

GENETICS AND SOCIETY
Sociology 422
Spring 2011
MW 3:55-5:15pm
Hickman Hall, Room 129

Professor: Kristen W. Springer
Department of Sociology
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E-mail: kspringer@sociology.rutgers.edu
Office Hours: Wednesdays 2:30pm to 3:30pm or by appointment
Course Website: sakai.rutgers.edu (course designation: "Soc 422: Genetics and Society")

COURSE DESCRIPTION

This course is an overview of issues related to genetics in society. We will approach the course from a sociological lens – focusing on the ethics and science behind key genetic social issues as well as learning the basic biology of genetics. The class is divided into two sections – one before and one after spring break.

The first section explores the relevance of genetics to sociological research, the basics of the biology of DNA and genetics, and the practice of using genetics in sociological research and to understand social structures. The section on DNA structure, function, and expression may feel more like a biology class, rather than a sociology class – though I expect no previous biological training. This section is critical in order to fully understand and grappled with the social implications of applied genetics.

The second section explores current debates in genetics and society including genetic testing, human genome project, cloning, reprogenetics, forensic DNA, and genetically modified foods.

REQUIRED TEXTS

Pilnick, Alison. 2002. *Genetics and Society: An Introduction*. New York: Open University Press.

Optional: Green, Ronald. 2007. *Babies by Design: The Ethics of Genetic Choice*. New Haven, CT: Yale University Press.

All other required readings, including excerpts from Green (2007), will be on our Sakai website.

COURSE REQUIREMENTS

This course is organized as a seminar, which means that a large portion of the class will be spent collectively discussing the material. In order for this to happen, it is essential that you read before class and come prepared to talk thoughtfully and intelligently about the course material. The importance of discussion is reflected in the distribution of grades – with 10% of your grade based on attendance, 10% on active class participation, and 20% on thoughtful reflections of the material (QIPs). The remainder of your grade will be based on a midterm (20%) and a research

paper (40%). There will be a total of 250 points (plus extra credit, as described below) available in the class. Therefore, you can think of 10% as 25 points. In other words, you can get up to 25 points for attendance and your final project will be worth 100 points.

Attendance

Attendance will be taken **each day** by way of a sign-in sheet at the very beginning of class. If you arrive late – but within 15 minutes of the start of class – you can sign in at the end of class for reduced attendance credit.

Participation

This grade reflects *quality* participation in the class discussion. Students should read carefully so they come to class with insightful comments and questions. Quality discussion requires knowing and understanding when and how to engage in civil discourse. For example, just “talking” without having read the material will count *against* your participation grade. Students, who read materials that are not on the syllabus but that are germane to the discussion, should feel free to contribute this knowledge to the discussion; the class as a whole will benefit from the specialized knowledge of all participants.

QIPs

Before each class, you should go to the Sakai website and under *Assignments* write a **QIP**, that is, a short comment (1-2 paragraphs) about a **Q**uestion, an **I**nterest, or a **P**roblem that the reading raised for you. You don’t need to write long and polished essays; just your immediate reactions to the readings. Occasionally I may read QIPs aloud during class to generate class discussion. The QIPs will be graded on a three-point scale: 3: an expansive, fully developed, and deeply probing response, above and beyond the call of duty; 2.5: a solid, thoughtful response that shows you did the reading (most good responses will get this grade); 2: some good ideas, but needs more development; 1.5: quite skimpy, hard to see the ideas; 1: unacceptably brief. For full credit, the QIPs must be done **BY 2PM BEFORE CLASS** (Sakai will register the cutoff time as 2pm class day). We will also be watching two movies during the semester and therefore two of the QIPs will be about a movie. Movie QIPs must be submitted by **2PM ON THE NEXT CLASS DAY AFTER THE MOVIE**. You need to do a total of **18 QIPs** over the course of the semester (which means that you can miss 4 QIPs); however you can do additional QIPs for extra credit.

Midterm

The midterm will be on March 9th and will cover the first half of the class: DNA function, structure, and expression; epigenetics; and the role of genetics in sociology. The test will consist of multiple choice questions, short answers, genetics problems, and one or more bluebook essays. I have set aside one class to review and prepare for the midterm. A make-up exam will only be granted under extraordinary circumstances, and it will be harder than the original exam.

Research Project

The final project for this class will be an 8-10 page **RESEARCH PAPER** on a genetic controversy, or an aspect of a genetic controversy, that was *not* covered in class. We will discuss this paper in more depth throughout the semester, but in brief, you will be expected to provide a balanced analyses of a genetic controversy that addresses at least the following issues: bioethics

(as discussed in class), societal implications, and your suggested role of sociology (or your discipline) in the issue.

This final project will proceed in stages, with grades given at each stage.

Project Proposal (10 pts)

On March 28th you are to hand in a two page OUTLINE of your project, ideally with a suggested bibliography attached, previewing the points you want to make in your final paper.

Revised Proposal and Bibliography (10 pts)

On April 11th you need to hand in a three to four page proposal that addresses the comments I provided on your initial proposal. You will also need to hand in an annotated bibliography with at least six *academic* sources relevant to your project.

Power Points Slides and Project Presentation (20 pts)

On April 25th or April 27th, you will give a ten-minute presentation of your research project. Be prepared to answer questions from your classmates and me at the end of your presentation. You will need to submit power point slides of your presentation by **April 25th at NOON** – regardless of whether you are presenting on April 25th or April 27th.

Final Project (60 pts)

The final project is due at the beginning of the last class – both by hard copy to me and to the Sakai website. Specifically, all papers must be uploaded to Sakai and handed in to me by **3:55pm on May 2nd**.

COMMUNICATION

Smart Class

Students are expected to regularly access their Eden e-mail and/or the course website at sakai.rutgers.edu. Important information will be disseminated to your Eden account (unless you change your e-mail address through Rutgers' system) and will be posted on the sakai course website.

E-Mail and Office Hours

Students should feel free to ask questions before, during, or after class. In addition, I will hold office hours every Wednesday from 2:30pm to 3:30pm and I encourage you to come by. If you have a class conflict with this time, you can arrange to meet with me at another time. Finally, I am happy to correspond by e-mail within the following guidelines.

Please do not e-mail me with questions that can be answered by looking at the syllabus. Further, please do not e-mail with substantive questions about course material – please come to office hours for these types of discussion. I prefer that you e-mail me from an account that *lists your name* as the sender. The subject heading should signal that you are one of my students. You may begin the subject with Soc 422 Genetics Student, or the like. I also ask that you include your full name in the text of the e-mail so I can be sure I am responding to the correct student!

I receive so many e-mails that even important e-mails may not receive a reply for 48 hours – though I will make every effort to return your e-mail within 24 hours. If you have not received a reply from me within 24 hours, please feel free to e-mail me again. However, please do not e-mail at the last moment (that is 24 hours before exams, deadlines, etc.) with questions regarding the material and assignments. These questions should be raised in class or in my office hours.

To reply to as many e-mails as possible, I convey my responses in as few words as possible. Please do not view my parsimonious responses as discourteous. I respond to all students with the same brevity.

CLASS CONDUCT AND GROUND RULES

The Department of Sociology encourages the free exchange of ideas in a safe, supportive, and productive classroom environment. To facilitate such an environment, students and faculty must act with mutual respect and common courtesy. Thus, behavior that distracts students and faculty is not acceptable. Such behavior includes cell phone use, surfing the internet, checking email, text messaging, listening to music, reading newspapers, leaving and returning, leaving early without permission, discourteous remarks, and other behaviors specified by individual instructors. Courteous expression of disagreement with the ideas of the instructor or fellow students is, of course, permitted and strongly encouraged.

ACADEMIC INTEGRITY

I follow the Rutgers University’s policy on academic integrity and you can familiarize yourself with this policy at: <http://teachx.rutgers.edu/integrity/policy.html>. Cheating and plagiarism will not be tolerated and I am obligated to report such conduct and violations of this policy. Please also know that all assignments uploaded through Sakai will be assessed for plagiarism.

SCHEDULE OF TOPICS, READINGS, AND ASSIGNMENTS

January 19th	Introduction and Overview of Class
January 24th	Introduction to Genetics and Society Issues
	United States Department of Energy. 2008. <i>Genomic and Its Impact on Science and Society: The Human Genome and Beyond. A Primer.</i>
	Pilnick, Alison. 2002. Chapter 2
January 26th	Role of Genetics in Sociological Research and To Understand Social Structure
	Freese, Jeremy and Sara Shostak. 2009. “Genetics and social inquiry.” <i>Annual Review of Sociology</i> . 35:107–28
	Bearman, Peter. 2008. “Introduction: exploring genetics and social

	structure.” <i>American Journal of Sociology</i> . 114 (Sppl): V-X.
January 31st	Introduction to Genetics
	Carey, Gregory. 2003. <i>Human genetics for the social sciences</i> , Chapter 1 Ridley, Matt. 2000. “Introduction.” <i>Genome: The autobiography of a species in 23 chapters</i> . (pp. 4-10). New York: Harper Collins. Pilnick, Alison. 2002. Chapter 1
February 2nd	DNA Structure and Function
	Genes and Chromosomes: Centre for Genetics Education Factsheet #1 23 and me videos
February 7th	Gene Expression: Protein Synthesis
	Carey, Gregory. 2003. <i>Human genetics for the social sciences</i> , Chapter 3
February 9th	Epigenetics
	Epigenetics: Ghost in your Genes Video Centre for Genetics Education Factsheet #15
February 14th	Epigenetics Discussion and DNA Wrap-Up
February 16th	Genetics and Behavior
	Pilnick, Allison. 2002. Chapter 3
February 21st	Population Genetics
	Watson, James. 2004. “Out of Africa: DNA and the human past.” <i>DNA: The Secret of Life</i> . (pp 232-267). Henig, Robin. 2004. “The Genome in Black and White (And Gray).” <i>New York Times Magazine</i> . Oct. 10, 2004.
February 23rd	Genetics in Sociological Research: Race and Health
	Fausto-Sterling, Anne. 2008. “The Bare Bones of Race.” <i>Social Studies of Science</i> . 38(5). 657-694.

February 28th	Genetics in Sociological Research: Violence
	Guo, Guang, E. Michael Roettger, and Tianji Cai. 2008. "The Integration of Genetic Propensities into Social Control Models of Delinquency and Violence among Male Youths." <i>American Sociological Review</i> 73:543-568.
March 2nd	Genetics in Sociological Research: Perceptions of Genetic Sex Differences
	Patsopoulos, Nikolaos A., Athina Tatsioni, and John P. A. Ioannidis. 2007. "Claims of Sex Differences: An Empirical Assessment in Genetic Associations." <i>JAMA</i> . 298: 880-893. Dar-Nimrod, Ilan, and Steven J. Heine. 2006. "Exposure to Scientific Theories Affects Women's Math Performance." <i>Science</i> 314:435.
March 7th	Review
March 9th	Test
March 14 th and March 16 th – Spring Break Have fun!	
March 21st	Genetic Ethics
	Pilnick, Alison. 2002. Chapter 9
March 23rd	Genetic Testing
	Pilnick, Alison. 2002. Chapter 5 Hellman, Deborah. 2003. "What makes genetic discrimination exceptional?" in <i>Genetic Prospects: Essays on Biotechnology, Ethics, and Public Policy</i> . 85-97
March 28th	Human Genome Project
	Pilnick, Alison. 2002. Chapter 6 Chaufan, Claudia. 2007. "How much can a large population study on genes, environments, their interactions and common diseases contribute to the health of the American people?" <i>Social Science & Medicine</i> . 65(8) 1730-174.

	<i>Project Proposal Due</i>
March 30th	Cloning
	Pilnick, Alison. 2002. Chapter 8 The President’s Council on Bioethics, <i>Human Cloning and Human Dignity: An Ethical Inquiry</i> . 2002. i – xxxix
April 4th	Introduction to Reprogenetics
	Pilnick, Alison. 2002. Chapter 4 Start watching <i>Gattaca</i>
April 6th	Risks and Consequences of Reprogenetics
	Finish watching <i>Gattaca</i>
April 11th	Discussion of <i>Gattaca</i>
	<i>Revised Proposal and Bibliography Due</i>
April 13th	Potential Promises of Reprogenetics
	Green, Ronald. 2007. <i>Babies by Design</i> (pages TBA).
April 18th	Criminology/Forensics
	National Institute of Justice. July 2002. <i>Special Report: Using DNA to Solve Cold Cases</i> Cole, Simon A. 2007. “How much justice can technology afford? The impact of DNA technology on equal criminal justice.” <i>Science and Public Policy</i> . 34(2). 95-107.
April 20th	Genetically Modified Foods
	Pilnick, Alison. 2002. Chapter 7 Raney, Terri & Prabhu Pingali. 2007. “Sowing a Gene Revolution.” <i>Scientific American</i> . 104-111.
April 25th	<i>Presentations</i> <i>Power Point Slides due by NOON for ALL Students</i>

April 27th	<i>Presentations</i>
May 2nd	Future of Genetics Research
	Pilnick, Alison. 2002. Chapter 10
	<i>Final Papers Due</i>
Final: May 5th 8am – 11am	<i>No Class – Enjoy Your Summer!</i>