

Science Studies III Spring 2011

Cathy Gere: HSS 4040; cgere@ucsd.edu

Neoliberal Science

This class poses a question about the economic substructure of scientific knowledge by examining the case of neoliberal science. Taking the longer view of recent history, the course aims to deepen students' understanding of the constitution and operation of contemporary entrepreneurial scientific research. After an introduction to the topic of neoliberal science, we will open our historical inquiry with an overview of the history of neoliberalism since the oil crisis of 1973. In second week we will dig down to the roots of neoliberal ideology, examining a set of nineteenth-century arguments that link free enterprise with Malthusian evolutionary theory and hedonistic concepts of human well-being. Third week will be devoted to Cold War neoliberalism, when the open-ended organization of scientific inquiry was philosophically linked with the politics and economics of capitalist democracy.

The rest of the class will be devoted to the life sciences in the post-Cold War world. The deep historical, political and philosophical links between free enterprise, open-ended scientific inquiry, and Darwinian economic competitiveness are all implicit in the modern biotechnology industry. This cluster of notions is seamlessly operationalized by a technological revolution in the life sciences that reduces life to a weightless sign, enabling biological derivatives to enter the same circulation flows as international finance and other forms of digital information. At the same time, urgent questions about environmental degradation – potentially the most potent source of a critique of neoliberalism – are being pressed to conform to a free-market logic.

Using Kaushik Sunder Rajan's analysis of 'biocapital' to understand this new scientific economy, we will be surveying developments in India, East Asia and Latin America, as well as Europe and the United States. Alongside critical secondary literature originating in our own field, we will also be dipping into some recent works aimed at investors and economists, with a view to understanding how industry insiders conceptualize their entrepreneurial research activities. The class will have an intensive local focus to complement its global perspective. Since UCSD is such a powerful engine of this brave new world, the main graded assignment will be a collaborative research project delineating the geography of neoliberal science in the vicinity of the university.

Required Texts:

David Harvey (2005) *A Brief History of Neoliberalism*. Oxford: Oxford University Press.

Michel Foucault (2005) *The Birth of Biopolitics* New York: Palgrave Macmillan

Cori Hayden (2003) *When Nature Goes Public: the Making and Unmaking of Bioprospecting in Mexico*. Princeton: Princeton University Press

Kaushik Sunder Rajan (2006) *Biocapital: the Constitution of Postgenomic Life* Durham: Duke University Press

All other readings will be available electronically.

Assignments:

Students will be required to present readings to the class and to participate in the discussion; 35% of the grade will be allotted to the quality of their participation.

The other 65% of the grade will be allotted to their engagement in developing a collaborative report on the geography and history of neoliberal science in San Diego County.

Syllabus

1. Introduction to Neoliberal Science

Rebecca Lave, Philip Mirowski, and Samuel Randalls, (2010) 'STS and Neoliberal Science', *Social Studies of Science* 40(5) 659-675

David Harvey (2005) *A Brief History of Neoliberalism*. Oxford: Oxford University Press.

2. Ur-liberalism and nature

James McCarthy and Scott Prudham (2004) Neoliberal Nature and the Nature of Neoliberalism *Geoforum* 35 275-283

Thomas Malthus (1798) *An Essay on the Principle of Population*

3. Cold War Neoliberalism and science

Naomi Oreskes (2010) 'Science, Technology and Free Enterprise', *Centaurus* 52:297-310

David Kaiser (2002) 'Cold War requisitions, scientific manpower and the production of American physicists after WWII' *Historical Studies in the Physical and Biological Sciences*, vol. 33, #1 pp. 131-159.

Michel Foucault (2005) *the Birth of Biopolitics* New York: Palgrave Macmillan

4. Patenting Life: intellectual property, biotechnology and global trade

Office of Technology Assessment (1989) *Patenting Life*
<http://www.fas.org/ota/reports/8924.pdf>

World Trade Organization Trade-Related Aspects of Intellectual Property Rights (TRIPS)
http://www.wto.org/english/tratop_e/trips_e/trips_e.htm

Daniel Barben (2010) 'The political economy of genetic engineering: the neoliberal formation of the biotechnology industry' *Organization and Environment*, December 1998: 406-420.

Philip Mirowski and Robert van Horn (2005), 'The Contract Research Organization and the Commercialization of Scientific Research' *Social Studies of Science*, August 2005: 503-548.

5. Biocapital in India and the US

Kaushik Sunder Rajan (2006) *Biocapital: the Constitution of Postgenomic Life* Durham: Duke University Press

6. Neo-liberal science and global trade in Mexico

Cori Hayden (2003) *When Nature Goes Public: the making and unmaking of bioprospecting in Mexico* Princeton: Princeton University Press

Mauricio Schoijet and Richard Worthington, (1993) 'Globalization of Science and Repression of Scientists in Mexico' in *Science, Technology and Human Values*, Vol. 18 # 2: 209-230

Marisa Brandt, TBA

7. Science in one-party capitalism

Yongxiang Lu (2010) *Science and Technology in China: a roadmap to 2050: strategic general report of the Chinese Academy of Sciences*

8. Neoliberalism and environmental regulation

Larry Lohman (2005) 'Marketing and Making Carbon Dumps: Commodification, Calculation and Counterfactuals in Climate Change Mitigation' *Science as Culture* 14 (3) 203-235.

Brian Gareau (2008) 'Dangerous Holes in Global Environmental Governance: the roles of Neoliberal Discourse, Science, and California Agriculture in the Montreal Protocol' *Antipodes* 40 (1) pp. 102-30.

9. The insiders' view

Each student will be asked to report on a book about biotech aimed at industry insiders, such as:

Cynthia Robbins Roth (2001) *From Alchemy to IPO*

Shreefal Mehta (2008) *Commercializing Successful Biomedical Technologies*

10. The local scene

Students will report on the progress of the final research project and prepare to finish the work in time for submission in finals' week.