

GLOBAL SCIENCE, GLOBAL POLITICS

Su, Tu, Th 1-2:30pm; G209

PROFESSOR JENNY BRIAN

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Office: H600 (at the back, by the patios)

Office hours: Su, Tu 3-6pm and by appointment

Scientific and technological advancements, from cell phones to vaccines to nuclear power plants to genetically modified organisms, are progressing rapidly and profoundly affect both developed and developing countries. In this class, we will investigate claims of expertise, evidence, intellectual property, and development through case studies such as sex selection, genetically modified organisms, nuclear energy and biosecurity, and ask some of the following questions: How do governments balance tensions between promoting its own national interests and cooperating with the international community? What happens to politics when state officials fail to inform citizens of real threats to life? What are the moral and political consequences of remedies available in the wake of technological disasters (such as the Bhopal chemical leak and the Chernobyl nuclear reactor explosion)? How does the global nature of science affect the outputs of science? This course examines the moral and political dimensions of science in local and global communities.

READING MATERIALS:

A course reader, containing a selection of journal articles, news articles, will be distributed in class. In addition, we will read selected chapters from two books: *Life Exposed: Biological Citizens after Chernobyl* by Adriana Petryna and *Unnatural Selection: Choosing Boys over Girls and the Consequences of a World Full of Men* by Mara Hvistendahl. These books must be picked up in the library.

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 two papers, a series of in-class individual and group activities, online discussion, a group project.

The *participation grade (30% total)* will be assessed through the quality and quantity of in-class and online participation. This course has two websites: <http://scienceethicspolitics.tumblr.com> and <https://sites.google.com/site/globalscienceglobalpolitics/>. The Google site contains information about the course, and a discussion board where you will post comments

* Please note: The assessment methods are subject to change. Students will receive an updated syllabus within the next two weeks.

about the readings and discussion questions. Active participation on the Google website is required. You will sign up for one week to present a news article and a short commentary (that will then be posted on the Tumblr page), and one week to prepare 2-3 discussion questions to guide the Tuesday or Thursday session. This is not a “bonus” 30%. If you do not want to be an active participant, please find another course.

Two *response papers* (15% each; **30% total**) will test your understanding of the readings and your critical thinking and originality. I will post a prompt every month, and you must choose two to respond to in the form of a 3-4 page paper. I will post the prompts on Saturday, and your paper will be due a week later in class on Sunday.

The group project (**40% total**) will be a 15 to 20-page analysis of a particular technology within one or more countries. Further details will be distributed in class. You will be assigned to work in interdisciplinary groups (3 people per group). A project proposal is due Feb 7th/9th, a full draft will be due on March 29th, the draft will be returned to you on April 2nd, and the final project and a one-page policy memo are due on May 4th.

POLICIES:

- **Attendance:** Daily attendance is required. Each student is allowed 2 absences, with no explanation necessary. Additional absences will negatively affect your final grade (e.g., taking you from a B to a B-). The instructor reserves the right to fail those who miss twenty percent of the class meetings or more for any reason.
- **Late penalty for assignments:** You will be given 3 grace days to use when you wish. You can use them all for one assignment, or spread them out over the course of the semester. However, once the 3 days are used up, assignments handed in late will not be accepted.
- **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 with a paragraph explanation as to why you think my assessment was incorrect and why you deserve a different grade.
- Unless you are otherwise instructed, all assignments are to be handed directly to the Instructor.
- Reading assignments are to be completed in advance. It is hard to play catch-up in this course. The reading assignments are not onerous, but bear in mind that oftentimes philosophical literature must be read twice or three times to facilitate comprehension.
- 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.

ACADEMIC INTEGRITY

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 will result in a failing grade for the assignment, the class, and disciplinary action with the Dean and Provost. It is your responsibility to be aware of, understand, and adhere to the rules and regulations of the Asian University for Women. Please consult your student handbook for further details.

READINGS AND TOPICS*:

WHAT KIND OF “GOOD” IS SCIENCE? WHAT ARE THE POLITICS OF SCIENCE?

Sarewitz, D. “Science and Happiness.” In: Lightman, A., Sarewitz, D. and Desser, C. (Eds.) *Living with the Genie*. Island Press, 2003.

Cohen, E. “The new politics of technology.” *The New Atlantis* 2003; 3-8.

Sarewitz, D., Foladori, G., Invernizzi, N., and M. Garfinkel. “Science Policy in Its Social Context.” *Philosophy Today* 2004; 67-83.

TECHNOLOGY AND SOCIETY

Winner, L. “Do artifacts have politics?” In: Winner, L. (1986). *The Whale and the Reactor: A search for limits in the age of high technology*. Chicago: University of Chicago Press, pg. 19-39.

GENDER, SCIENCE AND OBJECTIVITY

“More Work for Mother” by Ruth Schwartz Cowan

GENDER, SCIENCE AND OBJECTIVITY

CASE STUDY: SEX SELECTION

Hvistendahl, M. (2011). *Unnatural Selection: Choosing Boys over Girls and the Consequences of a World Full of Men*. PublicAffairs.

“Cultural Differences and Sex Selection” by Mary Mahowald

“Getting Past Nature as a Guide to the Human Sex Ratio” by Timothy F. Murphy

INTELLECTUAL PROPERTY

CASE STUDY: GENETICALLY MODIFIED ORGANISMS

Thornstrom, C. “Who owns your dinner?” In: Lightman, A., Sarewitz, D. and Desser, C. (Eds.) *Living with the Genie*. Island Press, 2003.

Hilgartner, S. “Acceptable Intellectual Property.” *Journal of Molecular Biology* 2002; 319: 943-946.

Shiva, V. (1997). “Monocultures, Monopolies, Myths and the Masculinization of Agriculture.”

Video: TED Talk – Innovation and Development

Optional: Rai, A.K. and Eisenberg, R.S. “Bayh-Dole and the Progress of Biomedicine.” *Law and Contemporary Problems* 2003; 66: 289-314.

PUBLIC UNDERSTANDING OF SCIENCE

CASE STUDY: GENETICALLY MODIFIED ORGANISMS

* This list is incomplete and subject to change.

Brunk, C.G. "Public knowledge, public trust: Understanding the 'knowledge deficit'" *Community Genetics* 2006; 9: 178-183.

Blue, G. "Food, publics, science." *Public Understanding of Science* 2010; 19(2): 147-154.

GLOBAL HEALTH

CASE STUDY: BIOSECURITY

Collier, S.J. and A. Lakoff. "The problem of securing health." In: Lakoff, A. and S.J. Collier. (Eds). (2008). *Biosecurity Interventions*. New York: Columbia University Press.

Koch, E. "Disease as security threat." In: Lakoff, A. and S.J. Collier. (Eds). (2008). *Biosecurity Interventions*. New York: Columbia University Press.

Sharp, P.A. "1918 Flu and Responsible Science." *Science* 2005; 310: 77.

Adams, V. (2010). "Against Global Health? Arbitrating Science, Non-Science and Nonsense Through Health." In Metzl, J. and A. Kirkland. (Eds.) *Against Health: How Health Became a New Morality*. New York: NYU Press, pp. 40-60.

CASE STUDY: ENERGY DISASTERS

SCIENCE AND THE LAW

Jasanoff, S. "Bhopal's Trials of Knowledge and Ignorance." *ISIS* 2007; 98: 344-350.

EXPERTISE

Wynne, B. "Misunderstood misunderstandings: Social Identities and the public uptake of science."

Epstein, S. "Democracy, Expertise, and AIDS Treatment Activism."

BIOLOGICAL CITIZENSHIP

Jasanoff, S. "Science and citizenship: A new synergy." *Science and Public Policy* 2004; 31(2): 90-94.

Petryna, A. (2002). *Life Exposed: Biological Citizens after Chernobyl*. Princeton University Press.

SCIENCE, PROGRESS AND THE COMMON GOOD

Roy, A. "The Greater Uncommon Good."

Visvanathan, S. "What is progress?"