



## **Genes and Gender**

*Womensst 297J*

*Fall 2004*

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*M, W: 3.35 – 4.50*

*Office Hours, M, W 2- 3 pm; Bartlett 229*

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### **I. COURSE DESCRIPTION**

We live in an age of genes. Everyday, the newspapers herald the discovery of a new “gene.” We have seen claims of genes for conditions such as cancer, schizophrenia, alcoholism; as well as IQ, math ability, and musicality. We even hear of genes for criminality, thrill seeking, religiosity, morality, as well as a genetic basis for differences in sex, gender, race, class, and sexuality. But what are “genes”? How do they act? How can they “determine” the above? In this course, we will explore both popular claims, critiques and understandings as well as academic research, its claims, debates and critiques. The course will take up a range of claims about genes, their functions and their actions to examine what these studies of “genes” can tell us – exploring both what they tell us and what they do not. Using literature from biology, women’s studies, and science studies, we will examine the biological and cultural contexts for our understanding of “genes.” The course will give students the tools to analyze genetic studies, to understand the relationship of nature and culture, science and society, biology and politics.

### **II. REQUIREMENTS**

*Class Participation:* The quality of the course, and the value of the experience for all of us, depends on careful preparation for class by each of us. It is imperative that you attend all classes, complete the reading assignments before class, and be prepared to contribute to the class discussion. In addition, there will be a few in class and take home assignments. Your grade will be based on your work and the **quality** (not to be confused with quantity) of your participation in class throughout the semester. (20% of your grade). Attendance is required. More than three unexcused absences will result in a reduction of at least one letter grade.

*Written Requirements:* There will be four written assignments:

1. **Mid term:** One mid-term take-home exam based on the material we have covered in class till this time. Due in class, Wed Oct 13. (20% of your grade)
2. **Class summaries.** Four times during the semester, you must submit a 2-3 page reflection paper on the readings assigned for class that day (due in class). The first paper must be for a class on 9/13, 9/15, 9/20 or 9/22; the second paper for a class on 9/27, 9/29, 10/4 or 10/6; the third paper for a class on 10/25, 10/27, 11/3; and the fourth paper summary for a class on 11/8, 11/10, 11/15 or 11/17. Each reflection paper is worth 5% of your grade. The papers must be typed and double spaced. In this paper you should clearly summarize the main points of the readings assigned for that day and then critically examine and reflect on the implications of the authors’ arguments. Do *not* present a paper that is list of summaries of the assigned articles. (20% of your grade)

3. **Genetics Quiz:** On completion of the genetics section, there will be an in class quiz. You are required to pass the quiz but the quiz will not be graded. If you do not pass the quiz, you can take it again any time during the semester till you pass it.
4. **Final Project:** There will be a final project for this class. You can work on this individually or in pairs or groups of 3. The project includes an annotated bibliography due on Nov 1 (5% of grade), a class presentation (5%) and a final paper (30%) (Project is 40% of your grade)
5. **Frontiers of Genetics:** Each class a student(s) will report on a recent news item that explores new discoveries (or plans for future discoveries) in genetics. You can sign up for a convenient date during the semester.

### III. TEXTS

There is no assigned text for this course. There will be a course pack that is a compilation of readings. In addition there are several web sources in the syllabus. (Course pack is available at CopyCat – S. Pleasant Street, Amherst)

(The Course pack is on reserve in the library in the Women’s Studies Office, Bartlett 208)

### IV: SCHEDULE

#### Wed, Sept 8 – INTRODUCTION

#### Mon, Sept 13 – Genes in the News

Simon LeVay, “Thou, Nature, Art My Goddess,” In *The Sexual Brain*, MIT Press, 1994, 1-4.

Francis Fukuyama, “In Defense of Nature, Human and Non-Human,” *World Watch*, July/Aug 2002, 30-32

Brian Halweil and Dick Bell, “Beyond Cloning: The Larger Agenda of Human Engineering,” *World Watch* July/August 2002

Alex Mauron, “Is the Genome the Secular Equivalent of the Soul?” *Science*, 291, 2001.

#### Wed, Sept 15 – Biology, Sex and Gender

Ruth Bleier, “Sociobiology, Biological Determinism and Human Behavior,” In *Science and Gender: A Critique of Biology and Its Theories on Women*, Pergamon Press, 1984, 15-48.

Anne Fausto Sterling, “Dueling Dualisms,” In *Sexing the Body: Gender Politics and the Construction of Sexuality*, Basic Books, 2000, 1- 29

#### Mon, Sept 20 – Genes and Difference

Anne Fausto Sterling, “Genes and Gender,” In *Myths of Gender: Biological Theories about women and men*. New York: Basic Books, 1992.

Troy Duster, “Genetics Screening of “Target” Populations.” In *Backdoor to Eugenics*, Routledge, 2003, 114-131.

Dorothy Roberts, “Introduction,” In *Killing the Black Body: Race, Reproduction, and the Meaning of Liberty*, Pantheon Books, 1997.

#### Wed, Sept 22 – Nature vs. Nurture

Richard Lewontin, Steven Rose and Leon J. Kamin, “The Politics of Biological Determinism,” In *Not In Our Genes: Biology, Ideology, and Human Nature*, Pantheon, 1984, 17-36

Daniel Dennett, “The Mythical Threat of Genetic Determinism,” *The Chronicle of Higher Education*, January 31, 2003.

**Mon, Sept 27 – Eugenics: Then**

Daniel Kevles, “Out of Eugenics: The Historical Politics of the Human Genome,” In *The Code of Codes: Scientific and Social Issues in the Human Genome Project*, ed. Daniel Kevles and Leroy Hood, Harvard University Press, 1992, 3-36.

Garland Allen, “Science Misapplied: The Eugenics Age Revisited,” *Technology Review* 29, Aug/Sep 1996.

Gay Becker, “Genes and Generations,” in *The Elusive Embryo*, California University Press, 2000, 60-78.

**Wed, Sept 29 – Eugenics: Now**

Garland Allen, “Is a New Eugenics Afoot?” *Science*, v. 294, October 2001, 59-60.

Troy Duster, “Eugenics by the Back Door,” In *Backdoor to Eugenics*, Routledge, 2003, 114-131.

Dorothy Roberts, “Race, and the New Reproduction,” In *Killing the Black Body: Race, Reproduction, and the Meaning of Liberty*, Pantheon Books, 1997.

Ruth Hubbard and Stuart Newman, “Yuppie Eugenics,” *Mag*, March 2002, [www.zmag.org](http://www.zmag.org)

**Mon, Oct 4 – Genes and their Representations**

Dorothy Nelkin, “The Mystique of Science in the Press,” In *Selling Science*, Freeman Press, 1995, 14-32.

Lori Andrews, “Gene Prospecting,” and Genetic Politics,” In *The Clone Age: Adventures in the New World of Reproductive Technology*, Owl Books, 1999.

*In-Class Exercise On Popular Representations of the Gene*

**Wed, Oct 6 – Genes and Disease**

Karen Sue Taussig, Rayna Rapp, and Deborah Heath, “Flexible Eugenics,” In *Genetic Nature/Culture*, ed. Alan Goodman, Deborah Heath, Susan Lindee, California University Press, 2003, 58-76.

Kyla Dunn, “Cloning Trevor,” *Atlantic Monthly*, June 2002.

Robert Pollack, “Gene Maps Lead Medicine Down the Wrong Road,” *Perspectives in Biology and Medicine*, v. 45, No. 1 (Winter 2002) 43-45.

James C. Wilson, “(Re)Writing the Genetic Body-Text: Disability, Textuality, and the Human Genome Project,” *Cultural Critique* 50, Winter 2002, 23-29.

*Take Home Exam*

**Mon, Oct 11 - HOLIDAY**

**Wed, Oct 13 – Library Research**

*Take Home Exam Due*

**Mon, Oct 18 – Brief Look at Genetics**

Evelyn Fox Keller, “The Meaning of Gene Function: What Does a Gene Do?” Harvard University Press, 2002. 45-72.

**Wed, Oct 20 - Brief Look at Genetics**

Ruth Hubbard and Elijah Wald, “Inherited Tendencies”: Chronic Conditions and Behaviors,” In *Exploding the Gene Myth*, Beacon Press, 1997, 72-107.

**Mon, Oct 25 – Genetics (contd.,)**

David Moore, "What Galton's Eugenics has Wrought: Behavior Genetics and Heritability," and "Dependent Genes: Essential Biology and DNA," In *The Dependent Gene: The Fallacy of Nature vs. Nurture*, W. H. Freeman and Co., 2002.

Richard Lewontin, "The Dream of the Human Genome Project," In *It Ain't Necessarily So: The Dream of the Human Genome and Other Illusions*, NYRB, 2000, 135-186.

**Wed, Oct 27 – Genetics (contd.,)**

Dena Davis, "Genetics: The not-so-new new thing," *Perspectives in Biology and Medicine*, v. 47, no 3 (summer 2004) 430-40.

Barry Commoner, "Unraveling the DNA Myth," *Harper's Magazine*, February 2002, 39-47.

Richard Lewontin, DNA Era *GeneWatch*, Council for Responsible Genetics,  
[www.gene-watch.org/genewatch](http://www.gene-watch.org/genewatch)

**Mon, Nov 1 - Genes, Representation and Popular Culture**

Film: *Gattaca*

Annotated Bibliography for your final project due

**Wed, Nov 3 - Film Discussion**

David Kirby, "The New Eugenics in Cinema: Genetic Determinism and Gene Therapy in GATTACA," *Science Fiction Studies*, Vol. 27, July 2000.

<http://www.depauw.edu/sfs/essays/gattaca.htm>

"Extrapolating Race in GATTACA: Genetic Passing, Identity, and the Science of Race," *Literature and Medicine* 23, No. 1, 2004: 184-200.

Laura Briggs and Jodi Kerber-Kaye, "There is no Unauthorized Breeding in Jurassic Park" *NWSA Journal*, 2000, Vol. 12, No. 3.

**Mon, Nov 8 – Genes as Property/Commodity**

Vandana Shiva, "Can Life Be Made? Can Life be Owned?" Redefining Biodiversity," In *Biopiracy: The Plunder of Nature and Knowledge*, South End Press, 1997, 19-42.

Marty Crouch, "How the Terminator Terminates: An explanation for the non-scientist of a remarkable patent for killing second generation seeds of crop plants,"

<http://www.thegreatboycott.net/HowtheTerminatorTerminates.html>

John Bear, "What's my DNA worth Anyway?" *Perspectives in Biology and Medicine*, vol. 47, No. 42, Spring 2004: 273-89.

**Wed, Nov 10 – Genes as Property/Commodity**

Hilary Rose, "Gendered Genetics in Ireland," *New Genetics and Society*, August 2001, 119-138.

Kimberley Blanton, "Corporate Takeover: How One Company Gained Control Over Genetic Research and Testing for Breast Cancer," *Boston Globe* Feb 24, 2002.

Lawrence K. Altman, "Drug Slashes Breast Cancer Risk, Study Shows," *Adbusters* No. 29, Spring 2000.

Phil Bereano and Martin Philipson, "Goliath vs. Schmeiser," *Genewatch*, V. 17, No 4. July-August 2004.

Sheldon Krinsky, "Science On Trial," *Genewatch* 3, V. 16. No 5, October, 2003.

**Mon, Nov 15 - Genetic Discrimination**

Jennifer Reardon, "The Human Genome Diversity Project: The Case Study of Co-Production," *Social Studies of Science* 31, June 2001, 357-88.

Rebecca Skloot, "Cells That Save Lives Are a Mother's Legacy," *NYT*, Nov 17, 2001.

Anita Silvers and Michael Stein, "Essentially Empirical: The Roles of Biological and Legal Classification in Effectively Prohibiting Genetic Discrimination," In *Science and Other Cultures*," ed. Robert Figueroa and Sandra Harding, Routledge, 2003, 129-153.

Brandon Keim, "The Wild Genetic Goose Case: An Interview with Tony Holtzman," *Genewatch*, V. 17, No. 4, July- August 2004.

**Wed, Nov 17 – Patenting Genes**

Rebecca S. Eisenberg, "How Can You Patent Genes," In *The American Journal of Bioethics*, Summer 2002, v. 2, No. 3, 3-11.

Responses by: Mark Sagoff, Dorothy Nelkin, Rosemary Quigley, Peter Whitehouse.

**Mon, Nov 22 – HOLIDAY**

**Wed, Nov 24 – Case Studies Class Presentations**

**Mon, Nov 29 – Case Studies Class Presentations**

**Wed, Dec 1 – Case Studies Class Presentations**

**Mon, Dec 6 – Case Studies Class Presentations**

**Wed, Dec 8 – Case Studies Class Presentations**

**Mon, Dec 13 – Conclusion and Wrap-Up**

Anne Fausto Sterling, "Gender Systems: Toward a Theory of Human Sexuality," In *Sexing the Body: Gender Politics and the Construction of Sexuality*, Basic Books, 2000, 1-29.

