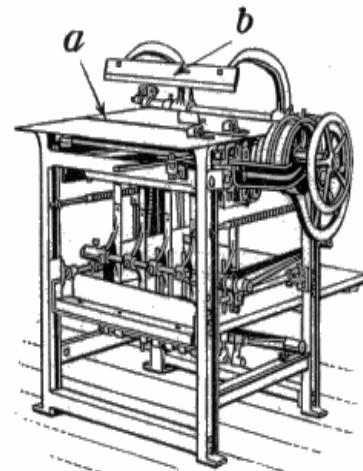


# Society, Nature, and Technology

The University of Texas at Austin  
School of Architecture  
Dr. Steven A. Moore



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ARC 386M-01055

Fall 2006  
Th 3:30-6:30, Battle 101

## I. GENERAL COURSE DESCRIPTION

Architects have tended to tell the history of our discipline as either the succession of styles or as the succession of theories. In both these views of architectural history, technological choices are understood to be the instrumental means by which aesthetic projects are realized. This course will examine architecture differently. Rather than examine architecture in visual or textual terms, we will examine the evolving relation between society and nature that is realized in the technological choices of architects. To better understand what technology is, the seminar will read from the Philosophy of Technology. To better understand how technologies and natures are socially constructed, the seminar will read from Science and Technology Studies. This background will enable seminar participants to finally consider the various proposals for *sustainable*, *regenerative*, or *green* technology as a historical critique of modern architectural production.

## II COURSE REQUIREMENTS

This course will require rigorous reading and writing. The writing component will include three brief (less than 5-page) “position papers” and one 10-15-page final paper. Reading requirements are indicated in the course schedule below. Reading selections that are not included in the required texts will be available electronically via “blackboard.” In addition to completing the reading, pairs of students will take turns in leading a critical discussion of the required and recommended reading for each class. This requirement may be repeated for extra credit depending upon the number of students enrolled. The student responsible for the week’s reading will prepare:

- a brief synopsis (5 minutes) of *three* points derived from the authors’ principal argument(s). These need not be comprehensive, but should be selected to reflect the student’s own interests.
- the three points must then be related to contemporary issues of architectural production. I encourage the use of images to develop your logic.

Class presentations on the reading *must not* be read as a text.

The three brief position papers are conceived as an opportunity for students to “stake-out” a theoretical position in response to the texts read for parts I, II, and III of the syllabus. These exercises will prepare you for the more ambitious final paper. In this sense the course writing-component builds upon itself. The purpose of the final paper is to provide seminar participants with an opportunity to critically interpret a contemporary case of so-called *sustainable* architecture or to investigate an aspect of your thesis or dissertation research. This alternative is encouraged.

A weekly *voluntary* discussion group will be scheduled in addition to our weekly class. Our TA, Barbara Brown (MA architectural history, CRP PhD student) will lead discussions for those who want an additional opportunity to interpret the texts and develop paper ideas.

There will be no final examination.

**Enrollment:** The seminar will be limited to twenty graduate students. Undergraduate Urban Studies Program students will be admitted by petition only. Up to three LBJ students enrolled in the Environmental Policy program will be admitted. Should enrollment be oversubscribed, priority will be given first to SOA *Sustainable Design* students. Graduate students from any discipline will then be given priority based upon rank. IE., Ph.D. students are given priority over Master students, third year over second year, etc. Interdisciplinary students are welcomed.

### III BOOKS

**Required:**

Heidegger, Martin. *The Question Concerning Technology and Other Essays*, translated and with an Introduction by William Lovitt (New York: Harperand Rowe, 1977).

MacKenzie, Donald and Wajcman, Judy. *The Social Shaping of Technology* (Philadelphia: Open University Press, Second Edition,1999).

**Recommended:**

Selections from these texts are available via Blackboard:

Guy, Simon and Steven A. Moore. *Sustainable Architectures: Natures and Cultures in Europe and North America* (London: Routledge/ Spon, 2005).  
[This title is electronically available to UT students]

Feenberg, Andrew and Hannay, Alastair. *Technology and the Politics of Knowledge* (Bloomington, IN: Indiana University Press, 1995).

Latour, Bruno. *Politics of Nature: How to bring the sciences into democracy*. (Cambridge, MA: Harvard University Press, 2004).

William McDonough and Michael Braungart, *Cradle to Cradle: Remaking the way we make things*. (New York: North Point Press, 2002).

Smith, Merritt Rowe and Marx, Leo., Eds. *Does Technology Drive History* (Cambridge, MA: MIT Press, 1995).

**Web site:**

It is recommended that you subscribe to *Green Clips*, a web-based environmental newsletter that announces technological events in architectural technology that the editors deem worthy of publication. The purpose of subscribing (which is free) is to test your critical skills in interpreting technology, not to blindly accept the editors' definition of the good. Various "clips" might make good subjects for your final paper. See < [www.greenclips.com](http://www.greenclips.com) >

## IV COURSE SCHEDULE

- 31 Aug. Course Introduction:**  
**Should architecture be understood as the history of styles, the history of space, the history of ideas, or as the ethnographic study of making places?**

Recommended reading:

Kenneth Frampton, "Introduction: Reflections on the Scope of The Tectonic," in *Studies in Tectonic Culture* (Cambridge, MA: MIT Press, 1995), pp. 1-28.

Ellen Sokora, "Book Review of Studies in Tectonic Culture," in *JAE*, 51/1 (September 1997): pp. 73-74.

Howard Davis. "Introduction," pp. 3-21 in, *The Culture of Building*. (New York: Oxford University Press, 2006).

### PART 1: TECHNOLOGY AND MODERN ONTOLOGY

- 07 Sept. What is so *modern* about modern technology?**

Required reading:

Kenneth Frampton, "On Reading Heidegger," in *Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory, 1965-1995*, Kate Nesbitt, ed., (New York: Princeton Architectural Press, 1996), pp. 440-446.

Martin Heidegger, "The Question Concerning Technology" in, *The Question Concerning Technology and Other Essays*, pp. 3-35.

Martin Heidegger, "Building Dwelling Thinking," in *Poetry, Language, Thought*; translated and introduced by Albert Hofstadter (New York: Harper and Row, 1971), pp. 143-162.

Recommended reading:

Martin Heidegger, "The Age of the World Picture," in *The Question Concerning Technology and Other Essays*, pp. 115-154.

- 14 Sept. On reading Heidegger through rose- or puce-colored lenses.**

Required reading:

Hubert L. Dreyfus, "Heidegger on Gaining a Free Relation to Technology," in *Technology and the Politics of Knowledge*," Andrew Feenberg and Alastair Hannay, Eds., (Bloomington, IN: Indiana University Press, 1995), pp., 97-107.

Richard J. Bernstein, "Heidegger's Silence: Ethos and Technology," in, *The New Constellation: The Ethical-Political Horizon of Modernity / Postmodernity* (Cambridge, MA: MIT Press,

1992), pp. 79-141.  
 Karl Marx, "Estranged Labour," in *The Marx-Engels Reader*, second edition, edited by Robert C. Tucker (New York: Norton, 1978), p. 66-81.

Recommended reading:

Thomas Sheehan, "A Normal Nazi," in *The New York Review* (January 14, 1993): 30:35.

James Ryerson, "'Heidegger's Children': Sins of the Father," in *New York Times* 16 December 2001. Available at:

<http://www.nytimes.com/2001/12/16/books/review/16RYERSOT.html>

## **PART II: THE SOCIAL CONSTRUCTION OF TECHNOLOGY**

### **21 Sept. Science, technology, technoscience and "great men."**

Required reading:

"Introductory Essay and General Issues," in *The Social Shaping of Technology*, Donald MacKenzie and Judith Wajcman, eds., (Philadelphia: Open University Press, 1999), pp. 3-28.

Thomas P. Hughes, "Edison and Electric Light," in *The Social Shaping of Technology*, Donald MacKenzie and Judith Wajcman, eds., (Philadelphia: Open University Press, 1999), pp. 50-64.

Bruno Latour, "Opening Pandora's Black Box," in *Science in Action* (Cambridge, MA: Harvard University Press, 1987), pp.1-17.

Recommended reading:

Sigfried Giedion, "The Balloon Frame and Industrialization," in *Space, Time and Architecture*, Fourth Edition (Cambridge, MA: Harvard University Press, 1963).

Ted Cavanaugh, "Balloon Houses: The Original Aspects of Conventional Wood-Framed Construction Re-examined," in *Journal of Architectural Education*, Vol. 51, No. 1 (September 1997): 5-15.

### **28 Sept. Technology and gender.**

**Position paper no. 1 due**

Required reading:

Ruth Schwartz Cowan, "The Industrial Revolution in the Home," in

*The Social Shaping of Technology*, Donald MacKenzie and Judith Wajcman, eds., (Philadelphia: Open University Press, 1999), pp. 269-300.

Anne-Jorunn Berg, "A Gendered socio-technical Construction: The Smart House," in *The Social Shaping of Technology*, Donald MacKenzie and Judith Wajcman, eds., (Philadelphia: Open University Press, 1999), pp. 301-313.

Donna Haraway, "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," in *Technology and the Politics of Knowledge*, Andrew Feenberg and Alastair Hannay, Eds., (Bloomington, IN: Indiana University Press, 1995), pp., 175-194.

Recommended reading:

Morya Doorly, "A Woman's Place: Dolores Hayden on 'the Grand Domestic Revolution'" in, *The Social Shaping of Technology*, Donald MacKenzie and Judith Wajcman, eds., (Philadelphia: Open University Press, 1999), pp. 314-317.

#### **05 Oct. Technological voluntarism Vs determinism.**

Required reading:

Merritt Roe Smith, "Technological Determinism in American Culture," in *Does Technology Drive History: The Dilemma of Technological Determinism*, Merritt Roe Smith and Leo Marx, Eds. (Cambridge, MA: MIT Press, 1994), pp. 1-36.

Thomas Hughes, "Technological Momentum," in *Does Technology Drive History: The Dilemma of Technological Determinism*, Merritt Roe Smith and Leo Marx, Eds. (Cambridge, MA: MIT Press, 1994), pp. 101-114.

Recommended reading:

Weibe E. Bijker and John Law, "General Introduction," and "Do Technologies Have Trajectories," in *Shaping Technology / Building Society* (Cambridge, MA: MIT Press, 1992), pp., 1-21.

#### **15 Oct. Technology and democracy.**

Required reading:

Langdon Winner, "Do Artifacts Have Politics," in *The Social Shaping of Technology*, Donald MacKenzie and Judith Wajcman, eds., (Philadelphia: Open University Press, 1999), pp. 28-41.

Andrew Feenberg, "Subversive Rationalization: Technology, Power, and Democracy," in *Technology and the Politics of*

*Knowledge*,” Andrew Feenberg and Alastair Hannay, Eds., (Bloomington, IN: Indiana University Press, 1995), pp., 3-22.  
 Frances Ventre, “Regulation, a Realization of Social Ethics” in *VIA* (10): 51-62, 1990.

Recommended reading:

Karl Marx, “The machine versus the worker,” in *The Social Shaping of Technology*, Donald MacKenzie and Judith Wajcman, eds., (Philadelphia: Open University Press, 1999), pp. 156-157.

Langdon Winner, “Citizen Virtues in a Technological Order,” in *Technology and the Politics of Knowledge*,” Andrew Feenberg and Alastair Hannay, Eds., (Bloomington, IN: Indiana University Press, 1995), pp., 65-84.

Donald MacKenzie and Judith Wajcman, “Introduction to the technology of production,” in *The Social Shaping of Technology*, (Philadelphia: Open University Press, 1999), pp.141-151.

### **PART III: THE SOCIAL CONSTRUCTION OF NATURE**

#### **19 Oct. Competing ideas about Nature and the ecology crisis**

Required reading:

Lynn White Jr., “The Historical Roots of Our Ecological Crisis,” in *Science*, Vol. 155, No. 3767 (10 March 1967): pp. 1203-1207.

Arne Naess, “The Shallow and the Deep, Long-Range Ecology Movements: A Summary,” in *Deep Ecology for the 21<sup>st</sup> Century: Readings on the Philosophy and Practice of the New Environmentalism*, George Sessions, Ed. (Boston, MA: Shambala, 1995), pp. 141-150.

Steven Vogel, “Introduction,” in *Against Nature: The Concept of Nature in Critical Theory* (Albany: State University of New York Press, 1996), pp. 1-12.

#### **26 Oct. Is “Nature” dead, becoming “second” nature, or did we concoct the whole idea in the first place?**

**Position Paper No. 2 due.**

Required reading:

Bruno Latour, Chapter 1, “Crisis” pp. 1-12 in, *We have Never Been Modern*. (Cambridge, MA: Harvard University Press, 1993).

Richard Ingersoll, "Second Nature: On the Social Bond of Ecology and Architecture," in *Reconstructing Architecture: Critical Discourses and Social Practices*, Tom Dutton and Lian Hurst Mann, Eds., (Minneapolis: University of Minnesota Press, 1996), pp. 119-157.

David Demeritt, "What is 'Social Construction of Nature.' A topology and sympathetic critique," in *Progress in Human Geography* 26(6): 767-790.

Bruno Latour, "Summary of the Argument (for Readers in a Hurry ...)" pp. 243-250 in, *Politics of Nature: How to bring the sciences into democracy*. (Cambridge, MA: Harvard University Press, 2004)

#### **PART IV: THE SOCIAL CONSTRUCTION OF SUSTAINABLE ARCHITECTURE (and PLANNING)**

##### **02 Nov. Competing paradigms of architectural production.**

Required reading:

Campbell, Scott. "Green Cities, Growing Cities, Just Cities: Urban Planning and the Contradiction of Sustainable Development," in *APA Journal* (Summer 1996): 296-312.

Simon Guy and Graham Farmer, "Re-interpreting Sustainable Architecture: The Place of Technology," in *Journal of Architectural Education* 54:3, pp. 140-148

William McDonough and Michael Braungart, "The Next Industrial Revolution," in *Atlantic Monthly* (October 1998): 82-92.

Recommended reading:

William McDonough and Michael Braungart, *Cradle to Cradle: Remaking the way we make things*. (New York: North Point Press, 2002).

##### **09 Nov. Pluralism Vs singular models**

##### **Position paper no. 3 due**

Simon Guy and Steven A. Moore, "Introduction: The paradoxes of sustainable architecture", in *Sustainable Architectures: Cultures and natures in Europe and North America* (London and New York: Spon Press, 2005), pp. 1-12.

Janda, Kathryn and Alexandra von Meier. "Theory, practice and proof", in *Sustainable Architectures: Cultures and natures in Europe and North America* (London and New York: Spon

Press, 2005), pp. 31-50.

Moore, Steven A. and Nathan Engstrom. "The social construction of green building codes", in *Sustainable Architectures: Cultures and natures in Europe and North America* (London and New York: Spon Press, 2005), pp.51-70.

**16 Nov. Competing and alternative design**

Required reading:

Wasely, Jim. "Safe houses and green architecture" in, *Sustainable Architectures: Cultures and natures in Europe and North America* (London and New York: Spon Press, 2005), pp. 107-122.

Horwitz, Jamie. "Leaky walls" in, *Sustainable Architectures: Cultures and natures in Europe and North America* (London and New York: Spon Press, 2005), pp. 163-4, 185-200.

Rohracher, Harald. "Social research on energy-efficient building technologies" in *Sustainable Architectures: Cultures and natures in Europe and North America* (London and New York: Spon Press, 2005), pp. 201-218.

**23 Nov. Thanksgiving, no class**

**30 Nov. Architects, nature and society**

Required reading:

Guy, Simon and Steven A. Moore. "Reflection and engagement: toward pluralistic practices of sustainable architecture" in, *Sustainable Architectures: Cultures and natures in Europe and North America* (London and New York: Spon Press, 2005), pp. 221-40.

**07 Dec. Summary and conclusions**

**Final paper due**

Each seminar participant will present a 5-minute synopsis of their paper followed by a general discussion of our collective findings for the semester.

**V PERFORMANCE EVALUATION**

Work for the semester will be based upon the scale outlined below. If any student wishes to protest a grade, a request for review must be made within one week of its issuance, after which no grade revision will be considered. It is up to

the student to request interim evaluations from the instructor if you are concerned about your progress.

Individual writing assignments will be evaluated as follows:

**A:** Students work is original and of exceptional intellectual quality, is very well written, is supported by wide textual documentation, is structurally inventive, and is complete.

**B:** Students work is of high intellectual quality, is well written, is supported by textual documentation, progresses logically, and is complete.

**C:** Students work is of average intellectual quality, is written intelligibly, is supported by some textual documentation, progresses logically, and is complete.

**D:** Students work is of below average intellectual quality, is written poorly, is not adequately supported by textual documentation, progresses illogically, and/or is incomplete.

**F:** Students work is of unacceptable intellectual quality, badly written, unsupported, illogical, and/or incomplete.

Assignment weight:

Reading review(s)	10%
Position Paper No. 1:	15%
Position Paper No. 2:	15%
Position Paper No. 3	15%
Final paper:	35%
Discussion participation	10%

## VI OFFICE HOURS

Goldsmith 4.134, Thursday 1:00-3:00 PM, or by appointment. Office telephone: 471-0184. E-mail [samoore@mail.utexas.edu](mailto:samoore@mail.utexas.edu)

The University of Texas at Austin provides upon request appropriate academic accommodations for qualified students with disabilities. For more information, contact the Office of the Dean of Students at 471-6259, 471-4641.