

SOCIOLOGY 3460
SCIENCE, TECHNOLOGY, AND SOCIETY
Winter 2007

Amit Prasad

332 Middlebush Hall

Phone: 882- 8218

Email: prasada@missouri.edu

Office Hours: 2- 3 pm, Tue & Thu or by appointment

TA: Thomas Josephsohn

Email: tjj9q3@mizzou.edu

Office Hours: 3.30-5.50 pm Wednesday

Schedule of Classes and Location: 3.30 to 4.45 pm on Tue & Thu at 209 MDLBH

Password for e-reserves: **soc3460**

Course Description:

In the last few decades science and technology have permeated our lives as never before. This has led to wide ranging debates on the relationship between science, technology, and society. This course, which is organized as a lecture-seminar, aims at critically investigating different aspects of the relationship between science, technology, and society.

Each class will have one or two students presenting the article(s) that has been assigned for the day. Presentation should be around 5 minutes and should highlight the strengths and weaknesses of the article(s). This will lay down the basis for further discussions in which students will have to participate. This is very important because the aim of this course is not just to provide information about different theories and events concerning science, technology, and society but also to aid in a deeper understanding. Students will be evaluated for their presentations as well as contribution to discussion in the class.

There will be four assignments for this class. For the first assignment students will investigate constructions of American “technological identity” in the media. Students can choose a particular TV show(s) or film and analyze how media has attempted to represent relationships between science, technology and American identity. Students should pay special attention to representations of race, gender, and class.

The third assignment will be a biography of a technology. Each student will choose a particular technology whose biography s/he wants to write. Instructor should be informed about the choice before hand so that two students do not end up writing on the same technology. For the biography of a technology assignment students will have to utilize the theories taught in the class (from the section on Theoretical Approaches) to explain

the relationship between that particular technology and its development in the society. Both the assignments have to be five double spaced, typewritten pages. Internet can serve as a valuable tool for this purpose.

The second and fourth assignments would be critical analyses of the readings assigned for the class. They will be five double-spaced, typewritten pages on the question/theme that will be assigned.

There will be no extensions for the assignments. Plagiarism will result in the student getting an F in the course. If a student wants to obtain honors for this course s/he should contact the instructor; the student will be assigned additional work for this purpose.

Course Requirements

Grades will be based on class participation (20%) and assignments: (i) construction of American technological identity in the media (20%), (ii) biography of a technology (20%), (iii) critical analysis of readings # 1 (20%), and (iv) critical analysis of readings # 2 (20%).

Syllabus

Enchantment and Disenchantment with Science & Technology

16th Jan. Handing over of the syllabus

18th Jan. (i) Toffler, A. 1997. "The Powershift Era," in Albert H. Teich (ed.) *Technology and the Future* (New York: St Martin's Press) pp. 15-24; & (ii) Weinberg, A. 1997. "Can Technology Replace Social Engineering?" (same book as above) pp. 55-64.

23rd Jan. (i) Marx, L. 1994. "The Idea of "Technology" and Postmodern Pessimism," in Yaron Ezrahi (ed.) *Technology, Pessimism, and Postmodernism* (Dordrecht: Kluwer Academic Publishers) pp. 11-28; & (ii) Ezrahi, Y. 1994. "Technology and the Illusion of the Escape from Politics," (same book as above) pp. 29-37.

25th Jan. Shiva, V. 1990. "Reductionist Science as Epistemological Violence" in Ashis Nandy (ed.) *Science, Hegemony and Violence: A Requiem to Modernity* (Delhi: Oxford University Press) pp. 232-56.

30th Jan. Stepan, N. L. & S. Gilman. 1993. "Appropriating the Idioms of Science: The Rejection of Scientific Racism," in Sandra Harding (ed.) *The "Racial" Economy of Science: Toward a Democratic Future* (Bloomington: Indiana University Press) pp. 170-93. & Jones, James. 1993. "The Tuskegee Syphilis Experiment: "A Moral Astigmatism" (same book as above) pp. 275-86.

1st Feb. Adas, Michael. 1989. *Machines as the Measure of Men* (Ithaca: Cornell University Press), ch. 3. "Global Hegemony and the Rise of Technology as the Main Measure of Human Achievement," pp. 133-98

6th Feb. Assignment on media construction of American technological identity due

6th Feb. Film

Theoretical Approaches

- 8th Feb. (i) Pinch, T. & W.E. Bijker. 1987. "The Social Construction of Facts and Artifacts: Or How the Sociology of Science and the Sociology of Technology Might Benefit From Each Other," in W.E. Bijker *et al* (ed.) *The Social Construction of Technological Systems* (Cambridge: MIT Press) pp. 17-50.
- 13th Feb. (i) Callon, M. 1987. "Society in the Making: The Study of Technology as a Tool for Sociological Analysis," (same book as above) pp. 83-103; & (ii) Law, J. & M. Callon. 1995. "Engineering and Sociology in a Military Aircraft Project: A Network Analysis of Technological Change," in S. Leigh Star (ed.) *Ecologies of Knowledge: Work and Politics in Science and Technology* (Albany: State University of New York Press) pp.281-301.
- 15th Feb. (i) Keller, E. F. 1995. "Gender and Science: Origin, History and Politics". *Osiris* 10: 27-38; & (ii) Harding, S. 1991. *Whose Science, Whose Knowledge: Thinking from Women's Lives* (Ithaca: Cornell University Press), "What Is Feminist Science?" pp. 296-312.

Bridging Nature and Society

- 20th Feb. (i) Williams, R.1980. "Ideas of Nature," in *Problems in materialism and culture* (London, Verso), 67-85; (ii) Latour, Bruno. 1989. *We Have Never Been Modern* (Cambridge: Harvard University Press) pp. 1-12.
- 22nd Feb. Escobar, A. 1999. "After Nature: Steps to an Anti-essentialist Political Ecology." *Current Anthropology* 40(1): 1-30 (<http://www.unc.edu/~aescobar/articles1engli.htm>).
- 27th Feb. Yoxen, E.1983. "The Life Industry," in *The Gene Business, Who should control biotechnology?* (London, Free Association Books), 1-56.
- 1st Mar. (i) Rabinow, P. 1996. "Artificiality and enlightenment: from sociobiology to biosociality," in P. Rabinow, *Essays in the Anthropology of Reason* (Princeton: Princeton University Press), 91-111; & (ii) Pollan, M. 1998. "Playing God in the Garden," *New York Times Magazine*, October 25.
- 6th Mar. Mitchell, T. 2002. "Can the Mosquito Speak", chapter from *Rule of Experts: Egypt, Techno-Politics, Modernity* (Berkeley, University of California Press) pp. 19-53.
- 8th Mar. Assignment on critical analysis (1) of readings due
- 8th Mar. Film

Human-Technology Interactions

- 13th Mar. Turkle, S. 1984. "Hackers: Loving the Machine for Itself," chapter 6 from *The Second Self: Computers And The Human Spirit* (New York: Simon and Schuster) pp. 197-233.
- 15th Mar. Johnson, J. (Bruno Latour). 1988. "Mixing Humans and Nonhumans Together: The Sociology of a Door-Closer," *Social Problems* 35 (3): 298-310.

- 20th Mar. Schivelbusch, W. 1986. *The Railway Journey: The Industrialization of Time and Space in the 19th Century* (Berkeley: University of California Press) pp. 113-49.
- 22nd Mar. Casper, M. 1994. "Reframing and Grounding Non-Human Agency," *American Behavioral Scientist* 37 (6): 839-56.

SPRING BREAK

- 3rd April. Biography of Technology assignment due
- 3rd April. Bordo, S. 1996. *Technologies of the Gendered Body* (Durham: Duke University Press), ch. 3, "On the Cutting Edge: Cosmetic Surgery and New Imaging Technologies", pp. 56-79.
- 5th April. Dumit, J. "A Digital Image of the Category of the Person: PET Scanning and Objective Self-Fashioning," in Gary Lee Downey and Joseph Dumit (ed) *Cyborgs and Citadels* (Santa Fe: School of American Research Press) pp. 83-102.

Technology and the War

- 10th April. Film
- 12th April. Mackenzie, D. 1989. "From Kwajalein to Armageddon? Testing and the Social Construction of Missile Accuracy," in David Gooding *et al* (ed) *The Uses of Experiment* (New York: Cambridge University Press) pp. 409-433.
- 17th April. Kaempffert, W. 1941. "War and Technology," *American Journal of Sociology* XLVI (4): 431-444
- 19th April. Viswanathan, S. "Atomic Physics: The Career of an Imagination," chapter from *Carnival for Science: Essays on Science, Technology and Development* (Delhi: Oxford University Press) pp. 146-201.
- 24th April. Virilio, P. 1989. *War and Cinema: The Logistics of Perception* (London: Verso), Preface (pp. 1-4), ch. 3 "Abandon All Hope, Ye Who Enter the Hell of Images" (pp. 31-51), and ch. 5 "The 'Fern Andra' Cinema" (pp. 52-60).
- 1st May. . De Landa, M. 1991. *War in the Age of Intelligent Machine* (New York: Swerve Editions), ch. 3. "Policing the Spectrum," pp. 179-231.

3rd May. Review

7th May. Final Assignment on critical analysis of readings due.