

Philosophy of Technology (Phil. 107 Honors)

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Penn State University, Fall 2008

Office: 312 D Main; Office hours: Tues. & Thurs. 3-5:30 pm and by appointment

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Course Description:

This course involves a close examination of the philosophical aspects of technology and its connections to power, work, the environment and society. We will explore technology's relation to and effect upon the body, conceptions of the self and time, construction of social space and knowledge, and alteration of the physical world. We will look at the ways in which our machines and technological artifacts invite us into, build up or change our experiences and help to alter our images and ideas of ourselves. In the process, we will discuss specific technologies such as the written word and the printing press, clocks, hand tools, the phone, the computer, television, automobiles and genetic engineering as well as questions connected with surveillance, cyborgs, authority and death. We will look at attempts and movements to develop appropriate, ecological or human scale technology and to use technology to reintegrate us with or modify the existing environment. Students will be encouraged to set up and pursue final projects as they relate to their chosen fields of study. We will also try to work in a field trip or two into the class. A sampling of some of the issues and questions we will investigate include:

- Has the microwave oven helped to undermine family life by changing our eating habits?
- How have TVs, cars and computers altered the way that way we interact with the world?
- Are genetically modified organisms a threat to our food supply or a solution to famine?
- Do we control technology, or does it control us? Are technologies neutral or political?
- Do nonhuman animals use technology? What exactly is technology anyway?
- Should I be concerned about the technological invasion of privacy?
- Has any culture resisted a technological invention?
- How has technology changed our understandings of time, space, speed, death and sex?
- Do men and women relate to technology in different ways? If so, why?
- Does technology evolve like living organisms? Are we evolving with technology?
- Can machines acquire intelligence?
- Should we clone humans or nonhumans?
- Can I learn from films ("The Matrix," "Terminator," "Frankenstein") about technology?

Course Objectives:

- To better understand and appreciate philosophical issues related to our use of technology.
- To investigate ideas, arguments and beliefs concerning the best social role of technology.

- To share our questions, concerns and insights about technology with each other.
- To improve our ability to reason well and to think, read and write clearly.
- To experience and engage critically emerging technological processes.

Required Texts:

R. Volti, *Society and Technological Change*

B. McKibben, *Enough: Staying Human in an Engineered Age*

J. Mander, *In the Absence of the Sacred: The Failure of Technology and Survival of the Indian Nation*

E. Tenner, *Why Things Bite Back: Technology and the Revenge of Unintended Consequences*

M. Shelley, *Frankenstein*

Reserve readings and websites

Course Requirements:

- Two papers (approx. 5-6 pages each)
- Short homework assignments and class presentations
- Final project or paper (10 pages)
- Regular attendance (2 allowable absences), class preparation and participation

Grade Breakdown:

- Class attendance & participation 20%
- Short assignments & presentations 25%
- Paper #1 15%
- Paper #2 15%
- Final Project and Presentation 25%

Grade Distribution:

• A = 94-100 A- = 90-93 B+ = 87-89 B = 83-86 B - = 80-82
C+ = 77-79 C = 70-76 D = 60-69 F = below 59

A = outstanding achievement relative to the level necessary to meet course requirements.

B = achievement significantly above level necessary to meet course requirements.

C = achievement that meets course requirements in every respect.

D = achievement that is worthy of credit though it fails to fully meet course requirements.

F = work that does not merit credit because either it was completed at a low level of achievement or was not completed at all.

Course Policies

Readings:

You are expected to come prepared for class and to have read and thought about the assignment prior to arriving. Please always bring the appropriate text with you.

Exams and Papers:

Exams are to be taken at the time scheduled. Any papers or homework assigned are due on time. A penalty for lateness will be assessed, unless we have otherwise made a personal agreement about a due date.

Class attendance and participation:

Class attendance is required. You will be permitted two absences during the course of the semester, and no distinction will be made between excused and unexcused absences. If you arrive late or leave early you will not receive credit for attendance that day. Plan to stay for the entire class. Class participation will be considered as part of the final grade, though creativity, clarity and depth of insight in your contributions rather than mere outspokenness or verbal presence will be the most important considerations in weighing this factor. The “base grade” from which you can move up or down is a “B”. Please plan to arrive to class a few minutes early and to remain until class is dismissed so as to avoid disrupting class discussions or your classmates’ concentration.

Technology:

Arrange for Penn State Internet access. If you would rather use a home account, please have Penn State email forwarded to it. There will be times when we need to communicate about class via email. Please remember to turn off all cell phones, radios, CD players and pagers before coming to every class.

Academic Integrity:

Speaking with other members of the class about assignments outside of our meeting times is a positive approach for doing well in the course. It is very important, however, that you perform your own work and do not borrow writing, answers and research from another student or from any other source. Copying in part or whole from books, websites, student papers and other publications is considered plagiarism and, according to university policy, it is penalized by failure on the assignment or in the course. For the complete Penn State University Academic Integrity Statement, consult http://www.royercenter.psu.edu/resources/integrity_statement.htm

Students with Disabilities:

Penn State does not discriminate against students with documented physical or learning disabilities. If you have a disability-related need for modifications in this course, please contact Sharon Manco: 610-892-1461 (phone); 203A Main (office). Notification should occur by the end of the first week of the semester. For the PSU Disability Statement, see <http://www.equity.psu.edu/ods/>

Access to Electronic Reserve Material:

To locate, read, copy or print class material on electronic reserve, you should go to the PSU – Brandywine library page: <http://www.libraries.psu.edu/brandywine//> Under the Penn State shield there is a box headed SEARCH OUR COLLECTIONS, and in that box

there is a link to COURSE RESERVES. When you click on that link, you will be taken to a page that reads: STUDENTS. Click here for course reserves in the CAT. You will be asked to authenticate, supply your user ID and password, and then you can enter the system. In the boxes provided, you will supply the course name and/or faculty member (Macauley), and select "Brandywine." That will bring up all items on the course list with links to the text.

Course Schedule - Philosophy of Technology

<i>Dates</i>	<i>Topic and Reading Assignment</i>
<u>Week #1</u> Aug. 26 Aug. 28	<u>Introduction</u> <u>Questioning Technology</u> Read: Volti, <i>Society and Technological Change</i> , chap. 1 Mander, <i>In Absence of the Sacred</i> , ch. 1-3 (pp. 1-50)
<u>Week #2</u> Sept. 2 Sept. 4	<u>Theories of Technology</u> Read: Volti, <i>Society and Technological Change</i> , chap. 2 and 15 <u>Revenge Effects and Is Technology Neutral?</u> Read: Tenner, <i>Why Things Bite Back</i> , chap. 1 Winner, "Do Artifacts Have Politics?" (e-reserve)
<u>Week #3</u> Sept. 9 Sept. 11	<u>Natural Time, Technological Speed and Work</u> Read: Volti, <i>Society and Technological Change</i> , chaps. 8-10 Mander, <i>In Absence of the Sacred</i> , pp. 247-249; 254-55 <u>Sports and Technology</u> Read: Volti, <i>Society and Technological Change</i> , chap. 10
<u>Week #4</u> Sept. 16 Sept. 18	<u>Sports and Technology</u> Read: Volti, <i>Society and Technological Change</i> , chap. 11 <u>Television</u> PAPER #1 DUE Read: Volti, <i>Society and Technological Change</i> , chap. 12 Mander, <i>In Absence of the Sacred</i> , ch. 5 (pp. 75-96)
<u>Week #5</u> Sept. 23 Sept. 25	<u>Television</u> Read: Mander, <i>In the Absence of the Sacred</i> , ch. 6 (pp. 97-119) <u>Automobiles</u> Read: Tenner, <i>Why Things Bite Back</i> , pp. 333-342 Film: "Taken for a Ride"
<u>Week #6</u> Sept. 30 Oct. 2	<u>Automobiles</u> Read: Hawkins, "Reinventing the Wheels" (e-reserve) Frankel, "Coexisting with the Car" (e-reserve) <u>Cyberspace and the Internet</u> Read: http://www.amychaves.bizland.com/articles/cyberspa.htm
<u>Week #7</u> Oct. 7	<u>Computers</u> Read: Mander, <i>In the Absence of the Sacred</i> , chap. 4

- Tenner, *Why Things Bite Back*, chap. 8
 Berry, <http://www.tipiglen.dircon.co.uk/berrynot.html>
- Oct. 9 Computers and Artificial Intelligence **Project Proposal Due**
 Read: Tenner, *Why Things Bite Back*, chap. 9
 "The Turing Test" <http://cogsci.ucsd.edu/~asaygin/tt/ttest.html>
- Week #8
- Oct. 14 Privacy and Surveillance
 Read: Edgar, "Computers and Privacy" (e-reserve)
- Oct. 16 Tools of Destruction: Weapons
 Read: Volti, *Society and Technological Change*, chap. 13-14
- Week # 9
- Oct. 21 Medical Technologies **PAPER #2 DUE**
 Read: Volti, *Society and Technological Change*, pp. 110-120
 Tenner, *Why Things Bite Back*, chap. 2
- Oct. 23 Medical Technologies
 Read: Read: Tenner, *Why Things Bite Back*, chap. 3
- Week # 10
- Oct. 28 Genetic Engineering and Techno-bodies
 Read: McKibben, *Enough*, chap. 1 (pp. 1-65)
 Macauley, "Interview with Jeremy Rifkin" (handout)
- Oct. 30 Post-humans, Nanotechnology and Robotics
 Read: McKibben, *Enough*, chap. 2 (pp. 66-108)
 Mander, *In the Absence of the Sacred*, chap. 10 (pp. 178-193)
 Joy, "Why the Future Doesn't Need Us" (website)
<http://www.wired.com/wired/archive/8.04/joy.html>
- Week # 11
- Nov. 4 Biotechnology and Hyper-technologies
 Read: McKibben, *Enough*, chap. 3 (pp. 109-161)
 Mander, *In the Absence of the Sacred*, chap. 9 (pp. 161-177)
 Volti, *Society and Technological Change*, pp. 120-127
- Nov. 6 Energy, Technology and the Environment
 Read: Volti, *Society and Technological Change*, chap. 6
- Week # 12
- Nov. 11 Technology and the Environment
 Read: Read: Tenner, *Why Things Bite Back*, chap. 4-5
- Nov. 13 Biomimicry: Technology Imitating Nature
 Read: "Biomimicry" (handout)
 Film: "Biomimicry: Learning from Nature"
- Week # 13
- Nov. 18 Architectural Technology: Designing Better Buildings
 Read: Oberlin Environ. Studies <http://www.oberlin.edu/ajlc/ajlcHome.html>
 McDonough, "Redesigning Buildings" (reserve)
 Orr, "Architecture as Pedagogy" (reserve)

Nov. 20

Evaluating and Governing Technology

Read: Volti, *Society and Technological Change*, chap. 17

Tenner, *Why Things Bite Back*, chap. 12

Thanksgiving Break (no class on Nov. 25th and 27th)

Week #14

Dec. 9

Presentation of Student Projects

Dec. 11

Presentation of Student Projects

TBA

FINAL PROJECT DUE

Guidelines for Final Projects (Phil. 107 H)

Overview of Requirement:

Each student is required to work on, complete and present a final project for the course. This is an additional opportunity to make the material and course meaningful to you and your interests. The project should reflect a solid and significant engagement with an issue of your choosing that relates to technology *and* philosophy and involves some extended thinking, planning, research, action and writing. You will be asked to submit a proposal for the project to be approved by me. You may submit this proposal at any time up to and including the due date specified on the syllabus.

The final project can be an in-depth research paper (e.g., an argumentative, analytical or critical paper of about 10 pages in length), but it does not necessarily have to be one. One could explore, for example, in greater detail a subject that we took up in class or a topic that we did not have time to consider. The project could, however, involve campus or community action; outdoor activity; a film documentary, construction or design of new technology; an education effort; and so forth. In all cases, however, you should guide the project by issues, ideas and positions as they relate to technology and philosophy. The results should also be documented by some kind of written material (summary, analysis, discussion etc.).

Final Project Proposal:

You are required to submit a short *type written* proposal (approximately 1-2 pages in length) with the following information:

- a. Project thesis statement – projected purposes and goals
- b. Brief description of the planned or projected project
- c. Summary of likely methods or approaches
- d. Selected bibliography or sources

Due Dates and Grading:

- Project due: At the time the final exam is scheduled (to be announced)
- Proposal due: October 9th (or before)
- Presentations: Final week of the semester
- Grading: 25% of course grade (includes proposal and presentation)

Philosophy of Technology – Other Relevant Works

You may find some of these sources helpful to you as you investigate issues and ideas related to the philosophy of technology and work on class papers and assignments.

1. Langdon Winner, *The Whale and the Reactor*
2. Neil Postman, *Technopoly*
3. Morton Winston and Ralph Edelbach, eds., *Society, Ethics, and Technology*.
4. Langdon Winner, *Autonomous Technology*
5. Martin Heidegger, *The Question Concerning Technology*
6. Jacques Ellul, *The Technological Society*
7. Albert Borgmann, *Technology and the Character of Contemporary Life*
8. David Noble, *The Religion of Technology*
9. Andrew Feenberg, *Questioning Technology*
10. Donna Harroway, "Cyborg Manifesto"
11. Marshall McLuhan, *Understanding Media*
12. Lewis Mumford, *Technics and Civilization*
13. Carl Mitcham, *Thinking Through Technology*
14. Ivan Illich, *Tools for Conviviality*
15. Rothenberg, *Hand's End: Technology and the Limits of Nature*
16. Richard Lanham, *The Electronic Word: Democracy, Technology and the Arts*
17. Janine Benyus, *Biomimicry: Innovation Inspired by Nature*
18. Jeremy Rifkin, *The Biotech Century*
19. Robert Scharff and Val Dusek, eds. *Philosophy of Technology*