

**REED COLLEGE
WINTER ALUMNI COLLEGE 2010
COURSE SYLLABUS**

This reading list is divided into five sections. The first section is a list of readings for all attendees. The subsequent sections provide the lists for the Relationship (Itard), Health (Pasteur), Food (Escoffier), and Environment (Hausmann) subject areas, respectively.

I. GENERAL READINGS

David Nye, *Technology Matters*. Cambridge: MIT Press, 2006. Read Chapters 1 and 2 (pp 1-31). Note: this entire book will be assigned for the Summer Alumni College.

Vannevar Bush, "As We May Think," *The Atlantic Monthly*, August, 1945
<http://www.diigo.com/annotated/a040300169e6377b5cc920eb7f66c7e8>

Vannevar Bush, who was in charge of the USA's wartime scientific effort (including, among other things, the Manhattan Project and the creation of the first electronic digital computer), was concerned about the need for new information tools for the postwar world. In this visionary essay, written decades before the invention of the transistor, Bush imagined a machine that used telephone connections and specially marked paper cards and microfilm to create an extension of the human mind, which he called "the Memex."

Howard Rheingold, "Virtual Worlds Research: Past, Present & Future," *Whole Earth Review*, Winter, 1987 <http://journals.tdl.org/jvwr/article/view/293/247>

This is the reprint of the original article that coined the term "virtual community," as far as anyone since has been able to tell. It's clearly the voice of a younger and more enthusiastic participant in an online social scene six years before the Mosaic browser made the World Wide Web the hot new technology of the 1990s. If you want a chance to interrogate the author of a primary source text, here's your chance.

Trebor Scholz, "The Participatory Turn in Social Life Online," two 2007 presentations available at <http://www.collectivate.net/journalisms/2007/9/26/the-participatory-turn-in-social-life-online.html>

List of short items on technology and health compiled by Laura Leviton for your convenience and to be found at http://web.reed.edu/alumni/year-round_AC.html#readings

Laura C. Leviton, Scott D. Rhodes, and Carol Chang, "Public Health: Policy, Practice, and Perceptions." Excerpt of Chapter 4 in Anthony R. Kovner, James R. Knickman (Eds), *Health Care Delivery in the United States* (9th Edition), 2007. NY: Springer.

Joseph Malines, "The Fence or the Ambulance." In Hazel Felleman, (Ed.), *The Best Loved Poems of the American People*. Doubleday, 1936.

<http://www.nypartnersinoralhealth.com/aboutus/poem.html>

Paul Plsek, "Why Innovation Is Important." From the *Innovations Exchange* of the Agency for Healthcare Research and Quality

<http://www.innovations.ahrq.gov/content.aspx?id=2035>

- Kaiser Family Foundation, "How Changes in Medical Technology Affect Health Care Costs." <http://www.kff.org/insurance/snapshot/chcm030807oth.cfm>
- PBS, "Unnatural Causes: Is Inequality Making Us Sick?" <http://www.unnaturalcauses.org/assets/uploads/file/primers.pdf>
- Cochrane Collaboration, "The Cochrane Collaboration: The Reliable Source of Evidence in Health Care." <http://www.cochrane.org>.
- P.C. Gøtzsche and M. Nielsen, "Screening for breast cancer with mammography." A sample of a Cochrane Library "plain language summary." *Cochrane Database of Systematic Reviews*. <http://www.cochrane.org/reviews/en/ab001877.html>

National Academy of Science, "Valuing Ecosystem Services," 2005. Read the Executive Summary. <http://www.nap.edu/openbook.php?isbn=030909318X>

Pamela Ronald, "Making Rice Disease-Resistant," *Scientific American*, Nov. 1977, pp. 100-107. http://indica.ucdavis.edu/publication/reference/Ronald_Scientific_American_1997.pdf/view

Pamela Ronald, "The new organic: The future of food may depend on an unlikely marriage: organic farmers and genetic engineering." *Boston Globe* op-ed, 16 March 2008. <http://indica.ucdavis.edu/news/filestorage/The%20new%20organic%20-%20The%20Boston%20Globe.pdf/view> This is an opinion piece by Pam Ronald laying out her central thesis from her book (Tomorrow's Table), arguing for a fusion of organic management practices, and genetic engineering (for example, to yield varieties that are disease resistant). It's well done, and quick. It appeared in the Boston Globe, and is freely available from their website, as well as from Pam's lab site:

II. ITARD CONFERENCE (HOW WE RELATE)

J.C.R. Licklider, "Man-Computer Symbiosis," *IRE Transactions on Human Factors in Electronics*, volume HFE-1, pages 4-11, March 1960

<http://www.diigo.com/annotated/326b7dcd8b7069255f189a6e44b3008b>

A vital link between Vannevar Bush's Memex (above) and Douglas Engelbart's thinking machines (below) was this 1960 vision of a future in which "human brains and computing machines will be coupled together very tightly." Just as Bush saw in his own work as a grand coordinator of applied research the need for better information-navigation techniques in order to make practical use of the knowledge that scientific specialties had started producing at a prodigious rate, Licklider saw in his own work as a scientist the need for better information-navigation techniques "in order to get into position to think."

Donald Engelbart, "Augmenting Human Intellect: A Conceptual Framework," *Stanford Research Institute Report AFOSR-3233*, October, 1962

<http://www.diigo.com/annotated/59779c2564a10e846fcbe7daa6e26ada>

This paper is fundamental. It's about how humans think together, not just about a new kind of computing. Keep in mind that Engelbart was starting from scratch, explaining to a world in which the computer business and computer scientists saw computers as strictly meant for scientific computation and business data processing. In 1968, in San Francisco, Engelbart and his team demonstrated a new method of using computers that introduced most of the components of

today's personal computers -- the mouse and point-and-click, word processing, hyperlinks, multimedia communication -- in a demonstration that has come to be known as the mother of all demos.

http://en.wikipedia.org/wiki/The_Mother_of_All_Demos

The film of the original demo is available as a Youtube video

<http://www.youtube.com/watch?v=JfIgzSoTMOs>

Suggested interesting videos

Video first-hand account of countercultural origins of cyberculture (in two parts).

<http://blip.tv/file/787638> and <http://blip.tv/file/805566>

John Coate talks about how his experiences on a commune in the 1960s led into his experiences as one of the first employees of The Well, a pioneering virtual community.

Video of a 1989 party at The Well <http://blip.tv/file/860833/>

III. PASTEUR CONFERENCE (OUR HEALTH CARE)

Please choose 1 Medical Care option and 1 Public Health option

Medical Care: Choose 1 of 3 options

Option 1: Quality (17 pages)

- a. Robert Wood Johnson Foundation Research Highlight: "All Americans at Risk of Receiving Poor Quality Health Care." March, 2006
http://www.rwjf.org/files/publications/other/asch_nejm_20060316.pdf?gsa=1 **AND**
- b. Atul Gawande. "Testing, Testing." *New Yorker*, December 14, 2009, pp 34-41.
http://www.newyorker.com/reporting/2009/12/14/091214fa_fact_gawande **AND**
- c. David Leonhardt. "Dr. James Will Make It Better." *New York Times Magazine*, November 8, 2009 pp 32-47.
<http://www.nytimes.com/2009/11/08/magazine/08Healthcare-t.html?ref=magazine> **AND**
- d. Agency for Healthcare Research and Quality Press Release: "Quality Improvement Campaign Increases Use of Steroids to Reduce Complications of Preterm Births in Pregnant Women." January 5, 1999
<http://www.ahrq.gov/news/press/pr1999/lobrpr.htm>

Option 2: Drugs and Medical Devices (20 pages) Robin J. Strongin, Ron Geigle and Victoria A. Wicks. "Pharmaceuticals." Chapter 11 in Anthony R. Kovner, & James R. Knickman (Editors), *Health Care Delivery in the United States* (9th Edition), 2007. New York: Springer, pp 298-318.

Option 3: Electronic Information (16 pages – *but explore the Changemakers and Sermo sites! They let you peek around...*)

- a. Robert H. Miller and Ida Sim, "Physicians' Use of Electronic Medical Records: Barriers and Solutions. *Health Affairs*, 23(2), pp.116-126. Accessible at <http://www.rwjf.org/pr/product.jsp?id=14693> **AND**
- b. Sanjeev Arora, "Project ECHO: Knowledge Networks for the Treatment of Complex Diseases in Remote, Rural, Underserved Communities." Winner of Ashoka

Changemakers competition, *Disruptive Innovations in Health and Health Care: Solutions People Want*. <http://www.changemakers.com/node/1036> -- be sure to click to “unhide” the different parts of the story, e.g., impact, sustainability
AND

- c. “About Sermo.” <http://www.sermo.com/about/introduction> and <http://www.sermo.com/features/overview>

Public Health: Choose 1 of 3 options**Option 1: Physical Activity and Obesity (12 pages)**

- a. Healthy People 2010:
http://www.healthypeople.gov/Document/html/uih/uih_4.htm#physactiv **AND**
- b. Active Living Research, “Active Transportation: Making the Link from Transportation to Physical Activity and Obesity.”
http://www.activelivingresearch.org/files/ALR_Brief_ActiveTransportation.pdf **AND**
- c. Healthy Eating Research, “The Negative Impact of Sugar-Sweetened Beverages on Children’s Health.”
http://www.healthyeatingresearch.org/images/stories/her_research_briefs/her_ssb_synthesis_091116.pdf

Option 2: Injury (15 pages)

- a. Healthy People 2010:
http://www.healthypeople.gov/Document/html/uih/uih_4.htm#injviol **AND**
- b. Wikipedia. “Road Traffic Safety.” At
http://en.wikipedia.org/wiki/Road_Traffic_Safety **AND**
- c. National Highway Traffic Safety Administration. “Safe Communities: An Approach to Reduce Traffic Injuries”
<http://www.nhtsa.gov/staticfiles/DOT/NHTSA/Safe%20Communities/Articles/PDF%20Files/approach.pdf>

Option 3: Environmental Quality (15 pages)

- a. Healthy People 2010:
http://www.healthypeople.gov/Document/html/uih/uih_4.htm#environqual **AND**
- b. Centers for Disease Control and Prevention. “The National Environmental Public Health Tracking Network: Bridging the Gap in Environmental Health Information” www.cdc.gov/phn/spotlight/epht.html **AND**
- c. The Pew Environmental Health Commission. “America’s Environmental Health Gap: Why the Country Needs a Nationwide Health Tracking Network” -- first 10 pages only unless you want to read more.
<http://healthyamericans.org/reports/files/healthgap.pdf>

IV. ESCOFFIER CONFERENCE (HOW WE EAT)

And here's a nice piece from FAO on biofuels. It's the introductory chapter to one of their big reports, but it's intended as an overview of the key messages, and is aimed at a general audience. <ftp://ftp.fao.org/docrep/fao/011/i0100e/i0100e01.pdf>

For people who are interested, it can be kind of fun, now that the maize genome is done, to wander over and look at the tools for navigating the beast. Here's a link into a synteny viewer (comparing maize and rice). We know so much about these plant we eat that we can just blithely compare their genomes over the web, and we know so little, none of us can say what all of this sequence means.

http://www.maizesequence.org/Zea_mays/Location/Synteny?r=1:8001-18000

V. HAUSSMANN CONFERENCE (HOW WE LIVE)

National Academy of Science, “Valuing Ecosystem Services,” 2005. Read the case study that is in Chapter 5. <http://www.nap.edu/openbook.php?isbn=030909318X>

Ted Williams, “Sin City Goes Dry,” *Audubon*, March-April 2007, pp. 92-100.
http://web.reed.edu/alumni/year-round_AC.html#readings