

Molecular Me: Social Implications of the Genomics Revolution

Sociology 496

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Office Hours: Tuesday 10-11:30am or by appointment

Fall 2017

Tuesdays 2:30-5pm

Van Hise 483

Beginning with the sequencing of the human genome in 2003, the possibilities of a new integration between genetics and social science inquiry have increased substantially. Rapid reductions in the costs of sequencing human DNA have allowed tens of millions of people to receive the CliffsNotes to their own genomic information. Advances in genetic discovery force us to grapple with a variety of new questions for social policy as well as revisit what we “know” about important social processes. More than ever before, all citizens will be required to consider genetics in their everyday lives—from gathering information about ancestry and family history; to deciding who to date and marry and have children with; to reacting to genetic tests that show both genetic risk and genetic advantages. More recent advances in gene editing further increase the reach of genomic science into society. Will the rise of predictive medicine create an offshoot of predictive policy, where we target interventions based on measuring genetic risk? How will we further redefine notions of race/ethnicity in light of new genetic data? How will we use genetic information to shape the genetic profiles of the next generation of babies?

The purpose of the course is twofold. First, we aim to gain an intermediate understanding of biological, evolutionary, and genetic theories and facts that then can be deployed to gain novel insights into traditional social science questions. Second, students will begin to grapple with both historical and recent implications of genetics for understanding societal processes.

The course will begin with an overview, mostly from genetics and biology, of basic concepts. We will aim to utilize both foundational academic papers and also online video lectures and presentations throughout the course in order to foster discussions of the material. The course will then transition into reading and discussing state-of-the-art research and policy questions.

Book

Conley, Dalton, and Jason Fletcher. [*The Genome Factor: What the Social Genomics Revolution Reveals about Ourselves, Our History, and the Future*](#). Princeton University Press, 2017.

Pre-requisites: none

Tentative Topics

Week 1 (9/12)	Overview—Welcome to the Social Genomics Revolution
Week 2 (9/19)	Historical Perspectives: Eugenics, Heritability, and Evolving Techniques of Genetic Discovery
Week 3 (9/26)	Is Race Genetic? Human Populations, Ancestry, and Classification
Week 4 (10/3)	Genotyping Yourself: What can you learn from 23andMe?
Week 5 (10/10)	Genetic Discrimination
Week 6 (10/17)	The Interplay between Genetic and Environmental Factors
Week 7 (10/24)	Genetic Sorting and Cavorting in the US
Week 8 (10/31)	Genetics and Socioeconomic Success
Week 9 (11/7)	Epigenetics: How the environments turns genes on, off, up, and down
Week 10 (11/14)	Microbiome—the bugs that shape your life
Week 11 (11/21)	Fitter, Happier...The Technologies of Gene Editing
Week 12 (11/28)	The Coming Genotocracy