

# ROSS PAIN

Department of Philosophy  
Cotham House, University of Bristol  
Bristol, BS6 6JL

Email: [ross.pain@bristol.ac.uk](mailto:ross.pain@bristol.ac.uk)  
Web: <https://philpeople.org/profiles/ross-pain>

**AOS:** Philosophy of science (esp. biology, cognitive science and archaeology/anthropology)  
**AOC:** Philosophy of mind

## ACADEMIC EMPLOYMENT

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<b>University of Bristol</b> Postdoctoral Research Associate	May 2023-
<b>Australian National University</b> Research Fellow (Level B)	November 2021-April 2023

## EDUCATION

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<b>PhD</b>	Australian National University, Philosophy	2017-2022
<b>MA</b>	La Trobe University, Philosophy	2014-2016
<b>BA</b>	La Trobe University (Major: Archaeology, Hons 1 <sup>st</sup> class)	2008-2013

## PUBLICATIONS

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### *Edited collections*

- “Material Evidence and Cognitive Evolution” (with Rachael Brown & Ceri Shipton). Topical collection in *Biological Theory* on cognitive archaeology.
- “The Free Energy Principle: From Biology to Cognition” (with Michael Kirchhoff & Stephen Francis Mann). Topical collection in *Biology and Philosophy* on the Free Energy Principle.

### *Journal articles & book chapters*

1. “On the Use of Parsimony in Archaeological Reasoning” (with Sam Lin and Alex Mackay). *American Antiquity*, forthcoming.
2. “Four Heuristics for Theory Selection in Evolutionary Cognitive Archaeology” (with Anton Killin). *Journal of Cultural Cognitive Science*, forthcoming.
3. “Teleosemantics, Structural Resemblance and Predictive Processing” (with Stephen Francis Mann). *Erkenntnis* (2024).  
<https://doi.org/10.1007/s10670-024-00819-2>

4. “Past Material, Past Minds: The Philosophy of Cognitive Paleoanthropology” (with Adrian Currie, Anton Killin, Mathilde Lequin and Andra Meneganzin). *Philosophy Compass*, 19(6), e13001 (2024).  
<https://doi.org/10.1111/phc3.13001>
5. “Expanding the Causal Menu: An Interventionist Perspective on Explaining Human Behavioral Evolution” (with Ron Planer). *Evolutionary Human Sciences*, 2024;6:e39.  
<https://doi.org/10.1017/ehs.2024.27>
6. “Cognitive Archaeology Meets Cultural Evolutionary Psychology”, in Karenleigh A. Overmann, and Frederick L. Coolidge (eds), *Oxford Handbook of Cognitive Archaeology*, Oxford Library of Psychology (2024)  
<https://doi.org/10.1093/oxfordhb/9780192895950.013.50>
7. “Stone Tools, Predictive Processing & the Evolution of Language”. *Mind & Language*, 38(3), 711–731 (2023).  
<https://doi.org/10.1111/mila.12419>
8. “How WEIRD is Cognitive Archaeology? Engaging with the Challenge of Cultural Variation and Sample Diversity” (with Anton Killin). *Review of Philosophy & Psychology*, 14, 539-563 (2023).  
<https://doi.org/10.1007/s13164-021-00611-z>
9. “Cognitive Archaeology & the Minimum Necessary Competence Problem” (with Anton Killin). *Biological Theory*, 18, 269-284 (2023).  
<https://doi.org/10.1007/s13752-021-00378-7>
10. “Free Energy: A User’s Guide” (with Stephen F. Mann & Michael Kirchhoff). *Biology & Philosophy*, 37, 33 (2022).  
<https://doi.org/10.1007/s10539-022-09864-z>
11. “Teleosemantics and the Free Energy Principle” (with Stephen F. Mann). *Biology and Philosophy*, 37, 34 (2022).  
<https://doi.org/10.1007/s10539-022-09868-9>
12. “Teleosemantics and the Hard Problem of Content” (with Stephen F. Mann) *Philosophical Psychology*, 35:1, 22-46 (2022).  
<https://doi.org/10.1080/09515089.2021.1942814>
13. “Mind the Gap: A More Evolutionarily Plausible Role for Technical Reasoning in Cumulative Technological Culture” (with Rachael L. Brown). *Synthese*, 199 (1-2): 2467-2489 (2021).  
<https://doi.org/10.1007/s11229-020-02894-8>
14. “What Can the Lithic Record Tell Us About the Evolution of Hominin Cognition?” *Topoi*, Vol. 40, No. 1 (2021): 245-259.  
<https://doi.org/10.1007/s11245-019-09683-0>

#### ***Commentaries, reviews & introductions***

1. “How to Ride a Bike How to ride a bike: rigidity vs flexibility in the cultural evolution of techniques. Review of Charbonneau, M. (Ed.) ‘The Evolution of Techniques’” *Philosophy of Science*, forthcoming.
2. “Does Science Evolve? Review of Chris Haufe’s ‘How Knowledge Grows’”. *Evolution*, Volume 77, Issue 12, December 2023, 2699–2702.  
<https://doi.org/10.1093/evolut/qpadi167>.

3. “Archaeology and Cognitive Evolution: Introduction to the Thematic Section” (with Rachael L. Brown and Ceri Shipton). *Biological Theory*, 18, 231-233 (2023).  
<https://doi.org/10.1007/s13752-023-00448-y>
4. “Gadgets Meet Artefacts: Aligning Heyes’ Cultural Evolutionary Account with the Archaeological Record”. *Perspectives on Psychological Science*, 19(1), 44-45.  
<https://doi.org/10.1177/17456916231187405>
5. “No tinkering allowed: When the end-goal requires a highly specific or risky, and complex action sequence, expect ritualistic scaffolding.” (with Rachael L. Brown). *Behavioral and Brain Sciences*, Vol. 45, E2525 (2022).  
<https://doi.org/10.1017/S0140525X22001315>
6. “Culture, genes, selection, and learning: a response to Nichols, Mackey & Moll” (with Anton Killin). *Philosophical Psychology*, 35:2, 297-300 (2022).  
<https://doi.org/10.1080/09515089.2021.1980205>
7. “Unification at the Cost of Realism and Precision” (with Rachael L. Brown, Carl Brusse & Bryce Huebner). *Behavioral and Brain Sciences*, Vol. 43, Ed. 95 (2020).  
<http://dx.doi.org/10.1017/S0140525X19002760>
8. “‘You: A Natural History’ by William B. Irvine”. *Quarterly Review of Biology*, Vol. 95, No. 3 (2020): 250-251.  
<https://doi.org/10.1086/710394>
9. “Phenomenology and Cognitive Neuroscience: Can a Process Ontology Help Resolve the Impasse?” *Australasian Philosophical Review*, Vol. 2, No. 2 (2018): 204-208.  
<https://doi.org/10.1080/24740500.2018.1552098>

### ***Public philosophy***

1. “Life hates surprises: Can an ambitious theory unify biology, neuroscience and psychology?” (with Stephen Francis Mann and Michael Kirchhoff). *The Conversation*, August 2022.  
<https://theconversation.com/life-hates-surprises-can-an-ambitious-theory-unify-biology-neuroscience-and-psychology-184052>
2. “What is the Difference Making Cause?” (with Michael Raetz). Letter to *The Australian Geologist*, Issue no. 195, 2020.

### ***In progress***

- “The Problem of Conceptual Scope and the Philosophy of Trust” (with Jenny Munt and Caroline Hendy). Under review.
- “Comparative Cognitive Archaeology” (with Claudio Tennie and Richard Moore). In preparation.
- “Hierarchical cognition and the Evolution of Syntax”. In preparation.
- “The Cultural Evolution of Cultural Evolution: Aligning the Self-Assembly Hypothesis with the Archaeological Record” (with Christine Balasa). In preparation.
- “Teleosemantics, Structural Representation and the Proximate/Ulimate Distinction” (with Johan Heemskerk). In preparation.

## GRANTS AND AWARDS

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### *Awards*

- **2019:** Australasian Association of Philosophy Postgraduate Prize.
- **2015:** Shortlisted for the Australasian Association of Philosophy Postgraduate Prize.
- **2012:** La Trobe University: David Hume Philosophy Prize.

### *Grants*

- **2025:** REF Workshop Award, University of Bristol: GBP £500.
- **2024:** Institute of Philosophy Innovation Award, University of London (with Giulia Palazzolo and Simon Brown): GBP £5000
- **2022:** Forethought Fellowship, Global Priorities Institute, University of Oxford: GBP £8,000.
- **2019:** ANU CASS workshop grant (with Rachael Brown): AUD \$10,000.
- **2019:** Passmore Scholarship for graduate student travel: AUD \$2,000.
- **2019:** ANU CASS workshop grant (with Colin Klein): AUD \$2,250.
- **2018:** ANU CASS workshop grant (with Colin Klein): AUD \$15,000.
- **2018:** ANU CASS research grant (with Alan Hajek): AUD \$6,000.
- **2017:** Australian National University Research Scholarship: AUD \$26,682 per annum over 3 years.
- **2013:** La Trobe University Travel Grant: AUD \$1000.
- **2012:** Australian Postgraduate Award: AUD \$24,254 per annum over 2 years.

## CONFERENCE PAPERS

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### *Peer reviewed/invited*

- **2024:** “Teleosemantics, Structural Representation and the Proximate/Ulimate distinction” (with Johan Heemskerk). University of Bristol department research seminar.
- **2024:** “Expanding the Causal Menu: An Interventionist Perspective on Explaining Human Behavioral Evolution” (with Ron Planer). Masaryk University, invited workshop.
- **2024:** “Hierarchical Cognition and the Evolution of Syntax”. Masaryk University, invited lecture.
- **2024:** “Methodological Diversity and the Study of Cumulative Technological Culture”. Philosophy of Science Annual Conference, New Orleans.
- **2024:** “Expanding the Causal Menu: An Interventionist Perspective on Explaining Human Behavioral Evolution” (with Ron Planer). Webinar for special issue of *Human Evolutionary Sciences*.
- **2024:** “Comparative Cognitive Archaeology”. British Society for the Philosophy of Science Annual Conference, University of York.

- **2024:** “Comparative Cognitive Archaeology”. Philosophy of the Paleosciences Workshop, University of Exeter.
- **2024:** “Hierarchical Cognition and the Evolution of Syntax”. European Society for Philosophy and Psychology, Grenoble INP.
- **2024:** “Teleosemantics, Structural Representation and the Proximate/Ulimate distinction”. Philosophy and Evolution Workshop, University of Warwick.
- **2024:** “Doing Things with Words”. Xscape workshop on Material Engagements, University of Sussex.
- **2024:** “Comparative Cognitive Archaeology”. ECR Workshop on Animal Minds, London School of Economics.
- **2023:** “Hierarchical Cognition and the Evolution of Syntax”. Origins of Syntax workshop, University of Warwick.
- **2023:** “From Tool Morphology to Cognitive Capacity: a Trait-Based Methodology for Cognitive Archaeology”. International Society for the History, Philosophy and Social Studies of Biology Biannual Conference.
- **2023:** “Major Transitions in Cultural Evolution?” (with Arsham Nejad Kourki). British Society for the Philosophy of Science Annual Conference.
- **2023:** “Causation and Explanation in Palaeoarchaeology” (with Ron Planer). Past Materials, Past Minds workshop, University of Exeter.
- **2022:** “Between Nature and Culture: Developing a Third way for Causal Cognition” (with Rachael L Brown). London School of Economics.
- **2022:** “Stone Tools, Predictive Processing and the Evolution of Language”. British Society for the Philosophy of Science Annual Conference.
- **2022:** “Between Nature and Culture: Developing a Third way for Causal Cognition” (with Rachael L Brown). Causation in Biology workshop, University of Kent.
- **2021:** “How WEIRD is Cognitive Archaeology?” (with Anton Killin). International Society for the History, Philosophy and Social Studies of Biology Annual Meeting.
- **2021:** “Cognitive Archaeology meets Cultural Evolutionary Psychology”. Philosophy of Biology at Dolphin Beach.
- **2021:** “Cognitive Archaeology and the Minimum Necessary Competence Problem” (with Anton Killin). Society for American Archaeology Annual Meeting.
- **2020:** “What Can the Lithic Record Tell Us About the Evolution of Hominin Cognition?”. British Society for the Philosophy of Science Annual Conference (accepted, but conference cancelled due to COVID19).
- **2019:** “The Mechanics of Representation” (with Stephen Mann). Mental Representations in a Mechanical World workshop, Ruhr-Universität Bochum.
- **2019:** “Inferring Minds from Material Remains”. Retuning Cognition with a Pair of Rocks workshop, University of Pittsburgh HPS.
- **2018:** “Prediction and Uncertainty” (with Stephen Mann). Australasian Association of Philosophy and Psychology, Macquarie University.
- **2018:** “Carnap & Sellars on the Problem of Universals”. Phenomenology and Pragmatism, Deakin University.
- **2015:** “Sellarsian Picturing & Scientific Realism”. Australasian Association for the History, Philosophy and Social Studies of Science, University of Melbourne.

- **2015:** “Pragmatism, Naturalism & Abstracta”. Sellars in a New Generation, Kent State University.

***Other seminar and workshop presentations***

- **2023:** “The philosophy of Trust and the Problem of Conceptual Scope” (with Jenny Munt and Caroline Hendy). Egenis Philosophy Colloquium, University of Exeter.
- **2023:** “The cultural evolution of cultural evolution: aligning the model with archaeological data” (with Christine Balasa). Major Transitions in Biology and Culture workshop, University of Bristol.
- **2022:** “Progress We Can Be Proud Of” (with James Willoughby). Philsoc seminar, Australian National University.
- **2021:** “Stone Tools, Predictive Processing & the Evolution of Language”. Philsoc seminar, Australian National University.
- **2021:** “On Philosophical Progress” (with James Willoughby). Kioloa Graduate conference, Australian National University.
- **2021:** “Between Nature & Culture: Developing a Third Way for Causal Cognition” (with Rachael L Brown). PBANSHEE seminar, Online meeting.
- **2021:** “How WEIRD is Cognitive Archaeology” (with Anton Killin). New Work in Social & Cultural Evolution, Australian National University.
- **2019:** “The Mechanics of Representation” (with Stephen Mann). Philsoc seminar, Australian National University.
- **2019:** “Metalinguistic Anti-realism”. Philosophy of mind seminar, Australian National University.
- **2019:** “Addressing the Minimum Necessary Competence Problem” (with Anton Killin). Material Evidence & Cognitive Evolution workshop, Australian National University.
- **2019:** “Analyticity & Easy Ontology” (with Szymon Bogacz). Australasian Association of Philosophy, University of Wollongong.
- **2019:** “Teleosemantics & the Free Energy Principle” (with Stephen Mann). Australasian Association of Philosophy, University of Wollongong
- **2019:** “Analyticity for Novices” (with Szymon Bogacz). Kioloa Graduate conference, Australian National University.
- **2019:** “Cognitive-transition inferences”. Philsoc seminar, Australian National University.
- **2018:** “Analyticity and Neo-Carnapianism” (with Szymon Bogacz). Philosophy of mind seminar, Australian National University.
- **2018:** “Prediction & Uncertainty” (with Stephen Mann). Kioloa Graduate conference, Australian National University.
- **2018:** “Representationalism, 4E cognition & the Predictive Brain”. Kioloa Graduate conference, Australian National University.
- **2017:** “The Problem with Affordances” (with Nik Alksnis). Australasian Society for Cognitive Science, Charles Sturt University.
- **2017:** “Carnap & Sellars on Abstract Entities”. Kioloa Graduate conference, Australian National University.

- **2016:** “Two Types of Carnapian Deflation”. Australian Metaphysics Conference, Australian National University.
- **2016:** “Realism & Anti-realism in Metaontology”. Philosophy seminar, La Trobe University.
- **2015:** “Two Types of Carnapian Deflation”. Philsoc seminar, Australian National University.
- **2015:** “A Metalinguistic Defence of Strong Deflationism”. Australasian Association of Philosophy, Macquarie University.

## TEACHING EXPERIENCE

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### *University of Bristol*

2023-

- **2025:** ARCH20058 Evolution and Human Behaviour. Two guest lectures.
- **2024:** PHILM0046 Philosophy of Philosophy. One guest lecture.
- **2024:** PHIL30049 Philosophy of Science. One guest lecture
- **2023:** PHIL20063 Beyond Humanity. One guest lecture.

### *Australian National University*

2017-2023

- **2022:** PHIL3078 The Philosophy of Emotion. One guest lecture.
- **2022:** PHIL3079 Evolution and Human Nature. Tutor.
- **2021:** PHIL3073 Advanced Ethics: Trust & Cooperation in Philosophy & Evolution (with Jenny Munt).
  - Full responsibility for unit; from design, through to delivery, lecturing, tutoring and marking.
- **2020:** PHIL3076 Philosophy of the Life Sciences: Cognitive Science. Lecturer & Convener.
  - Full responsibility for unit; from design, through to delivery, lecturing, tutoring and marking.
- **2020:** PHIL3074 Advanced Philosophical Topics: Human Evolution. Tutor & one guest lecturer.
- **2019:** PHIL3076 Animal Cognition. Two guest lectures.
- **2019:** PHIL2126 Science in Society. Tutor & one guest lecture.
- **2018:** PHIL1005 Logic & Critical Thinking. Tutor.

### *La Trobe University*

2013-2016

- **2015:** PHIL4HONS Philosophy Honours. Two guest lectures.
- **2015:** PHIL1CRT Logic & Critical Thinking. Tutor.
- **2014:** PHIL1GPI Great Philosophical Ideas. Tutor.
- **2014:** PHIL1PPR Philosophical Problems. Tutor.

## SUPERVISION

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*University of Bristol*

2024-

- MA thesis on evolutionary aesthetics.

*Australian National University*

2017-2023

- Honours thesis on niche construction.

#### **OUTREACH PROJECTS**

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*What is it like to be another animal?*

2024-

- This project, run in conjunction with the Bristol Museum and Art Gallery, introduced children aged 5-11 to the breadth of animal sensory experience. We used interactive exhibits and a VR experience to illustrate echolocation in bats, electrolocation in fish and platypus, and the visual world of jumping spiders. We then asked children to draw what it would be like to experience the world through these different senses. The project was funded by an Innovation Award from the Institute of Philosophy at the University of London's School of Advanced Study.

<https://sites.google.com/view/whatisitliketobeanotheranimal/home>

#### **RELEVANT NON-ACADEMIC EMPLOYMENT (CASUAL AND PROFESSIONAL)**

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*Casual academic employment*

- **2019-2021:** Research assistant to Dr Rachael Brown, Director, Centre for Philosophy of the Sciences. Duties included organising regular weekly Centre meetings and occasional workshops, editing, literature reviews and other research tasks.

*Professional experience*

My professional background is in information management, quality assurance and document/data control. I have worked in ISO 9001 regulated environments in large construction projects across the resources and energy sector, and more recently in the health sector.

- **2015-2017:** Victorian Aboriginal Community Controlled Health Organisation. Quality, risk & compliance officer.
- **2013-2015:** Australian Red Cross Blood Service (Information Services). Quality assurance/data control officer.
- **2009-2013:** Energy Australia (LOPS/Mortlake project). Document/data controller.
- **2003-2005:** Newcrest Mining (Telfer project). Document/data controller.

#### **COURSEWORK (ANU)**

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- **2019:** Naturalising Desire: Julia Haas.

- **2019:** Prediction in Complex Sciences: Alkistis Elliott-Graves.
- **2019:** Introduction to German: GERM6501.
- **2019:** Language and Mind: Phillip Pettit.
- **2018:** Writing Philosophy: Daniel Stoljar and Alan Hajek.
- **2018:** Social Generics: Renee Bolinger and Justin D'Ambrosio.
- **2018:** Python Training Course: Colin Klein and Matthew Spike.
- **2018:** Statistical Design Course: Statistical Consulting Unit.
- **2018:** Experimental Philosophy: Matthew Lindauer.
- **2017:** Philosophy of Linguistics: Matthew Spike.
- **2017:** Value Theory: Wlodek Rabinowicz.

## PROFESSIONAL SERVICE

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Referee for: *Philosophy of Science, Australasian Journal of Philosophy, The British Journal for the Philosophy of Science, American Journal of Psychology, Biology and Philosophy, Journal of the Royal Society Interface, Philosophical Transactions of the Royal Society B, Erkenntnis, Synthese, Proceedings of the Royal Society B, European Journal for the Philosophy of Science, Evolutionary Biology, Cognitive Neuroscience, Cognitive Science, Journal of Cultural Cognitive Science, Consciousness & Cognition, Review of Philosophy & Psychology, Phenomenology and the Cognitive Sciences, Topoi.*

- **2025:** Program committee for the British Society for the Philosophy of Science Annual Conference.
- **2024:** Philosophy representative, First Generation Network, University of Bristol.
- **2023:** Principal organiser, Major Transitions in Biology and Culture Workshop, University of Bristol.
- **2022:** Principal organiser, From Casual Reasoning to Scientific Thinking workshop, Australian National University.
- **2022:** Principal organiser, Biology and Morality workshop, Australian National University.
- **2021:** Program committee for the British Society for the Philosophy of Science Annual Conference.
- **2021:** Participant in honours mentoring program, ANU.
- **2020:** Author of 'Issues facing graduate students' survey project, ANU (with Tim Williamson).
- **2020:** Principal organiser, New Work in Social & Cultural Evolution, Australian National University.
- **2019:** ANU Minorities and Philosophy (MAP) representative.
- **2019:** Principal organiser: Material Evidence and Cognitive Evolution, Australian National University.
- **2018/19:** ANU: Philsoc convener (August 2018 – May 2019).
- **2018:** Organiser, ANU Philosophy Kioloa Graduate Conference.
- **2017:** Organiser, ANU Philosophy Kioloa Graduate Conference.
- **2014:** Organiser, "Philosophy and God" course for the Melbourne Free University.
- **2013:** La Trobe University Postgraduate Representative.

## AFFILIATIONS

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- Global Priorities Institute, University of Oxford. Feb 2022 to present  
Fellow.
- Evolution of Cultural Diversity Initiative, ANU. Jan 2022 to present  
Affiliate member.

## REFERENCES

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### **Professor Kim Sterelny**

School of Philosophy  
Australian National University  
Phone: +61 2 6125 2886  
Email: [kim.sterelny@anu.edu.au](mailto:kim.sterelny@anu.edu.au)

### **Professor Cecilia Heyes**

All Souls College  
University of Oxford  
Phone: +44 (0)1865 279394  
Email: [cecilia.heyes@all-souls.ox.ac.uk](mailto:cecilia.heyes@all-souls.ox.ac.uk)

### **Professor Alison Wylie**

Department of Philosophy  
University of British Columbia  
Phone: +1 604 822 6574  
Email: [alison.wylie@ubc.ca](mailto:alison.wylie@ubc.ca)

### **Associate Professor Rachael Brown**

School of Philosophy  
Australian National University  
Phone: +61 402 098 909  
Email: [rachael.brown@anu.edu.au](mailto:rachael.brown@anu.edu.au)

### **Professor Samir Okasha**

Department of Philosophy  
University of Bristol  
Phone: +44 117 455 2321  
Email: [samir.okasha@bristol.ac.uk](mailto:samir.okasha@bristol.ac.uk)

### **Professor Thomas Wynn**

Department of Anthropology  
University of Colorado, Colorado Springs  
Phone: +1 719 255 3126  
Email: [twynn@uccs.edu](mailto:twynn@uccs.edu)