Biological Functions and Natural Norms

Richard Lawrence

Fall 2018

1 Course Description

This course is a seminar exploring a topic in the Philosophy of Biology. We will focus on the topic of *biological functions*. A biological function is an action or effect that an organ or organism performs; intuitively, it is what that organ or organism is for, or what it is supposed to do. For example, the function of a human heart is to circulate blood to the lungs and throughout the body. In this course, we will be interested in the relationship between biological functions, norms, and the explanatory framework of modern biology. We will ask: what are biological functions? How should we explain the distinctions between functioning well and malfunctioning, or functions and accidental activities? To answer these questions, we will examine contemporary debates among philosophers of science about how biological functions should be characterized. One central concern in this literature is how to accommodate the apparent normativity of functions in the naturalistic framework of biology. When biologists make claims about functions, are they making normative claims? If so, can those norms be grounded in other concepts of modern biology? Should talk of functions be rejected if they cannot be grounded in more naturalistic terms? We will ask these questions in order to understand the debate, but also because they serve as a case study for an issue of wide philosophical interest: how do norms fit into our naturalistic picture of the world and ourselves?

Course learning objectives

By the conclusion of the course, the student will:

- understand several different possible views from the contemporary literature about what biological functions are
- be able to articulate these different views of functions and compare their explanatory goals, merits, and drawbacks
- develop a philosophical question about biological functions and answer that question in dialogue with the views in the literature
- practice analysis, reconstruction, and evaluation of philosophical arguments from contemporary philosophical literature
- practice presenting a philosophical text to a seminar of peers

Meeting time and contact information

Course	**Instructor**
Mondays, 4:00PM–6:00PM Philosophy Seminar Room	Richard Lawrence richard.lawrence@berkeley.edu Office Hours: Thursdays, 1PM–3PM 301 Moses Hall

2 Course Requirements

	Due date	Length	Weight in final grade
Short Essay 1	*Monday, September 24*	4–5 pages	15%
Short Essay 2	*Monday, October 29*	4–5 pages	15%
Final Essay	*Monday, December 3*	10 pages	50%
Participation and presentation			20%

2.1 Essays

You will write three essays in this course. You generally have two tasks to complete in the essays: first, to reconstruct one or more philosophical arguments from the texts we have read; and second, to present your own philosophical argument in response, saying why the author's arguments are correct or incorrect, whether you agree with their conclusions, and why. Your analysis of arguments in the readings, the structure of your own argument, and correct spelling, grammar, and citations are all important.

Short essays The first two essays will be shorter assignments, asking you to reconstruct and respond to a philosophical view from one of the course readings. A choice of writing prompts will be provided.

Final essay The final essay will be a longer piece, addressing one of the larger themes of the course. You will develop your own topic for this essay, in conversation with me. Your topic should be based on a question that is addressed by at least two of the authors we read, and may consider additional philosophical literature. You will be expected to compare the views of these authors, and defend your own answer to your question.

2.2 Discussion in seminar

The seminar meets once a week, and attendance is required. (Please notify me as soon as possible if you cannot attend.) Most of our time will be spent in cooperative discussion about how best to interpret the philosophical arguments in the readings for the week, and what their significance is. You are expected to be an active participant in this discussion. To prepare for discussion each week, you should read the assigned material, and make notes to yourself about the important points in the reading and any questions you have.

Seminar presentations Each participant in the seminar will give a short (20–30 minute) presentation about one of the readings, which will count toward your participation grade. (We will schedule these presentations after the first few weeks of the course.) The purpose of the presentation is to introduce the important points from the reading to the seminar, and raise a few questions that will serve as the starting point of discussion that week. You should plan to meet with me to discuss your presentation during the preceding week.

2.3 Academic honesty

It is your responsibility to ensure that your work in this course accords with the University's standards for academic honesty. Students found to have plagiarized will be reported to the Center for Student Conduct and may fail the course, at the determination of the instructor. For further information on plagiarism and how to avoid it, see: `http://sa.berkeley.edu/conduct/integrity/definition`.

3 Readings and Schedule

The texts for the course are readings from contemporary philosophical literature. They will be made available electronically and as a course reader. Optional additional readings will be made available depending on the interests of seminar participants and the direction of discussion.

Week 1	Course introduction
	The causal contribution view
Week 2	Morton Beckner, "Function and teleology"
Week 3	Robert Cummins, "Functional analysis"
	The etiological view
Week 4	Larry Wright, "Functions" and Christopher Boorse, "Wright on functions"
Week 5	John Bigelow and Robert Pargetter, "Functions"
Week 6	Ruth Garrett Millikan, "In defense of proper functions"
Week 7	Karen Neander, "Functions as selected effects"
Week 8	Peter Godfrey-Smith, "A modern-history view of functions"
Week 9	D. M. Walsh, "Fitness and function"
	Unified (and disunified) accounts
Week 10	Peter Godfrey-Smith, "Functions: consensus without unity"
Week 11	Philip Kitcher, "Function and design"
	Natural norms
Week 12	Hannah Ginsborg, "Oughts without intentions: a Kantian approach to biological functions"
Week 13	Richard Lawrence, "What questions do biological functions answer?"
Week 14	Course conclusion