

Science & Society: Values in Science

Course Number: PHIL 3310-090

Semester: Summer 2023

Course Meeting: Online

Early Version - Details are Subject to Change

If you have questions about the class, get in touch with either (or both) of us 😊

Instructor Information:

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Office Hours: By Appointment via Zoom

Course Description:

What is scientific objectivity and how do we achieve it?

What is indigenous knowledge, and in what ways is it similar to and different from Western science?

Should scientists be free to pursue any research project, regardless of the potential dangers of their research?

Should scientists strive to be value-free or can scientists incorporate values into their work in an unproblematic way?

How do we, as a society, want to use science?

These are some of the main questions we will be exploring in this class, with some of the prominent authors being W. E. B. DuBois, Richard Rudner, Helen Longino, Philip Kitcher, Alison Wylie, and Heather Douglas to name a few. After getting a handle on these issues, we will then apply them to some specific topics: health, disability, genetics, and aesthetics.

Part of this class includes examining the ways in which science has impacted and continues to impact marginalized communities of all kinds, including women, racial and ethnic minorities, the LGBTQIA+ community, the disabled community, and more. Discussion will be a key part of this class and we will ensure that discussion posts will be an open space for everyone to share their thoughts while also remaining respectful of each other.

Objectives:

- Learn how to create, assess, and respond to philosophical arguments by participating in collaborative discussions and writing your own research paper.
- Be able to articulate the difference between epistemic and non-epistemic values and how they influence science.
- Learn the history and different meanings behind the concept of 'objectivity'.
- Learn some history about the field of genetics and how values in those fields have affected, and continue to affect, people in both positive and negative ways.
- Learn the history of the relationship between scientific and artistic practices.

Reading Materials:

All readings will be made digitally available on Canvas. No need to purchase anything!

Grading:

Grades will be based on the following criteria:

1. Weekly Discussion Posts & Replies
2. Quizzes (one or two)
3. Exam
4. Research Paper

Grade scale:

A+ = 100-97	C+ = 79-77
A = 96-93	C = 76-73
A- = 92-90	C- = 72-70
B+ = 89-87	D+ = 69-67
B = 86-83	D = 66-63
B- = 82-80	D- = 62-60
	F = 59-0

Class Schedule

Unit I: Intro to Topic

- Learn how to create, assess, and respond to good philosophical arguments using some basic logical tools.
- Introduce the standard way of thinking about science and society, then do some readings on values in science – which may include earthquake predictions, indigenous archaeology, climate scientists as activists, or others – to begin our look at problems for the standard way of thinking.

Unit II: Values in Science

- Do some key readings from the values in science literature on issues like objectivity, democracy and science, the pursuit-worthiness and effects of research projects, the value-free ideal, and the role non-epistemic values should (or shouldn't) play in science, and indigenous knowledge.

Unit III: Values in Science & Aesthetics

- Learn how the artworld and its history have been affected by the development of technology and the scientific world-conception.
- Under this heading, we will talk about how art theorists reacted to industrialization and automation.
- We will also examine the role that technological explanation plays in art history.
- Learn about how aesthetic judgment impacts the practice of science and the development of scientific theories.

Unit IV: Values in Genetics

- This unit will cover the history of genetics, starting in the mid-1800's and hitting on major developments to the present day.
- We will cover the eugenics movement that started in the late-1800's and continued until the 1940's. We will pay special attention to the history of eugenics in America and Utah, including forced sterilizations of those deemed "unfit" to reproduce.
- We will then pivot to present day genetics, pre-natal genetic testing, and gene-editing technologies. Some want to use these methods to cure diseases, others want to use them to create healthier and better people. But what counts as "healthier" and "better"? What makes something a disease or a disability? And who gets to decide?