2020 - MARCH 2020

Research Assistant  
**Centre of Excellence for the Dynamics of Language (ANU)**  
Developing an agent-based 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.

## PEER-REVIEWED PUBLICATIONS

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**Mann, S. F.** (forthcoming) OPEN ACCESS  
The Price Equation since Price: An accessible account and a generalization to categorical variables.  
*Philosophy, Theory, and Practice in Biology.*

**Mann, S. F.** (forthcoming) OPEN ACCESS  
Quantifying information in structural representations. *Theoria.*

Pain, R. and **Mann, S. F.** (2024) OPEN ACCESS  
Teleosemantics, structural resemblance and predictive processing.  
*Erkenntnis.*

**Mann, S. F.** (2023) OPEN ACCESS  
The relevance of communication theory for theories of representation.  
*Philosophy and the Mind Sciences*, 4, 32.

Turner, C. R., **Mann, S. F.**, Spike, M., Magrath, R. D., and Sterelny, K. (2023)  
Joint evolution of traits for social learning  
*Behavioral Ecology and Sociobiology*, 77, 47.

**Mann, S. F.** and Pain, R. (2022) OPEN ACCESS  
Teleosemantics and the free energy principle  
*Biology & Philosophy*, 37, 34.

**Mann, S. F.**, Pain, R., and Kirchhoff, M. (2022) OPEN ACCESS  
Free energy: a user's guide. Introduction to the Topical Collection 'The Free Energy Principle: From Biology to Cognition'  
*Biology & Philosophy*, 37, 33.

**Mann, S. F.** and Pain, R. (2022) OPEN ACCESS  
Teleosemantics and the hard problem of content  
*Philosophical Psychology*, 35(1), 22-46.

Roberts, S., ... **Mann, S. F.**, ... (2020)  
CHIELD: The Causal Hypotheses in Evolutionary Linguistics Database.  
*Journal of Language Evolution* 5(2), 101-120.

**Mann, S. F.** (2020)  
Consequences of a functional account of information  
*Review of Philosophy and Psychology* 11(3), 669-687.

**Mann S. F.** (2018)  
Attribution of information in animal interaction  
*Biological Theory* 13(3), 164-179.

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## BOOK CHAPTERS

Auderset, S., ... **Mann, S. F.**, ... (2024) OPEN ACCESS  
Constituency and convergence in the Americas – Results and discussion in Tallman et al. (eds.) *Constituency and convergence in the Americas.* Language Science Press.

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## 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.

## 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, Synthese, Biological Theory, Erkenntnis, Ergo, Philosophy and the Mind Sciences, European Journal for Philosophy of Science, Phenomenology and the Cognitive Sciences, Theoria, AVANT, Philosophies, Qeios*
- Guest editing**
- 2021 *Biology & Philosophy*
- 22 Topical Collection  
The Free Energy Principle: From Biology to Cognition (with Ross Pain and Michael Kirchhoff)
- Public outreach**
- 2019 *Radio/podcast appearances*
- 24 Four guest appearances on *Because Language* podcast (formerly *Talk the Talk*), speaking on language, animal communication, and general linguistics topics.
- 2019 *HMI Interviews*  
Conducted a series of filmed interviews with members of the Humanising Machine Intelligence project.  
Sample: [YouTube playlist](#)
- 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.

## CONFERENCE PROCEEDINGS

- Round, E. R., **Mann S. F.**, Beniamine, S., Lindsay-Smith, E., Esher, L., & Spike, M. (2022)  
Cognition and the stability of evolving complex morphology: An agent-based model.  
*Proceedings of the Joint Conference on Language Evolution (JCoLE)*, 635–642.

## OTHER WRITING

- Mann, S. F.** and Gregory, D. (2024) OPEN ACCESS  
Might text-davinci-003 have inner speech? *Think*, 23(67), 31-38.
- Mann, S. F.** (2023) Major Transitions: A Record of Reorganization of Individuality in the Colonial Organisms of Earth.  
*Life Beyond Us*, ed. Julie Nováková, Lucas K. Law, and Susan Forest. European Astrobiology Institute.
- Mann, S. F.**, Pain, R., and Kirchhoff, M. (2022) OPEN ACCESS  
'Life hates surprises': can an ambitious theory unify biology, neuroscience and psychology? *The Conversation*.

## SELECTED PRESENTATIONS

- MAR 2024  
INVITED **The relevance of communication theory for theories of representation**  
*Centre for Cognitive Science (COGS)*  
University of Sussex  
Brighton, UK (talk given online)
- MAR 2023  
INVITED **Degrees of proper function**  
*Empirical Philosophy Workshop*  
Universität Bielefeld  
Bielefeld, Germany
- MAR 2023  
PEER REVIEW **Categorical variables and the strength of selection**  
*Predicting Evolution: The Price Equation and Its Applications*  
Universität Hannover  
Hanover, Germany
- SEPT 2022  
INVITED **The relevance of communication theory for theories of representation**  
*Representation in Cognitive Science*  
Universitat de Barcelona  
Barcelona, Spain
- 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