

Evolution and the mind (Semester 1)

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61 items

Week 1. Introduction. (3 items)

The general topic of the module is the impact of evolutionary forces on the way we think, especially around topics that philosophers are usually interested in. The obvious example is morality: "Why be moral?" is a standard question in moral philosophy (see the Ring of Gyges etc), and you get the same question in evolution ("Why would we evolve to be nice, when it's all about survival of the fittest?"), so the Joyce book below is a good starting point. Morality is probably the main example, but it's not the only one - see e.g. the Atkins paper below.

The evolution of morality, by Richard Joyce, 2006

Book | **Recommended** | Joyce is a particular kind of antirealist about morality. In this book he is arguing for that position on the basis of evolutionary considerations. (Cf. week 8, in which Steve is arguing for a particular kind of *realism* on the basis of evolutionary considerations.) In Chapter 1 Joyce is setting out some basic concepts, and also outlining some of the mechanisms by which human morality might have evolved. Then the task is going to be to turn those into that argument for antirealism. Use this chapter as a way of getting into the issues, reminding yourself what evolutionary theory is about, etc.

Of Sensory Systems and the "Aboutness" of Mental States - in The Journal of Philosophy, by Kathleen Akins, 1996-07

Article | **Optional** | .

The subject as cause and effect of evolution - in Interface Focus, by Godfrey Smith Peter, 6 October 2017

Article | **Optional**

Week 2: The scope and limits of evolutionary explanation. (7 items)

The main aim this week is to think a bit about some of the subtleties and controversies around explaining human traits by appeal to evolutionary forces. One of these, which will become important later on (see e.g. the Hanson paper from Week 7) has to do with what is called the Negative View of natural selection. Another, which isn't so central to the discussions later on, but which has been important and influential in restraining allegedly excessive kinds of evolutionary explanation, has to do with what Gould and Lewontin called the "Panglossian Paradigm". Have a look at some of the readings below, mainly just to get a sense of the kinds of concerns that might be raised about a particular evolutionary explanation.

Why you have one trait rather than another: The failure of the explanatory-chain strategy, by Casey Helgeson

Article | **Recommended** | The "Evolutionary Debunking Arguments" in Week 6 and 7 are part of an ongoing discussion in the philosophy journals at the moment - that makes it a

current and interesting topic, but unfortunately does mean that there is quite a lot of technical philosophical machinery being used. Don't worry about following the whole thing, but try to pin down exactly what Sober's view is, and get a sense of why it's not a simple question.

Philosophy of Biology, by Brian Garvey, 2014

Book | **Recommended** | This book is a useful introduction to lots of the philosophical questions about the status of evolutionary explanations. Try the chapter on the Panglossian Paradigm, maybe starting on p.51 at "There still remain some commentators who suspect that the importance of natural selection has been exaggerated." Okay, so how has it been exaggerated, and what would be doing the explaining instead?

Are Evolutionary Explanations Unfalsifiable? Evolutionary Psychology and the Lakatosian Philosophy of Science - in Psychological Inquiry, by Timothy Ketelaar and Bruce J. Ellis, 2000

Article | **Optional**

Four Fallacies of Pop Evolutionary Psychology - Scientific American, by David J. Buller

Webpage | **Optional** | On the limitations of evolutionary explanations in psychology

Delusions of Gender : The Real Science Behind Sex Differences, by Cordelia Fine, 2005

Book | **Optional** | Do gender differences have an evolutionary explanation?

Nativism, Empiricism, and the Origins of Knowledge - in Infant Behavior and Development, by Spelke Elizabeth S.

Article | **Recommended** | The nativism-empiricism debate is relevant to the question of how much is explained by evolution.

Innateness in cognitive science - in Trends in Cognitive Sciences, by Richard Samuels

Article | **Optional**

Week 3: Morality and the Prisoners' Dilemma (8 items)

Prisoner's Dilemma is the subject of an enormous literature in lots of subjects. Basic aim this week is just to understand the structure of the interaction, and two kinds of *iterated* PD. Then we can look at how it (allegedly) tells us something about morality.

There are thousands of presentations of it - different presentations will use different numbers, but the *structure* is the same. Beware of some presentations showing payoffs in terms of goods, e.g. 0, 1, 2, 3 units of money, in which case 3 is better than 2, some showing it terms of units of something bad, e.g. 1, 2, 3, 4 years in prison, in which case 2 is better than 3, and some putting outcomes in order, in which case 2nd best is better than 3rd best... Also beware of "co-operate", meaning co-operate *with the other player*, which could be confused with co-operating *with the police* in the standard story. Obviously in the lectures/notes we'll pick one setup and stick to it.

There is no set reading, just the notes, and the main "homework" task is to think about what you think is the rational thing to do in the PD, and come up with a "strategy" for playing IPD according to the rules set out in the notes. But if you do want to do some wider

reading there is some below. (But please don't just base your entry in the Week 4 tournament on what you've read is the best strategy. We want a representative sample to put in the model and see what comes out on top.)

An introduction to moral philosophy, by Jonathan Wolff, 2018

[Book](#) | **Optional** | Chapter 7 ("The Social Contract") discusses a typical application of reasoning involving the PD in moral philosophy.

PD on Wikipedia

[Webpage](#) | **Optional** | Here are some examples of apparent applications of PD in real life.

PD on the Stanford Encyclopedia of Philosophy

[Webpage](#) | **Optional** | Detailed and philosophical but long.

The Prisoner's Dilemma in Business and the Economy

[Webpage](#) | **Optional** | In case you want a different perspective to the philosophers...

Paradoxes of Rationality and Cooperation: Prisoner's Dilemma and Newcomb's Problem, by Richard Campbell, 2000

[Book](#) | **Optional** | Classic collection of philosophical discussions on rationality and the PD (and Newcomb's problem, which is different but related).

Prisoner's Dilemma doesn't explain much, by Robert Northcott; Anna Alexandrova

[Article](#) | **Optional** | Useful skeptical take on the explanatory power of the PD.

Game Theory, by Ross, Don, 1997/01/25

[Article](#) | **Optional** | .

Week 4: Evolutionary game theory (5 items)

The main topic this week is our tournament, which is something like the famous Axelrod tournament from the early 80s. Obviously one question is whether we'll get the same kinds of results - if we do, then the next question is what that shows. So the first reading below is the start of that discussion, where conclusions are drawn from the results in Axelrod's original tournaments.

More Effective Choice in the Prisoner's Dilemma - in The Journal of Conflict Resolution (pre-1986), by Axelrod, Robert, pre-1986; Beverly Hills Vol. 24, Iss. 3, (Sep 1980

[Article](#) | **Essential** | Axelrod summarises his tournament results here, and sets out some of the claims about successful strategies.

Evolutionary Game Theory, by Alexander, J. McKenzie, 2002/01/14

[Article](#) | **Optional**

The evolution of cooperation - in Science, by R Axelrod; W. Hamilton, 1981-03-27

[Article](#) | **Optional** | Famous paper by Axelrod and Hamilton setting out some of the claims made on the basis of these models.

The Stag Hunt - in Proceedings and Addresses of the American Philosophical Association, by Brian Skyrms, 2001-11

[Article](#) | **Optional** | .

The stag hunt and the evolution of social structure, by Brian Skyrms, 2004

[Book](#) | **Optional** | Chapter 1 is a later version of the APA address above.

Week 5: Evolution and the origins of morality. (7 items)

The main aim this week is to get into some of the more detailed philosophical discussions about what can really be inferred from evolutionary explanations of morality.

Models and Reality-A Review of Brian Skyrms's Evolution of the Social Contract - in Philosophy and Phenomenological Research, by Martin Barrett; Ellery Eells; Branden Fitelson; Elliott Sober; Brian Skyrms, 1999-03

[Article](#) | **Essential** | This is an important philosophical review of the methodology being employed in the evolutionary models and arguments for philosophical conclusions.

REVIEW OF: The Complexity of Cooperation: Agent-Based Models of Competition and Collaboration - in Journal of Artificial Societies and Social Simulation, by Ken Binmore, 1998

[Article](#) | **Optional** | Another useful skeptical review.

Review: Précis of "The Evolution of Morality" - in Philosophy and Phenomenological Research, by Richard Joyce, 2008

[Article](#) | **Optional** | This is a summary of the whole of Joyce's book, for a review symposium - the articles below are reviews of it in the same issue of the journal, and then the one at the end contains Joyce's responses to the reviewers.

Review: Acquired Moral Truths - in Philosophy and Phenomenological Research, by Jesse Prinz, 2008

[Article](#) | **Optional**

Review: Some Questions about "The Evolution of Morality" - in Philosophy and Phenomenological Research, by Stephen Stich, 2008

[Article](#) | **Optional**

Review: Evolution and the Possibility of Moral Realism - in Philosophy and Phenomenological Research, by Peter Carruthers; Scott M. James, 2008

[Article](#) | **Optional**

Review: Replies - in Philosophy and Phenomenological Research, by Richard Joyce, 2008

[Article](#) | **Optional**

Week 6: Evolution and moral skepticism (8 items)

This week the focus is on one specific line of argument for various forms of moral skepticism on the basis of evolution, which has been around since Darwin but which has been extensively discussed in the philosophical literature since the publication of some papers by Sharon Street. See the title of the Street paper below for the basic idea.

Does anything really matter or did we just evolve to think so? - in The Norton introduction to philosophy, by Sharon Street, edited by Gideon A. Rosen; Alex Byrne; Joshua Cohen; Seana Valentine Shiffrin, 2018

[Chapter](#) | **Essential** | .

Does anything matter or did we just evolve to think so?

[Chapter](#) | **Essential** | Electronic scan of the chapter above.

Evolutionary Debunking of Moral Realism - in Philosophy Compass, by Katia Vavova, 2015-02

[Article](#) | **Optional**

Debunking arguments - in Philosophy Compass, by Daniel Z. Korman, 2019-12

[Article](#) | **Optional**

The real problem with evolutionary debunking arguments - in Philosophical Quarterly, by Louise Hanson, 2017

[Article](#) | **Essential** | Draws on, among other things, the Negative View discussed in Week 2

Evolutionary debunking arguments: moral realism, constructivism, and explaining moral knowledge - in Philosophical Explorations, by Elizabeth Tropman, 2014

[Article](#) | **Optional** | Argues among other things that Street's constructivist alternative doesn't ultimately fare any better in the light of the EDA.

Evolutionary arguments against moral realism: Why the empirical details mat... - in Biology & Philosophy, by Jeroen Hopster, 2018

[Article](#) | **Optional**

Evolutionary debunking of morality: epistemological or metaphysical? - in Philosophical Studies, by Ramon Das, 2016

[Article](#) | **Optional**

Week 7: Explaining inequality (4 items)

The origins of unfairness: social categories and cultural evolution, by Cailin O'Connor, 2019

[Book](#)

The Origins of Unfairness: Social Categories and Cultural Evolution | [Reviews](#) | Notre Dame Philosophical Reviews | University of Notre Dame

[Webpage](#)

How to Put the Cart Behind the Horse in the Cultural Evolution of Gender - in Philosophy of the Social Sciences, by Daniel Saunders, 2022-01

[Article](#)

Cailin O'Connor, The Origins of Unfairness: Social Categories and Cultural Evolution - in The Philosophical Review, by William FitzPatrick, 2022

[Article](#) | Review of O'Connor's book

Week 8: The evolution of religion (7 items)

This week the topic is the evolutionary origins of religion, especially of religious *belief* - also the evolutionary explanation of religious practices, institutions, etc, but those also come under "Cultural evolution" next week.

Are Children "Intuitive Theists"? Reasoning about Purpose and Design in Nature - in

Psychological Science, by Kelemen, Deborah

[Article](#) | **Essential** | .

Debunking Arguments and the Cognitive Science of Religion - in Theology and Science, by Matthew Braddock, 2016-07-02

[Article](#) | **Recommended** | The old EDA again, this time in a different context. The patterns of reasoning are the same (Evolution explains belief in X, without requiring that belief to be true; this undermines belief in X); what differs are the particular explanations. We'll focus instead on those explanations themselves, e.g. as in the Kelemen paper above.

The Naturalness of Religious Belief: Epistemological Implications, by Helen de Cruz

[Document](#) | **Recommended** | The "debunking" argument discussed in the Braddock paper above, and the "naturalness" argument in this paper, form a pair in a similar way to the skeptical and realist arguments of Weeks 6 and 8 in case of the morality.

Does cognitive science show belief in god to be irrational? The epistemic consequences of the cognitive science of religion - in International Journal for Philosophy of Religion, by Joshua C. Thurow, 2013-8

[Article](#) | **Optional**

Evolutionary Debunking Arguments in Three Domains: Fact, Value, and Religion - in A New Science of Religion, by Wilkins John; Griffiths Paul, edited by Dawes Gregory W.; Macclaurin James

[Chapter](#) | **Optional**

Cognitive Science of Religion: Looking Back, Looking Forward - in Journal for the Scientific Study of Religion, by Justin L. Barrett, 2011-06

[Article](#) | **Optional**

Reidian Religious Epistemology and the Cognitive Science of Religion - in Journal of the American Academy of Religion, by K. J. Clark; J. L. Barrett, 2011-09-01

[Article](#) | **Optional**

Week 9: Evolution and realism (2 items)

We've had the skeptical arguments, and those are the ones that have probably received the most attention in the literature, but other people think that evolution *supports* realism about morality (and other domains).

The Rediscovery of Common Sense Philosophy, by S. Boulter, 2007

[Book](#) | **Essential** | Stephen Boulter will probably join us for this week, because he advocates certain forms of evolutionary argument for realism - see e.g. Chapter 2 of this book.

Morality and Evolutionary Biology, by William FitzPatrick

[Article](#) | **Recommended** | This is useful (a) because it's a well written encyclopedia article, but also (b) because the author is a realist.

Week 10: Cultural evolution (10 items)

Contemporary debates in philosophy of biology, by Francisco

Jose

Ayala; Robert Arp, 2010

Book | **Essential** | Look at Susan Blackmore, "Memetics does provide a useful way of understanding cultural evolution", the reply by William Wimsatt, and Blackmore's response that follows, for a good in-depth discussion of memetics.

Towards a unified science of cultural evolution - in Behavioral and Brain Sciences, by Alex Mesoudi; Andrew Whiten; Kevin N. Laland, 2006-8

Article | **Optional** | .

Rethinking adaptation: The niche-construction perspective - in Perspectives in Biology and Medicine, by Day, Rachel ; Laland, Kevin ; Odling-Smee, John

Article | **Optional**

Explaining culture: a naturalistic approach, by Dan Sperber, 1996

Book | **Optional** | Especially chapters 4 and 5

How Darwinian is cultural evolution? - in Philosophical Transactions of the Royal Society B: Biological Sciences, by N. Claidiere; T. C. Scott-Phillips; D. Sperber, 2014-03-31

Article | **Optional**

Cultural evolutionary theory: How culture evolves and why it matters - in Proceedings of the National Academy of Sciences, by Nicole Creanza; Oren Kolodny; Marcus W. Feldman, 2017-07-25

Article | **Optional**

Five Misunderstandings About Cultural Evolution - in Human Nature : An Interdisciplinary Biosocial Perspective, by Henrich, Joseph; Boyd, Robert; Richerson, Peter J, Jun 2008

Article | **Recommended**

If we are all cultural Darwinians what's the fuss about? Clarifying recent disagreements in the field of cultural evolution - in Biology & Philosophy, by Alberto Acerbi; Alex Mesoudi, 2015-7

Article | **Optional**

The evolution of the Teddy Bear - in Animal Behavior, by Robert A Hinde; L A Barden, 1985

Article | **Optional** | .

Evolution of Mind, Brain, and Culture, by Gary Hatfield , and Holly Pittman, 2013

Book