SOCIOLOGY 476: GENETICS AND SOCIETY

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Mondays, 3-5pm, Parkes 222

OVERVIEW

We are in the middle of remarkable advances in the availability of molecular genetic data on individual persons. In the same way that computing had a golden era in which every couple of years you could buy a new computer that was twice as powerful for the same price as your old one, genetic assays continue becoming dramatically cheaper and more powerful. Across every quarter of the academy that concerns itself with contemporary human lives, this has prompted consideration of what these new genetic advances imply for society and social inquiry. Surveying and assessing this work is the objective of this course.

Compared to some other titles in the graduate course catalog, "Genetics and Society" might seem a niche topic. Do not be fooled: the readings and material for this course may be the broadest that you will encounter in a seminar, in terms of the substantive fields and epistemological orientations that are represented. (Sociologists, especially: there is a whole great big world out there!) This breadth reflects the manifold ways that new developments in genetics intersect with broad social phenomena and longtime preoccupations of social science. My hope is that, apart from the contribution to thinking about genetics, the breadth of the readings will be a useful guide to the diversity of social inquiry more generally. Whatever else, you will get to see how a broad range of fields lay out arguments.

Social science engagement with developments in genetic research include four broad forms. First, social scientists are trying to figure out how genetic data can be used to help them better understand phenomena they have been long endeavoring to understand. Second, social scientists try to improve understanding of how social environments moderate, amplify, or attenuate genetic influences on outcomes as studying by behavioral or medical genetics. Third, social scientists consider how genetic findings or information affect public opinion or other aspects of culture, broadly conceived. Fourth, social scientists study how advances in genetic medicine affect the experience of patients
and population differences in health outcomes. We will consider work of all these forms, and then some.

Usually also about this topic are the extent to which we will cover matters that are very much unsettled. Progress in the area has been palpable across iterations of the syllabus, and there are works I feel ought to be on this syllabus but are under embargo, etc.. This is precisely what I find so exciting about this area, and, if I may so, a compelling contrast to various areas of sociology that shall remain nameless. However, it does require a certain amount of tolerance for ambiguity, appreciation for the existing of standing puzzles, and willingness to change your mind as the field develops (everybody in the field is wrong about some things, but the whole fun is that nobody knows what we will turn out to be wrong about).

MATERIALS

Readings for each week of the course are presented below. No books need to be purchased for the course, which is fitting given that developing technologies seem likely to make printed books obsolete within ten years anyway. Readings will be made available on Blackboard.

COURSE REQUIREMENTS

As a conscientious participant in good standing in this seminar, you are expected to do the following:

You will be familiar with the basic arguments of each of the readings indicated as required and participate in our class discussion about them.

At least six times during the quarter, you will provide an e-mail to everyone in the course that offers at least three comments, questions, reactions to the reading, by the agreed-upon time on the Sunday before class.

You will help lead/motivate discussion with another person at various times during the quarter, depending on our total enrollment. The comments from others will presumably help you (and me) in this task.

You will write a potentially-relatively-short-by-seminar-standards paper regarding the intersection of human genetics and a matter of your own developing intellectual interests. This paper may be a research proposal, a review, a critique of existing work, a broadside, or an essay.
COURSE SCHEDULE AND READINGS

WEEK ONE (April 2): Salutations and orientations

Selections from Plomin, Robert, John C. DeFries, Gerald E. McClearn, and Peter McGuffin. 2008. Behavioral Genetics, Fifth Edition. New York, NY: Worth. [Chapters 2-4 provide very basic background; Chapter 5 is suitable even if one can skip Chapters 2-4]


WEEK TWO (April 9): Why would anybody believe that genes cause _____?

Psychology


Economics


Political science


**Sociology**


**WEEK THREE (April 15): Why are some people cautious or outright skeptical about heritability estimates?**

**Limitations for Policy**


**Assumptions and conceptual limitations**


**Limitations in the context of genomics**


Supplemental: Charney, Evan. 2012. "Behavior genetics and postgenomics." Behavioral and Brain Sciences 35:331-358 (plus open commentary [or perhaps especially the open commentary]).

**WEEK FOUR** (April 22): *Genomic Research and How People Think about Themselves*

**Risk**


**Ambiguity**


**Identity**


**Medicalization**


**WEEK FIVE** (April 29) - *Gene-Environment Interdependence, I*
Gene-environment interplay


Flynn effect, population change, and concept of multipliers


Interdependence in intellectual development


WEEK SIX (May 6) - Gene-Environment Interdependence, II

Gene-environment interaction and inter/transdisciplinarity


Debate about gene-environment interaction and depression


WEEK SEVEN (May 13): Geneticization, Essentialism, Reductionism, and Race/Ethnicity


**Geneticization**


**Essentialism**


**Reductionism and race/ethnicity**


**WEEK EIGHT** (May 20) - Elaborations of design

*[Note: This week is still a work in progress.]*


**WEEK NINE** (TBD, June 3 by default) - Genome-wide data

**Complementary studies of nicotine use**


**Neighborhood-level interaction**


**Using twins as their own controls**


**Genes as instrumental variables (Mendelian randomization)**


**Measures of genetic diversity: recent controversy in economics/anthropology**