ARC 327R (UG) + ARC 386M (G)

Sustainability: Why this Way?

University of Texas at Austin School of Architecture

Spring 2019: Wednesdays 9am-12pm.

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Office Hours: Wednesdays 1pm-3pm and by appointment

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Overview

Seminar Agenda

In 2008, California introduced the first-in-the-nation Green Building Standards Code to encourage sustainable construction practices. While the adoption of this set of rules (and other similar provisions across the country) marked a significant moment in the process of the greening of building regulations, it represents only one moment in the nation's history of environmental action, and in that of code-making. Two parallel narratives, and their eventual mergence are the subject of this seminar and serve as a springboard for a critical discussion about sustainability. The first is an account of the rise of environmental awareness and of how it was gradually standardized by law-makers, interpreted through technology, and shaped by the market. The second is a story of the agendas that shaped the American house (we will focus on the single-family house as an example), and the regulations that govern it. The goal is to expose the wide-ranging consequences of their convergence; the combined influence of building regulations and financial incentives on environmental awareness and environmentally-driven design as practiced today.

In other words, **this seminar is an exploration of the genealogy and repercussions of ideas, technologies, and norms that have contributed to the current understanding of sustainability and practice of sustainable design in architecture.**

The seminar is divided into two blocks. The first part provides an account of ecological ideas, socio-economic agendas, regulatory programs, and design attitudes as they emerged, influenced each other, and affected environmental action and the character of the American house. The second part investigates the regulations used to standardize sustainable building practices and financial incentives used to promote specific types of green technologies.

The objective of this seminar is to help you develop a critical position towards the mechanisms that affect ideas and modes of practice and provide you with instruments to question them as you develop your own position on sustainability in general, and an attitude towards the role of specific environmentally-driven design strategies, technologies, and standards.

Overview

Seminar Road Map

01 | January 23	**Sustainability: Why these Ideas, Technologies, and Norms? Introduction**
02 | January 30	**Open-Ended: How to Think about Sustainability? 1**
	From Welfare & Safety, to Ecology: before the 1970s
03 | February 6	**Welfare & Safety** Themes: 1. Before the 1920s: Safety First - Tenement House Acts & the National Building Code Recommended by the National Board of Fire Underwriters (1905). | 2. 1920s: Building the Market - Recommended Minimum Requirements for Small Dwelling Construction, Department of Commerce's Bureau of Standards (1922). | 3. 1930s-1945: Post Depression - The Federal Housing Administration (1934).
04 | February 13	**Ecology** Themes: 4. 1945-1950s: Prosperity & Suburban Expansion - The National Housing Act (1949) & Minimum Property Standards for Properties of One or Two Living Units, FHA (1958). | 5. 1960s: Comfort vs. Degradation - Standard 55 Thermal Environmental Conditions for Human Occupancy, ASHRAE (1966) & the National Environmental Policy Act (1969).
	Environmental Protection & Sustainable Development: 1970s - 1980s
05 | February 20	**Environmental Protection** Themes: 1. 1970s: Containing Crisis - Energy Policy and Conservation Act (1975) & California Energy Conservation Standards (1978).
06 | February 27	**Sustainable Development** Themes: 2. 1980s: Manifestos - The Brundtland Report (1987).
	Green Economy & Green Building Standards: 1990s – present
07 | March 6	**Green Economy** Themes: 1. 1990s – mid-2000s: Green Metrics - The Energy Policy Act (1992) & USGBC's Leadership in Energy and Environmental Design Certification (2000).

08 | March 13	**Green Building Standards** Themes: 2. Mid-2000s – 2010s: Speculation - California Green Building Standards Code (2008) & the American Recovery and Reinvestment Act (2009) Essay Assignment Announced.
00| March 20	Spring Break: Rest, Reflect, Write
09 | March 27	**Open-Ended: How to Think about Sustainability? 2** **Quid pro Quo: Technological Artifacts & Financial Incentives**
10 | April 3	**Technological Artifacts** Themes: 1. Artifacts and Technics. Essay Assignment Due.
11 | April 10	**Financial Incentives** Themes: 2. Incentivize to Convince or Legislate to Coerce? | 3. Incentives: Building the (Green) Market. | 4 Green Artifacts and Technics: Side-Effects. Research Project Assignment Announced.
12 | April 17	**Open-Ended: How to Think about Sustainability? 3** **The Meta-Code: The Impact of the Structure & Form of Regulations**
13 | April 24	**The Code Makers** Themes: 1. The Rule: Who Protects the (Interior) Environment? Focus: Materials. | 2. The Matrix: Where are the Rule Makers and What is Their Agency? Focus: Water.
14 | May 1	**The Structure & Form** Themes: 3. The Stack: What is Regulated and Why in Multiple Codes? Focus: Air. | 4. The Inner Workings: How are the Appropriate Solutions Achieved? Focus: Vegetation.
15 | May 8	**Sustainability: How Else? Conclusions**
16 | May 15	**Final Research Project Presentations** Research Project Assignment Due.

Except for the main essay and research project, students will be expected to discuss case studies, watch selected documentaries, regularly read provided texts, and write short responses. Specific readings and tasks will be provided on weekly basis. There will be no final exam.

In each assignment, you will be asked to critically assess the adopted definitions of sustainability (and embedded in them attitudes towards the environment), but also investigate broader (and most of the time hidden) ecological consequences of these attitudes.

The course will feature guest lectures and screenings of documentaries focused on environmental thought, art, and activism; code-making; green construction; and the role of the real-estate market. Screenings and guest lectures might require an occasional change of schedule. Details will be announced in advance on canvas.

Resources

Selected Readings

Baer, William C. 2011. "Customs, Norms, Rules, Regulations and Standards in Design Practice." In Companion to Urban Design, edited by Tridib Banerjee, and Anastasia Loukaitou-Sideris. New York: Routledge.

Braham, William W. 2016. *Architecture and Systems Ecology: Thermodynamic Principles of Environmental Building Design in Three Parts.* Abingdon, UK; New York, NY: Routledge.

Ben-Joseph, Eran. 2005. *Code of the City: Standards and the Hidden Language of Place Making.* Cambridge, MA: MIT Press.

Bijker, Wiebe E., Hughes, Thomas, and Tevor J. Pinch, eds. 1987. *The Social Construction of Technological Systems*. Cambridge, MA: MIT Press.

Caradonna, Jeremy L. 2014. *Sustainability.* New York, NY: Oxford University Press.

Crist, Eileen. 2007. "Beyond the Climate Crisis: A Critique of Climate Change Discourse." *Telos 141* (Winter 2007).

Daniels, Thomas L. 2009. "A Trail across Time: American Environmental Planning from City Beautiful to Sustainability." *Journal of the American Planning Association*, vol. 75, no. 2 (Spring 2009): 178-192

Grober, Ulrich. 2012. *Sustainability. A Cultural History*. Devon, UK: Green Books.

Hughes, Thomas. 1994. "Technological Momentum." In Does Technology Drive History? edited by Merritt Roe Smith, and Leo Marx. London, UK; Cambridge, MA: MIT Press.

Moe, Kiel. 2014. Insulating Modernism: Isolated and Non-isolated Thermodynamics in Architecture. Basel: Birkhäuser.

Moore, Steven A., and Barbara B. Wilson. 2014. *Questioning Architectural Judgment: The Problem of Codes in the United States.* London. UK; New York, NY: Routledge.

Mumford, Lewis. 1964. "Authoritarian and Democratic Technics." Technology and Culture, Vol. 5, No. 1, (Winter).

Pollan, Michael. 1991. *Second Nature: A Gardener's Education*. New York: Grove Press.

Tabb, Phillip, and A. Senem Deviren. 2013. *The Greening of Architecture: A Critical History and Survey of Contemporary Sustainable Architecture and Urban Design*. Burlington, VT: Ashgate.

Timmermans, Stefan, and Steven Epstein. 2010. "A World of Standards but not a Standard World: Toward a Sociology of Standards and Standardization." *Annual Review of Sociobiology* 36: 69–89.

Waddington, C. H. 1977. *Tools for Thought.* London, UK: Jonathan Cape.

Worster, Donald. (1977) 1996. *Nature's Economy: A History of Ecological Ideas*. Cambridge, MA; New York, NY: Cambridge University Press.

Winner, Langdon. (1985) 1999. "Do Artifacts Have Politics?" In The Social Shaping of Technology, edited by Donald MacKenzie and Judy Wajcman. Buckingham, UK; Philadelphia, PA: Open University Press.

Procedures

Evaluation & Policies

General Culture

Being on time is required. Participation is expected. Asking questions is highly encouraged. We want to have an open and engaging conversation. Laptops can only be used for taking notes. Texting and eating are distracting and disrespectful. Drinks are fine, stay hydrated! Please, step out if you have to make an emergency call.

Communication & Submissions: Canvas & Emails

Canvas will be used for communication of the logistics and content of the course, as well as for submission of assignments, feedback, grading, and attendance. Direct emails will be used for one-to-one communication.
Please, set up your Canvas preferences to receive an email (or text message) notification as soon as a Canvas Announcement has been posted online. Make sure that the email you provided on Canvas is active and that you regularly check your inbox.

Grading

All students are expected to participate in all activities and comply with all the requirements for the length of the semester. There are four components to the grade:

1. Reading & Written Responses 15%
2. Essay 30%
3. Research Project and Final Presentation 40%
4. Case Study Presentation & Participation in the discussions 15%

Grade Descriptions

A/A- **Excellent**
Project surpasses expectations in terms of inventiveness, appropriateness, visual language, conceptual rigor, craft, and personal development. Student pursues concepts and techniques above and beyond what is discussed in class. Project is complete on all levels.

B+/B/B- **Above Average**
Project is thorough, well presented, diligently pursued, and successfully completed. Student pursues ideas and suggestions presented in class and puts in effort to resolve required projects. Project is complete on all levels and demonstrates potential for excellence.

C+/C **Average**
Project meets the minimum requirements. Suggestions made in class and not pursued with dedication and rigor. Project is incomplete in one or more areas.

C-/D+/D/D- **Poor**
Project is incomplete. Basic grasp of skill is lacking, visual clarity or logic of presentation are not level-appropriate. Student does not demonstrate the required competence and knowledge base.

F **Fail**
Project is unresolved. Minimum objectives are not met. Performance is not acceptable. Note that this grade will be assigned when students have excessive unexcused absences.

X **Excused Incomplete**
Can be given only for legitimate reasons of illness or family emergency. Simply not completing work on time is not an adequate cause for assigning this evaluation. It may only be used after consultation with the Associate Deans' offices and with an agreement as to a new completion date. Work must be completed before the second week of the next semester in which the student is enrolling, according to the School of Architecture policy.

Attendance
Attendance is mandatory. Participation is expected. With three (3) unexcused absences, the student's final grade for the course will be lowered by a full letter grade. The final grade will be lowered by a full letter grade for each unexcused absence thereafter. Aside from religious observances, absences are only excused with written documentation of a medical issue or family emergency. The student is responsible for completing work missed due to excused absences and initiating communication with the instructor to determine due dates. If a student is late (10 minutes after the start of class) three (3) times, it will be counted as one (1) unexcused absence. Students should notify the instructor via email prior to class if lateness or absence is known in advance.

Religious Observances
A student shall be excused from attending classes of other required activities, including examinations, for the observance of a religious holy day, including travel for the purpose. A student whose absence is excused under this subsection may not be penalized for that absence and shall be allowed to take an examination or complete an assignment from which the student is excused within a reasonable time after the absence. University policy requires students to notify each of their instructors as far in advance of the absence as possible so that arrangements can be made.

Academic Integrity
Students who violate University policy on academic integrity are subject to disciplinary penalties, including the possibility of failure in the course and/or dismissal from the University. Since such dishonesty harms the individual, all students, and the integrity of the University, policies on academic integrity will be strictly enforced. Refer to the Student Conduct and Academic Integrity website for official University policies and procedures on academic integrity: http://deanofstudents.utexas.edu/conduct/academicintegrity.php. University Code of Conduct: http://catalog.utexas.edu/general-information/the-university/#universitycodeofconduct

Care Program

Counselors in Academic Residence (CARE) Program places licensed mental health professionals within the colleges or schools they serve in order to provide better access to mental health support for students who are struggling emotionally and/or academically. Abby Simpson is the CARE counselor for the School of Architecture. Faculty and staff may refer students to the CARE counselor or students may directly reach out to her.
Abby Simpson | BTL 114B | (512) 471-3115
https://cmhc.utexas.edu/CARE_simpson.html

Students with Disabilities

Students with disabilities who require special accommodations need to obtain a letter that documents the disability from the Services for Students with Disabilities area of the Office of the Dean of Students (471-6259 voice or 471-4641 TTY for users who are deaf or hard of hearing). This letter should be presented to the instructor in each course at the beginning of the semester and accommodations needed should be discussed at that time. http://diversity.utexas.edu/disability/