**Science and Media in Public Life**

**JOMC 089.002**

**Tuesday and Thursday, 1:00-2:15pm**

**Carroll 253**

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Hours: 2:15-3:15pm, Tuesdays and Thursday, and by appointment

**Course Description:**

What role does science play in public controversies? What role does the public play in scientific controversies? How are media implicated in science and democracy? This seminar explores the place of media and science in public life through a series of case studies of scientific controversies and public debate over science on issues chosen by students, such as fracking, vaccines, and nuclear power. We will trace each controversy through newspapers, social media, films, and other forms of popular culture, as well as academic writings that clarify the nature and scope of scientific debate. Through class discussions and course assignments we will consider the stakeholders involved and how they communicate, critique, and justify public actions. We will consider how scientists communicate their findings to broader publics and the nature of scientific debate, as well as how journalists cover controversies and understand science. We will be joined by academics and activists who work on public issues with a scientific dimension, and taking advantage of the current elections, we will also try to go outside of the classroom to participate in public discussions among advocacy organizations, political campaigns, and social movements to observe first-hand the role of media and science in public life.

Students taking this course will learn about the practice of science and journalism, the processes of public debate, and the institutions that regulate science and technology. Even more, students will learn to make arguments regarding the role of science and technology in democratic life. Students taking this course will also gain core competencies outlined by the Accrediting Council on Education in Journalism and Mass Communications (ACEJMC), and will learn to think critically, creatively, and independently about expertise and democracy, understand concepts and apply theories in their writing and projects, critically evaluate the reliability and authenticity of sources of information, and evaluate their own work and that of their peers.

**Book:**

Larson, Edward J. *Summer for the gods: the Scopes trial and America's continuing debate over science and religion*. Basic books, 2008.

**Assignments:**

*Engaged participation:*

As a seminar, this course is discussion based. Each student is expected to come to class having completed and thought about the day’s reading. Students are required to post at least one, 200-word response comment to the readings *each week* on the online discussion board. These are due the evening before the start of class (Monday or Wednesday by 8pm). Students are responsible for ‘opening’ at least one text during the semester. This entails a more formal presentation that summarizes the key arguments of the text and commences class discussion. Signups will be on Sakai.

In addition, students are expected to be following daily news coverage of the 2014 midterm elections in North Carolina and nationally, as well as national media coverage. Topics about science from the campaign trail and the news media more generally will often open classroom discussion.

*Experiential Learning Activities:*

Throughout the semester, we will be visited by, and hopefully visiting, a number of scientists, advocacy organizations, public officials, and journalists. Students are expected to attend class on these days and research the backgrounds of the speakers and organizations we are visiting.

*Case Studies and Writing Assignments:*

During the semester, the class will choose three contemporary cases of natural or social scientific controversies that are in public debate. Topics may include: fracking, vaccines, health care, stem cells – whatever students want to spend two weeks learning more about. Students will be responsible as a group for choosing these issues, researching the topic, compiling accessible science writing and journalistic coverage of the issue, identifying government documents and potential speakers, and analyzing the case.

During the semester students will complete one, five-page, double-spaced ‘reaction’ paper in response to a controversy case study that we encounter in class. These are due the Thursday the week after we discuss the issue.

*Term Paper:*

The final paper consists of a 10-15 page term paper and final presentation. Students will analyze a public debate (historical or contemporary) of their choosing that relates to the social or natural sciences. It must be on a topic not discussed in the course and is subject to the approval of the professor. Term papers should analyze the nature of the controversy, its timeline, how it was covered in the professional press and media more broadly, the stakeholders involved and how they framed their arguments, and make an argument about how the public should understand the nature of the debate. Students are welcome, and encouraged, to work in groups on the final paper.

To familiarize students with a core practice of the sciences, and help students improve their work, students must submit a draft of their final paper to a group of their peers for comments. Students will also be responsible for providing feedback on the work of one of their peers (individually). Comments should engage critically with all aspects of the paper, and look for weaknesses in the work so the author can correct them and make the paper stronger as a result. Students are expected to revise their papers based on the comments of their peers.

First drafts of papers should be submitted for peer review by 12/2. Peer review comments are due on 12/5. The final papers and presentations are due on 12/9.

**Grading:** The course grade has the following components:

Participation (including discussion and posts) 40%

Reaction paper 20%

Final term paper 40%

**Outline and Weekly Schedule**

**Week 1: The Practice of Science: Part 1**

Introduction to the course and each other

*Tuesday, August 19th*

Introductions and syllabus

*Thursday, August 21st*

Summer for the Gods, Chapter 1

**Week 2: The Practice of Science: Part 2**

*Tuesday, August 26th*

Bruno Latour, Opening Pandora’s Black Box, from *Science in Action* (pages 1-17)

Available online at:

<http://cscs.res.in/dataarchive/textfiles/textfile.2008-08-19.0976973208/file>

*Thursday, August 28*

*Guest Speaker*

Steve Wall, UNC Institute for the Environment

Freedom Forum Conference Center

**Week 3: Science and Public Life, Part One**

*Tuesday, September 2nd*

Summer for the Gods, Chapters 2, 3, 4, 5

*Thursday, September 4th*

Summer for the Gods, Chapters 6 and 7

**Week 4: Science and Public Life, Part Two**

*Tuesday, September 9th*

Summer for the Gods, Chapters 8, 9, and 10

*Thursday, September 11th*

*Guest Speaker*

Stephanie Zerwas, Assistant Professor, UNC School of Medicine

**Week 5: Making Issues Public**

*Assignment: Come prepared to discuss cases*

*Tuesday, September 16th*

“State of the News Media 2014”

Available online at: <http://www.journalism.org/packages/state-of-the-news-media-2014/>

*Thursday, September 18th*

*Nature Neuroscience*, “The Perils of Public Debate”

<http://www.nature.com/neuro/journal/v8/n5/full/nn0505-535.html>

Susan Moser, “Communicating Climate Change: history, challenges, process and future directions.” Available online: <http://web.env.auckland.ac.nz/courses/geog320/resources/pdf/climate/Moser%202009.pdf>

**Week 6: Debating Climate Change: Consensus and Doubt**

*Tuesday, September 23rd*

Naomi Oreskes, “The Scientific Consensus on Climate Change”

Available online at: [http://www.sciencemag.org/content/306/5702/1686.full.pdf&embedded=true](http://www.sciencemag.org/content/306/5702/1686.full.pdf%26embedded%3Dtrue)

S. Holly Stocking and Lisa W. Holstein, “Manufacturing Doubt: journalists’ roles and the construction of ignorance in a scientific controversy,” *Public Understanding of Science,* 2009

*Thursday, September 25th*

Nicole Roth, animal rights and environmental lawyer

“Scientific Data Shows Animal Agriculture Largest Contributor to Global Warming: Why Don't We Know About it? What Can The Media Do?”

Readings to be announced

**Week 7: Debating Climate Change: Controversies, Facts, and Beliefs**

*Tuesday, September 30th*

Richard Holliman, “Advocacy in the Tail: Exploring the Implications of ‘Climategate’ for Science Journalism and Public Debate in the Digital Age” *Journalism*, 2011

*Guest Speaker*

Kathleen Gray, UNC Institute for the Environment

Freedom Forum Conference Center

*Thursday, October 2nd*

Brendan Nyhan, “When Beliefs and Fact Collide”

Available online at: <http://www.nytimes.com/2014/07/06/upshot/when-beliefs-and-facts-collide.html?_r=1&abt=0002abg=0>

Aaron M. McCright and Riley E. Dunlap, “The Politicization of Climate Change and Polarization in the American Public’s Views of Global Warming, 2001-2010,” *The Sociological Quarterly,* 2011

*Guest Speaker*

Stephanie Willen Brown, Park Library, School of Journalism and Mass Communication

**Week 8: Debating Climate Change: Engagement and Movements**

*Tuesday, October 7th*

Matthew Nisbet, “Communicating Climate Change: Why Frames Matter for Climate Change,”

Available online at: <http://bit.ly/1AkAJBG>

Anne M. McCright and Riley E. Dunlap, “Defeating Kyoto: The Conservative Movement’s Impact on U.S. Climate Change Policy,” Available online at: <http://www.res.ku.edu/~crgc/NSFWorkshop/Readings/Defeating%20Kyoto.pdf>

*Thursday, October 9th*

Alexandra Segerberg and W. Lance Bennett, “Social Media and the Organization of Collective Action: Using Twitter to Explore the Ecologies of Two Climate Change Protests,” *The Communication Review,* 2011.

**Week 9: Case Study One**

*Tuesday, October 14th*

*Thursday, October 16th*

No Class, Fall Break

**Week 10: Case Study One, Continued**

*Tuesday, October 21st*

*Thursday, October 23rd*

**Week 11: Case Study Two**

*Tuesday, October 28th*

*Thursday, October 30th*

**Week 12: Case Study Two, Continued**

*Tuesday, November 4th*

*Thursday, November 6th*

**Week 13: Case Study Three**

*Tuesday, November 11th*

*Thursday, November 13th*

**Week 14: Case Study Three, Continued**

*Tuesday, November 18th*

*Thursday, November 20th*

**Week 15: How Should We Discuss Scientific Issues?**

*Tuesday, November 25th*

Michel Callon, Pierre Lascoumes, and Yannik Barthe, *Acting in an Uncertain World*

Read chapter 1, Available online at: <http://bit.ly/1w0UrDR>

*Thursday, November 27th*

No Class: Thanksgiving Holiday

**Week 16: The Stakes**

*Tuesday, December 2nd*

Jared Diamond, *Collapse: How Do Societies Choose or Fail to Succeed*

Read chapter 14, “Why Do Some Societies Make Disastrous Decisions?”

and chapter 16, “The World as a Polder: What Does it All Mean to Us Today?”

Available online at: <http://bit.ly/1sKdqjT>

Deadline for submission of final paper drafts for peer review

*Friday, December 5th*

Peer review comments due

**Final Paper Presentations**

Tuesday, December 9th, 4:00pm