



## Living in an Uncertain World: Science, Technology, and Risk S&TS 3181 / HIST 3181

Fall 2009

MWF, 9:05 – 9:55 am  
142 Goldwin Smith Hall



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### Course description

This course explores the history, sociology, and ethics of risk. In particular, we will focus on the complex and often ambiguous relationship between science, technology, and risk. A historical perspective shows how science and technology have generated risks while they have also played key roles in managing and solving those very risks. By examining several case studies, including nineteenth-century mining, the 1911 Triangle Fire, nuclear science, asbestos, Katrina, and the contemporary financial crisis, we will consider how risk and ideas about risk have changed over time. By studying different historical and cultural responses to risk, we will explore the sociopolitical dimensions of the definitions, perceptions, and management of risk—both in the past and the present. During the final two weeks of the semester, students will apply concepts they have developed in the class to contemporary local issues.

### Required texts

The following books are required. They are available at the Cornell Store. One or two copies of each book have also been put on reserve at Uris Library.

- Deborah Lupton, *Risk: Key Ideas* (Routledge, 1999).
- Anthony Wallace, *St. Clair: A Nineteenth-Century Coal Town's Experience With a Disaster-Prone Industry* (Cornell University Press, 1988). **[Please note: Copies of this book are available ONLY through Amazon. Please place your order asap.]**
- Andrew Schneider and David McCumber, *An Air That Kills: How the Asbestos Poisoning of Libby, Montana, Uncovered a National Scandal* (Berkley Trade, 2005).

**[Please note: Copies of this book are available ONLY through Amazon. Please place your order asap.]**

- Craig E. Colton, *An Unnatural Metropolis: Wresting New Orleans from Nature* (Louisiana State University Press, 2006).

In addition, several book chapters and journal articles are required. They are available through the course's Blackboard website [[STS3181-Pritchard-Fall2009: Living in an Uncertain World](#)] and are noted **[BB]** on the syllabus, *or* through Cornell Library's e-journals collection and marked **[EJ]** on the syllabus.

## Assignments and grading

### Discussion (30%)

This is a senior seminar so many of our class meetings will be organized around discussion. We will generally meet as an entire class, but we may break into smaller groups. All students are expected to participate in discussion, but a student's discussion grade will be based foremost on quality and secondarily on quantity. In addition, I value students who listen to one another, ask follow-up questions, synthesize others' comments, and pose questions to the entire class. In other words, these kinds of contributions also "count" toward your discussion grade.

### Midterm paper (25%)

More information will be distributed later in the semester, but the 8 – 10-page midterm paper will have you work with primary sources associated with the 1911 Triangle Fire in New York City, keeping in mind the themes of this class. The ILR School's Catherwood Library has put together an extensive website (<http://www.ilr.cornell.edu/trianglefire/>) that includes numerous sources (photos, architectural plans, newspaper articles, diaries, court testimony, etc.).

To encourage progress on the paper, I have developed several intermediate deadlines. They count towards your final grade on this assignment as specified below.

Sept 30	Annotated citations of relevant primary sources	3%
Oct 7	Draft thesis and 1 – 2-pg outline	7%
Oct 19	Final draft	90%

### In-class collaborative project (10%)

During the final two weeks of the semester, we will apply some of the ideas and themes we developed in the class to several contemporary local issues related to science, technology, and risk: the TCE controversy in South Hill, Marcellus Shale gas drilling in upstate New York, and Cornell's Lake Source Cooling Project. (If the class ends up being large, additional issues will be identified). The class will be divided into smaller groups with each group responsible for one of these issues. Most of our time in class as well as the limited number of readings and assignments during the final two weeks of the term will be focused on these issues. The projects will culminate with one-page statements on those issues and short presentations during our university-scheduled final exam slot.

To encourage progress on the collaborative project, I have developed several intermediate deadlines. They count towards your final grade on this assignment as specified below.

Nov 23	Assignment: Identify/read/post on Blackboard two articles related to your group's issue	10%
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Nov 23	In class: Discussion	10%
Nov 25	Assignment: Prepare and submit 3 – 5 “talking points” related to your group’s issue	15%
Nov 25	In class: Discussion	10%
Nov 30	In class: Discussion	10%
Dec 2	In class: Outline of statement	15%
Dec 4	In class: Draft statement	20%
Dec 18	Presentation	10%

### Take-home final (35%)

More information will be distributed later in the semester, but there will be a take-home final composed of two, 4 – 5-page essays. I will probably distribute four questions from which each student will select two. They will likely be synthetic, “cumulative” questions that span (or have the potential to span) course materials from the entire semester, but the essays will be open book, open note, open brain, etc. Please note: collaboration among students on the take-home final is, however, not acceptable.

### Course policies and other legalese

A Blackboard course website [[STS3181-Pritchard-Fall2009: Living in an Uncertain World](#)] has been set up to facilitate communication and to coordinate the collaborative projects. All students enrolled in the class are expected to sign up in a timely fashion.

Unless otherwise noted, all assignments are due in class and must be submitted in order to earn a passing grade in the course. Electronic submissions are not accepted, unless specified on the assignment or alternative arrangements have been made due to an emergency. Late assignments will be penalized one-third of a letter grade (e.g., B+ to B) immediately, and one-third of a letter grade for each subsequent day the assignment is late. Make-up assignments as well as extensions will **only** be given for legitimate extenuating circumstances: that is, medical conditions, family emergencies, and religious holidays. They will also require proper documentation from the appropriate official(s). That said, if an emergency comes up, *please contact me as soon as possible*. Students with disabilities are encouraged to contact me privately at the beginning of the semester so that we can make appropriate arrangements. Alternative arrangements will not be made for students departing early for winter break; in short, please note our final exam slot *now* and make your travel plans accordingly. Cliff-hanging final grades will be decided by the degree of improvement over the semester and participation during discussion.

### Academic conduct and honesty

Each student in this course is expected to abide by the Cornell University Code of Academic Integrity, which states the following: “Absolute integrity is expected of every Cornell student in all academic undertakings... A Cornell student’s submission of work for academic credit indicates that the work is the student’s own. All outside assistance should be acknowledged, and the student’s academic position truthfully reported at all times. In addition, Cornell students have a right to expect academic integrity from each of their peers.” The complete Code is available at: <http://www.cuinfo.cornell.edu/Academic/AIC.html>.

Please note that standards for academic integrity are not necessarily the same in the United States as in other academic systems. International students are strongly encouraged to review carefully the definition of academic integrity at Cornell. In particular, using text from authoritative sources without proper acknowledgement can be a violation of academic integrity.

In short, by enrolling in this class, I am assuming that you are familiar with and agree to abide by the University's standards with respect to academic integrity and conduct. If you have any questions or concerns, please see me!

### TENTATIVE COURSE SCHEDULE

<b>Week 1</b> F, 8/28	<b>Welcome!</b> Course intro, review syllabus, etc.
<b>Week 2</b> M, 8/31  W, 9/2  F, 9/4	<b>UNIT I – CONCEPTUAL TOOLS AND FRAMEWORKS: Introduction to science and technology studies</b> <u>Discussion:</u> [BB] Wiebe E. Bijker, “Sociohistorical Technology Studies,” in <i>Handbook of Science and Technology Studies</i> , ed. Sheila Jasanoff, et.al. (Thousand Oaks, CA: Sage, 1995): 229-256. <u>Discussion:</u> [BB] Trevor J. Pinch and Wiebe E. Bijker, “The Social Construction of Facts and Artifacts: Or How the Sociology of Science and the Sociology of Technology Might Benefit Each Other,” in <i>The Social Construction of Technological Systems</i> , ed. Bijker, Hughes, and Pinch (Cambridge, MA: MIT Press, 1987). Lecture: Rethinking “science” and “technology.”
<b>Week 3</b> M, 9/7 W, 9/9 F, 9/11	<b>Introduction to critical studies of risk</b> <u>Discussion:</u> Lupton, <i>Risk</i> , Chs. 1 – 3. Lecture: Contested knowledge: Risk and expertise. <u>Discussion:</u> Lupton, <i>Risk</i> , Chs. 4 – 5.
<b>Week 4</b> M, 9/14 W, 9/16 F, 9/18	<b>UNIT II – WORK AND RISK: Mining</b> FILM: Excerpt from <i>Germinal</i> . <u>Discussion:</u> Wallace, <i>St. Clair</i> , Prologue, Chs. 1 – 2. <u>Discussion:</u> Wallace, <i>St. Clair</i> , skim Chs. 3 – 4, focus on Ch. 5.
<b>Week 5</b> M, 9/21  W, 9/23 F, 9/25	<b>Asbestos</b> Orientation to the Triangle Fire archives and website at the ILR School's Catherwood Library Kheel Center in Ives Hall (details TBA). <u>Read:</u> William Cronon, et.al., “Learning to Do Historical Research: A Primer for Environmental Historians and Others”: <a href="http://www.williamcronon.net/researching/index.htm">http://www.williamcronon.net/researching/index.htm</a> FILM: <i>Libby, Montana</i> (first half). <u>Discussion:</u> Schneider and McCumber, <i>An Air That Kills</i> , Chs. 1 – 13.

**Week 6**M, 9/28  
W, 9/30Discussion: Schneider and McCumber, *An Air That Kills*, Chs. 14 – 26.  
FILM: *Libby, Montana* (second half).→ **Assignment due: Submit ten annotated citations of sources from the Triangle Fire website that will be useful for your paper.**

F, 10/2

Discussion: [BB] Rachel Maines, “The Asbestos Technology Decision Environment” and “The Asbestos Tort Conflagration.”**Week 7**

M, 10/5

**Human bodies in industrial environments**Discussion: [BB]/[EJ] Arthur F. McEvoy, “Working Environments: An Ecological Approach to Industrial Health and Safety,” *Technology and Culture* (1995): S145-S173.

W, 10/7

Lecture: Industrialization, risk, and gender.

→ **Assignment due: Submit preliminary thesis and 1 – 2-pg outline of your Triangle Fire paper.**

F, 10/9

Lecture: Unequal impacts: Race and class in Gary, Indiana.

**Week 8**M, 10/12  
W, 10/14**No class [Fall break!]**Discussion: [EJ] Kim Fortun, “From Bhopal to the Informing of Environmentalism: Risk Communication in Historical Perspective,” *Osiris* 19 (2004): 283-296.

F, 10/16

**No class [Professor Pritchard at SHOT]****Week 9**

M, 10/19

**UNIT III – LARGE-SCALE SYSTEMS: The atomic age**

Lecture: Nuclear science and the atomic age [Guest lecture by Professor Suman Seth]

→ **Triangle Fire paper due.**

W, 10/21

Discussion: [BB] Charles Perrow, “Normal Accident at Three Mile Island” and “Nuclear Power as a High-Risk System.”

F, 10/23

Lecture: Living in atomic landscapes.

**Week 10**

M, 10/26

Discussion: [BB]/[EJ] Gabrielle Hecht, “Enacting Cultural Identity: Risk and Ritual in the French Nuclear Workplace,” *Journal of Contemporary History* 32:4 (1997): 483-508.

W, 10/28

FILM: *Blowing Up Paradise*.

F, 10/30

**No class [Professor Pritchard at 4S]****Week 11**

M, 11/2

**UNIT IV – HAZARDOUS ENVIRONMENTS?: Hurricane Katrina**FILM: Excerpt from *Trouble the Water*.

W, 11/4

Discussion: Colton, *Unnatural Metropolis*, Chs. 1 – 3.

F, 11/6

Discussion: Colton, *Unnatural Metropolis*, Chs. 4 – 6, Epilogue.

<b>Week 12</b> M, 11/9	<b>Bodies in toxic landscapes</b> <u>Discussion:</u> [EJ] Scott Frickel, “On Missing New Orleans: Lost Knowledge and Knowledge Gaps in an Urban Hazardscape,” 643-650; Linda Nash, “Purity and Danger: Historical Reflections on the Regulation of Environmental Pollutants,” 651-658; Sarah Vogel, “From ‘the Dose Makes the Poison’ to ‘the Timing Makes the Poison’: Conceptualizing Risk in the Synthetic Age,” 667-673; and Arthur Daemrich, “Risk Frameworks and Biomonitoring: Distributed Regulation of Synthetic Chemicals in Humans,” 684-693, all from <i>Environmental History</i> 13:4 (2008).
W, 11/11	<u>Discussion:</u> [EJ] Nancy Langston “The Retreat from Precaution: Regulating Diethylstilbestrol (DES), Endocrine Disruptors, and Environmental Health,” <i>Environmental History</i> 13:1 (2008): 41-65.
F, 11/13	FILM: Excerpt from <i>Safe</i> .
<b>Week 13</b> M, 11/16	<b>UNIT V – “RISK/REWARD”?</b> <u>Discussion:</u> [BB]/[EJ] Arwen Mohun, “Designed for Thrills and Safety: Amusement Parks and the Commodification of Risk, 1880-1929,” <i>Journal of Design History</i> 14:4 (2001): 291-306; and Lupton, <i>Risk</i> , Ch. 8.
W, 11/18	<u>Discussion:</u> [BB] Nassim Nicholas Taleb, Excerpt from <i>The Black Swan: The Impact of the Highly Improbable</i> (TBA).
F, 11/20	<u>Discussion:</u> [BB] Perrow, “Living with High-Risk Systems;” also peruse 2 links from Megaprojects New Media: <a href="http://megaprojects.fims.uwo.ca/">http://megaprojects.fims.uwo.ca/</a> .
<b>Week 14</b> M, 11/23	<b>UNIT VI – SCIENCE, TECHNOLOGY, AND RISK IN OUR AREA</b> In-class collaborative projects (ICCP): Present key points from your articles to your group (see today’s assignment); begin discussing your group’s issue in light of the course.
	→ <b>Assignment due: Identify, read, and post on Blackboard two articles about your group’s issue.</b>
W, 11/25	ICCP: Discuss talking points (see today’s assignment).
	→ <b>Assignment due: Read your group’s articles; prepare and submit 3 – 5 “talking points” that connect course materials to your group’s issue.</b>
F, 11/27	<b>No class [Thanksgiving holiday]</b>
<b>Week 15</b> M, 11/30	ICCP: Continue discussing talking points (see last Wed.’s assignment).
W, 12/2	ICCP: As a group, generate an outline for a one-page statement about your issue that your group might issue to the public; the statement can be informational and/or persuasive.
F, 12/4	ICCP: Draft one-page statement and coordinate presentation during finals.
<b>Finals week</b>	<b>Tentatively scheduled for Friday, December 18, 9:00 – 11:30 am</b> → <b>Group presentations.</b> → <b>Take-home final due.</b>