

HON 381, Fall 2017

Science, Social Justice and Activism



Shanghai 2009 by Jota Castro, Peru

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Course description:

Science and medicine are incredibly powerful forces that have the power to heal, destroy, create, disrupt, and organize our lives. This course will interrogate the ways in which health, medicine, technology, and scientific practices are created, organized by and situated within complex social and structural dynamics. We will draw on science and technology studies, bioethics, and theories from the feminist, race and disability communities to think about the ways in which social justice is both promoted and hindered by science and medicine. We will look at specific instances of scientific dissent and interrogate the power of lay citizens to change the direction and speed of scientific progress.

Required texts:

There is one book you are required to rent/purchase/borrow. The other readings will be posted online, in the Readings folder of our class Blackboard site.

Available at the ASU Bookstore:

- Benjamin, R. 2013. *People's Science: Bodies and Rights on the Stem Cell Frontier*. Stanford, CA: Stanford University Press.

Schedule of Readings¹

Aug 21 Introduction to the course

Introduction: Theory and Praxis

Aug 23 Sarewitz, D. 2003. "Science and Happiness." In *Living with the Genie*, edited by A. Lightman, D. Sarewitz, and C. Desser, 181-200. Washington, DC: Island Press.
Reardon, J. "On the Emergence of Science and Justice." *Science, Technology and Human Values* 2013; 38(2): 176-200.

Aug 28 Pielke, R. 2004. "Forests, Tornadoes and Abortion: Thinking about science, politics and policy." In: *Forest Futures: Science, policy and politics for the next century*, edited by K. Arabas and J. Bowersox, 143-152. Lanham, MD: Rowman and Littlefield.
Sarewitz, D. "How science makes environmental controversies worse." *Environmental Science and Policy* 2004; 7: 385-403.
Trotta, D. "Born this way? Researchers explore the science of gender identity." *Reuters* 2017 (Aug 2). Available online at: <http://www.reuters.com/article/us-usa-lgbt-biology-idUSKBN1AJ0F0>

Optional:

http://www.slate.com/articles/health_and_science/science/2017/08/evolutionary_psychology_is_the_most_obvious_example_of_how_science_is_flawed.html

Aug 30 Class canceled. *I will be attending the Society for the Social Studies of Science annual general meeting in Boston, MA.*

Sept 4 Labor Day (no class)

Patients as Doctors/Pharmacists/Researchers: Activism and HIV/AIDS

Sept 6 Excerpts from: Epstein, S. 2003. *Impure Science: AIDS, activism and the politics of knowledge*. Berkeley, CA: University of California Press.
Watch: "How to Survive a Plague" (2012)

Genetically Modified Organisms and Animal Rights

Sept 11 Watch: *Okja*
Foster Wallace, David. "Consider the Lobster." *Gourmet* 2004 (August): 50-64. Accessed online: <http://www.columbia.edu/~col8/lobsterarticle.pdf>
Pachirat, T. 2011. *Every Twelve Seconds: Industrialized Slaughter and the Politics of Sight*. New Haven, CT: Yale University Press. (Chapters 1 and 3)
Vegan Mafia (read: <https://www.cnn.com/2017/08/11/vegan-mafia-food-investor-network-includes-bill-maris-kyle-vogt.html> and look up companies)

Sept 13 Delborne, J. "Transgenes and Transgressions: Scientific dissent as heterogeneous practice." *Social Studies of Science* 2008; 38(4): 509-541.
Klintman, M. "The Genetically Modified (GM) Food Labelling Controversy: Ideological and Epistemic Crossovers." *Social Studies of Science* 2002; 32(1): 71-91.

¹ Please note that this list of readings is subject to change, so consider this document to be organic and fluid. I welcome suggestions for topics you would like to explore and am happy to make changes.

Optional: Wynne, B. "Creating Public Alienation: Expert Cultures of Risk and Ethics on GMOs." *Science as Culture* 2001; 10(4): 445-481.

Environmental Justice

Sept 18*

Leahy, P.J. and A. Mazur. "The Rise and Fall of Public Opposition in Specific Social Movements." *Social Studies of Science* 1980; 10(3): 259-284.

Jones, C. "Building More Just Energy Infrastructure: Lessons from the Past." *Science as Culture* 2013; 22(2): 157-163.

Sept 20

Ruffin, S. "Royal Dutch Shell Environmentally Degrades Nigeria's Niger Delta Region: A Land of Blacks." 2012; 5(3): 140-153.

Ite, U.E. "Partnering with the State for Sustainable Development: Shell's Experience in the Niger Delta, Nigeria." *Sustainable Development* 2007; 15: 216-228.

Sept 25

Wong, E. "In China City, Protesters See Pollution Risk of New Plant." *New York Times* 2008 (May 6). Available online:

<http://www.nytimes.com/2008/05/06/world/asia/06china.html?mcubz=3>

Ottinger, G. "Buckets of Resistance: Standards and the Effectiveness of Citizen Science." *Science, Technology and Human Values* 2010; 35(2): 244-270.

Optional: <http://lithub.com/growing-up-in-maines-cancer-valley/>

Nuclear Missiles, Nuclear Energy

Sept 27

Gleiser, M. "Does Science Know Right from Wrong?" *NPR* 2017. Available online:

<http://www.npr.org/sections/13.7/2017/02/15/515342681/does-science-know-right-from-wrong>

Wellerstein, A. "The Psychological Power of Nuclear Weapons." *Bulletin of the Atomic Scientists* 2016; 72(5): 298-303.

Edwards, P.N. "Entangled Histories: Climate science and the nuclear weapons research." *Bulletin of the Atomic Scientists* 2012; 68(4): 28-40.

Oct 2

Bhadra Haines, M. "Fighting Nuclear Energy, Fighting for India's Democracy." *Science as Culture* 2013; 22(2): 238-246.

Oct 4

Petryna, A. "Biological Citizenship: The Science and Politics of Chernobyl-Exposed Populations." *Osiris* 2004; 19: 250-265.

Hecht, G. "Nuclear Janitors: Contract Workers at the Fukushima Reactors and Beyond." *The Asia-Pacific Journal* 2013; 11(1.2). Accessed online at:

http://www.japanfocus.org/site/make_pdf/3880

Oct 9

Fall break (no class)

Stem Cell Research

Oct 11

Benjamin, R. 2013. *People's Science: Bodies and Rights on the Stem Cell Frontier*. Stanford, CA: Stanford University Press. (Introduction, Chapters 1-2)

Oct 16

Benjamin, R. (Chapters 3-4)

Oct 18

Benjamin, R. (Chapters 5-6)

Kim, S.-H. "The Politics of Human Embryonic Stem Cell Research in South Korea: Contesting National Sociotechnical Imaginaries." *Science as Culture* 2014; 23(3): 293-319.

Genetic Markers, Social Markets

- Oct 23 Tallbear, K. 2013. *Native American DNA: Tribal belonging and the false promise of genetic science*. Minneapolis, MN: University of Minnesota Press. (Introduction and Chapter 1: Racial Science, Blood and DNA)
Garrison, N. "Genomic Justice for Native Americans: Impact of the Havasupai Case on Genetic Research." *Science, Technology and Human Values* 2013; 38(2): 201-223.
- Oct 25 Roberts, D. (2013). "Pharmacoethnicity," in *Fatal Invention: How Science, Politics, and Big Business Re-Crete Race in the Twenty-First Century*. New York: The New Press.
Duster, T. "Race and Reification." *Science* 2005; 307(5712): 1050-1051.
Harmon, A. "In DNA Era, New Worries about Prejudice." *New York Times* 7 November 2009. Accessed online at <http://www.nytimes.com/2007/11/11/us/11dna.html>.
- Oct 30 Ong, Aihwa. 2016. *Fungible Life: Experiment in the Asian City of Life*. Durham, NC: Duke University Press. (Chapter 2: An Atlas of Asian Diseases)
- Nov 1 Jain, L. "Cancer Butch," *Cultural Anthropology* 2007; 2: 501-538.
Excerpts from: Stacey, J. 1997. *Teratologies: A Cultural Study of Cancer*. London: Routledge.

Testing, Testing, 1, 2, 3...

- Nov 6*** Corbett, K.P. "You've Got it, You May Have It, You Haven't Got It': Multiplicity, Heterogeneity, and the Unintended Consequences of HIV-Related Tests." *Science, Technology and Human Values* 2009; 34(1): 102-125.
Sanghavi, D.M. "Wanting Babies Like Themselves, Some Parents Choose Genetic Defects." *New York Times* 5 December 2006. Accessed online at <http://www.nytimes.com/2006/12/05/health/05essa.html>.
Harmon, A. "Prenatal Test Puts Down Syndrome in Hard Focus." *New York Times* 9 May 2007. Accessed online at <http://www.nytimes.com/2007/05/09/us/09down.html>.

Articles for assignment (see Blackboard for details)

Roadside drug tests: <https://www.propublica.org/article/common-roadside-drug-test-routinely-produces-false-positives?src=longreads>

Natural Cycles, birth control app: <https://arstechnica.co.uk/science/2017/03/natural-cycles-birth-control-review/>

Rape kits: <http://www.elle.com/culture/a37255/forgotten-rape-kits-detroit/?src=longreads>

Reproductive Technologies

- Nov 8 Thompson, C. "Confessions of a Bioterrorist: Subject position and reproductive technologies," in E. Ann Kaplan and Susan Squier (Eds.), *Playing Dolly: Technocultural Formations, Fantasies, and Fictions of Assisted Reproduction* (Rutgers University Press, 1999), pp. 189-219.
Center for Genetics and Society. "Webinar: Gene Editing and the Future of Reproductive Justice." Available online: <https://www.geneticsandsociety.org/multi-media/gene-editing-and-future-reproductive-justice> (both audio file and transcript available).
- Nov 13 Oudshoorn, Nellie. "On masculinities, technologies, and pain: The testing of male contraceptives in the clinic and the media." *Science, Technology, and Human Values* 1999; 24(2): 265-289.

Excerpts from: Takeshita, C. 2012. *The Global Politics of the IUD: How science constructs contraceptive users and women's bodies*. Cambridge, MA: MIT Press.

A Pharmaceutical Epidemic

Nov 15 Dumit, J. 2012. *Drugs for Life: How Pharmaceutical Companies Define Our Health*. Durham, NC: Duke University Press. (Introduction and Chapter 6: "Knowing Your Numbers")

Nov 20 Ryan, H. Girion, L., and S. Glover. "A Times Investigation: Oxycontin." *Los Angeles Times* 2016. Read parts 1-2; here: <http://www.latimes.com/projects/oxycontin-part1/> and <http://www.latimes.com/projects/la-me-oxycontin-part2/>

Nov 22 Ryan, H. Girion, L., and S. Glover. "A Times Investigation: Oxycontin." *Los Angeles Times* 2016. Read part 3 ("Global Expansion"; <http://www.latimes.com/projects/la-me-oxycontin-part3/>)
Barlett, D.L. and J.B. Steele. "Deadly Medicine." *Vanity Fair* 2011. Accessed online at <http://www.vanityfair.com/politics/features/2011/01/deadly-medicine-201101>.

How to Colonize (Mars): Putting Astrobiology into Conversation with Post-Colonial, Queer, Disability Rights, Feminist, Trans, Anti-Racist Theory

Nov 27 Readings TBA

Nov 29 Readings TBA

Readings

Asking yourself the following questions forces you to take a stance of curiosity toward the reading, and will help you prepare thoughtful responses to our texts. You should be able to answer these questions for each text before you come to class.

- What questions is the author asking?
- What assumptions is the author making?
- What controversial claims does the author make, and what are the possible objections?
- What interesting (non-obvious, original, thought-provoking) question does the author make and why is it interesting?
- What conclusions does the author draw, and what are the implications of those conclusions?

Assessment

This course will be a dynamic, discussion-based class that demands a high level of engagement from the students. Students are required to complete all assigned readings and come to class prepared for discussion. The final grade for the course will be based on participation (40%), media analysis (10%), discussion questions (5%), short written assignments/discussion board participation (15%), and a final assignment and/or final exam (30%).

Participation

Your participation grade will be assessed by the quality of your in-class contributions, and your participation in in-class group activities. Things that will help improve your participation score include: coming to class prepared, contributing productively and thoughtfully to the discussion at least once per class meeting, responding to your classmates' comments. Things that will hurt your participation in class include: being disruptive (talking to your neighbor, texting, forgetting to put your mobile on silent), being unprepared, checking e-mail or online shopping, sleeping in class, being late, not bringing the text(s) to class.

Daily attendance is required; you must attend class to participate. If you miss three or more classes, your final grade will be lowered by one grade (i.e., your maximum possible grade will be a B). If you miss five classes, your grade will be lowered by two letter grades (i.e., maximum C). I reserve the right (and am likely) to give a failing grade in the course to those who miss twenty percent or more of the class meetings for any reason.

Media Analysis

You will sign up for one day when it is your responsibility to present a relevant and recent (within the last 6 months) news article to the class. When it is your turn to present, you will (1) send me a link to the news story 24 hours before class, and (2) briefly summarize the story in class and explain the pertinent connections to our class material. You will also hand in a 300-400 word critical reflection of the article.

Discussion Question

Each student is responsible for providing two substantive discussion questions on an assigned day. Please send the question at least 24 hours before class. I will post guidelines for crafting strong discussion questions on Blackboard.

Final Assignment

You can choose from one of the following 10-12-page research assignments:

1. **Activist Imaginary:** Choose a scientific or technological issue and imagine an act of protest or dissent around that particular issue. What measures might be most effective in changing the course of research and development? Who are the key actors and how might they be incentivized to get involved?
2. **Activist History:** There are some incredible examples of citizens speaking/acting out against scientific and technological development (e.g., protests against nuclear energy, ballot propositions banning fracking in particular towns or counties, anti-GMO protests, etc). Choose an example of a campaign for or against a particular technology and critically explore the history. What were the key points of controversy? Who faced resistance from whom? What actions were taken and what were the consequences, if any?
3. **A Call for Help:** What social justice issue is both helped and hindered by scientific research? In this research paper, you will choose a particular social problem and critically examine the set of solutions (economic, cultural, technical) offered to alleviate this issue.

Final exam

You will have the option of writing a shorter final paper and taking a final exam. The exam is not a regurgitation of what you know, but instead a close inspection and recapitulation of the themes that have come up during the course. That is, it will center not on parroting back the facts we covered in the course, but rather on exploring the issues. The format will be two or three clusters of questions. You will address one question from each cluster. You will write **no more than three hours** total. You are free to talk to one another about the course themes and your thoughts, but the final examination is to be your own thoughts in your own words.

Grading key

The grading will be on a traditional scale of 100-98=A+, 97-93=A, 92-90=A-, 89-88=B+, 87-83=B, 82-80=B-, 79-78=C+, 77-70=C, 69-60=D, 59 and below=F.

A-level work will demonstrate mastery of the material and will go far beyond the minimum requirements of a particular assignment; in addition, there will be few or no mistakes.

B-level work will exceed the requirements of an assignment and demonstrate strong competency with the material; some mistakes, but no egregious errors.

C-level work will meet the requirements of an assignment but demonstrate only basic comprehension of the material; some mistakes and potentially a major error.

D-level work will fail to meet the requirements of an assignment and demonstrate little or no content comprehension; many mistakes and more than one major error.

F-level work will fail to meet the requirements of an assignment and have little merit as a demonstration of knowledge or ability.

Policies

Regrading policy: If you think the grade I gave you on an assignment is wrong, you may submit it to be regraded. It must be resubmitted within one week, with a paragraph explanation as to why you think my assessment was incorrect and why the paper deserves a different grade. Please refer to our grading rubric when making your case and remember that grades are earned, not given.

Electronic devices: You are welcome to use a laptop or tablet in class if you are referencing relevant readings. Do not use the laptop or tablet to check e-mail or Facebook or shop for shoes because that will significantly affect your overall participation grade. (It will affect your grade for the worse, just to be clear).

E-mail etiquette: Please include a salutation (“Dear Dr. Brian”, for example), and refrain from using text message abbreviations. I know it’s e-mail and we all receive hundreds of them a day/week, but good communication skills are important.

Plagiarism

If you submit work that is not your own, you will be fully disciplined in accordance with university policies. Cheating, plagiarism, or other forms of academic dishonesty are strictly forbidden and will result in a failing grade for the assignment, the class, and disciplinary action with the Dean. It is your responsibility to be aware of, understand, and adhere to the rules and regulations of The Barrett Honors College. Please review the ASU Academic Integrity Policy and available resources here: <https://provost.asu.edu/academicintegrity/students>. The policy is also posted on Blackboard, in Essay Materials.

Documented Disabilities

Students with permanent or temporary disabilities who would like to discuss course requirements and accommodations are asked to see the instructor within the first week of class.

Ethics and Multiculturalism

The Barrett community is committed to upholding values of academic, professional and personal honesty of the highest order. We believe that ethical and respectful behavior is one of the most important measures of the worth of an individual and, as such, the overall integrity of our community as a whole.

Barrett, the Honors College at Arizona State University, is committed to creating a multicultural learning environment, which is broadly defined as a place where human cultural diversity is valued and respected. I hope that you will contribute your unique perspectives to this effort by respecting others’ identities and personal life histories and by considering and raising issues related to multiculturalism and diversity as appropriate in our course discussions. Thoughtful discussions on multiculturalism and diversity will enhance each person's experience within and beyond the classroom.