

## **DSOC 2080: Technology, Society, and Development**

Instructor: Jason Cons, [jc162@cornell.edu](mailto:jc162@cornell.edu)

Class Meeting: Tuesdays and Thursdays, Ives 215, 2:55-4:10 PM

Office Hours: Tuesdays and Thursdays, 12-2:00 PM and by appointment

This course offers a set of alternative, sociological ways to think about the multiple relationships between technology, society, and development. Often, technology is conceived of as a “thing” that is deployed, delivered, or transferred from more “advanced” societies to less “developed” ones in order to aid in their economic, social, cultural, political, or ecological betterment. In this vision, technology is imagined as a simple tool that embodies a set of solutions to a set of fixable problems. In this course, we will complicate this vision. Through an exploration of both the historical and contemporary roles of technology in development, we will reconceptualize technology not just as a “thing,” but rather as a set of social relations. As such, we will rethink many of the classic issues related to technology and development—transfer, innovation, progress—as fundamentally embedded in relations of power, capital, expertise, and regulation.

What does this mean for students taking this course? The goal of this class is not to celebrate the uses of technology in development, to identify the technologies that are most likely to “succeed” in developing countries, or to simplistically deride all technological interventions in development as tools of empire. Rather, it is to unsettle assumptions about the relationships between progress, society, and technical expertise. In doing so, we will rethink new and classic technologies of development from a historical and critical standpoint that situates “change” within a network of competing interests, idealized notions, and messy realities “on the ground.”

This course is organized into five sections. We will begin by outlining some basic terms for our discussion that will be critical throughout our discussions of progress, expertise, and development. We will then explore the roots of contemporary development and its uses of technology in eighteenth and nineteenth century imperialism. Specifically, we will explore: the rhetoric of progress, the uses of new and emerging technological innovations to control and order populations, and the vagaries of using such tools to shape imperial space. We will then look at the links between the “age of empire” and the “age of development” through an exploration of the debates around one of the great development projects of the post-war period: the Green Revolution. We will then move into a space where you, the students, will identify several specific questions linked to technology, society, and development that you would like to explore in more depth. These student-driven weeks will form the basis for your final projects. Finally, we will conclude by exploring interventions and re-appropriations that turn technology, progress, and development on their heads. We will explore the ways that development is not the transmission of new technology to passive subjects, but rather an active set of relationships that are transformed and made anew in practice.

Overall, this course will not (and cannot) offer a comprehensive survey of important uses of technology in development, nor will it make a case for the use of one strategy of transfer or implementation over others. Rather, it will challenge students to approach such questions from a more grounded, historical, and sociological perspective that sees technology, development, and society as a set of complicated and interrelated processes in need of critical and empirical analysis.

**Blackboard:** This course makes extensive use of the online resource, Blackboard. We will use Blackboard as:

- A repository for course announcements
- A place to store course documents and syllabi
- The location to turn in *most* assignments

Students can easily gain access to Blackboard by going to Blackboard.cornell.edu and creating a user account. Once you have done this, you can search for and enroll in this course. You will have to enter the course code: **2080** in order to enroll.

**Course materials and how to acquire them:** Most course materials are available on Blackboard. In Addition, the following texts are required:

- Timothy Mitchell, *Rule of Experts: Egypt, Techno-Politics, Modernity*
- James Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*

Additionally, the following text is recommended:

- Cooper and Packard. *International Development and the Social Sciences: Essays on the History and Politics of Knowledge*

These books are available at Buffalo Street Books (215 N. Cayuga St. in the DeWitt Mall). You can walk downtown and get them, or they can all be ordered, by telephone (607-273-8246), or preferably, by email ([buffalostreetbooks@hotmail.com](mailto:buffalostreetbooks@hotmail.com)). When you place your order, be sure to state your name, contact information (telephone or email), what class (Jason Cons, DSOC 1201: Spies Like Us) you're ordering for, the books being ordered, and your credit card number including expiration date. They accept MasterCard, VISA and Discover. (No AmEx.) Confirmation will be sent by email. I will personally collect all orders placed by noon on Friday, August 5, and have them available in my office from 1 PM – 4 PM.

**Guidelines for Submission of Written Work:** Most work will be submitted via the digital drop-box on Blackboard by the time and date indicated in the syllabus. All work should be typed, preferably in Microsoft Word or some comparable word processing program (for example, Pages). All work should be submitted in double spaced, Times New Roman font, in 12 point text with 1 inch margins.

**Late Work:** Work that is turned in late will lose half a letter grade per day.

**Policy on Absence:** I expect students to attend all classes, arrive on time, and be alert and ready to participate. However, I also recognize that issues arise that may prevent you from being at every class session. If you miss a class, it is your responsibility to get information, notes, assignments, and handouts *from your fellow classmates*, and not from me, unless otherwise arranged. NOTE—missing more than two classes will have a negative impact on your overall participation grade.

**Academic integrity:** All the work you submit in this course must have been written for this course and not another and must originate with you in form and content with all contributory sources fully and specifically acknowledged. Make yourself familiar with Cornell's Academic Integrity Code which is distributed to students in the *Policy Notebook*. The code, together with a guide to *Acknowledging the Work of Others*, can be downloaded at <http://theuniversityfaculty.cornell.edu/pdfs/AIAckWorkRev90620.pdf>. In this course, the normal penalty for a violation of the code is an "F" for the term.

**Grading:** Your grade will be composed of the following:

- An initial, 5 page first essay. 30%
- Your active participation in a group project (explained in class). 15%
- A 10 page final research paper. 45%
- Class Participation 10%

## **Introduction:**

### Week 1: Course Introduction

August 25:

- In class overview of the syllabus and course organization
- Williams, Raymond. "Development." In *Keywords: A Vocabulary of Culture and Society*. 1976. Oxford University Press.

### Week 2: Basic Terms

August 30:

- Mitchell, Timothy. "Can the Mosquito Speak?" In *Rule of Experts: Egypt, Techno-Politics, Modernity*. 2002. University of California Press. pp 19-51.
- Horton, Richard. "Stopping Malaria: The Wrong Road." *The New York Review of Books*. February 24, 2011.

*In Class Case Study: Malaria and Expertise*

September 1:

- Scott, James. "Introduction" and "Chapter 1: Nature and Space." In *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*. 1999. Yale University Press. pp 1-52
- Heilbroner, Robert. 1998. "Do Machines Make History?" In *Does Technology Drive History: The Dilemma of Technological Determinism*. MIT Press. pp 54-66.
- Solomon, Stephen. 1981. "The Controversy Over Infant Formula." *The New York Times Magazine* (December 6).

*In Class Case Study: Technology, Development, and the Controversy Over Infant Formula*

## **Imperial Technologies and the Roots of Development**

### Week 3: Technology and Empire

September 6:

- Adas, Michael. "Global Hegemony and the Rise of Technology as the Main Measure of Human Improvement." In *Machines as Measures of Men: Science, Technology, and Ideologies of Western Dominance*. 1989. Cornell University Press. pp 133-198.
- Marx, Karl. 2003 (1853). "On Imperialism in India." In *Archives of Empire Vol. 1: From the East India Company to the Suez Canal*. Duke University Press. pp 117-128.

*In Class Case Study: Karl Marx and Empire—An Ambivalent Discourse?*

September 8:

- Adas, Michael. "Machines and Manifest Destiny." In *Dominance By Design: Technological Imperatives and America's Civilizing Mission*. 2006. Harvard University Press. pp 67-128.
- Twain, Mark. 1889. "Chapter 8: The Boss." In *A Connecticut Yankee in King Arthur's Court*. Harper and Brothers. Pp 56-63.

## Week 4: Ordering and the Politics of Rule

September 13:

- Scott, James. "Chapter 2: Cities, People, and Language." In *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*. 1999. Yale University Press. pp 53-84.
- Anderson, Benedict. 2006. "Census, Map, Museum." In *Imagined Communities: Reflections on the Origins and Spread of Nationalism*. Verso. 167-190.

September 15:

- Mitchell, Timothy. "The Character of Calculability" In *Rule of Experts: Egypt, Techno-Politics, Modernity*. 2002. University of California Press. pp 80-122.
- Borges, Jorge Luis. 1998. "On Exactitude in Science." In *Collected Fictions*. Penguin. p 325.
- Leuenberger, Christine and Izhak Schnell. 2010. "The Politics of Maps: Constructing National Territories in Israel." *Social Studies of Science*. Vol. 40. No. 6. 803-842.

*In Class Case Study: The politics of maps and mapping in the Israeli Territories*

## Week 5: The Forging of Space

September 20:

- Carter, Paul. "An Outline of Names." In *The Road to Botany Bay: An Exploration of Landscape and History*. University of Chicago Press. pp 1-33.
- Raffles, Hugh. "The Uses of Butterflies: Bates of the Amazon, 1848-1859." In *In Amazonia: A Natural History*. Princeton. Pp 114-149.

September 22:

- Goswami, Manu. "Mobile Incarceration: Travels in Colonial State Space." In *Producing India: From Colonial Economy to National Space*. 2004. University of Chicago Press. pp 103-131.
- Kolatkar, Arun. "The Railway Station." In *Jejuri*. New York Books.
- Davis, Mike. 2001. "India: The Modernization of Poverty." In *Late Victorian Holocausts: El Nino Famines and the Making of the Third World*. Verso. pp 311-340.
- Kipling, Rudyard. 1898. "William the Conqueror." In *The Day's Work*. Doubleday. Pp 193-242.

*First Essay Assignment Distributed*

## **Technology and Development**

### Week 6: Technological Modernization

September 27:

- Rostow, WW. 1960. "The Five Stages of Growth—A Summary." *The Stages of Economic Growth: A Non-Communist Manifesto*. Cambridge University Press. pp 4-17.
- Cooper, Frederick. 1997. "Modernizing Bureaucrat, Backward Africans, and the Development Concept." In *International Development and the Social Sciences: Essays on the History and Politics of Knowledge*. University of California Press. pp 64-92.
- Wallerstein, Immanuel. 2000 (1975). "Modernization: Requiescat in Pace." In *The Essential Wallerstein*. The New Press. Pp 106-111.

September 29:

- Mitchell, Timothy. "The Object of Development" In *Rule of Experts: Egypt, Techno-Politics, Modernity*. 2002. University of California Press. pp 209-243.
- Packard, Randall. 1997. "Visions of Postwar Health and Development and Their Impact on Public Health Interventions in the Developing World. In *International Development and the Social Sciences: Essays on the History and Politics of Knowledge*. University of California Press. pp 93-115.

### Week 7: Agricultural Technology and Development: The Green Revolution 1

October 4:

- Scott, James. "Chapter 8: Taming Nature: An Agriculture of Legibility and Simplicity." In *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*. 1999. Yale University Press. pp 262-306.
- Borlaug, Norman. "Nobel Lecture: The Green Revolution, Peace, and Humanity." *The Nobel Lectures*

October 6:

- Baker, Christopher. 1984. "Frogs and Farmers: The Green Revolution in India, and its Murky Past." In *Understanding Green Revolutions: Agrarian Change and Development Planning in South Asia*. Cambridge University Press. pp 37-52.
- Farmer, BH. 1977. Excerpts from *Green Revolution? Technology and Change in Rice Growing Areas of Tamil Nadu*. Palgrave. Tbd.
- Excerpt from a BARD. 1977. *Integrated Rural Development Program in Comilla District: An Evaluation*. Bangladesh Academy of Rural Development. TBD

*In Class Essay: Viewing the Green Revolution from the Village?*

*First Essay Due in the Digital Drop-Box on Blackboard by Midnight*

### Week 8: Agricultural Technology and Development: The Green Revolution 2

October 11: Fall Break

October 13:

- Shiva, Vandana. "Science and Politics in the Green Revolution." In *The Violence of the Green Revolution: Third World Agriculture, Ecology, and Politics*. 1992. Zed Books. Pp 19-60.
- Shiva and Borlaug. 1997. "An Exchange." *The Ecologist*. Vol. 27, No. 5. 211-212.

### **Contemporary Controversies in Society, Technology, and Development**

*In weeks 9-12, we will select, as a class, four different issues related to technology, society, and development. Working in teams, we will develop a dossier of readings for each week that will explore the debates, controversies, possibilities, and drawbacks of each particular broad issue. Students in each group will meet with the instructor to refine and develop a strategy for addressing each week. Topics available for exploration are:*

- Genetic Modification and Agriculture
- Bioethics and Medicine
- Information and Communication Technology
- Green Technologies and Climate Change
- Conservation

- Border Technologies and Security
- Public Health/Family Planning

## **Technology and Resistance**

### Week 13: Local Knowledges, Global Designs

November 15:

- Scott, James. "Chapter 9: "Thin Simplification and Practical Knowledge: Metis." In *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*. 1999. Yale University Press. pp 309-341.
- Parker, Ian. 2010. "The Poverty Lab: Transforming Development Economics One Experiment at a Time." *The New Yorker*. May 27.

*In Class Case Study: Methods for Understanding Poverty: Top-Down or Bottom-Up?*

November 17

- Agarwal, Arun. 1995. "Dismantling the Divide between Indigenous and Scientific Knowledge." *Development and Change*. 413-439.
- Fernando, Jude. 2003. "NGOs and the Production of Indigenous Knowledge under the Condition of Postmodernity." *Annals of the American Academy of Political and Social Science*. 54-72.

### Week 14: Technological Breakdown

November 22:

- In class film: *Darwin's Nightmare* (2004).

November 24: Thanksgiving

### Week 15: Turning Technology on its Head: Appropriations and Re-appropriations

November 29

- Peluso, Nancy. 1995. "Whose Woods Are These? Counter-Mapping Forest Territories in Kalimantan Indonesia." *Antipode*. 383-406.
- Wainwright, Joel and Joe Bryan. 2009. "Cartography, Territory, Property: Postcolonial Reflections on Indigenous Counter-Mapping in Nicaragua and Belize." *Cultural Geography*. Volume 16. 153-178.

December 1

- Ruuska, Alex. 2011. "Ghost Dancing and the Iron Horse: Surviving Through Tradition and Technology." Vol 52. No. 3. Pp 574-597.

December 8

***Final Papers Due by Midnight in the Blackboard Digital Drop-Box***