

PHIL 2600 Ethics in Science
Fall 2009

Instructor: Adam Briggie

Course Description

This course will explore the ethical and policy dimensions of scientific research, addressing issues such as research integrity, peer review, authorship status, trust, gender, human subjects and animals in research, as well as the policy context of science, including science for policy, societal impact criteria, and policy for science. Over the past half-century, science has become an integral part of society in the U.S. and around the world. During this time, several developments have raised the ethical dimensions of science to the forefront of public debate. These include cases of scientific misconduct, the increasing commercialization of scientific research, allegations of the misuse of science, clashes between scientific theories and religious belief systems, questions about the moral responsibilities and social roles of scientists, and controversies about public science funding (what types of science, how much science, should some science not be pursued, who decides and how).

Objectives

To achieve

- greater awareness about and critical insight into the ethical dimensions of science in contemporary society
- the ability to identify, analyze, and evaluate ethical issues and arguments pertaining to science

Evaluation (see Assignments section below for more detail)

1/3 Participation and weeklies

1/3 Final exam

1/3 Final paper

Writing Center http://www.engl.unt.edu/facilities/facilities_university_writing.htm

Student Code of Conduct http://www.unt.edu/policy/UNT_Policy/volume3/18_1_11.html

Disabilities <http://www.unt.edu/oda/>

The University of North Texas is on record as being committed to both the spirit and letter of federal equal opportunity legislation; reference Public Law 92-112 – The Rehabilitation Act of 1973 as amended. With the passage of new federal legislation entitled Americans with Disabilities Act (ADA), pursuant to section 504 of the Rehabilitation Act, there is renewed focus on providing this population with the same opportunities enjoyed by all citizens.

Texts

--- The Ethical Dimensions of the Biological and Health Sciences (2002), edited by Ruth Ellen Bulger, et al., Cambridge University Press

--- Ethical Issues in Scientific Research: An Anthology (1994), edited by Edward Erwin, Sidney Gendin, et al., Routledge

--- Science, Money, and Politics: Political Triumph and Ethical Erosion (2001), by Daniel Greenberg, University of Chicago Press

--- Frontiers of Illusion: Science, Technology, and the Politics of Progress (1996), by Daniel Sarewitz, Temple University Press

--- *Adam will supply additional reading materials (marked with an asterisk below).

Schedule**Part I. Values and Science (weeks 1-2)**

M 8/31: *Carl Mitcham and Adam Briggie, "Ethics and Science: An Introduction"

W 9/2: Carl G. Hempel "Science and Human Values," in Erwin pp. 7-27

F 9/4: Elizabeth Heitman, "The Roots of Honor and Integrity in Science," in Bulger pp. 21-28 (weekly 1)

M 9/7: No Class, Labor Day

W 9/9: * Jacob Bronowski, *Science and Human Values*, pps. 3-6 and chap. 3 (weekly 2)

F 9/11: Bentley Glass, "The Ethical Basis of Science," in Bulger pp. 29-41

Part II. Research Ethics: Misconduct and the Responsible Conduct of Research (weeks 3-5)

M 9/14: W. Broad and N. Wade, "Fraud and the Structure of Science," in Erwin pp. 69-89 (weekly 3)

W 9/16: U. Segerstrale, "Murky Border...Scientific Intuition and Fraud," in Erwin pp. 91-109

F 9/18: Alan Elms, "Keeping Deception Honest," in Erwin pp. 121-140

M 9/21: Sheila Jasanoff, "Innovation and Integrity in Biomedical Research," in Bulger pp. 71-77 (weekly 4)

W 9/23: R. Bulger, "Ethical Practices in Publication of Research Results," in Bulger pp. 89-96

F 9/25: **On Being a Scientist*, preface, intro, pp. 1-18, and pp. 35-42

M 9/28: Ruth Bulger, "The Scientist and Industry," in Bulger pp. 281-289

W 9/30: K. Kemp, "Conducting Research for the Military as...Duty," in Erwin pp. 387-396 (weekly 5)

F 10/2: Douglas Lackey "Military Funds, Moral Demands," in Erwin pp. 397-409

Part III. Research Ethics: Research on Human and Animal Subjects (weeks 6-7)

M 10/5: The Nuremberg Code and The Belmont Report, in Bulger pp. 126-138

W 10/7: Michael Lockwood, "Sins of Omission I," in Erwin pp. 201-218 (weekly 6)

F 10/9: G.E.M. Anscombe, "Sins of Omission II," in Erwin pp. 219-224

M 10/12: Peter Singer, "The Significance of Animal Suffering," in Erwin pp. 233-243 (weekly 7)

W 10/14: Elizabeth Heitman, "Humane Care and Use of Animals," in Bulger pp. 183-191

F 10/16: Arthur Caplan, "Beastly Conduct," in Bulger pp. 192-202

Part IV. Ethical Theories and Principles and their Relevance to Science (week 8)

M 10/19: *Carl Mitcham and Adam Briggie, *Ethics and Science*, chap. 1

W 10/21: *David Resnik, *The Ethics of Science*, chaps. 3 and 4

F 10/23: *Robert K. Merton, "The Normative Structure of Science" (weekly 8)

Part V. Science, Technology, and Politics (weeks 9-12)

M 10/26: Sarewitz, preface and chap. 1

W 10/28: Sarewitz, chap. 2 (Adam at 4S)

F 10/30: Sarewitz, chap. 3 (Adam at 4S/last day to drop course)

M 11/2: Sarewitz, chaps. 4 and 5

W 11/4: Sarewitz, chaps. 6 and 7

F 11/6: *Sarewitz, "An Excess of Objectivity" (weekly 9)

M 11/9: Greenberg, intro and chap. 1

W 11/11: Greenberg, chaps. 5 and 6

F 11/13: Greenberg, chaps. 7 and 8 (weekly 10)

M 11/16: Greenberg, chaps. 13 and 14

W 11/18: Greenberg, chaps. 21-23

F 11/20: Greenberg, epilogue (weekly 11)

Part VI. Science, Religion, and Culture (weeks 13-15)

M 11/23: *Carl Mitcham and Adam Briggie, *Ethics and Science*, chap. 8

W 11/25: *C.P. Snow, *The Two Cultures* (weekly 12)

F: No Class, Thanksgiving

M 11/30: *"Memo Opinion," ID court case, selections TBD (paper exchange)

W 12/2: Paper workshop

F 12/4: *Jill Lepore, "Baby Food: If Breast is Best, why are Women bottling their Milk?" (weekly 13)

M 12/7: * Sharon Begley vs. L.G. Goes on childhood vaccinations and autism

W 12/9: *Ina May Gaskin, *Ina May's Guide to Childbirth*, selections TBD

F 12/11 No Class – reading day!

Final Exam is Wednesday December 16, 1:30 to 3:30

Assignments

Evaluation of your performance will be based on three assignments.

1. Participation and weeklies (1/3):

- The class will feature both small and large group opportunities for letting your voice be heard. Your participation should adhere to basic principles of civility, respect, and open-mindedness.
- Weeklies (13 total) are 1 page written synopses and responses to the reading material for that day. They will serve to indicate your comprehension of the readings, to generate classroom discussion, and to help you prepare for the final exam. Weeklies must be typed and handed in during class. Each weekly does the following:
 - Outlines, in your own words and using select quotations, the article (3/4 page)
 - Makes two points of comparison or contrast with earlier works read in class (1/4 page)

2. Final exam (1/3):

- Cumulative short answer and essay.

3. Final paper (1/3):

- Ca. 4,000 words.
- Can be authored alone or in pairs. If team-authored, you can choose either to accept the same grade or indicate which sections were written by which student.
- The paper should introduce and analyze a contemporary topic pertaining to ethics and science. A good paper will provide an informative introduction, identify and analyze the ethical issue(s) at stake, evaluate conflicting claims, and propose and defend a response to the issue.
- Timeline:
 - Weeks 1-4, brainstorm topics, find a partner (if applicable)
 - Weeks 5-7, schedule an appointment with Adam to discuss possible paper topics
 - Week 8, finalize a topic via e-mail with Adam
 - Weeks 9-13, research and write
 - Week 14, paper workshop (Weds. 12/2)
 - Week 16, paper due (Tues. 12/15) electronically to Adam

Policy on Timeliness

- Late weeklies will not be accepted, but everyone gets one freebie. If you have last minute printer problems, email me your weekly prior to class (with WEEKLY as the subject line) and bring a hard copy to me as soon as possible. If you are too sick to attend class, you can still get full credit for submitting your weekly via e-mail prior to the class meeting time and providing a hard copy once you are well.
- *So, note: Unless Adam has a hardcopy of your weekly, it will not be counted.
- The final exam can be rescheduled for approved reasons only.
- Final papers will be docked 10% per day late.