

Genetics & Society (SOC1 138)

FA 2023. MWF 3-3:50pm in Center Hall 109

Professor Jon Ruiz (jjr026@ucsd.edu)

Office hours: M/W 2-3pm in SSB 474

TA: Ezgi Akguloglu (gakguloglu@ucsd.edu)

Office hours: Fridays 1:30-2:30pm in SSB 432

TA: Tannistha Sarkar (tasarkar@ucsd.edu)

Office hours: 4:15-5:15pm in SSB 430, or by Zoom (ucsd.zoom.us/j/99757210127)

For well over a century now, genetics has powerfully shaped how we think about human difference. This class will explore the many ways in which studying our genomes and inheritance patterns has informed public understanding and policy on topics like disability, reproduction, rare disease, intelligence, sociality, delinquency, personal identity and race and ethnicity in the United States. We will also see how social forces shape genetics research itself and discuss controversies surrounding gene patenting, forensic science, and genetic testing for disease, risk and ancestry. Readings will be drawn from the genetics literature, popular culture, and the social sciences. By the end of the class, students will possess the critical knowledge base to understand the enormous promises and potential pitfalls of contemporary genetics and genomics.

Assessment

Assessment for the class will consist of several reading response memos, a midterm exam, and a final exam. The breakdown of final grades will be as follows:

Reading response memos: 35% of your grade. Each week, except for Week 5, you may submit a 300-500 Reading Response Memo via the Assignments page on Canvas. They will be worth 7 points each and graded pass/fail. You must submit your memos by 11:59pm each Friday. To comply with Commencement of Academic Activity requirements, you must submit your first memo by the end of Week 2. All memos must summarize at least one reading in the syllabus for that week and present a question, criticism, or comment for further discussion. You may also engage other readings.

Midterm exam: 25% of your grade. This take-home exam will be circulated by 9am on Thursday of Week 5 and due by the end of the day (i.e. 11:59pm) that Friday. It will consist of short answer questions and one essay response. The exam will cover both readings and lecture materials that are *not* taken directly from the readings.

Final exam: 40% of your grade. The final exam will take a similar form to the midterm, but with two essay responses.

Readings

All texts are available on Canvas. I recommend setting up a VPN to access online readings off campus. See instructions [here](#). Please let me know if you have trouble accessing the readings. Some readings will contain technical genetics terms. I strongly recommend that you consult publicly available resources like Wikipedia or the [NIH/NHGRI glossary](#).

Course policies

Cheating and plagiarism:

Students are expected to do their own work and to cite sources according to established norms as outlined in the UCSD Policy on Academic Integrity. The policy can be found here: [h: http://senate.ucsd.edu/Operating-Procedures/Senate-Manual/Appendices/2](http://senate.ucsd.edu/Operating-Procedures/Senate-Manual/Appendices/2). A FAQs page on what counts as cheating can be found here: <http://academicintegrity.ucsd.edu/faq/index.html>. Cheaters will receive a failing grade on the assignment or exam and/or the entire course. They may also be referred for additional disciplinary action elsewhere at UCSD. If you are unsure about what is considered either plagiarism or cheating, please ask.

Missing/late exams and assignments:

Failure to turn in your take-home exams on time without a valid excuse will result the deduction of one half-letter grade for every day (or part thereof) after the deadline. Excuses communicated after the deadline will only be accepted in exceptional circumstances.

Contesting grades:

You may contest any grades by sending the assignment or exam to me. However, please be aware that this may result in a lower grade than the one given by the course TA.

Struggles with the class:

If you are having trouble with any aspect of the class, including deadlines, it is always best to contact me as soon as possible. That way we can address the problem before you have fallen too far behind or lost too many points from your final grade.

Disability accommodations:

Students requesting accommodations for this course due to a disability must provide a current Authorization for Accommodation (AFA) letter issued by the Office for Students with Disabilities (OSD). Students are required to present their AFA letters to Faculty (please contact me privately) and to the OSD Liaisons in the Sociology Department in advance so that accommodations may be arranged.

Week 0: Introduction

Friday, 9/29: Introduction, no readings

Week 1: What do we mean by 'gene'?

Monday, 10/2

*Keller, Evelyn Fox. 2002. *The Century of the Gene*. Harvard University Press. Introduction.

Wednesday, 10/4

*Keller, Evelyn Fox. 2002. *The Century of the Gene*. Harvard University Press. Chapter 2.

Friday, 10/6

*Wailoo, Keith. 2017. "Sickle Cell Disease—a History of Progress and Peril." *N Engl J Med* 376(9):805–7

Week 2: Eugenics

Monday, 10/9

* Galton, Francis. 1904. "Eugenics: Its Definition, Scope, and Aims." *American Journal of Sociology* 10(1):1–6.

* Paul, Diane B. 1995. *Controlling Human Heredity, 1865 to the Present*. Humanities Press. Chapters 1-2.

Wednesday, 10/11

*Paul, Diane B. 1995. *Controlling Human Heredity, 1865 to the Present*. Humanities Press. Chapter 3.

*Kevles, Daniel J. 1998. *In the Name of Eugenics: Genetics and the Uses of Human Heredity*. Cambridge, MA: Harvard. Chapter VII.

Friday, 10/13

* Stern, Alexandra Minna. 2005. *Eugenic Nation: Faults and Frontiers of Better Breeding in Modern America*. Berkeley: University of California Press. Chapters 3 and 4.

Week 3: DNA, chromosomes, and the rise of modern medical genetics

Monday, 10/16

* Comfort, Nathaniel. 2014. *The Science of Human Perfection: How Genes Became the Heart of American Medicine*. Reprint edition. Yale University Press. Chapters 5 and 6.

Wednesday, 10/18

* Lindee, M. Susan. 2008. *Moments of Truth in Genetic Medicine*. The Johns Hopkins University Press. Chapter 4.

Friday, 10/20

Hedgecoe, Adam M. 2001. "Geneticization: Debates and Controversies." in *eLS*.

Week 4: Behavior genetics, intelligence, and criminality

Monday, 10/23

* Richardson, Sarah S. 2013. *Sex Itself: The Search for Male and Female in the Human Genome*. University of Chicago Press. Chapter 5.

Wednesday, 10/25

* Panofsky, Aaron. 2014. *Misbehaving Science: Controversy and the Development of Behavior Genetics*. Chicago: University of Chicago Press. Chapter 3.

Friday, 10/27

Gould, Stephen Jay. 1994. "Curveball." *The New Yorker*, November 28, 139–49.

Week 5: Review and Midterm Exam

Monday, 10/30: Review session

Wednesday, 11/1: Review session

Friday, 11/3: Midterm exam circulated by 9am, due by 11:59pm

Week 6: Testing newborns and fetuses for genetic diseases

Monday, 11/6

*Timmermans, Stefan and Mara Buchbinder. 2013. *Saving Babies? The Consequences of Newborn Genetic Screening*. Chicago: University of Chicago Press. Chapter 1.

Wednesday, 11/8

*Timmermans, Stefan and Mara Buchbinder. 2013. *Saving Babies? The Consequences of Newborn Genetic Screening*. Chicago: University of Chicago Press. Chapter 2.

Friday, 11/10: Veterans Day – no class!

Week 7: Culture, identity, and race

Monday, 11/13

*Nelkin, Dorothy and M. Susan Lindee. 2004. *The DNA Mystique: The Gene as a Cultural Icon*. University of Michigan Press. Introduction and Chapter 6.

Wednesday, 11/15

*Hacking, Ian. 2006. "Genetics, Biosocial Groups & the Future of Identity." *Daedalus* 135(4):81–95.

*Cooper, Richard S., Jay S. Kaufman, and Ryk Ward. 2003. "Race and Genomics." *New England Journal of Medicine* 348(12):1166–70.

Friday, 11/17

*Fullwiley, Duana. 2007. "The Molecularization of Race: Institutionalizing Human Difference in Pharmacogenetics Practice." *Science as Culture* 16(1):1–30.

Week 8: Genomics, postgenomics, and the politics of ownership

Monday, 11/20

*Collins, Francis S. 1999. "Medical and Societal Consequences of the Human Genome Project." *New England Journal of Medicine* 341(1):28–37.

*Rose, Hilary and Steven Rose. 2013. *Genes, Cells and Brains: The Promethean Promises of the New Biology*. Verso Books. Chapter 1.

Wednesday, 11/22 (Prerecorded on Zoom): Owning genes and cell lines

*Skloot, Rebecca. 2011. *The Immortal Life of Henrietta Lacks*. New York: Broadway Books. Excerpt.

*Liptak, Adam. 2013. "Justices, 9-0, Bar Patenting Human Genes." *The New York Times*, June 13.

Friday, 11/24: Thanksgiving holiday, no class!

Week 9: Genetic testing, rare disease, and a new eugenics

Monday, 11/27 (Prerecorded on Zoom)

*Mnookin, Seth. 2014. "One of a Kind." *The New Yorker*, July 21.

*Rochman, Bonnie. 2012. "Why Cheaper Genetic Testing Could Cost Us a Fortune." *Time*, October 26. Retrieved December 21, 2012.

*Harmon, Amy. 2007. "After DNA Diagnosis: 'Hello, 16p11.2. Are You Just Like Me?'" *The New York Times*, December 28.

Wednesday, 11/29

*Duster, Troy. 2003. *Backdoor to Eugenics*. Routledge. Chapter 7 and Afterword.

Friday, 12/1

*Baltimore, David et al. 2015. "A Prudent Path Forward for Genomic Engineering and Germline Gene Modification." *Science* 348(6230):36–38.

*Pollack, Robert. 2015. "Eugenics Lurk in the Shadow of CRISPR." *Science* 348(6237):871–871.

Week 10: Genetics of sociality, and review

Monday, 12/4

*Darwin, Charles. 1874. *The Descent of Man*. Chapter IV and V.

*Lehrer, Jonah. 2012. "Kin And Kind." *The New Yorker*, March 5.

Wednesday, 12/6: Review

Friday, 12/8: Review

