

HTS 6002

Proseminar in the History of Technology

Spring Semester, 2015

Thursdays, 3.05 – 5.55pm

“Identifies major areas of interest in the history of technology and introduces a variety of approaches to the discipline”

Prof. John Krige

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(Office hours Thursday 12.30-2.30pm)

GRADING:

Participation in class, production of weekly bullet-points and regular presentations: 20%

Take-away paper: 80%

The take-away paper will be distributed on April 24, and must be submitted no later than 6pm on May 1.

January 8.

General discussion and introduction

January 15. Historical Overview

Joel Mokyr, *The Lever of Riches. Technological Creativity and Economic Progress* (New York: OUP, 1990) (exclude part IV if you are pressed)

January 22. Standardization and Mass Production (I)

Merritt Roe Smith, *Harpers Ferry Armory and the New Technology* (Ithaca: Cornell University Press).

January 29. Standardization and Mass Production (II)

David A. Hounshell, *From the American System to Mass Production 1880 – 1932. The Development of Manufacturing Technology in the United States* (John Hopkins University Press, 1984), chapters 1-4.

February 5. Standardization and Mass Production (III)

David A. Hounshell, *From the American System to Mass Production 1880 – 1932. The Development of Manufacturing Technology in the United States*, chapters 5-8.

February 12. Some ‘theory’: Technological Determinism, Path Dependence and Social Constructivism

Merritt Roe Smith and Leo Marx (eds), *Does Technology Drive History? The Dilemma of Technological Determinism* (MIT Press, 1998), chapters by Roe Smith, Hughes, Williams, Marx, Staudenmaier.

Paul David, “Clio and the Economics of QWERTY,” *The American Economic Review*, 5:2 (1985), 332-337.

Wiebe E. Bijker, Thomas P. Hughes and Trevor Pinch (eds), *The Social Construction of Technological Systems* (Cambridge: MIT Press, 1998), ‘General Introduction’, and articles by Pinch and Bijker, and Hughes.

February 19. American Technological Prowess

Thomas P Hughes, *American Genesis. A History of the American Genius for Innovation* (Penguin Books, 1990), excluding chapters 6 and 7 if you are pressed.

February 26. Infrastructural Technologies: Power

Thomas Hughes, *Networks of Power. Electrification in Western Society 1880-1930* (Johns Hopkins University Press, 1983), Introduction, Chapters 1, 2, 7-10.

March 5. Science, Technology and the Cold War State

Vannevar Bush, *Science. The Endless Frontier* (first published 1945: multiple editions) (provided by JK).

Aaron L. Friedberg, *In the Shadow of the Garrison State* (Princeton University Press), chapter 8 (provided by JK)

Joseph V. Kennedy, "The Sources and Uses of U.S. Science Funding," *The New Atlantis*, Summer 2012, 3-20 (provided by JK)

John Krige, "Diplomacy, Foreign Policy Post 1945," in Hugh Slotten, ed, *The Oxford Encyclopedia of American Scientific, Medical and Technological History* (New York, OUP, 2013) (provided by JK)

March 12. A Critique of the Linear Model

Philip Scranton, "Technology, Science and American Innovation," *Business History*, 48:3 (2006), 311-331.

David Edgerton, "The 'Linear Model' did not Exist: Reflections on the History and historiography of Science and Research in Industry in the Twentieth Century," in Grandin, Wormbs and Widmalm (eds), *The Science-Industry Nexus. History, Policy Implications* (New York: Watson, 2004), 31-57 and Hounshell's reply (provided by JK).

Chalmers W. Sherwin and Raymond S. Isenson, "Project Hindsight: A Defense Department Study of the Utility of Research," *Science* 156:3782 (June 1967), 1571-1577.

Peter Thompson, "TRACES: Basic Research Links to Technology Appraised," *Science* 163:3865 (January 1969), 374 -375.

March 19. MIDTERM BREAK

March 26. New Modes of Knowledge Production

Michael Gibbons et al, *The New Production of Knowledge. The Dynamics of Science and Research in Contemporary Societies* (SAGE 1994)

Philip Mirowski, *Science Mart. Privatizing American Science* (Harvard University Press, 2011), chapters 1 and 6. (Ebook)

April 2. Science, Technology and the National Security State

Linda Weiss, *America Inc.? Innovation and Enterprise in the National Security State* (Ithaca: Cornell University Press, 2014)

April 9. Technology and Use

David Edgerton, "From Innovation to Use: Ten Eclectic Theses on the Historiography of Technology," *History and Technology* 16:2 (1999), 111-136.

David Edgerton, *The Shock of the Old. Technology and Global History Since 1900* (Oxford University Press, 2007).

Nellie Oudshoorn and Trevor Pinch, *How Users Matter. The Co-Construction of Users and Technology* (MIT Press, 2003). Introduction (provided by JK)

April 16. Domestic Technology

Ruth Schwartz Cowan, *More Work for Mother. The Ironies of Household Technology from the Open Hearth to the Microwave* (Basic Books, 1983), chapters 1, 4, 6-8.

Ruth Oldenziel and Karin Zachmann, *Cold War Kitchen. Americanization, Technology and European Users* (MIT Press: 2009). (SELECT CHAPTERS)

Sue Bowden and Avner Offner, "Household Appliances and the Use of Time: the United States and Britain Since the 1920s," *Economic History Review* XLVII :4 (1994), 725-748.

April 23. The Transnational Turn

Bayly et al, "AHR Conversation: on Transnational History," *American Historical Review*, 111 (2006), 1441-1464.

Erik Van der Vleuten, "Towards a Transnational History of Technology: Meanings, Promises, Pitfalls," *Technology and Culture*, 49:4 (2008), 974-994.

Asif Siddiqi, "Competing Technologies, National(ist) Narratives, and Universal Claims: Towards a Global History of Space Exploration," *Technology and Culture*, (2010), 425-443.

Zuoyue Wang, "Transnational Science During the Cold War," *Isis*, 101 (2010), 367-377.

John Krige, "Hybrid Knowledge: The Transnational Coproduction of the Gas Centrifuge for Uranium Enrichment in the 1960s," *British J. for the History of Science*, 45:3 (2012), 337-357.

John Krige, "Embedding the National in the Global: US-France Collaboration in Space in the 1960s", in N. Oreskes and J. Krige, eds, *Nation and Knowledge. Science and Technology in the Global Cold War* (provided by JK)