Science, Values, and Democracy

Syllabus - Fall 2011

January 17, 2012

Course Information

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Office Location JO 4.120

Office Hours Wednesday 11:00am-Noon and 5:00-6:00pm.

Course Pre-requisites

Prior work in political theory, political philosophy, or philosophy/history/social studies of science is not required, but would be a benefit. All students should be prepared to read, discuss, and write about recent and sometimes difficult texts in these areas.

Course Description

Many scientists and philosophers defend the value-free ideal of science, and many social and political institutions are based on that ideal. The value-free ideal includes the following cluster of ideas: science is neutral with respect to our values, ideologies, politics, and morals. Except for some restrictions on the ethics of research where humans and other animals are affected directly or indirectly, there ought to be no political or ethical restrictions on science. The application of science is not part of science proper, but rather part of technology, and only the latter is responsible for those applications. Strictly speaking, science has no impact on our values, either, though religious or moral frameworks which presuppose beliefs about the world in conflict with science must give way. And so on.

In this course, we will analyze in depth the value-free ideal and a host of challenges to that ideal. We will look at arguments that values (cognitive, social, ethical) play a role in different parts of the scientific process. We will also examine claims that science does or should transform our values. We will look at questions about the relation between science and application, including the question about the legitimacy of the science-technology dichotomy and the use of science in policy, particularly how political and evaluative considerations come in to the use of science. Not only do scientific results regularly shape policy, but scientific funding decisions and legal regimes are shaped by political and social institutions, and we will look at the ways in which political (social, economic, etc.) institutions might alter or limit science (for better or worse).

Student Learning Objectives/Outcomes

- Students will examine and analyze a variety of works of philosophy and cognate fields.

- Students will develop their ability to read, analyze, and write about complex texts.

- Students will demonstrate knowledge of the major questions about the role of values in science and the role of science in democratic society.

- Students will be able to critically analyze and discuss the nature of, value of, and challenges to science as an intellectual and cultural institution.

Textbook and Materials

Required

- Heather Douglas, *Science, Policy, and the Value-Free Ideal*
- *The Challenge of the Social and the Pressure of Practice: Science and Values Revisited*
- Mark B. Brown, *Science in Democracy: Expertise, Institutions, and Representation*
- Kitcher, *Science in a Democratic Society*
- Kim Stanley Robinson, *Fifty Degrees Below*
- Paul Feyerabend, *The Tyranny of Science*

Readings *not* on this list will be available via electronic course reserves. Instructions will be given ahead of time in class.

Recommended

I've put in an order at the bookstores for the following texts which may provide introductory material or material for further research. None is necessary for the course, though each is helpful for different topics. Many of them would be helpful for your research papers or in-class presentations.

Introductory to philosophy of science and STS

- Peter Godfrey-Smith, Theory and Reality
- Frederick Grinnell, Everyday Practice of Science
- Steve Fuller, The philosophy of science and technology studies

Collections of essays

- Keller and Longino, Feminism and Science
- Value-Free Science? Ideals and Illusions
- Science, Values, and Objectivity
- Democratization of expertise? Exploring novel forms of scientific advice in political decision-making

Monographs related to the course

- Janet Kourany, Philosophy of Science after Feminism
- Philip Kitcher, Science, Truth, and Democracy
- Helen Longino, The Fate of Knowledge
- Sheila Jasanoff, The fifth branch: science advisers as policymakers
- Sam Harris, The Moral Landscape: How Science Can Determine Human Values

The other books in Kim Stanley Robinson's *Science in the Capital* trilogy, which are best to read w/ *Fifty Signs of Rain.*

- Kim Stanley Robinson, Forty Signs of Rain
- Kim Stanley Robinson, Sixty Days and Counting

Some other texts that might be of interest that I didn't order:

- Bruno Latour, *Politics of Nature: How to Bring the Sciences into Democracy*
- Thomas McGarity & Wendy Wagner, *Bending Science: How Special Interests Corrupt Public Health Research*
- Naomi Oreskes and Erik Conway, *Merchants of Doubt*

Course Schedule

1. 8/24 - Introduction to Philosophy of Science and Science and Technology Studies

2. 8/31 - The History of Science, Values, and Democracy in the U.S.

   - Douglas, Ch. 1–3 [65pp]

3. 9/7 - Values in Science I

   - Douglas, Ch. 4–6 [67pp.]

4. 9/14 - Values in Science II

   - CSPP 1,3,4 + Kourany Ch. 5 (online) [97pp]

5. 9/21 - The Political Theory of Science in Democracy

   - Chapters from *Science in Democracy* [∼70pp]
   - Guest Lecture by Mark B. Brown at Center for Values
   - Jonsson Performance Hall
   - Lunchtime meeting on 9/21

6. 9/28 - Feminism and Science

   - F&S Intro,2,3,5 (online) [58pp]

7. 10/5 - Aging Well: Scientific and Humanistic Approaches to Longevity

   - Attend discussion forum in lieu of class
   - Eugene McDermott Library room 2.410

8. 10/12 - Science, Values, and the Policy Process

   - Douglas Ch. 7–8, Epilogue [46pp]

9. 10/19 - Science in Democracy and Democracy in Science

   - TBA (online) [< 100p]

10. 10/16 - Science in a Democratic Society I

    - Kitcher part I [∼150pp]

11. 11/2 - Science in a Democratic Society II

    - Kitcher part II [∼150pp]

12. 11/9 - The Commercialization of Science

    - CSPP 9–11 [67pp]

13. 11/16 - Science in the Capital

- *Fifty Degrees* [603pp - but Mass Market Paperback]
- Guest Lecture by Kim Stanley Robinson at Center for Values
- Jonsson Performance Hall
- Lunchtime meeting on Thurs. 11/17

14. 11/23 - A Post-Modern Approach

- Tyranny [134pp - but light]

15. 11/30 - Science, Democracy, and Religion

- Kitcher, Kidd, Feyerabend, Farris (online) [∼50pp]

16. 12/7 - Final Papers Due

Grading

Graded Assignments

1. Class participation and preparedness, 10 points
2. In-class presentation, 5 points
3. Blog posts, 1 point / post, up to 3 posts
4. Blog comments, 0.5 point/comment, up to 2 points
5. Term paper, 10–12 pages, 20 points
6. Participation in Center for Values in Medicine, Science, and Technology's special events connected to the theme of the course, 1 point per. (At least 2 opportunities, max 5 points.)

Total possible points: 45

Final Grades

Final grade will be calculated on a 4.0 scale by taking your points divided by ten. So, for example, a student with a 33 would have a 3.3 or a B+. 41+ points is an A+, 38–40 points is an A, 35–37 points is an A-, 32–34 is a B+, 28–31 is a B, 25–27 is a B-, etc.

Classroom citizenship

You begin the course with a classroom citizenship score of 5. Frequent, appropriate, high-quality participation will increase that score up to a maximum of 10. Each class missed and each class period where you fail to practice proper courtesy will subtract 1 point. Tardiness will subtract half of a point. See note on respectfulness in class policies.

In-class presentation

Format and rubric to be discussed in class during week 2.

Blog posts

Students may submit blog posts to the Center for Values website on a topic from any week of the course. Posts should be between 300 and 500 words, should be clearly written, checked for grammar and style, and accessible to readers from outside the course. They must be published by Tuesday night for responses to readings for the course (i.e., before the session where the reading is discussed), or by Thursday night for responses to Center lectures (Brown, Robinson, Aging Well). Grades are all or nothing, based on effort and quality.

Students are encouraged to comment on each others' posts. Thoughtful, well-posed comments will receive 1/2 a point.

Grading Standards

These are the standards for assignments that will be graded on a letter grade / 4.0 scale:

- An **A** grade indicates *excellent* work. **A** work has something to say and says it well. It displays a subtle and nuanced understanding of the text, develops arguments clearly and effectively, and reflects insightfully on the course material. It often rises above other work in terms of creativity and sophistication, or it may add something valuable to the discussion that goes beyond merely fulfilling the letter of the requirements. Only few, minor mistakes in content, mechanics, and style are present.

- A **B** grade indicates *good* work. Such work displays a clear understanding of the text, develops arguments consistently towards a clear claim, and is thoughtful and careful. The presence of serious errors must not impair the clarity of an argument or the overall understanding of a text. **B** work is in many ways successful, but lacks the sophistication or originality of **A** work.

- A **C** grade indicates *adequate* work. It shows an adequate understanding of the key parts of the text. Arguments aim at a central claim, though they may rely on unsupported or insufficiently developed ideas. More serious errors may be present, so long as the central claims and basic understandings are not undermined.

- Work which deserves a grade less than **C** will display some of the following problems: it fails to show adequate understanding of the text; it fails to

understand the assignment; it fails to articulate a coherent or adequate argument; it fails to reflect on the content of the course; it displays such pervasive grammatical errors as to be highly obscure in meaning.

Course Policies

Email / eLearning Policy

You are expected to check your official UTD email account regularly for announcements related to the course. Crucial information will be emailed out at least 24 hours prior.

Email is the best way to contact me. I will generally try to return your emails within 24 hours (often sooner) Monday through Thursday, and within 48 hours on the weekends or holidays. You are welcome to email me a followup or reminder *if* I have not done so within this time frame. You should not count on being able to get in touch with me less than 24 hours before a major assignment is due.

Classroom expectations

You are expected to have read the assignments *before* class, and it would be to your benefit to also read them again after class. You are expected to bring *all* of the texts assigned for each day's class, and have them available to refer to. You are expected to listen respectfully to the professor, your fellow students, and guest speakers, and to participate in class discussions and activities while allowing room for others to do so as well. You should not show up to class very late or leave early.

Respect for others, respectful language

Some of the material in this course will touch on sensitive subjects such as religion, politics, and sexuality. Sometimes in lectures or discussions I may use outrageous examples to clarify points or provoke discussion; if you are offended by something that is said, please accept my apologies in advance and express your concern to me after class. I will not share your concerns with the class without your permission, but I will try to respond to them. While we will encourage informal discussion, I will insist that you always speak to others in the class in a respectful way, and to avoid comments and behaviors that disparage individuals. Speaking informally but respectfully about sensitive subjects is an important skill, and this class will help you learn it.

Laptops and Digital Devices

So - laptops and other digital reading and note-taking devices are permitted, but Internet use and game-playing are not. If you wish to use such devices, you must receive explicit permission from the professor, internet access must be disabled, and you must sit in the front row, nearest the instructor.

Late Work / Make-up Exams

No late work or make-up assignments or exams will be allowed without consent of the professor **prior to** the due/exam date, except in situations where University policy requires it.

Class Attendance

While reading and writing are crucial parts of the course, the central philosophical activity is live discussion. While class will occasionally involve bits of lecture, this is merely an instrument to a more well-informed discussion and other structured activities. *Attendance is thus considered mandatory.* Missed classes will count against your participation grade, and egregious absenteeism will be grounds for an **F** in the course at the professor's discretion. In-class assignments and activities likewise cannot be made up unless the professor agrees to it before the class is missed. Disruptive late arrivals or early departures are poor classroom citizenship and will also negatively impact your citizenship grades.

Further standard University policies can be found at http://go.utdallas.edu/syllabus-policies

These descriptions and timelines are subject to change at the discretion of the Professor.