

# **PHIL 217 – Biology, Society, and Values**

Winter Term 2014

**Mon Wed Fri 10:00–10:50 am, Biological Sciences M 229**

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## **A. Course overview and aims**

The biological and biomedical sciences have a privileged status within society, yet one which is never uncontested as technologies can have harmful effects and science challenges common ideas and values. This class understands science as a social institution and process, which is inflected with and impacts values and is to be subject to critical reflection. The aim is to recognize and discuss various ways in which science, society, and values mutually influence each other.

The class starts out with the history of eugenics in Alberta, which illustrates how scientific assumptions can mesh with social-political ideas so as to have substantial and damaging social influences. Our focus, though, is on recent genetic and reproductive technologies, which may again lead to some kind of eugenics in the form of bioenhancement. Then we take a look at evolutionary psychology, which claims to offer a biological explanation of human social behaviour (aggression, gender-specific behaviour, etc). Evolutionary ethics even contends to be in a position to offer moral norms derived from evolutionary theory. After reading week we address whether race is a biological category and whether research on race-differences and sex-differences in cognitive abilities is legitimate. Based on cultural values and sexist biases, biology has developed flawed and false theories about the behavior and social roles of female primates and the role of females in human evolution. We discuss whether the best response to this is to work toward an unbiased, value-free science or toward a science that self-consciously endorses such social values as equity. The class concludes with considering whether mental disorders are objective, biomedical categories (which would license stigmatizing persons as having a disorder) or whether psychiatric categorizations are influenced by cultural norms.

Students who successfully complete this class will

- have come to see science as a social enterprise, interacting with other social trends and common values,
- have gained knowledge about core issues at the intersection of science and society, and
- have developed skills that will enable them to think more clearly and critically about science, its popular representations, and its role in society.

In addition to the possibility of a major or minor in Philosophy, I would like to draw your attention to the university's interdisciplinary Program in Science, Technology and Society (<http://www.ois.ualberta.ca/ScienceTechnologyandSociety.aspx>). The program offers a major and a minor, and this class is one of the many courses you can count toward these degrees.

## B. Prerequisites

There are no formal prerequisites for this class, and it is designed to be accessible to those with no background in either philosophy or the biological and biomedical sciences.

## C. Required texts

Custom courseware reader for PHIL 217, available at the UofA bookstore in the SUB.

## D. Course requirements

- Midterm 20%
- Final 30%
- Book report 10%
- Essay 20%
- Leading discussion 10%
- Participation 10%

**Midterm exam (20%):** The midterm on **February 28** will consist of short answer questions (requiring you to explain in a few sentences a concept), and long answer questions (requiring you to write a paragraph showing you have understood a philosophical issue). The midterm covers the material before reading week.

**Final exam (30%):** The final on **April 23** will consist of short answer questions and long answer questions. While emphasis will be placed on material covered in the second half of the course, the final will be cumulative.

**Book report (10%):** In class on **Feb. 14**, you have to hand in a 2 page (double spaced) report on one of the books listed below in Section I. This task is to give you an idea of what some of the books related to our topic are and to make you take a look at (at least) one of them apart from the material we read in class. Among the books listed in Section I, take a look at some of them in the reserve area in Rutherford Library. Choose one of them that interests you in some way and read the introduction and at least one of the chapters. Upon introducing the basic topic of the book, your review has to select and present some issues from the chapter you read that you found particularly interesting, as well as a shorter account of yours of why these points are generally interesting or why you happen to disagree with some of them.

**Essay (20%):** In class on **April 9**, you have to hand in an essay (4–6 pages double spaced). In the essay, you have to choose and critically discuss one issue from the required readings (or the books listed in Section I if you wish), making use of the notions you have learned in class. Guidelines and suggestions on possible topics will be distributed after reading week.

**Leading discussion (10%):** Once a week, a group of 3-4 of you will be in charge of starting and leading the discussion on some of this week's readings. This includes that you jointly have prepared some issues pertaining to our readings that we can discuss in class. Ideally, you will meet with me beforehand to go over the material for which you have responsibility and to talk about how to steer discussion.

**Participation (10%):** Attendance and active participation is important for this class. Each class will normally intersperse lecture with general discussion of the readings. It is the responsibility of each student to come to class prepared to actively engage in discussion. Each of you will

probably have picked up different points from the readings or have questions or objections, so please share them! You can also obtain participation credit by contributing to the discussion forum on our website.

When assigning final grades at the end of the term based on your performance on the above requirements, I will ensure that the grade distribution of this class does not deviate too much from the overall university distribution, taking into account the overall workload of this course and the difficulty of the material.

## E. Course website

The course has a website at <https://eclass.srv.ualberta.ca>. I use this site to post lecture slides, study guides, and your grades. The site also contains our discussion board.

## F. Academic integrity and plagiarism

The University of Alberta is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards and to uphold the policies of the university in this respect. Students are urged to familiarize themselves with the Code of Student Behaviour (<http://tinyurl.com/CodeofStudentBehaviour>) and avoid any behaviour which could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the university. For a summary please see <http://www.governance.ualberta.ca/en/StudentAppeals/DontCheatsheet.aspx>

The Code of Student Behaviour defines plagiarism as follows:

No Student shall submit the words, ideas, images or data of another person as the Student's own in any academic writing, essay, thesis, project, assignment, presentation or poster in a course or program of study.

Useful information: <http://www.library.ualberta.ca/guides/plagiarism>. See in particular the section "Avoiding Plagiarism" (sidebar on the left, among "Resources for Students").

## G. Schedule of classes

<b>Jan 6 – 10</b>	<b>Eugenics 1: History of eugenics in Alberta</b> Wahlsten, "Leilani Muir versus the philosopher king: eugenics on trial in Alberta"
<b>Jan 13 – 17</b>	<b>Eugenics 2: Technology and reproductive futures</b> Paul, "Is human genetics disguised eugenics?" Kitcher, "Utopian eugenics and social inequality"
<b>Jan 20 – 24</b>	<b>Eugenics 3: Future bioenhancement</b> Agar, 'Genius sperm, eugenics and enhancement technologies' (Ch.1 of <i>Liberal Eugenics: In Defence of Human Enhancement</i> ) Pp. 217–219 & 225–233 of Shakespeare, "The social context of individual choice"

<b>Jan 27 – 31</b>	<b>Evolutionary psychology 1: Sociobiology</b> Dawkins, ‘Why are people?’ and ‘Battle of the sexes’ (Chapters 1 and 9 of <i>The Selfish Gene</i> )
<b>Feb 3 – 7</b>	<b>Evolutionary psychology 2: Critiques</b> Pigliucci, “Is evolutionary psychology a pseudoscience?” Vickers and Kitcher, “Pop sociobiology reborn: the evolutionary psychology of sex and violence”
<b>Feb 10 – 14</b>	<b>Evolutionary ethics</b> Kitcher, “Four ways of ‘biologizing’ ethics” Pp. 272–291 of Richards, “A defense of evolutionary ethics” <b>Friday, Feb. 14: BOOK REPORT due in class</b>

Reading week

<b>Feb 24 – 28</b>	Review for midterm <b>Friday, February 28: MIDTERM EXAM</b>
<b>Mar 3 – 7</b>	<b>Race</b> Appiah, “Why there are no human races” Rose, Ceci and Williams “Should scientists study race and IQ?” ( <i>online</i> )
<b>Mar 10 – 14</b>	<b>Gender 1: Cognition and research on gender differences</b> Pp. 337–359 of Pinker, ‘Gender’ (Ch. 18 of <i>The Blank Slate: The Modern Denial of Human Nature</i> ) Kitcher, ‘Constraints on free inquiry’ (Ch. 8 of <i>Science, Truth, and Democracy</i> )
<b>Mar 17 – 21</b>	<b>Gender 2: Flawed and sexist science</b> Pp. 3–13 of Kourany, ‘A feminist primer for philosophers of science’ (Ch. 1 of <i>Philosophy of Science after Feminism</i> ) Lloyd, “Pre-theoretical assumptions in evolutionary explanations of female sexuality” Pp. 126–139 of Schiebinger, ‘Primatology, archaeology, and human origins’ (Ch. 7 of <i>Has Feminism Changed Science?</i> )
<b>Mar 24 – 28</b>	<b>Gender 3: Value-free or socially responsible science?</b> Pp. 50–58 and 63–77 of Kourany, ‘What feminist science studies can offer’ (Ch. 3 of <i>Philosophy of Science after Feminism</i> )
<b>Mar 31 – Apr 4</b>	<b>Mental disorder</b> Rosenhan, “On being sane in insane places” Pp. 274–297 & 299–301 of Chrisler and Caplan, “The strange case of Dr. Jekyll and Ms. Hyde: how PMS became a cultural phenomenon and a psychiatric disorder”
<b>Apr 7, 9</b>	Wrapping up Review for the final <b>Wednesday, April 9: ESSAY due in class</b>

<b>Apr 23</b>	<b>FINAL EXAM: Wednesday, April 23, 9:00–11:00 am</b>
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## H. Bibliography of assigned readings

- Agar, Nicholas (2004) 'Genius sperm, eugenics and enhancement technologies.' Chapter 1 of *Liberal Eugenics: In Defence of Human Enhancement*. Malden: Blackwell.
- Appiah, Anthony Kwame (2006[1996]) "Why there are no human races." Reprinted in E. Sober (ed.) *Conceptual Issues in Evolutionary Biology*. Cambridge, MA: MIT Press, pp. 455–475.
- Chrisler, Joan C. and Paula Caplan (2002) "The strange case of Dr. Jekyll and Ms. Hyde: how PMS became a cultural phenomenon and a psychiatric disorder." *Annual Review of Sex Research* 13: 274–306.
- Dawkins, Richard (2006[1976]) 'Why are people?' and 'Battle of the sexes.' Chapters 1 and 9 of *The Selfish Gene*. Oxford, Oxford University Press.
- Kitcher, Philip (2001) 'Constraints on free inquiry.' Chapter 8 of *Science, Truth, and Democracy*. Oxford: Oxford University Press.
- Kitcher, Philip (2003[2000]) "Utopian eugenics and social inequality." Reprinted in his *In Mendel's Mirror: Philosophical Reflections on Biology*. Oxford: Oxford University Press, pp. 258–282.
- Kitcher, Philip (2006[1993]) "Four ways of 'biologizing' ethics." Reprinted in E. Sober (ed.) *Conceptual Issues in Evolutionary Biology*. Cambridge, MA: MIT Press, pp. 575–586.
- Kourany, Janet (2010) 'A feminist primer for philosophers of science' and 'What feminist science studies can offer.' Chapters 1 and 3 of *Philosophy of Science after Feminism*. Oxford: Oxford University Press.
- Lloyd, Elisabeth A. (1993) "Pre-theoretical assumptions in evolutionary explanations of female sexuality." *Philosophical Studies* 69: 139–153.
- Paul, Diane B. (1998[1994]) "Is human genetics disguised eugenics?" Reprinted in D. Hull and M. Ruse (eds.) *The Philosophy of Biology*. Oxford: Oxford University Press, pp. 536–551.
- Pigliucci, Massimo (2006) "Is evolutionary psychology a pseudoscience?" *Skeptical Inquirer* 30: 23–24.
- Pinker, Steven (2002) 'Gender.' Chapter 18 of *The Blank Slate: The Modern Denial of Human Nature*. New York: Penguin Books.
- Richards, Robert J. (1986) "A defense of evolutionary ethics." *Biology and Philosophy* 1: 265–293.
- Rosenhan, David L. (1973) "On being sane in insane places." *Science* 179: 250–258.
- Schiebinger, Londa (1999) 'Primatology, archaeology, and human origins.' Chapter 7 of *Has Feminism Changed Science?* Cambridge, MA: Harvard University Press.
- Shakespeare, Tom (2005) "The social context of individual choice." In D. Wasserman, J. Bickenbach and R. Wachbroit (eds.) *Quality of Life and Human Difference: Genetic Testing, Health Care, and Disability*. Cambridge: Cambridge University Press, pp. 217–236.
- Vickers, A. Leah and Kitcher, Philip (2003[2002]) "Pop sociobiology reborn: the evolutionary psychology of sex and violence." Reprinted in P. Kitcher, *In Mendel's Mirror: Philosophical Reflections on Biology*. Oxford: Oxford University Press, pp. 333–355.
- Wahlsten, Douglas (1997) "Leilani Muir versus the philosopher king: eugenics on trial in Alberta." *Genetica* 99: 185–198.

## I. Books for writing reports on

### On reserve at Rutherford Library

- Agar, Nicholas (2004) *Liberal Eugenics: In Defence of Human Enhancement*. Malden: Blackwell. [must read at least one other chapter than Ch. 1 read in class] HQ 755 A29 2004
- Bleier, Ruth (1984) *Gender and Science: A Critique of Biology and Its Theories of Women*. New York: Pergamon Press. QP 34.5 B64 1984
- Eichler, Margrit (1988) *Nonsexist Research Methods: A Practical Guide*. Boston: Allen & Unwin. H 62 E345 1988
- Fausto-Sterling, Anne (1992) *Myths of Gender: Biological Theories about Women and Men* (revised edition). New York: Basic Books. QP 81.5 F38 1992
- Friel, Howard (2010) *The Lomborg Deception: Setting the Record Straight About Global Warming*. New Haven: Yale University Press. Q 175.37 F75 2010
- Forrest, Barbara and Paul R. Gross (2004) *Creationism's Trojan Horse: The Wedge of Intelligent Design*. New York : Oxford University Press. BS 659 F67 2004 and as electronic resource at <http://www.library.ualberta.ca/permalink/opac/4273723/WUAARCHIVE>
- Gould, Stephen Jay (1996) *The Mismeasure of Man* (revised and expanded edition). New York: Norton. BF 431 G697 1996
- Halpern, Diane F. (2012) *Sex Differences in Cognitive Abilities*, 4<sup>th</sup> edition. New York: Psychology Press. BF 311 H17 2012
- Hrdy, Sarah B. (1981) *The Woman That Never Evolved*. Cambridge, MA: Harvard University Press. QL 737 P9 H87 1981
- Kitcher, Philip (2001) *Science, Truth, and Democracy*. Oxford: Oxford University Press. [must read other chapters than Ch. 8 read in class] Q 175.5 K525 2001 and as electronic resource at <http://www.library.ualberta.ca/permalink/opac/5006806/WUAARCHIVE>
- Lloyd, Elisabeth A. (2005) *The Case of the Female Orgasm: Bias in the Science of Evolution*. Cambridge, MA: Harvard University Press. QP 251 L56 2005
- Michels, David (2010) *Doubt is Their Product: How Industry's Assault on Science Threatens Your Health*. New York: Oxford University Press. RA 1229 M53 2008
- Mooney, Chris (2005) *The Republican War on Science*. New York: Basic Books. Q 175.52 U5 M66 2005 and as electronic resource
- Oreskes, Naomi and Erik M. Conway (2010) *Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming*. New York: Bloomsbury Press. Q 147 O74 2010
- Richardson, Robert C. (2007) *Evolutionary Psychology as Maladapted Psychology*. Cambridge, MA: MIT Press. BF 698.95 R44 2007 and as electronic resource at <http://www.library.ualberta.ca/permalink/opac/5770761/WUAARCHIVE>
- Rose, Steven, Leon J. Kamin and Richard C. Lewontin (1984) *Not In Our Genes: Biology, Ideology, and Human Nature*. Harmondsworth: Penguin Books. BF 341 R79 1984
- Roughgarden, Joan (2004) *Evolution's Rainbow: Diversity, Gender, and Sexuality in Nature and People*. Berkeley: University of California Press. QH 541.15 B56 R68 2004
- Spanier, Bonnie B. (1995) *Im/Partial Science: Gender Ideology in Molecular Biology*. Bloomington: Indiana University Press. QH 506 S66 1995 and as electronic resource at <http://www.library.ualberta.ca/permalink/opac/5776511/WUAARCHIVE>
- Thornhill, Randy and Craig T. Palmer (2000) *A Natural History of Rape: Biological Bases of Sexual Coercion*. Cambridge, MA: MIT Press. HV 6558 T48 2000 and as electronic resource at <http://www.library.ualberta.ca/permalink/opac/5766219/WUAARCHIVE>
- Whitaker, Robert (2002) *Mad in America: Bad Science, Bad Medicine, and the Enduring Mistreatment of the Mentally Ill*. New York: Perseus Books. RC 514 W44 2002