

***COGR 225D, HIGR 241, PHIL 209D, SOCG 255D.
Introduction to Science Studies, Part II***

Technology and Social Theory

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Outline

This course examines key work by social thinkers who have asked fundamental questions about the relationship between technology and social and political order, and who have held out the prospect of deep change in technical and social arrangements. The course aims to develop an understanding of a longstanding tradition of critical social thought about technology. My view is that we can better comprehend the issues dealt with in contemporary STS, and can do more (intellectually and publicly) with STS if we can contextualize our work within this vibrant tradition of critical social thought. The thinkers addressed in this course have asked questions such as: In what ways is technology not only enabling, but constraining? Who do our technological arrangements benefit and who do they oppress? Are industrial technologies and organizational forms inevitable and 'locked-in' or is a different 'modern' order possible? What would a liberatory technology look like? It is today absolutely clear that modern industrial society is deeply unsustainable in its relationship with the broader natural world. In what ways is this unsustainability built into our technologies and our modes of technological decision-making? What would an ecological technology and society be like and what obstacles would it need to overcome? What forms of thinking, reasoning, and feeling are necessary for imagining possibilities beyond our contemporary social and technological order?

Schedule

10 weeks of instruction

Tuesdays 9.30-12.20, HSS 3027.

Assessment:

Final essay: 90%

Class discussion and presentation: 10%

Essay assignment:

Write one essay: 20-25 pages (double-spaced). Worth 90% of grade.

Due by Thursday March 17 at 12 noon – in my office, or have time-stamped at Sociology Department front desk and place in my Sociology dept. mailbox. Note that Sociology Department main office closes at 12 noon.

Your essay *must*:

Critically compare the ideas on the relationship between technology and social and political order of two or more of the thinkers read during the quarter.

All students must hand in, in advance, an outline setting out the topic and approach they are planning for their essay. I will return feedback on the outline with a mark of Satisfactory or Unsatisfactory

An incomplete (i.e. extension) will only be granted if the request is made in advance of the paper due date, and if there are good reasons.

Outline – essay topic and one-page (double-spaced) outline – due in class, Week 5. The outline will be marked Satisfactory/ Unsatisfactory. The final paper will not be accepted unless I have previously returned to you your outline with a mark of Satisfactory.

Attendance policy.

Attendance at seminars is mandatory.

If you miss more than two seminars during the term, without prior permission or valid reason (medical, or family emergency) you may receive a failing grade for the course.

Class discussion and Presentations

You are expected to read all the texts listed under the topic for each week.

A group of students will lead each session (except for Week 1). They will :

- a. Prepare a set of questions before the session and distribute it by Monday.
- b. Present short reviews in class and lead discussion

Presentations and participation in class discussion will be worth 10% of the final grade.

Readings.

Background reading:

The following gives a useful overview of the subject:

Val Dusek, *Philosophy of Technology: An Introduction* (Oxford: Blackwell, 2006).

Available at Geisel Library, physical reserve.

Core readings

You are expected to read all the texts listed under the topic for each week.

Core readings are either books that are available from UCSD bookstore, or are chapter or articles available through SSH library electronic reserves:

<http://libraries.ucsd.edu/resources/course-reserves/index.html>

Certain texts may also be available on short loan from physical reserve at Geisel.

Books to Buy:

The following are available at UCSD Bookstore, and should be purchased

Jacques Ellul, *Technological Society* (Vintage, 1967)

Andrew Feenberg, *Heidegger and Marcuse: The Catastrophe and Redemption of History* (Routledge, 2005)

Marge Piercy, *Woman on the Edge of Time* (Fawcett, 1985)

Albert Borgmann, *Technology and the Character of Contemporary Life* (University of Chicago Press, 1987)

Web-CT

There is a web-CT site for the course – on which I may post certain additional readings and relevant materials.

<https://webctweb.ucsd.edu/webct/>

Schedule

Week 1: What is Technology?/ Overview of Course

Langdon Winner, “Do Artifacts Have Politics?” in idem, *The Whale and the Reactor: The Search for Limits in an Age of High Technology* (Chicago: University of Chicago Press, 1986), pp. 19-39.

Don Ihde, “The Historical-Ontological Priority of Technology Over Science” in idem, *Existential Technics* (Albany: State University of New York Press, 1983), pp. 25-46.

Week 2: Marx: The Machine and the Worker

Karl Marx, The ‘Fragment on Machines’ from the *Grundrisse*, trans. Martin Nicolaus (London: Penguin Classics, 1993), pp. 673-712.

Karl Marx, "Machinery and Large-Scale Industry" in *Capital: A Critique of Political Economy, Volume 1*, translated by Ben Fowkes (New York: Vintage Books, 1977), pp. 492-564.

Donald MacKenzie, "Marx and the Machine" *Technology and Culture* 25 (1984): 473-502.

Week 3: Liberatory Technics: Kropotkin, Mumford, Bookchin

Peter Kropotkin, "The Decentralisation of Industries," Chapter 1 of idem, *Fields, Factories and Workshops Tomorrow*, edited by Colin Ward (New York: Harper and Row, 1975).

Lewis Mumford, "Authoritarian and Democratic Technics," *Technology and Culture*, 5 (1) (Winter, 1964), pp. 1-8.

Lewis Mumford, "The Polytechnic Tradition: The Medieval Continuum, The Polytechnic Heritage, Technical Liberation, the Subversion of Polytechnics, The Technological Pool," in idem, *The Myth of the Machine: The Pentagon of Power* (NY: Harcourt Brace Jovanovich, 1970), 130-156.

Murray Bookchin, "Towards a Liberatory Technology" in idem, *Post-Scarcity Anarchism* (San Francisco: Ramparts Press, 1971), pp. 83-139.

Murray Bookchin, "The Social Matrix of Technology," in idem, *The Ecology of Freedom* (Palo Alto: California: Cheshire Books, 1982), 240-266.

Week 4: Jacques Ellul: Autonomous Technique

Jacques Ellul, *The Technological Society* (NY: Vintage, 1967), read chapter 1, section on "Situating the Technical" (pp. 3-22), and read all of chapters 2, 4 and 5.

Week 5: Technological Reason, Subjectivity, and History: Heidegger and Marcuse

Martin Heidegger, "The Question Concerning Technology," in idem, *The Question Concerning Technology and Other Essays*, trans. William Lovitt (NY: Harper and Row, 1977)

Herbert Marcuse, *One-Dimensional Man* (Boston: Beacon Press, 1964), chapters 1 and 6: "New Forms of Control" and "From Negative to Positive Thinking: Technological Rationality and the Logic of Domination".

Andrew Feenberg, *Heidegger and Marcuse: The Catastrophe and Redemption of History* (NY: Routledge, 2005), chapters 1-3.

Week 6: Technics for Sociality: Illich

Ivan Illich, *Tools for Conviviality* (NY: Harper and Row, 1973) -- read all.

Week 7: Technofeminism

Shulamith Firestone, *The Dialectic of Sex: The Case for Feminist Revolution* (NY: William Morrow and Co., 1970). Chapter 1, "The Dialectic of Sex," Chapter 10 "Feminism in an Age of Ecology," and "Conclusion: The Ultimate Revolution."

Marge Piercy, *Woman on the Edge of Time* (NY: Random House, 1976).

Week 8: Albert Borgmann: Focal Reality and the Device Paradigm

Albert Borgmann, *Technology and the Character of Contemporary Life*.

Week 9: Determinism, Contingency, and Social Construction

Robert Heilbroner, "Do Machines Make History?" *Technology and Culture* 8 (1967): 335-345.

Wiebe Bijker and Trevor Pinch, "The Social Construction of Facts and Artifacts," in Bijker et al, *The Social Construction of Technological Systems* (Cambridge, MA: MIT Press, 1989), 17-51.

Thomas P. Hughes, "Technological Momentum" in Merritt Roe Smith and Leo Marx, Does Technology Drive History (Cambridge, MA: MIT Press, 1994), 101-114.

Bruno Latour, "Where are the Missing Masses? The Sociology of a Few Mundane Artifacts" in Wiebe Bijker, *Shaping Technology/ Building Society: Studies in Sociotechnical Change* (Cambridge, MA: MIT Press, 1994), 225-258.

Paul David, "CLIO and the Economics of QWERTY," American Economic Review 75 (2) (1985): 320-337.

Sally Wyatt, "Technological Determinism is Dead; Long Live Technological Determinism" Chapter 7 in Edward Hackett, Olga Amsterdamska, Michael Lynch, and Judy Wajcman *The Handbook of Science and Technology Studies*, 3rd edition (Cambridge, MA: MIT Press, 2008).

Week 10: Technology and the Natural World

Barbara Adam, "Industrial Food for Thought: For Everything there is a Season and a Place," in Adam, *Timescapes of Modernity: The Environment and Invisible Hazards* (London: Routledge, 1998).

Barry Commoner, "The Technological Flaw," Chapter 9 of idem, *The Closing Circle: Nature, Man, Technology* (New York: Alfred A. Knopf, 1971), pp. 140-177.

John Bellamy Foster, *The Ecological Revolution* (New York: Monthly Review Press, 2009), Chapters 6 and 9: “The Jevons Paradox: Environment and Technology under Capitalism” and “Marx’s Theory of the Metabolic Rift: Classical Foundations for Environmental Sociology”

Alan Schnaiberg, *The Environment: From Surplus to Scarcity* (NY: Oxford University Press, 1980), Chapters 1 and 5.