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GOVT 169a

Science, Technology, and Politics

Meets GE requirement D2: Major Social Issues

MWF 10:00-10:50, Amador 260

Spring 2006

Course Description

This course will examine some of the public controversies associated with the role of biomedical science and technology in contemporary society. Students will draw on various theories of science and technology to examine the ethical, legal, social, and political dimensions of stem cell research, genetic testing, gene therapy, the use of genetic data, and related issues. The course is specifically designed to move beyond the typical standoff between supporters and critics of biomedical science and technology. Like other areas of science and technology, biomedical research is neither a value-neutral tool of inevitable social progress nor an inhuman force of disenchantment and destruction. Rather, biomedical research is intertwined with social values and political decisions. Understanding biomedical controversies, therefore, requires that we examine the values and decisions associated with the various positions on each controversy. As we shall see, people's positions on biomedical controversies often defy traditional categories of right and left, liberal and conservative. Due to the complex issues involved, liberals often find themselves allied with those who take a conservative stance on other issues, and vice versa. Students will be encouraged to understand the best arguments for each of the various viewpoints in any given controversy, to develop their own views on the controversies, and to consider how our society can best mediate among competing positions. Course readings will address alternative theories of the relationships among biomedical science, technology, and politics; the history of political efforts to shape biomedical science and technology; the relationships among scientists, ethicists, and lay people in controversies over biomedical science and technology; and questions of race, class, gender, and sexual orientation in biomedicine. Some readings will provide a very basic overview of the technical facts necessary for understanding the relevant social and political issues, but students are not expected to have any prior technical knowledge. Students with backgrounds in the natural sciences and engineering will have an opportunity to think about the social dimensions of their work; students from the social sciences and humanities will be able to more fully appreciate the controversial role of biotechnology in contemporary society and politics.

Learning objectives

After successfully completing this course, students will have:

- improved their ability to summarize and explain the historical background of contemporary biomedical controversies
- gained an understanding of the most basic scientific facts necessary for understanding contemporary biomedical controversies

- improved their understanding of, and ability to articulate in both discussion and writing, the strengths and weaknesses of each of the various positions on several contemporary biomedical controversies
- enhanced their ability to develop and articulate their own views on contemporary biomedical controversies
- developed and carried out an independent research project on a particular ethical, legal, and/or political controversy involving contemporary biomedical science and technology

Course Materials

As indicated below, many of the readings for this course are available online. You will need to log into the course's WebCT site and print out the readings. We will also watch some films. The following required books are available at the campus bookstore:

- President's Council on Bioethics, *Beyond Therapy: Biotechnology and the Pursuit of Happiness*. Regan Books, 2003.
- Glenn McGee and Arthur Caplan, eds., *The Human Cloning Debate*, 4th Ed., Berkeley Hills Books, 2004.
- Michael Rues and Christopher A. Pynes, *The Stem Cell Controversy: Debating the Issues*. Prometheus Books, 2003.

Course Requirements

This class will be conducted as a seminar, with most of each class devoted to group discussion. It is thus essential that you attend every class on time, and that you come to class having already completed (and thought carefully about) *all* the assigned reading. We will make use of the university's WebCT system for distributing class materials and communicating between classes, so all students should familiarize themselves with WebCT. Grades will be based on the following assignments:

Ten two-page papers with rough drafts (2% per draft; 3% per finished paper = 50%):

The readings for most weeks in this class present a debate between two or more opposing sides of a biomedical controversy. The syllabus lists a debate question for each week. On any ten weeks of your choice, write a short paper in which you draw on the readings to briefly present an argument that responds to the question for that week. Since these are very short papers, it is important that they be well crafted. On each week that you choose to write a paper, bring three copies of a rough draft of your paper to the Wednesday class session. Students will meet in small groups to read and discuss each other's drafts. I will collect drafts at the end of class and grade them pass/fail. Final papers are due Friday of the same week. *Both drafts and final papers must be submitted during class; late papers will not be accepted.* Final papers will be graded on a 100-point scale according to the following criteria:

- 1) *quality of writing*: carefully organized, forceful, precise, and virtually free of mechanical errors;
- 2) *use of texts*: you should make reference to several *specific* points from three or more of the assigned readings for that week;
- 3) *critical analysis*: simultaneously acknowledge each side's best arguments *and* present your own view on the issue. (If you're not sure what you think about the issue, just invent a position "for the sake of argument," or say you can't decide and explain why.)

Papers should be typed, double-spaced with standard margins and 12-point font. For extra credit you may write up to two additional papers beyond the required ten.

One 8-10 page research paper (25% paper; 5% rough draft and peer review = 30%).

Your research paper may be an expansion of one of your short papers, or you may choose from a list of suggested topics. A draft of at least 5 pages is due April 14. Drafts will be randomly distributed back to the class on the same day for in-class peer review—that is, we will devote part of class to students reading and commenting on each other's papers. Both drafts and peer review comments will be graded pass/fail. *If you do not complete a rough draft, you cannot participate in the peer review.* Grading criteria and guidelines for peer review will be distributed in class. Final papers are due May 12. I strongly urge you to meet with me during office hours to discuss your rough draft and/or your final paper. Late final papers will be penalized by 5% for each day they are late.

Attendance and Participation (10%): Given the seminar format of this class, each student's learning experience depends on the participation of the other students. In addition to the rough drafts submitted in class, there will be occasional worksheets and group projects that will contribute to your grade. I will also take attendance on randomly selected days throughout the semester. You may miss two classes without penalty. Any additional absences require a serious and appropriately documented excuse.

In-class final exam (10%): The exam will give you a choice of several essay questions covering the key aspects of the course. Prior to the exam, I will solicit suggestions for questions from the class and we will review possible questions in class. I may veto questions and add my own questions to fulfill the purposes of the course, but you will receive all the potential questions prior to the exam.

Grades: Final grades will be calculated according to the traditional scale: A > 93%...A- > 90%...B+ > 88%...B > 83%...B- > 80%...etc.

Please Note

If you have a disability and require accommodations, please discuss your needs with me after class or during my office hours early in the semester. You will need to provide disability documentation to the CSUS Office of Services to Students with Disabilities (SSWD), Lassen Hall 1008, (916) 278-6955.

Finally, it should go without saying that all the work you submit for this class must be your own. If you are not sure what constitutes plagiarism, please ask me or consult the library plagiarism information website at <http://library.csus.edu/content2.asp?pageID=353>. Plagiarism will be punished in proportion to the severity of the case, but any plagiarism is likely to result in a failing grade for the course and may lead to additional administrative penalties, including expulsion from the University.

Preliminary Outline of Topics and Assignments

Assignments marked with a hyperlink are available through WebCT. Those marked with an asterisk (*) will either be distributed in class or made available through the library's electronic reserve service. Minor changes to this schedule are likely and will be announced in class.

	READINGS AND FILMS	PAPER TOPICS
Jan. 23	Introduction: Science Studies and the Legacy of Eugenics Introductory lecture.	
Jan. 25	Nathaniel Hawthorne, "The Birth Mark" Dan Sarewitz, "Where Responsibility Lies"	
Jan. 27	*Buchanan et. al, "Eugenics and Its Shadow," in <i>From Chance to Choice: Genetics & Justice</i> , Cambridge University Press, 2000, pp. 27-60. Tony Platt, "Curious Historical Bedfellows: Sac State and Its Racist Benefactor," Sacramento Bee, February 29, 2004. Carl T. Hall, "Echoes of Eugenics Movement in Stem Cell Debate," San Francisco Chronicle, October 24, 2005. Carl Ingram, "State Issues Apology for Policy of Sterilization," Los Angeles Times, March 12, 2003. Additional materials on eugenics in California are available here . FILM: <i>After Darwin</i> , part 1.	
Jan. 30	STEM CELL RESEARCH Speech by President George W. Bush, and essays by NIH and Maienschein, in "The Science of Stem Cells," in <i>The Stem Cell Controversy</i> , pp. 9-51.	#1 <i>Is stem cell research morally acceptable?</i>
Feb. 1	Essays by Novak, Robertson, and McGee/Caplan, in "Moral Issues" in <i>The Stem Cell Controversy</i> , pp. 99-105, 121-150.	
Feb. 3	FILM: <i>After Darwin</i> , part 2.	
Feb. 5	All essays in section on "Religious Issues," <i>The Stem Cell Controversy</i> , pp. 161-207.	#2 <i>Should stem cell research be publicly funded?</i>
Feb. 7	Essays by Young, Ryan, and NBAC in "Policy Issues," <i>The Stem Cell Controversy</i> , pp. 211-260.	
Feb. 9	Leon Kass, "A Way Forward on Stem Cells," Washington Post, July 12, 2005.	
Feb. 13	Essays by Condic and Siegel in section on "Policy Issues," <i>The Stem Cell Controversy</i> , 261-287.	#3 <i>Was Proposition 71 good for California?</i>

Feb. 15	Ralph Brave, "Stem Cell Wonderland," <i>Sacramento News & Review</i>, October 20, 2005. Mark B. Brown and Ramshin Daneshi, "Advancing Both Science, Democracy," <i>Sacramento Bee</i>, May 1, 2005.	
Feb. 17	FILM: "Biotechnology: Friend or Foe?"	
Feb. 20	CLONING Potter Wickware, "History and Technique of Cloning," in <i>Human Cloning Debate</i> . FILM: The Science of Cloning	#4 Is human cloning morally acceptable?
Feb. 22	Charles Krauthammer, "Crossing Lines," in <i>Human Cloning Debate</i> . Leon Eisenberg, "Would Cloned Humans Really Be Like Sheep?" in <i>Human Cloning Debate</i> .	
Feb. 24	Autumn Fiester, "Reflections on Dolly: What Can Animal Cloning Tell Us about the Human Cloning Debate?" in <i>Human Cloning Debate</i> . Sherwin Nuland, "The Uncertain Art: Narcissus Looks into the Laboratory" in <i>Human Cloning Debate</i> . Leon Kass, "The Wisdom of Repugnance," in <i>Human Cloning Debate</i> .	
Feb. 27	Arthur Caplan, "Is Biomedical Research Too Dangerous to Pursue?" in <i>Human Cloning Debate</i> . John Robertson, "Cloning As a Reproductive Right," in <i>Human Cloning Debate</i> .	
Mar. 1	Gregory Stock, "From Reproductive Medicine to Human Design: What Are We Really Afraid Of?" in <i>Human Cloning Debate</i> . Ronald Bailey, "Cloning Babies Is Not Inherently Immoral," in <i>Human Cloning Debate</i>	#5 Should human cloning be illegal?
Mar. 3	Glenn McGee and Ian Wilmut, "A Model for Regulating Cloning," in <i>Human Cloning Debate</i> . Chris Mooney, "The Future Is Later," in <i>Human Cloning Debate</i> FILM: "Why Not Clone A Human?"	
Mar. 6	GENETIC TESTING, THERAPY, ENHANCEMENT Kass et al., "Biotechnology and the Pursuit of Happiness," in <i>Beyond Therapy</i> , Chap. 1, pp. 1-24.	
Mar. 8	* Elliot Sober, "The Meaning of Genetic Causation," in <i>From Chance to Choice: Genetics & Justice</i> (Cambridge UP: 2000), pp. 347-370.	#6 Is it helpful to distinguish between genetic therapy and genetic enhancement?
Mar. 10	TBA	

	<i>Spring Break</i>	
Mar. 19	Prenatal Screening and Testing: What's a Disability? Kass et. al, "Better Children," in <i>Beyond Therapy</i> , Chap. 2, pp. 27-71	#7 Are disabilities genetically determined?
Mar. 21	Adrienne Asch, "Prenatal Diagnosis and Selective Abortion," in <i>American Journal of Public Health</i> 89, no. 11 (1999): 1649-57. Mundy, Liza. "A World of their Own." <i>Washington Post Magazine</i>, March 27, 2002	
Mar. 23	Julian Savulescu, "Procreative Beneficence: Why We Should Select the Best Children," <i>Bioethics</i> 15: 5/6 (2001): 413-426 Kean Birch, "Beneficence, Determinism and Justice: An Engagement with the Argument for the Genetic Selection of Intelligence," <i>Bioethics</i> 19:1 (Feb. 2005).	
Mar. 27	Genetics and Sex Selection: Freedom of Choice? Stein, E., "Choosing the sexual orientation of children," <i>Bioethics</i> 12:1 (1998): 1-24. Ten, C. L., "The use of reproductive technologies in selecting the sexual orientation, the race and the sex of children," <i>Bioethics</i> 12:1 (1998): 45-48. John A. Robertson, "Preconception Gender Selection," <i>The American Journal of Bioethics</i> 1:1 (2001): 2-9.	#8 Should expectant parents have unlimited use of preimplantation genetic diagnosis?
Mar. 29	Kara Platoni, "It's a Boy! We Made Sure of It," <i>East Bay Express</i>, November 3, 2004. Joe Carter, "Sex and Desire: The Role of Parental Aspiration in Sex Selection," online publication of the Center for Bioethics and Human Dignity, March 30, 2005. "Trial aims to measure social effects of choosing babies' sex." <i>Nature</i>, October 27, 2005.	
Mar. 31	FILM: "The Gay Gene" Recommended film: "The Twilight of the Golds"	
Apr. 3	Genetics and Race: What's Real about Race? Social Science Research Council, "Is Race Real?" - selections to be announced	#9 Should the government fund genetic research on race?
Apr. 5	Rick Weiss, "Scientists Find a DNA Change that Accounts for White Skin," <i>Washington Post</i>, December 16, 2005, A01.	
Apr. 7	FILM: <i>Race: The Power of an Illusion, Episode 1: The Difference Between Us</i> . See also companion website: www.pbs.org/race	

Apr. 10	Genetics and Sports: Better, Stronger, Faster? Kass et. al, "Superior Performance," in <i>Beyond Therapy</i> , pp. 101-156.	#10 Should athletes be allowed to use genetic technologies to enhance their performance?
Apr. 12	Savulescu, et al., "Why We Should Allow Performance Enhancing Drugs in Sport, <i>Br. J. Sports Med.</i> 38 (2004): 666-670.	
Apr. 14	Pincock, "Gene Doping," 366 (2005): 18-19. Kayser, "Legalisation of performance-enhancing drugs," <i>Lancet</i> 366 (2005): 21. SUBMIT DRAFT OF RESEARCH PAPER FOR PEER REVIEW	
Apr. 17	Policies and Politics of Human Genetic Modification Kass, et al., "'Beyond Therapy': General Reflections," in <i>Beyond Therapy</i> , Chap. 6, pp. 275-310.	#11 Should the government fund research on inheritable genetic modification?
Apr. 19	Center for Genetics and Society, Inheritable Genetic Modification, Arguments Pro and Con Center for Genetics and Society, Federal Policies on Inheritable Genetic Modification	
Apr. 21	FILM: <i>Gattaca</i> (excerpts)	
Apr. 24	BIOTECHNOLOGY AND DEMOCRACY Bioethics and the Politics of Expertise Stephen Wexler, "Expert and Lay Participation in Decision Making," in <i>Participation in Politics</i> , ed. Pennock and Chapman (1975).	#12 Is bioethics a form of expertise?
Apr. 26	Madison Powers, "Bioethics as Politics: The Limits of Moral Expertise," <i>Kennedy Institute of Ethics Journal</i> 15, No. 3 (2005): 305-322.	
Apr. 28	Scot D. Yoder, "Experts in Ethics? The Nature of Ethical Expertise," <i>Hastings Center Report</i> 28:6 (1998): 11-19.	
May 1	Bioethics Commissions Leon Kass, "Reflections on Public Bioethics: A View from the Trenches," <i>Kennedy Institute of Ethics Journal</i> 15.3 (2005) 221-250.	#13 What should be the role of bioethics advisory commissions in public policymaking for biotechnology?
May 3	Albert W. Dzur and Daniel Levin, "The 'Nation's Conscience': Assessing Bioethics Commissions as Public Forums," <i>Kennedy Institute of Ethics Journal</i> 14:4 (2004):333-360.	
May 5	James Lindemann Nelson, "The Baroness's Committee and the President's Council: Ambition and Alienation in Public Bioethics," <i>Kennedy Institute of Ethics Journal</i> 15.3 (2005) 251-267.	

May 8	Bioethics and Public Participation Harold T. Shapiro, "Reflections on the Interface of Bioethics, Public Policy, and Science," <i>Kennedy Institute of Ethics Journal</i> 9.3 (1999): 181-204.	<i>#14 What should be the role of lay citizens in public policymaking for biotechnology?</i>
May 10	David Resnik, "Setting Biomedical Research Priorities: Justice, Science, and Public Participation," <i>Kennedy Institute of Ethics Journal</i> 11.2 (2001): 181-204.	
May 12	Review discussion.	
May 15	Final Exam: 10:15 a.m. - 12:15 p.m.	