**Debating Politics and Science**
**Communication Studies 489.001**
**Josh Pasek, Ph.D.**
**Fall, 2011**

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Course Meetings:
MW – 2:30-4:00PM
1110 North Quad

Office Hours:
MW – 4:30-5:30PM
5413 North Quad
and by appointment
jpasek@umich.edu

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In 1931, Wilbur Glenn Voliva offered a $5,000 prize for anyone who could prove that the earth was round. Many tried, all of them failed. Without the ability to launch into space, no one had really observed the shape of the globe. It was simply assumed from a series of scientific results.

Fifty years later, Stephen Hawking (1988) recounted a story in which the philosopher Bertrand Russell was giving a speech about astronomy:

> *'He described how the earth orbits around the sun and how the sun, in turn, orbits around the center of a vast collection of stars called our galaxy. At the end of the lecture, a little old lady at the back of the room got up and said: "What you have told us is rubbish. The world is really a flat plate supported on the back of a giant tortoise." The scientist gave a superior smile before replying, "What is the tortoise standing on?" "You're very clever, young man, very clever," said the old lady. "But it's turtles all the way down!"'*

What makes you believe that the earth is round and that we are not all living on the back of an infinite stack of turtles? Have you ever seen a chromosome or a quark? How about electricity? Most of what we "know" about science comes from textbooks and second-hand reports. These reports can shape the way we think about the world we live in and the way we act within in.

How safe is genetically engineered broccoli? Can you really be addicted to the Internet? Will cell phones give you brain cancer? And if so, is there anything the government should do about it?

In this class, we explore how the public consumes science, and how scientific findings translate into public policy. Three contemporary topics – Intelligent Design, Climate Change, and Autism – illustrate where science and public policy collide. With these topics as a foundation, we not only evaluate what counts as science, but see how the impact of scientific findings are shaped by the media, by public opinion, and by political debates. What we know does not come directly from

the laboratory, but rather from carefully crafted journalistic standards. These standards can convince us (or at least sway our opinion) toward the contemporary notion that the world is round, or perhaps – under other circumstances – toward the view that turtles are indeed in play.

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**Requirements:**

*Class Meetings:*

The class meets on Mondays and Wednesdays from 2:30PM to 4:00PM in North Quad, room 1110. Students are expected to attend all classes and to have the reading assignments and paper assignments completed in advance of the assigned class.

*Weekly Response Papers:*

Before each week (**posted by noon on Sunday**) of weeks 2 through 14, students will be expected to post a response paper online using the class WordPress blog (http://debatingpoliticsandscience.wordpress.com). Response papers should be no shorter than 2 paragraphs long (> 250 words) and should at a minimum 1) provide a brief summary of some aspect of at least two of the readings, 2) compare and contrast at least two readings, and 3) raise a question for class discussion based on that comparison. Students should be prepared to discuss the questions they pose in each week's paper during class.

Weekly response papers will be graded on the "check system" (check, check plus, check minus). Papers that demonstrate some critical thinking about the readings and that meet weekly requirements will receive a check. Papers that provide a particularly insightful analysis and raise deep questions will receive a check plus. Papers that make a concerted attempt to fulfill the assignment and that demonstrate that at some of the reading was completed will receive a check-minus (as will all late papers). All papers not meeting these standards or not turned in will receive a zero. The lowest paper grade will be dropped.

*Responses to Classmate Papers:*

Using the class WordPress blog (http://debatingpoliticsandscience.wordpress.com), students are expected to post substantive comments (of at least one full paragraph) in response to two other students' weekly response papers. Comments should be **posted no later than Tuesday at noon** each week. Please make sure that you are logged in when you post comments or I will not be able to evaluate them.

*Final Paper:*

In addition to the weekly response papers, students will be expected to produce one longer term paper of 8-10 pages (double-spaced, 12 pt font, 1 inch margins), which will be **due by the start of class on Wednesday, December 7th**. This larger paper will explore the science, news, public opinion, and policy framework surrounding one of three issues that we did not focus on in class. The paper will need to show 1) why the scientific issue you choose has substantive policy implications, 2) what the state of the science actually is, 3) how that science is being reported in the media, 4) what the public thinks about the science, and 5) how that relates to policy on the issue. Also, be sure to discuss what the core points of contention are and your thoughts on whether the messages being conveyed at each step in this process are appropriate or not.

*Topics for Final Paper:*

- Do Cellular Telephones Cause Cancer?
- Is Nuclear Power Safe?
- How Risky are Genetically Modified Foods?
- (I am open to other topics if you send me a written proposal in advance)

**Grading:**

40% - Weekly Response Papers
10% - Weekly Response Commentaries
30% - Final Paper
20% - Attendance and Participation

**Required Text:**

There is one required book for this class. The first reading assignment from the book will be due on November 7th. Please plan to acquire a copy in advance. Please note that I did **NOT** order copies for the bookstore.

Offit, P. A. (2010) *Autism's False Prophets: Bad Science, Risky Medicine, and the Search for a Cure*, Columbia University Press: New York.

**Course Policies:**

*Special Accommodations:*

Any student who has a need for accommodation based on the impact of a disability, religious practice, physical requirement, or medical need should contact me privately to discuss the specific situation as soon as possible.

*A Note on Academic Freedom and Controversial Subjects:*

Many of the subjects we will be discussing in this class are highly controversial and sometimes touch on matters of strongly held beliefs. It is both my responsibility as an instructor and your responsibility as students to respect the range of opinions held in the classroom and to recognize that aspects of every topic we will be discussing are open to debate. In particular, some of the debates we will be discussing pit current scientific understandings against religious viewpoints and personal experiences. The questions we will be asking are **not** questions of what is true, but instead serve as an exploration of the process by which scientists address questions, reach conclusions, and by which the news media disseminate those conclusions to the public. Although the scientific method represents one means for understanding what is or is not true in the world, it is not the only method through which people reach an understanding of truth. As such, this classroom is **not** a forum for discussing the veracity of any religious beliefs (except perhaps Pastafarianism – see: http://www.venganza.org/), though we may be discussing the *scientific* standing thereof. I will do what I can to keep the discussion within these bounds – please try to do your part to keep conversation both civil and germane to the topics at hand.

A second point on this general note concerns the readings we will be encountering. In part, this course was designed to showcase aspects of contemporary scientific and political debates. Because this is the case, many of the readings that we will encounter are coupled with strongly held viewpoints. It is impossible that the viewpoints in all of these readings are correct – indeed, you will see that they regularly contradict one-another. A reading's inclusion in the syllabus thus does not represent any endorsement of its content.

*Academic Honesty:*

A good student-teacher relationship operates on the basis of trust. From that basis, I trust that you will do your utmost to complete course readings and to be honest with me if for any reason you are unable to fully meet a commitment to the class. I also trust your judgment that any collaboration with your peers or additional online research that you do is academically honest. That said, if I encounter evidence that you have in any way shape or form copied material without attribution or collaborated to the point that the work you present is not your own, you will fail the course and I will immediately report the incident to the Dean of Student Affairs.

**Course Outline:**

Week of September 5, 2011 (Week 1)
**Introduction to the Politics of Science**

September 5th – NO CLASS

September 7th - Introduction to the Course

**Test Case 1 – Debating Evolution**

Week of September 12, 2011 (Week 2)
**Debating Evolution / What is Science?**

In *Kitzmiller v. Dover*, the seminal court case on intelligent design (ID), both the proponents of ID and those arguing that only evolution should be taught in schools asked the judge to make a determination on whether or not ID counted as science. But determining what is and isn't science is a notoriously difficult task. This week, we read some of the philosophical literature outlining the search for a "demarcation criterion" – the set of standards whereby scientific endeavors could be distinguished from both dogma (religious beliefs) and pseudo-science (fields like astrology). Karl Popper proposed that science could be distinguished from non-science because science made claims that could be proven wrong. Thomas Kuhn regarded science as a puzzle-solving endeavor, but expressed skepticism that scientific methods could be consistently distinguished from non-science. And Imre Lakatos challenged both notions in portraying science as a constant competition between rival explanations of the world, one that depended on how well theory could predict future results. In exploring the views of these philosophers as well as the Judge's decision in *Kitzmiller v. Dover*, we consider what science actually is.

*Readings for this Week:*

> Thornton, S., (2009) "Karl Popper", *The Stanford Encyclopedia of Philosophy*, Zalta, E. N. (ed.). Available from: http://plato.stanford.edu/archives/sum2009/entries/popper/. *[[Concentrate on sections 2, 3, and 4]]*
>
> Bird, A., (2009), "Thomas Kuhn", *The Stanford Encyclopedia of Philosophy,* Zalta, E. N. (ed.). Available from: http://plato.stanford.edu/archives/fall2009/entries/thomas-kuhn/.

*[[Concentrate on sections 2-6]]*

Lakatos, Imre, "Science and Pseudoscience", [Transcript from the London School of Economics]. Available from: http://www2.lse.ac.uk/philosophy/about/lakatos/scienceAndPseudoscienceTranscript.aspx.

Kitzmiller v. Dover Area School District (12/20/05) Case 4:04 –cv-02688-JEJ. Available from: http://www.pamd.uscourts.gov/kitzmiller/kitzmiller_342.pdf
[[Read only pp. 40; 49; 64-83.]]

*Some Questions to Think About:*

- *What would Popper, Kuhn, and Lakatos say about the scientific status of ID?*
- *Which of these authors comes closest to your own understanding of science?*
- *Do we need a "Demarcation Criterion"?*
- *Is Judge Jones's reasoning in the Kitzmiller decision sound?*
- *What do you think of the criteria Judge Jones uses that are not discussed by the philosophers? Are they appropriate/useful?*

September 12th – Watch NOVA documentary (http://www.pbs.org/wgbh/nova/evolution/intelligent-design-trial.html)

September 14th – What is Science Discussion

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Week of September 19, 2011 (Week 3)
**Debating Evolution / Shaping Public Opinion of Life Sciences**

If most scientists don't think that ID qualifies as science, why is it that a large portion of the public thinks that it deserves a place in the science classroom? This week, we explore how the public comes to understand what is and isn't "scientific." In particular, we look at how mass media and religious beliefs might shape public opinion about evolution. The Nisbet and Nisbet and Pew reports show the state of Americans' views on the issue. What strikes you about the numbers presented? Why is it that Americans hold the views they have? In another piece, Nisbet discusses how the news media and proponents of both ID and Evolution frame their positions.

*Readings for this Week:*

Nisbet, M. C., & Nisbet, E. C., (2005) Evolution & Intelligent Design: Understanding Public Opinion. *Geotimes*. Available from: http://www.geotimes.org/sept05/feature_evolutionpolls.html.

Pew Research Center for the People and the Press, (2009) Public Praises Science, Scientists Fault Public, Media. *[Unpublished Report]*. Available from: http://people-press.org/files/legacy-pdf/528.pdf.

Nisbet, M. C., (2009) Framing Science: A New Paradigm in Public Engagement. *New Agendas in Science Communication* (Kahlor, L. and Stout, P. eds.), New York: Taylor and Francis, pp. 40-67. Available from: http://ion.uwinnipeg.ca/~clark/teach/3480/nisbetframingscience.pdf.

Find, read, and bring to class three (3) newspaper articles, opinion pieces, blog postings, or interview transcripts that discuss the debate between ID and Evolution. [[POST THESE ON THE CLASS WORDPRESS BLOG]]

## DO I WANT TO HAVE THEM POST THESE? ##

FIND A COPY OF:

Mooney, C. & Nisbet, M.C. (2005, Sept./Oct.). When Coverage of Evolution Shifts to the Political and Opinion Pages, the Scientific Context Falls Away, Unraveling Darwin. Columbia Journalism Review, 31-39. [Cover article]

*Some Questions to Think About:*

- *Does it matter what the American public believes?*
- *Why do you think the public is so far off in guessing what scientists believe?*
- *What do the news articles you found tell you about how reporters, journalists, bloggers, and opinion columnists think about Evolution and ID?*
- *How well does the discussion in those news articles fit with Nisbet's notions of how these issues are framed?*

September 19th – Public Opinion of Evolution

September 21st – The Role of the Mass Media

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Week of September 26th, 2011 (Week 4)
**Debating Evolution / Law as an Implementation of Public Policy**

The teaching of evolution in public schools has been a hot button issue since Darwin's theory first entered the scientific mainstream. Both the introduction of natural selection into the high school curriculum and attempts to excise its inclusion have represented points of contention between scientists, science teachers, administrators, school board members, politicians, and the public. In many cases, however, ultimate authority for determining what was or was not to be included fell to the courts. Lawyers and judges bore the ultimate responsibility for figuring out

what was and wasn't scientific as well as what practices failed legal or constitutional muster. This week, we focus on the long and complicated legal history surrounding the teaching of evolution. In professor Larson's account, we see the legal history of the debate over evolution. See how he characterizes strategic shifts as well as the nature of the debate. The sections in Phillip Johnson's book outline some of the strategic considerations as well as the cultural context from the ID movement's perspective, a strategy for which is outlined in "The Wedge Strategy." Both Shipman's article and the Labov and Pope article show a concerted attempt by scientists to respond to both public opinion and the political debate.

*Readings for this Week:*

Larson, E. J. (2008, October 16) From Dayton to Dover: A History of the Evolution Teaching Legal Controversy in America. *William A. Brahms Lecture on Religion*. [Invited Lecture] Center for Professional Ethics, Case Western Reserve University, Cincinnati, OH. Available from CTools.
[NOTE: VIDEO IS AN HOUR LONG – PLEASE PLAN ACCORDINGLY]

Johnson, P. E. (2010) Darwin on Trial. InterVarsity Press: Downers Grove, IL.
[Read Pages XXXX]

Center for the Renewal of Science and Culture, (n.d.) "The Wedge Strategy." [Internal Document] *Discovery Institute*: Seattle, WA.

Shipman, P. (2005) Being Stalked by Intelligent Design. *American Scientist, 93*, 500-502.

Labov, J. B. & Pope, B. K., (2008) Understanding Our Audiences: The Design and Evolution of Science, Evolution, and Creationism, *CBE – Life Sciences Education, 7*, 20-24.

Kitzmiller v. Dover Area School District (12/20/05) Case 4:04 –cv-02688-JEJ. Available from:
http://www.pamd.uscourts.gov/kitzmiller/kitzmiller_342.pdf
[skim remaining sections]

*Some Questions to Think About:*

- *Who should determine whether or not evolution is taught in public schools?*
- *Would scientists, the courts, or the public approach the issues differently if religion were not involved?*
- *Is there a way to resolve this debate?*
- *Does there need to be a debate in the first place?*
- *What role should scientists, policy makers (school board members), and the courts play in determining what get taught in science class?*

September 26th – Defining the Scope of the Public Policy Debate

September 28th – Implications of the Court Decision(s)

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**Test Case 2 – Climate Change**

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Week of October 3, 2011 (Week 5)
**Climate Change / The Nature of Scientific Consensus**

What do scientists believe about climate change (CC)? Is it happening? Are we responsible? Is there something we should be doing about it? Unlike the case of ID, there are no religious reasons to question scientists on whether or not the earth has been warming up. Instead, the contention over climate change represents a scientific series of questions. The public and policy makers, in such circumstances, might be reasonably concerned over whether scientists agree on a particular issue or whether ongoing scientific debates leave conclusions (and therefore potential policy ramifications) in doubt. This week's readings explore the nature of scientific consensus – whether or not it exists, how to identify it, and what the state of scientific debate is. In particular, we focus on the notion of scientific uncertainty and how it can be both understood and communicated.

*Readings for this Week:*

Le Treut, H., Somerville, R., Cubasch, U., Ding, Y., Mauritzen, C., Mokssit, A., Peterson, T. & Prather, M. (2007) Historical Overview of Climate Change. In: *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [Solomon, S., Qin, D., Manning, M., Chen, Z., Marquis, M., Averyt, K. B., Tignor, M. & Miller, H. L. (eds.)]. Cambridge University Press: New York.

Peterson, T. C., Connolley, W. M., & Fleck, J. (2008, September) The Myth of the 1970s Global Cooling Consensus, *Bulletin of the American Meteorological Society*.

Oreskes, N., (2005) The Scientific Consensus on Climate Change*, Science, 306*, p. 1686.

Doran, P. T. & Zimmerman, M. K., (2009) Examining the Scientific Consensus on Climate Change, *EOS Transactions American Geophysical Union, 90*(3), pp. 22-23.

Intergovernmental Panel on Climate Change, (2005) Guidance Notes for Lead Authors of the IPCC Fourth Assessment Report on Addressing Uncertainties, *[Report]*.

Allen, M. A., Stott, P. A., Mitchell, J. F. B., Schnur, R., & Delworth, T. L. (2000) Quantifying the Uncertainty in Forecasts of Anthropogenic Climate Change, *Nature, 407*, pp. 617-620.

Stainforth, D. A., Aina, T., Christensen, C., Collins, M., Faull, N., Frame, D. J., Sexton, D., Smith, L. A., Spicer, R. A., Thorpe, A. J., & Allen, M. A. (2005) Uncertainty in Predictions of the Climate Response to Rising Levels of Greenhouse Gasses, *Nature, 433,* pp. 403-406.

Richards, J. (2010, March 16) When to Doubt a Scientific 'Consensus', *The American*. American Enterprise Institute, Washington, D.C.

Crighton, M. (2003, January 13) Aliens Cause Global Warming, *Caltech Michelin Lecture*. Available from: http://www.sepp.org/NewSEPP/GW-Aliens-Crichton.htm

*Some Questions to Think About:*

- *What is scientific consensus?*
- *When do enough scientists agree to call something a consensus?*
- *Does it matter that scientists in related fields do not agree as frequently as scientists studying climate directly?*
- *What is scientific uncertainty?*
- *How should scientists address uncertainty?*

October 3rd – Scientific Consensus

October 5th – Scientific Uncertainty

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Week of October 10, 2011 (Week 6)
**Climate Change / Journalism in a Pickle**

When a scientific issue enters public consciousness, science journalists are tasked with describing the findings to the general public. One particular challenge they face is communicating the correct level of contention and uncertainty in the science with their articles. This is confounded by the fact that most journalists are not trained scientists. Determining the proper heft and caveats to bestow on a scientific discovery is no simple endeavor. Hence, it is perhaps unsurprising that journalists are often accused of regularly both overstating and understating scientific certainty. This week we assess how journalists cope with uncertainty and how journalistic

norms frame the communication of scientific results. In particular, attempts to show "both sides" of an issue like climate change might serve to distort as much as it helps.

*Readings for this Week:*

Bennett, W. L. (1996) An Introduction to Journalism Norms and the Representations of Politics*, Political Communication, 13*, pp. 373-384.

Boykoff, M. T., & Boykoff, J. M. (2007) Climate Change and Journalistic Norms: A Case Study of US Mass-Media Coverage, *Geoforum*.

Zehr, S. C. (2000) Public Representations of Scientific Uncertainty About Global Climate Change, *Public Understanding of Science, 9*, pp. 85-103.

Schrope, M. (2001) Consensus Science or Consensus Politics*, Nature, 412*, 112-114.

Stocking, S. H. (1999) How Journalists Deal with Scientific Uncertainty, in *Communicating Uncertainty: Media Coverage of New and Controversial Science* (Friedman, S. M., Dunwoody, S., Rogers, C. L. eds.), Laurence Earlbaum: Mahwah, NJ. pp. 23-41.

Find, read, and bring to class three (3) newspaper articles, opinion pieces, blog postings, or interview transcripts that discuss climate chance.

## DO I WANT TO HAVE THEM POST THESE? ##

*Some Questions to Think About:*

- *What can we expect of science journalists?*
- *Whose fault is it if a story comes out wrong?*
- *How do journalistic norms shape the way stories are written?*
- *How well do the articles you found match the norms described?*

October 10th – What are the Journalistic Norms in Play?

October 12th – How do we Reconcile Journalism with Uncertainty?

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Week of October 17, 2011 (Week 7)
**Climate Change / What Informs Public Opinion? Mass Media**

How does the public internalize what it hears from journalists about scientific issues? Media effects scholars tend to divide the influence of media stories on attitudes and behaviors into four basic types of effects: persuasion, framing, priming, and agenda-setting. Persuasion is the direct influence that media messages have on an audience. Framing occurs when media sources convey the context in which people should think about a particular news issue. Priming is when the messages in the media make people think about a series of related constructs. And agenda-setting is the role media sources have in defining what issues are important. This week, we think about how each of these processes might apply as information about climate science permeates through the media and reaches the general public.

*Readings for this Week:*

Nisbet, M. C. (2009) Communicating Climate Change: Why Frames Matter for Public Opinion, *Environment, 51*(2) pp. 12-23.

Zhao, X. (2009) Media Use and Global Warming Perceptions: A Snapshot of the Reinforcing Spirals, *Communication Research, 36*(5) pp. 698-723.

Fortner, R. W., Lee, J.-Y., Corney, J. R., Romanello, S., Bonnell, J., Luthy, B., Figuerido, C., & Ntsiko, N. (2000) Public Understanding of Climate Change: Certainty and Willingness to Act, *Environmental Education Research, 6*(2) pp. 127-141.

Corbett, J. B., & Durfee, J. L., (2004) Testing Public (Un)Certainty of Science : Media Representations of Global Warming, *Science Communication, 26*(2), pp. 129-151.

*Some Questions to Think About:*

- *What do people glean from news articles about climate change?*
- *What influence might different portrayals of climate change have on public opinion?*
- *Is there anything that journalists should do differently in describing climate change?*
- *What kinds of media effects do you think are relevant influences from stories about climate change?*

October 17th – NO CLASS (Fall Study Break)

October 19th – What do People Get From The News?

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Week of October 24, 2011 (Week 8)
**Climate Change / What Informs Public Opinion? Psychology**

Mass media are far from the only force shaping public opinion around issues like global warming. People also have pre-existing worldviews that are either compatible with or incongruent with notions of anthropomorphic climate change. But when are people responsive to messages in the media and from climate scientists and when are they predisposed toward skepticism. This week we explore issues around trust in climate scientists, beliefs about how just and fair the world is, perceptions of recent weather, and partisanship as factors influencing which individuals in the public believe that the earth is warming.

*Readings for this Week:*

Oppenheimer, M. & Todorov, A. (2006) Global Warming: The Psychology of Long Term Risk, *Climatic Change 77*, pp. 1-6.

Kellstedt, P. M., Zahran, S., & Vedlitz, A. (2008) Personal Efficacy, the Information Environment, and Attitudes Toward Global Warming and Climate Change in the United States, *Risk Analysis, 28*(1) pp. 113-126.

Egan, P. J., & Mullin, M. (2010) Turning Personal Experience in to Political Attitudes: The Effect of Local Weather on Americans' Perceptions about Global Warming, *[Unpublished Manuscript]*.

Feinberg, M., & Willer, R. (2011) Apocalypse Soon? Dire Messages Reduce Belief in Global Warming by Contradicting Just-World Beliefs, *Psychological Science, 22*(1), pp. 34-38.

Dunlap, R. E. & McCright, A. M. (2008) A Widening Gap: Republican and Democratic Views on Climate Change, *Environment, 50*(5) pp. 26-35.

October 24th – What Influences Beliefs?

October 26th – Attitude Stability and Change

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Week of October 31, 2011 (Week 9)
**Climate Change / When Science Becomes Political**

Climate change elicits action, if it is indeed happening. But acting on climate change might entail significant costs. A political response, therefore, depends on two basic factors: whether anthropomorphic climate change is happening, and whether it is "worth it" to do something about the issue. Both arguments hinge around the understanding that the American public has of climate change and the extent to which they think measures to deal with the issue are worthwhile. This week, we

look at the interchange between opinion on climate change and policy on climate change. Who is advocating change and who is fighting that change? How are they going about those decisions?

*Readings for this Week:*

Krosnick, J. A., Holbrook, A. L., & Visser, P. S. (2000) The Impact of the Fall 1997 Debate About Global Warming on American Public Opinion, *Public Understanding of Science, 9*, pp. 239-260.

McCright, A. M., & Dunlap, R. E. (2000) Challenging Global Warming as a Social Problem: An Analysis of the Conservative Movement's Counter-Claims, *Social Problems, 47*(7), pp. 499-522.
[Don't worry about any of the specific sociological theories they mention]

Grundmann, R. (2007) Climate Change and Knowledge Politics, *Environmental Politics, 16*(3), pp. 414-432.

Demeritt, D. (2001) The Construction of Global Warming and the Politics of Science, *Annals of the Association of American Geographers, 91*(2), pp. 307-337.

Selin, H. & VanDeveer, S. D. (2007) Political Science and Prediction: What's Next for U.S. Climate Change Policy? *Review of Policy Research, 24*(1), pp. 1-27.

Krosnick, J. A. (2010, June 8) The Climate Majority, *New York Times* (Op-Ed).

Van den Hove, S., Menestrel, M. L., & de Bettinies, H.-C. (2002) The Oil Industry and Climate Change: Strategies and Ethical Dilemmas. *Climate Policy, 2*, pp. 3-18.

October 31st – Public Opinion and Policy

November 2nd – Challenging the Policy Consensus

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Week of November 7, 2011 (Week 10)
**Vaccination and Autism / The Early Years: An Open Question with Policy Ramifications**

Before the 1940s, nobody had ever heard of autism. Today, it is considered one of the world's most pervasive and problematic developmental disorders; scientists estimate that it afflicts between 1 in 200 and 1 in 50 individuals. But what was this

newly pervasive disease? And was its prevalence really growing or were we just paying attention to something that we hadn't been aware of previously? In the early 1990s and even through the present day, research on autism raised as many questions as had been answered. Indeed, scientists still disagree on whether the disorder is spreading or simply better diagnosed. And if autism is indeed an epidemic, then something must be causing its increased prevalence. For many parents in particular, the silver bullet seemed to be vaccinations. Children were receiving more and more vaccines, and autism seemed to kick in shortly thereafter. This week's readings show the state of the science when the vaccine hypothesis entered the literature and how parents regarded that science.

*Readings for this Week:*

American Psychiatric Association (1994) Diagnostic Criteria for Diagnosing Autism, *Diagnostic and Statistical Manual of Mental Disorders – IV* [Also known as DSM-IV]

Wakefield, A. J., Murch, S. H., Anthony, A., Linnell, J., Casson, D. M., Malik, M., Berelowitz, M., Dhillon, A. P., Thomson, M., A., Harvey, P., Valentine, A., Davies, S. E., Walker-Smith, J. A. (1998) Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children, *The Lancet, 351*(9103), pp. 637-641. [Note: This study has been redacted]

Offit, P. A. (2010) *Autism's False Prophets: Bad Science, Risky Medicine, and the Search for a Cure*, Columbia University Press: New York.
[Chapters 1-2, 4-5]

November 7th – Frontline Documentary: The Vaccine War
(http://www.pbs.org/wgbh/pages/frontline/vaccines/)

November 9th – Vaccines as a Culprit

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Week of November 14, 2011 (Week 11)
**Vaccination and Autism / The Challenge of Changing Opinions**

Increasing diagnoses of autism and the perception that vaccines might be responsible led to a flurry of research on the potential for a link between autism and either the MMR vaccine or the vaccine preservative thimerosal. A large number of studies emerged in the early 2000s disputing the purported links. Further, the Wakefield et al. study was redacted from *Lancet*, after some evidence suggested both a conflict of interest and potentially falsified data. But what influence did this have on both the discourse and on the public? This week's readings explore how new scientific evidence entered the debate.

*Readings for this Week:*

Offit, P. A. (2010) *Autism's False Prophets: Bad Science, Risky Medicine, and the Search for a Cure*, Columbia University Press: New York.
[Chapters 3, 6, 9, and Epilogue]

Taylor, B. (2006) Vaccines and the Changing Epidemiology of Autism. *Child: Care, Health, and Development, 32*(5), pp. 511-519.

Evans, M., Stoddart, H., Condon, L., Freeman, E., Grizzell, M. and Mullen, R. (2001) Parents' Perspectives on the MMR Immunisation: A Focus Group Study. *British Journal of General Practice, 51*, pp. 904-910.

November 14th – Interpreting the Scientific Evidence

November 16th – Does the Science Reach the Public?

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Week of November 21, 2011 (Week 12)
**Vaccination and Autism / Policy Agreement with a Divided Public**

## WRITEUP##

*Readings for this Week:*

Offit, P. A. (2010) *Autism's False Prophets: Bad Science, Risky Medicine, and the Search for a Cure*, Columbia University Press: New York.
[Chapters 8 & 10]

Pitney, J. (2011) Autism Politics: A Research Agenda. Paper presented at the annual meeting of the *Midwest Political Science Association*, Chicago, IL April 22-25.

November 21st – From Policy Makers to Public Opinion

November 23rd – Parents as a Social Movement

[Have a Happy Thanksgiving]

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Week of November 28, 2011 (Week 13)
**When Science is Uncertain**

*Readings for this Week:*

Karpinski, A. C., and Duberstein, A. (2009) A Description of Facebook Use and Academic Performance among Undergraduate and Graduate Students. Poster presented at the Annual Meeting of the American Educational Research Association, San Diego, CA.

Grabmeier, J. (2009, April, 8) Study Finds Link Between Facebook Use, Lower Grades in College. [Press Release]

Pasek, J., More, E., and Hargittai, E. (2009) Facebook and Academic Performance: Reconciling a Media Sensation with Data. *First Monday, 14*(5). Available from: http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/2498/2181

Karpinski, A. C. (2009) A Response to Reconciling a Media Sensation with Data. *First Monday, 14*(5). Available from: http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/2503/2183

Pasek, J., More, E., and Hargittai, E. (2009) Some Clarifications on the Facebook-GPA Study and Karpinski's Response. *First Monday, 14*(5). Available from http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/2504/2187

Holland, E. (2009, May 8) Facebook and Procrastination: Runaway Coverage Mistakes Correlation for Causation. *Columbia Journalism Review*. Available from: http://www.cjr.org/the_observatory/facebook_and_procrastination.php#comments

Bem, D. (2011) Feeling the Future: Experimental Evidence for Anomalous Retroactive Influences on Cognition and Affect. *Journal of Personality and Social Psychology, 100*(3), pp. 407-427.

Wagenmakers, E.-J., Wetzels, R., Borsboom, D., and van der Maas, H. (Forthcoming) Why Psychologists Must Change the Way They Analyze Their Data: The Case of Psi. *Journal of Personality and Social Psychology*.

November 28th – Facebook and GPA

November 30th – Predicting the Future

Week of December 5, 2011 (Week 14)
**Closing the Loop: The Politics of Scientific Questions**

In reading through the literature on the nature of science, the communication of science messages to the public, the formation of public opinion, and the development of policy, we have seen how science can play a variety of different roles in public opinion and politics. Yet the story remains critically lacking. Not only do scientific findings have the capacity to alter political realities, but political decisions can shape science itself. This week we explore the foundations of scientific questions. In particular, we focus on the notion of social constructivism. Science could be said to be socially constructed if there was nothing inherently natural about the way science progresses or the questions scientists ask. To the extent that science is a social construct, the outcomes of science might be strongly shaped by the questions researchers pose. If the funders of science or the practitioners of science pose questions with political motivations, what might that do to the end results of the scientific process?

*Readings for this Week:*

Hacking, I. (1999) *The Social Construction of What?* Harvard University Press: Cambridge, MA.
[Read Preface and Chapters 1 and 3]

Berube, M. (2011) The Science Wars Redux. *Democracy, 19*, pp. 64-74.

Glenn, D. (2009, October 7) Senator Proposes an End to Federal Support for Political Science. *Chronicle of Higher Education*.

Coburn, T. (2009) Writeup on Amendment 2631 – Prohibits the National Science Foundation from Wasting Federal Research Funding on Political Science Projects.

Cohen, P. (2010, January 18) Professor is a Label that Leans to the Left. *New York Times*.

December 5th – Social Constructivism

December 7th – Are Scientific Questions Biased?

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Week of December 12, 2011 (Week 15)
**A Party and Some Concluding Thoughts**

*Readings for this Week:*

Jamieson, D. (1996) Scientific Uncertainty and the Political Process. *Challenges in Risk Assessment and Risk Management, 545*, pp. 35-43.

December 12th – Thinking About The Whole Model

December 14th – NO CLASS (Study Days)