

History 180c

Cultural History of 20th Century Science and Technology: the Triple Helix

<http://www.sscnet.ucla.edu/08S/hist180c-1/>

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Lectures will be held Tuesdays/Thursdays 2-3:15pm in Bunche 3156

Office Hours: Tuesdays/Thursdays 3:30-5pm at 5286 Bunche

Cultural History of the "Triple Helix" [universities/industry/government] in 20C Science, Technology, and Medicine

We will explore the intersection of universities, industry, and government as a site for making knowledge that emerged worldwide during the twentieth century. Cases include aerospace, pharmaceuticals, secret codes, marketing, weapons, area studies, testing, computing, graphics technologies. These practices have powerfully reshaped universities such as UCLA. We will examine how these sites changed during the twentieth century. Science students are welcome, as are students in all other fields; inter-disciplinarity will strengthen the class. Graduate students are also welcome.

Tues/Thur 1/3 Apr "Triple Helix" as a site for making knowledge

Tues/Thur 8/10 Apr 20c Universities and knowledge making

10 April Guest Lecturer: Dr. Helena Pettersson,
Dept of Culture & Media, Umea University, Sweden

<http://www.umu.se/kultmed/personal/pettersson/helena.html>

Tues/Thur 15/17 Apr Governments, Industries, think tanks, and knowledge making

Tues/Thur 22/24 Apr Where are the people in knowledge making?

Tues/Thur 29 Apr/1May case studies: weapons, aerospace, and space

Tues/Thur 6/8 May case studies: area/transnational studies

Tues/Thur 13/15 May case studies: "big sciences"

Tues/Thur 20/22 May case studies: computing technosciences

Tues/Thur 27/29 May case studies: pharmaceuticals and biomed technosciences

Tues/Thur 3/5 June case studies: environmental technosciences; closing themes

REQUIREMENTS FOR THE COURSE:

1. Attendance at ALL classes.

Extensive information about assignments will ONLY be given in class.

2. A minimum of 100 pages of reading from research journals per week

3 Total of twenty-five pages of analytic writing

4. There are no examinations.

See course webpage for links about

1. Analytic reading and writing

2. What is a research journal?

Writing Assignments:

Extensive information about writing assignments will be given in class

[not on the website, not on email, and not in office hours]
Six-page analytic reviews of your reading are due at the beginning of class
Thursday 17 April
Thursday 8 May
Thursday 29 May
Seven-page triple-helix/mode 2 analysis of a case study topic
Thursday 12 June

"Mode 2" and the "Triple Helix" Hypotheses

These webpages below include extensive information on the "Mode 2" and the "Triple Helix" hypotheses; both describe/explain new ways of making knowledge at the intersection of universities-industry-government.

Helga Nowotny and Michael Gibbons developed the Mode Two approach;
Loet Leydesdorff and Henry Etzkowitz developed the Triple Helix ideas.
The fullest pages are those of Loet Leydesdorff and Helga Nowotny.

Loet Leydesdorff

Amsterdam School of Communications Research (ASCoR)
Kloveniersburgwal 48, 1012 CX Amsterdam, The Netherlands

<http://www.leydesdorff.net>
<http://www.chem.uva.nl/sts/loet/index.htm>
<http://listserv.surfnet.nl/archives/th-1.html>
<http://www.leydesdorff.net/th>

Henry Etzkowitz

Science Policy, State University of New York at Purchase
<http://www.mindspring.com/~cwjordan/etzkowitz.html>

Helga Nowotny

Society in Science: The Branco Weiss Fellowship
Swiss Federal Institute of Technology [ETH Zentrum], Zurich
<http://www.nowotny.ethz.ch/>

At this page above you can access some of her recent articles, such as
"Democratising expertise and socially robust knowledge," *Science and Public Policy*, vol. 30, no. 3, June 2003, Surrey, 151-156.

<http://www.nowotny.ethz.ch>

"Re-Thinking Science: Mode 2 in Societal Context," (with Peter Scott and Michael Gibbons). (2004, forthcoming) In: *Technology, Innovation and Knowledge. Management Book Series, Vol. 2.: Knowledge Creation, Diffusion and Use in Innovation Networks & Clusters: A Comparative Systems Approach Across the U.S., Europe and Asia.* Greenwood Publishing Group Praeger Books, USA.

At the webpage below see a description of Nowotny's work by Rob Hagendijk, International School for Humanities & Social Sciences, Amsterdam, when Helga was awarded the John Desmond Bernal Prize by the Society for Social Studies of Science [4S]

http://www.nowotny.ethz.ch/aktivitaeten_en.html

Michael Gibbons

Secretary General of the Association of Commonwealth Universities

<http://www.kcl.ac.uk/175/biogs/gibbons.html>

http://www.oecd.org/document/30/0,2340,en_21571361_23918823_33622302_1_1_1_1_00.html

Reading Assignments

Week of 1/3 April: Triple Helix & Mode Two Hypotheses

1. Henry Etzkowitz & Loet Leydesdorff, "The Endless Transition: A 'Triple Helix of University-Industry-Government Relations,' in a special issue of Minerva [Vol. 36 (1998), pp. 203-288] 75pages Access at <http://users.fmg.uva.nl/lleydesdorff/th2/index.htm>

2. Helga Nowotny, Peter Scott; Michael Gibbons, "Introduction: 'Mode 2' Revisited: The New Production of Knowledge," Minerva { Vol. 41, No. 3 (September, 2003), pp. 179-194], 13 p.
Access Mode2.pdf at course website

3. Marc Audétat, "Re-Thinking Science, Re-Thinking Society: Review of **Re-Thinking Science: Knowledge and the Public in an Age of Uncertainty** by Helga Nowotny; Peter Scott; Michael Gibbons," Social Studies of Science [Vol. 31, No. 6 (Dec., 2001), pp. 950-956], 6 pages
Stable URL: <http://links.jstor.org/sici?sici=0306-3127%28200112%2931%3A6%3C950%3ARSRS%3E2.0.CO%3B2-1>

4. Shinn, Terry, "The Triple Helix and New Production of Knowledge: Prepackaged Thinking on Science and Technology," Social Studies of Science [Vol. 32, no. 4 (Aug., 2002), pp. 599-614]
<http://links.jstor.org/sici?sici=0306-3127%28200208%2932%3A4%3C599%3ATTHANP%3E2.0.CO%3B2-0>
See Shinn.pdf at course webpage

Week of 8/10 April: Universities In changing political economies

1. Clark, Burton R.,
"Common problems and adaptive responses in the universities of the world: organizing for change," Higher Education Policy [Volume 10, number 3/4 (1997), pp. 291-295], 4 pages.
See Clark.pdf at course webpage

2. Kaiser, David,

"The Postwar Suburbanization of American Physics," *American Quarterly* [Vol. 56, no. 4 (December 2004), pp. 851-888], 28 pages.

See Kaiser.pdf at course webpage

3. Kerr, Clark, "Transcript of Clark Kerr's remarks to the Joint Committee, August 24, 1999," 11 pages. <http://www.ucop.edu/acadinit/mastplan/kerr082499.htm> or see

Kerr.doc at course webpage

4. Shinn, Terry, "The Triple Helix and New Production of Knowledge: Prepackaged Thinking on Science and Technology," *Social Studies of Science* [Vol. 32, no. 4 (Aug., 2002), pp. 599-614], 12 pages.

See Shinn.pdf at course webpage

UC system:

5. A Master Plan for Higher Education in California: 1960-1975

pp. xiii-xiv, 59-81, 115-136.

[in pdf format: pp. 13-14, 76-81, 132-153], 25 pages.

<http://www.ucop.edu/acadinit/mastplan/mp.htm>

6. The California Master Plan for Higher Education in Perspective, 1 page.

<http://www.ucop.edu/acadinit/mastplan/mpperspective.htm>

See also: History of the California Master Plan for Higher Education

http://sunsite.berkeley.edu/~ucalhist/archives_exhibits/masterplan/post1960.html

To be added:

Week of 15/17 April: Think Tanks/R&D/policy making

Week of 22/24 April: Careers in the Triple Helix

Week of 29 Ap/1May: Weapons, aerospace, and space

Week of 6/8 May: Area/transnational studies

Week of 13/15 May: "Big sciences"

Week of 20/22 May: Computing technosciences

Week of 27/29 May: Pharmaceuticals and biomed technosciences

Week of 3/5 June: Environmental technosciences; closing themes