Hist 191l – Sem1
Tiago Saraiva
Spring 2008

Sciences and the State(s) in the Twentieth Century

In this course we will discuss the changing relationship between scientific activity and the State in the twentieth century. We will be interested in exploring both how science production was shaped by the State and how it shaped State configurations. How did the sciences answered to State demands and how did these demands determined the kind of scientific research undertaken? What was the role of laboratories in building the State and enlarging its scope? The seminar will have a clear chronological perspective but it will also offer a global look by paying attention to different State formations in different geographical settings: the Nazi State, the Soviet Union, Cold War US, Post-Colonial States (India, Latin-America), the Regulatory State…

Participation

This course is a seminar, meeting for 3 hours once a week. As such, its success depends on the quality of the discussion and interaction among the participants. This in turn depends on your doing the reading—and doing it carefully—before class.

Presentations

Each week, students will give presentations and guide a substantial portion of the discussion. In some cases, pairs of students will do these presentations. Presenters will guide us through the reading, and they will assist us in analyzing, interpreting, and framing questions about the texts.

Written Assignments:

Students will submit one-page reading-response papers weekly.

The final paper will be 12 to 15 pages and will be submitted at the end of 10th week. Topics will be approved by week five.

Readings:

The Reader will be available at Course Reader Material, 1137 Westwood Blvd. They will also be available as pdf files on the course website.

Grading:

Participation:	30%
Presentation:	20%
One-page reading responses:	20%

Final paper: 30%

Week1

Introduction: Science, State, Nationalism, Ideology

David Edgerton, *The Shock of the Old. Technology and Global History Since 1900*, Oxford University Press, 2007, pp. 103-159

Dominique Pestre, "Science, Political Power and the State", in John Krige & Dominique Pestre, *Science in the Twentieth Century*, Amsterdam: Harwood Academic Publishers, 1997, pp. 61-75

Theodore M. Porter and Dorothy Ross (eds.), *The Modern Social Sciences, Vol. 7 of The Cambridge History of Science*, Cambridge University Press, chapters 30, 31 and 34.

Mark Walker (ed.) *Science and Ideology. A comparative history,* London: Routledge, 2003, pp, 1-16; 35-65.

Week2

Science and Government in the United States from the Progressive Movement to the New Deal

Michael Adas, *Dominance by Design. Technological Imperatives and America's Civilizing Mission*, Cambridge, Mass: Belknap, 2006, pp. 185-216

Thomas P. Hughes, American Genesis, *A Century of Invention and Technological Enthusiasm, 1870 -1970*, New York: Viking, 1989, pp. 96-137; 353-442

Ronald Kline, "Construing 'Technology' as 'Applied Science': Public Rhetoric of Scientists and Engineers in the United States, 1880-1945", *Isis*, 1995, *86*: 194-221

Week3

Nazi Big Science and Technology: Rockets, Bombs and Planes

Walter E. Grunden, Mark Walker and Masakatsu Yamazaki, 'Wartime Nuclear Weapons Research in Germany and Japan', *OSIRIS* 2005, *20*: 107-130.

Burghard Ciesla and Helmuth Trischler, 'Legitimation through use. Rocket and aeronautic research in the Third Reich and the USA', in Mark Walker (ed.) *Science and Ideology. A comparative history,* London: Routledge, 2003 pp. 156-185.

Michael J. Neufeld, *Von Braun, Dreamer of Space, Engineer of War*, New York: Knopf: 2007, 89-114; 135-166.

Week 4

Building the Nazi Landscape

Michael Thad Allen, "Modernity, the Holocaust, and Machines without History", in Michael Thad Allen and Gabrielle Hecht (eds.), *Technologies of Power, Essays in Honor of Thomas Parke Hughes and Agatha Chipley Hughes,* Cambridge, Mass: MIT Press, 2001, pp. 175-214.

Gotz Aly and Susanne Heim, *Architects of Annihilation. Auschwitz and the Logic of Destruction*, London: Weidenfeld & Nicolson, 2002. 1-9; 253-282.

David Blackbourn, *The Conquest of Nature: Water, Landscape, and the Making of Modern Germany*, New York: Norton, 2006, pp. 251-309.

Week5

Science and the Soviets

Nikolai Krementsov, "Big Revolution, Little Revolution: Science and Politics in Bolshevik Russia", *Social Research*, 2006, *73*: 1173 - 1204

Paul R. Josephson, *New Atlantis Revisited. Akademgorodok, The Siberian City of Science*, Princeton, NJ: Princeton University Press, 1997, pp.163-203

Richard Beyler, Alexei Kojevnikov, Jessica Wang, "Purges in Comparative Perspective: Rules for Exclusion and Inclusion in the Scientific Community under Political Pressure" *Osiris*, 2005, *20*: 23-48.

Week6

Cold War Science in the United States

Jessica Wang, *American Science in an Age of Anxiety. Scientists, Anticommunism, and the Cold War*, Chapel Hill: University of North Carolina Press, 1999, pp. 1-84. Introduction, Chapters 1 & 2.

Robert Kargon and Stuart Leslie, "Imagined Geographies: Princeton, Stanford and the Boundaries of Useful Knowledge in Postwar America", *Minerva,* 1994, *32*: 121-143.

David Kaiser, "The Postwar Suburbanization of American Physics", *American Quarterly*, 2004, *56*: 851-888.

Martin J. Collins, *Cold War laboratory: RAND, the Air Force, and the American state, 1945-1950,* Washington, D.C. : Smithsonian Institution Press, 2002.

Week7

Science & Technology and the Indian Postcolonial State

Itty Abraham, *The Making of the Indian Atomic Bomb,* London: Zed Books, 1998, pp. 34-112, Chapters 2 & 3

Deepak Kumar, "Reconstructing India: Disunity in the Science and Technology for Development Discourse, 1900-1947" *Osiris*, 2000, *15*: 241-257

Stuart Leslie and Robert Kargon, "Exporting MIT: Science, Technology, and Nation-Building in India and Iran", *Osiris*, 2006, *21*: 110-130

Week8

Science for Development in Latin America

Hebe Vessuri, "The institutionalization process", in Jean-Jacques Salomon, Francisco R. sagasti, and Celine Sachs-Jeantet (eds), *The uncertain quest: Science, technology, and development*, Tokyo/New York/Paris: United Nations University Press, 1994, pp. 168-200

Marcos Cueto, Cold War, Deadly Fevers. Malaria Eradication in Mexico, 1955-1975, Baltimore: Johns Hopkins University Press, 2007, pp. 70-158, Chapters 1, 3, & 4

Emanuel Adler, *The Power of Ideology. The Quest for Technological Autonomy in Argentina and Brazil*, Berkeley: UC Press, 1987, pp. 103-150, Chapters 5 & 6

Week9

Science in Postwar Europe: Rebuilding National States, Inventing the European Union

Gabrielle Hecht, "Political Designs: Nuclear Reactors and National Policy in Postwar France", *Technology and Culture*, 1994, *35*: 657-685.

Ruth Oldenziel, Adri Albert de la Bruheze, and Onno de Wit, "Europe's Mediation Junction: Technology and Consumer Society in the 20th Century", *History and Technology*, 2005, *21*: 107-139

John Kriege, *American Hegemony and the Postwar Reconstruction of Science in Europe*, Cambridge, Mass: MIT Press, 2006, pp. 1-56

Helmut Trischler and Hans Weinberger, "Engineering Europe: Big Technologies and Military Systems in the Making of 20th Century Europe", *History and Technology*, 2005, *21*: 49-83.

Week 10

Commercialization of Science and State Configurations at the beginning of the XXIst century

Jean-Paul Gaudillière, "Science, Technology, and Globalization: Globalization and Regulation in the Biotech World: The Transatlantic Debates over Cancer Genes and Genetically Modified Crops", *Osiris*, 2006, 21: 251–272.

M. Norton Wise, "Thoughts on the Politicization of Science through Commercialization", *Social Research* 2006, *73*: 1253-1272

Chris Mooney, The Republican War on Science, New York, pp. 78-120, 224-255, Chapters 7, 8, 14, Epilogue