

PHIL263/363: Philosophy of Biology

Semester 2, 2020

Lecture (263 + 363): Mondays 2–4pm, Room 315, Te Puna Aronui | Humanities (Building 206)

263 tutorials: Wednesdays 3–4pm, Room G16, Commerce A (Building 114)

363 tutorials: Thursdays 11am–12pm, Room 217, Te Puna Aronui | Humanities (Building 206)

Course coordinator and lecturer: Dr Emily Parke

Email: e.parke@auckland.ac.nz

Student drop-in hours: Mondays 10:30am–12pm. This is time I set aside to meet with students to discuss your questions or thoughts about the readings, course content, or life in general. During this weekly time window you are welcome to stop by my office to chat anytime. I am also happy to arrange to meet at other times (in person or via Zoom or phone call) by advance appointment.

Office: Room 427, Te Puna Aronui | Humanities (Building 206)

Tutor: David Kelley

Email: e.parke@auckland.ac.nz

Student drop-in hours: Tuesdays 11am–12pm in Room 303, Building 206

Course Description

You are probably already familiar with some philosophical issues involving biology, as they're portrayed in the media: For example, the evolution/creationism debate, or the effects of new genetic research on our understanding of humans (the human mind, human sexuality, or human nature). Philosophers of biology engage with these sorts of issues and many others, including: What exactly is natural selection, and does it act on individual organisms, genes, or groups of organisms? Does natural selection explain everything about the amazing diversity and complexity we see in the living world? If all individual organisms are fundamentally self-interested, how on earth do self-sacrificing behaviours, like sharing food, evolve? What is life, anyway, and where did it come from?

We will address these and a range of other questions about the conceptual and philosophical foundations of the life sciences. We will read and discuss literature by both philosophers of biology and biologists. Many of these issues are contentious—people have argued about them for decades or centuries, and are still arguing—so we will not just be learning what others have said, but engaging with ongoing debates.

Objectives

In this course you will:

- Engage with classic and contemporary debates in philosophy of biology
- Apply philosophical reasoning to conceptual debates in biology
- Draw on insights from the biological sciences to think about questions in philosophy
- Hone your critical thinking, reasoning, and writing skills, with a particular focus on writing *concisely* about complex, interdisciplinary topics

Assessment

50% Weekly Mini Essays

300 words maximum; due on Canvas on Mondays in weeks 2–11

50% Final Essays

2000 words maximum for PHIL263, 2500 for PHIL363; due on Canvas on 02 November

Weekly Mini Essays

Your weekly assignment (beginning in week 2) is to write a mini essay (maximum 300 words) answering an assigned question or topic based on the readings. Mini essays are due every Monday; questions/topics will be posted by the end of the day on the previous Monday. To get the most out of this course and these assignments, I strongly encourage you to (1) do the assigned readings for the week and write a draft of your mini essay in advance of Monday's lecture, then (2) finalise and submit your mini essay on Monday after participating in, and thinking about, the lecture.

Your final mark will be an average of your seven best mini essay marks of the ten assigned. This is to allow for the occasional missed assignment due to illness, enrolment delay, or any other reason, without your overall mark suffering. Further details about these assignments will be explained in the first weeks of class.

Other Important Details about Coursework

Anonymous marking: All coursework will be marked anonymously. When you submit your mini essays and final essays, do not include any identifying information on them. (Canvas will automatically associate your assignment with your name; your name will be blind to us only until marks are finalised.)

Word limits and references: Do not go over the word limit. Writing concisely about complex material is an important skill, and one aim of this course is to help you hone that skill. If you submit an essay which exceeds the specified word limit for the relevant assignment, we will read and mark it only up to that word limit. (For example, if you submit a 429-word mini essay, we will stop reading at 300 words and mark it as if the last 129 words were not there.) There is no minimum word count required for mini essays or final essays, but there is a maximum. Do not write more than that. The essay word limits do not include references. They do include footnotes, if the content of the footnote is something other than a reference. You may use whatever referencing and/or footnoting style you like in your essays, as long as you use it thoroughly and consistently. For a guide to common referencing styles and formats, see library.auckland.ac.nz/study-skills/referencing.

Late policy: Extensions on mini essays and final essays will be granted only by arrangement in advance of the deadline. If you need to request an extension, email Emily before the relevant deadline specifying how much of an extension you would like to request, and why. Unless an extension has been pre-arranged, mini essays and final essays will be marked down 5 points (1/3 of a letter grade) per 24-hour period they are submitted past the deadline.

For example:

- If you submit your first mini essay on 04 August at 8:30am, it will be marked down 5 points.
- If you submit your final essay on 06 November at 1:00 am, it will be marked down 20 points.

Technical issues with Canvas will not excuse lateness. In the event of last-minute technical issues, please email your essay to Emily so we have a record of its on-time submission. (You should still upload it to Canvas as well as soon as you are able, so we can mark it anonymously.)

Communication: We will check and respond to emails only on weekdays during business hours. Please keep this in mind and plan accordingly, especially as deadlines approach. When communicating by email, please include the course number in the subject line or text. We are teaching other courses this semester, some of them large, so without this information we will not necessarily know which course you are asking us a question about.

Academic integrity: The work that you submit must be your own, reflecting your own learning. In writing your essays, you are expected to engage with the assigned course readings; you are welcome

to draw on other resources as well, including further suggested course readings, resources from the University library, or resources you find on the internet. All of these must be properly acknowledged and referenced.

When in any doubt whatsoever, cite your sources. You will never be marked down for over-citing. At most, you will be told that your citations are too heavy-handed and you should tone it down next time. But there will be serious consequences for any instance of presenting another author's work as your own—whether the work in question is from a book, a journal article, a YouTube video, or anything else anyone has written anywhere online. In particular, all such instances will be treated as plagiarism cases and an Academic Misconduct form will be filed.

Provisional Schedule

All assigned readings will be available electronically on Canvas > Reading Lists.

PART 1: PHILOSOPHICAL DEBATES IN EVOLUTIONARY BIOLOGY

27 July **Week 1: Key Concepts in Evolutionary Biology I**

Assigned reading:

– Carl Zimmer, *The Tangled Bank*, Chapters 1 and 2

Note: tutorials meet this week and every week for the rest of the semester.

03 August **Week 2: Key Concepts in Evolutionary Biology II**

Assigned readings:

– Ernst Mayr, “Typological Versus Population Thinking”

– Carl Zimmer, *The Tangled Bank*, Chapters 5 and 6

Mini Essay #1 due

10 August **Week 3: Adaptationism**

Assigned readings:

– Stephen Jay Gould and Richard Lewontin, “The Spandrels of San Marco and the Panglossian Paradigm: A Critique of the Adaptationist Programme”

– Peter Godfrey-Smith, “Three Kinds of Adaptationism”

Mini Essay #2 due

17 August **Week 4: Selfish Genes, Altruism, and Levels of Selection I**

Assigned readings:

– Richard Dawkins, *The Selfish Gene*, Chapters 1–3 (through page 36; the rest is optional)

– Kim Sterelny and Paul Griffiths, *Sex and Death*, Sections 3.2–3.3

Mini Essay #3 due

24 August **Week 5: Selfish Genes, Altruism, and Levels of Selection II**

Assigned readings:

– Kim Sterelny and Paul Griffiths, *Sex and Death*, Sections 8.2–8.4

– Douglas Hofstadter, “The Prisoner’s Dilemma Computer Tournaments and the Evolution of Cooperation”

Mini Essay #4 due Tuesday

31 August **Week 6: Evolution as Progress**

Assigned readings:

- Stephen Jay Gould, *Wonderful Life*, Chapter 1
 - Kim Sterelny, *Dawkins vs. Gould: Survival of the Fittest*, Chapter 11
- Mini Essay #5 due Tuesday*

----- **Mid-Semester Break** -----

PART 2: BEYOND EVOLUTIONARY BIOLOGY

21 September **Week 7: Biodiversity and Conservation**

Assigned readings:

- James Maclaurin and Kim Sterelny, *What is Biodiversity?*, Chapters 1 and 3
- Mini Essay #6 due Tuesday*

28 September **Week 8: The Nature and Origin of Life**

Assigned readings:

- Carol Cleland and Christopher Chyba, “Does ‘Life’ Have a Definition?”
 - A. G. Cairns-Smith, *Seven Clues to the Origin of Life*, Chapter 1
- Mini Essay #7 due Tuesday*

PART 3: STUDENT CHOICE TOPICS

05 October **Week 9: Evolutionary Psychology**

Assigned readings:

- Leda Cosmides, John Tooby and Jerome Barkow, “Evolutionary Psychology and Conceptual Integration” (Introduction to *The Adapted Mind*)
 - Subrena Smith, “Is Evolutionary Psychology Possible?”
- Mini Essay #8 due Tuesday*

12 October **Week 10: Race and Human Diversity**

Assigned readings:

- Sally Haslanger, “A Social Constructionist Analysis of Race”
 - Quayshawn Spencer, “A Radical Solution to the Race Problem”
- Mini Essay #9 due Tuesday*

19 October **Week 11: Objectivity, Values, and Biases in Biology**

Assigned readings:

- Michael Weisberg, “Remeasuring Man”
 - Elisabeth Lloyd, “Pre-Theoretical Assumptions in Evolutionary Explanations of Female Sexuality”
- Mini Essay #10 due Tuesday*

26 October **Week 12: No lecture (Labour Day holiday)
... but tutorials are still on this week.**

02 November *** Final Essays due on Canvas ***