

S&TS 645, Govt 634  
Fall 2006  
T 2:30 – 4:25 p.m.

Stephen Hilgartner  
306 Rockefeller Hall  
5-9950; shh6

## **The New Life Sciences: Emerging Technologies, Emerging Politics**

### Course description

The new life sciences (including genetics, genomics, biotechnology, cell biology, and contemporary biomedical and agricultural research) are highly controversial areas of emerging science and technology. They inspire both hope and anxiety, and are a source of ongoing conflicts. This course will examine the politics of the new biology, both to consider the issues in their own right and to examine the relationships among science, technology, and politics. In particular, the course will focus on three themes – the politics of identity, the politics of property, and the politics of risk – as they pertain to the emerging technologies of life. Topics may include the social shaping of biological research; eugenics and genetics; genomic medicine; risk; commercial biotechnology; university-industry relationships; social movements; North-South issues; the Human Genome Project; genetics and race; intellectual property; the debate over human cloning; and the capacity of contemporary societies to manage emerging technologies. A particular focus of the course in 2006 will be critically examining the role of bioethics as a form of regulatory machinery in addressing the politics of emerging biomedical technologies.

### Prerequisites

This course is open to graduate students; seniors will only be permitted with permission of the instructor.

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Required readings are available in Olin 405 or online through the Cornell Libraries.

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### **EVALUATION**

The final grade will be determined as follows:

Class Participation	30%
Paper	70%

Participation: Students are expected to attend all classes, with readings prepared, and to participate actively in discussion.

Paper: 15 to 25 pages (double spaced) addressing a topic relevant to the course is due December 15. A one-page description of the paper topic, along with a short, illustrative list of works to be cited, is due no later than October 31. Late papers cannot be accepted. If an incomplete is taken, all work must be submitted by January 15, 2007.

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## READING ASSIGNMENTS

### Aug. 29      **Introductory meeting**

### Sept. 5      **Science, Expertise, Democracy**

- Beck, Ulrich, Risk Society: Towards a New Modernity (Sage, 1992), pp. 1-84.
- Jasanoff, Sheila, Designs on Nature: Science and Democracy in Europe and the United States (Harvard, 2005), pp. 1-93. (Hereafter: Jasanoff, Designs.)
- Additional recommended reading:
  - Guston, David H., Between Politics and Science: Assuring the Integrity and Productivity of Research (Cambridge University Press, 2000).
  - Hilgartner, Stephen, Science on Stage: Expert Advice as Public Drama (Stanford University Press, 2000).
  - Jasanoff, Sheila, ed., States of Knowledge: The Co-Production of Knowledge and Social Order (Routledge, 2004).
  - Kitcher, Philip, Science, Truth, and Democracy (Oxford University Press, 2001).
  - Latour, Bruno, Politics of Nature (Harvard University Press, 2004).
  - Nowotny, Helga., Peter Scott, and Michael Gibbons, Re-Thinking Science (Polity Press, 2001).

### Sept. 12      **Constituting Futures**

- Rabinow, Paul and Talia Dan-Cohen, A Machine to Make a Future (Princeton, 2005), pp. 1-60.
- Brown, Nik and Mike Michael, "A Sociology of Expectations: Retrospecting Prospects and Prospecting Retrospects," *Technology Analysis & Strategic Management*, Vol. 15, No. 1, 2003, pp. 3-18. (online)
- Jasanoff, Designs, pp. 94-145.

### Sept. 19      **Bioethical Visions 1**

- Beachamp, Tom and James Childress, Principles of Biomedical Ethics, 5<sup>th</sup> edition (Oxford, 2001), pp. 1-25, 57-112, 225-328.
- Wolpe, Paul Root, "The triumph of autonomy in American bioethics: a sociological view," pp. 38-59 in Raymond DeVries and Janardan Subedi, eds., Bioethics and Society (Prentice-Hall, 1998).

### Sept. 26      **Bioethical Visions 2**

- Kass, Leon R., Life, Liberty and the Defense of Dignity (Encounter, 2002), pp. 55-118.
- Farmer, Paul, Pathologies of Power: Health, Human Rights, and the New War on the Poor (University of California Press, 2005), pp. 29-90, 213-246.

- Cohen, Eric and William Kristol, “The Politics of Bioethics: Playing Defense Isn’t Enough,” *The Weekly Standard*, May 10, 2004, pp. 25-29.
- Wolf, Susan M., “Law & Bioethics: From Values to Violence,” *The Journal of Law, Medicine & Ethics*, Summer 2004, pp. 293-306.
- Hedgcock, Adam M., “Critical bioethics: beyond the social science critique of applied ethics,” *Bioethics*, Vol. 18, No. 2, 2004, pp. 120-143.

**Oct. 3 Bioethics in Social Context**

- Zussman, Robert, Intensive Care: Medical Ethics and the Medical Profession (University of Chicago Press, 1992), pp. 1-61, 81-160, 219-230.
- Jasanoff, Designs, pp. 146-202.

**Oct. 10 No class (Fall Break)**

- But begin reading for the week of Oct. 17.

**Oct. 17 Patients, Activists, Citizens**

- Hacking, Ian, “Madness: biological or constructed?” Chapter 4 of Hacking, The Social Construction of What? Cambridge, MA: Harvard University Press, 1999, pp. 100-124.
- Epstein, Steven, Impure Science: AIDS, Activism, and the Politics of Knowledge (University of California Press, 1996), pp. 1-41, 181-264.
- Parthasarathy, Shobita, “Knowledge is power: genetic testing for breast cancer and patient activism in the United States and Britain,” Chapter 6 of Nelly Oudshoorn and Trevor Pinch, How Users Matter: the Co-Construction of Users and Technologies (MIT Press, 2003), pp. 133-150.
- Dumit, Joseph, “Illnesses you have to fight to get: facts as forces in uncertain, emergent illnesses,” *Social Science & Medicine*, Vol. 62, 2006, pp. 577–590. (online)
- Rabehariosoa, Vololona, “From representation to mediation: the shaping of collective mobilization on muscular dystrophy in France,” *Social Science & Medicine*, Vol. 62, 2006, pp. 564-576. (online)
- Rose, Nikolas and Carlos Novas, “Biological citizenship,” Chapter 23 in Aihwa Ong and Stephen J. Collier, Global Assemblages: Technology, Politics, and Ethics as Anthropological Problems (Blackwell, 2005), pp. 439-463.
- Sperling, Stefan, “Managing potential selves: stem cells, immigrants, and German identity,” *Science and Public Policy* 31 (2), April 2004, 139–149.

**Oct. 24 Eugenics**

- Proctor, Robert N., Racial Hygiene: Medicine Under the Nazis (Harvard University Press, 1988), pp. 1-9, 64-130, 282-312.
- Kevles, Daniel J., In the Name of Eugenics (Harvard University Press, 1985), pp. 96-128.
- Nobles, Melissa, “Racial categorization and censuses,” Chapter 2 in David I. Kertzer and Dominique Arel, eds., Census and Identity: The Politics of Race, Ethnicity, and Language in National Censuses (Cambridge University Press, 2002), pp. 43-70.

**Oct. 26-28**     **Recommended event: Symposium on “The New Bureaucracies of Virtue,”**  
**Cornell University.**

**Oct. 31**         **Race**

- Reardon, Jenny, Race to the Finish: Identity and Governance in an Age of Genomics (Princeton University Press, 2005), pp. 1-167.
- Holloway, Karla, “Accidental communities: race, emergency medicine, and the problem of PolyHeme ®,” *American Journal of Bioethics*, May 2006, Vol. 6, No. 3, pp. 7-17.
- Case study: The BiDil debate (all sources online)
  - Duster, Troy, “Race and reification in science,” *Science* 307 (18 February 2005): 1050-1051.
  - Kahn, Jonathan, “Misreading race and genomics after BiDil,” *Nature Genetics* 37 (7), July 2005, 655-656.
  - Nature Biotechnology, “Illuminating BiDil” (editorial), *Nature Biotechnology* 23 (8), August 2005, 903.
  - Puckrein, Gary and Clyde W. Yancy, “BiDil’s impact” (letter to the editor), *Nature Biotechnology* 23 (11), November 2005, 1343.
  - Weigmann, Katrin, “Racial medicine: here to stay?” *EMBO Reports* 7 (3), 2006, 246-249.

**Nov. 7**            **Reproductive Technologies**

- Thompson, Charis, Making Parents: The Ontological Choreography of Reproductive Technologies (MIT Press, 2005), pp. 55-204.

**Nov. 14**         **Ownership Regimes**

- Boyle, James, “Enclosing the genome: what the squabbles over genetic patents could teach us,” Draft available under a Creative Commons License (online): <http://www.creativecommons.org/licenses/by-sa/1.0>
- Hilgartner, Stephen, “Mapping systems and moral order: constituting property in genome laboratories,” Chapter 7 in Sheila Jasanoff, ed., States of Knowledge (Routledge, 2004), pp. 131-141.
- Rose, Hilary, The Commodification of Bioinformation: The Icelandic Health Sector Database, final report to the Wellcome Charitable Trust, 2001, pp. 1-35. (online)
- Winickoff, David E. and Richard N. Winickoff, “The charitable trust as a model for genomic biobanks,” *New England Journal of Medicine*, 18 Sept. 2003, pp. 1180-1184.
- Jasanoff, Designs, pp. 203-246.

**Nov. 21**         **Pharmaceutical Economies**

- Healy, David, “The new medical Oikumene,” in Adriana Petryna, Andrew Lakoff, and Arthur Kleinman, eds., Global Pharmaceuticals: Ethics, Markets, Practices (Duke University Press, 2006), pp. 61-84.

- Petryna, Adriana, “Globalizing human subjects research,” in Adriana Petryna, Andrew Lakoff, and Arthur Kleinman, eds., Global Pharmaceuticals: Ethics, Markets, Practices (Duke University Press, 2006), pp.33-60.
- Walby, Catherine and Robert Mitchell, Tissue Economies: Blood, Organs, and Cell Lines in Late Capitalism (Duke University Press, 2005), pp. 135-159.
- Sunder-Rajan, Kaushik, Biocapital: The Constitution of Postgenomic Life (Duke University Press, 2006), pp. 40-103.
- Hayden, Cori, When Nature Goes Public: The Making and Unmaking of Bioprospecting in Mexico (Princeton University Press, 2004), pp. 48-84.

**Nov. 28          Reflections, Conclusions, Research Agendas**

- Jasanoff, Designs, pp. 247-291.