

Political Science 476/576—Science and Politics

Professor Ed Weber

Spring 2014

OFFICE HOURS

Mondays: 2:00 - 3:00

Wednesdays: 10:30 - 11:30

and by appointment

Course Description

OSU Catalog description: "Relationship between science and the political system in political ideas and history, in bureaucratic politics of science policy, and in contemporary scientific disputes. (Bacc Core Course)."

In recent years there has been an increasing emphasis among decision makers, interest groups, and citizens alike on the importance of more science-based public policy at local, regional, national, and international levels of governance. Many have normative expectations that this can improve the quality of complex public policy decisions. The assumption is that scientists can and should facilitate the resolution of public policy decisions by providing objective scientific information to policymakers and the public and by becoming more involved in policy arenas.

There are others, however, who suggest that science is used for less desirable policy purposes such as rationalizing and legitimizing decisions made by elites. This latter view argues that the authority of science and scientific "narratives" is socially constructed by scientists and users of scientific information and is not inherent to science *qua* science. This model posits the following: science and scientists are considered just one of many sources of authority concerning natural resource management issues; scientific information may itself be biased; and, other types of policy actors, information, and values can be more important in arriving at sensible and effective public policy choices.

Learning Outcomes

This course examines the role of science and scientists in the political and policy process from multiple perspectives so that students will be able to...

>describe and contrast major eras in the development of science and policy in the U.S. and European contexts.

>identify and explain the role of positivism and ideology in the use of science in politics and policy.

>recognize the role of formal actors (the President, Congress, the bureaucracy, the Courts, states) and informal actors (e.g., interest groups, and public opinion) in the making of science policies.

>explain and assess how policymakers use scientific evidence in the making of policy.

>analyze the development, implementation, and impact of selected science policies.

>explore science and technology's impact on the democratic process.

>evaluate arguments of science and technology supporters and critics in terms of policy development.

Grading & Assignments

An "A" requires a score of 93% or more, an A- ranges from 90% to 93%, a B+ ranges b/w 87.5% and 90%, a B b/w 82.5% and 87.5%, a C+ from 77.5% and 80%, and so on down the line.

For undergraduates this course has a series of grades totaling 500 points in all. As usual, those assignments with a smaller point count mean less work, while those with more points mean more. And as you will see, the Final Exam (for undergrads only) and the paper assignments carry the most weight. But you will also receive credit for Attendance and Participation; each will be worth 4% of the total course grade (or 40 points each). The attendance policy can be viewed at its own individual link in the Course Policies folder.

For graduate students, there will be some breakout discussion sessions involving only the grad students and the prof, and there will be a comprehensive critique paper focused on the NRC (2012) book that is designed to pull together what you have learned in this course.

All assignments and their due dates are noted below, and the grade weights and due dates for each assignment are also noted below.

This is going to be a great class. We're going to have fun.

PS 476/576 Grade Weights & Assignments

Due Date

Attendance	40 points	N/A
Participation	40 points	N/A
Paper 1–Assess & Critique Normative Science	100 points	April 28
Paper 2–The Pros and Cons of Big Data: Changer for the Better?	100 points	May 28
2 Essays from Jasanoff book	80 points	May 7
Online Discussion/ Prec. Principle (ugrads only)	40 points	May 19
FINAL EXAM (take home) (ugrads only)	100 points	June 10

GRAD STUDENTS will do all the above unless otherwise noted and will do two additional things:

- a critique of the National Research Council book on Science & Policy. The "Science & Policy" critique will be worth 200 points & will be due on June 9. The assignment will be posted in the Assignments section of Blackboard.
- one added assignment worth 80 pts/ TBD b/w Prof. and grad students. My initial idea here is to focus on growing push for local food networks/systems to explore alternative "angles" on the practical knowledge idea and how, for many, the importance of reintroducing practical, local knowledge is about much more than simply solving public policy problems.

Required Books & Readings

The following books are required for ALL students:

- Keller, Ann C. 2009. *Science in Environmental Policy: The Politics of Objective Advice*. Cambridge, MA: The MIT Press.

- Jasanoff, Sheila. 2007. *Designs on Nature: Science and Democracy in Europe and the United States*. Princeton: Princeton University Press. ISBN #978-0-691-13042-2 (paper)
- Mayer-Schonberger, Viktor, and Kenneth Cukier. 2013. *Big Data: A Revolution that Will Transform How We Live, Work, and Think*. Houghton, Mifflin, Harcourt.

The following books are required for GRAD students:

- National Research Council. 2012. *Using Science as Evidence in Public Policy*. Washington, D.C.: The National Academies Press

Required readings:

All these have been placed on the course Blackboard space on a class-by-class basis. Many have the requisite URL links, while some are attached as Word or PDF documents.

Course Policies:

Cheating, Plagiarism, etc. Policies

The text below is the official OSU policy.....read it and make sure you don't do anything to violate these rules.

OAR 576-015-0020 (2) Academic or Scholarly Dishonesty:

a) Academic or Scholarly Dishonesty is defined as an act of deception in which a Student seeks to claim credit for the work or effort of another person, or uses unauthorized materials or fabricated information in any academic work or research, either through the Student's own efforts or the efforts of another.

b) It includes:

(i) CHEATING - use or attempted use of unauthorized materials, information or study aids, or an act of deceit by which a Student attempts to misrepresent mastery of academic effort or information. This includes but is not limited to unauthorized copying or collaboration on a test or assignment, using prohibited materials and texts, any misuse of an electronic device, or using any deceptive means to gain academic credit.

(ii) FABRICATION - falsification or invention of any information including but not limited to falsifying research, inventing or exaggerating data, or listing incorrect or fictitious references.

(iii) ASSISTING - helping another commit an act of academic dishonesty. This includes but is not limited to paying or bribing someone to acquire a test or assignment, changing someone's grades or academic records, taking a test/doing an assignment for someone else by any means, including misuse of an electronic device. It is a violation of Oregon state law to create and offer to sell part or all of an educational assignment to another person (ORS 165.114).

(iv) TAMPERING - altering or interfering with evaluation instruments or documents.

(v) PLAGIARISM - representing the words or ideas of another person or presenting someone else's words, ideas, artistry or data as one's own, or using one's own previously submitted work. Plagiarism includes but is not limited to copying another person's work (including unpublished material) without appropriate referencing, presenting someone else's opinions and theories as one's own, or working jointly on a project and then submitting it as one's own.

c) Academic Dishonesty cases are handled initially by the academic units, following the process outlined in the University's Academic Dishonesty Report Form, and will also be referred to SCCS for action under these rules.

Attendance Policy

We all know that attendance is important. Showing up, whether it is in university courses or life, more generally, is typically half the battle when it comes to success. I expect students to be here every class period. Having said that I also know that on occasion life can get in the way. This is why the attendance policy gives everyone two "freebie" misses. I do not need to hear why you missed. However, there are penalties for missing more than two classes during the quarter.

0 - 2 misses = 100%, or all 40 attendance points

3-4 misses = 60%, or just 24 of the possible 40 attendance points

More than 4 misses = 0%, or zero of the possible 40 attendance points

Rules for Discussion & Other Stuff

1. There will be **NO make-up exams or extra credit assignments**. The dates of exams are listed on the syllabus. Exceptions will be made only in the case of a medical emergency and **you must have documentation from a physician to confirm your condition**. **READ THE FOLLOWING CAREFULLY**: Family vacations, plane reservations for Spring break, Thanksgiving, or summer vacation, hangovers, forgetfulness, or mid-term or final exams for another class **do not qualify as medical emergencies!**

2. **Rules for Discussion/Participation in class**. It is expected that all students will treat others with respect, civility, and generosity at all times. Always assume that a colleague making a statement has come to their conclusions honestly, no matter how much you might disagree with a particular statement or conclusion. We will recognize that we all are entitled to different opinions, but that it is also fair game for anyone to ask us to defend our opinions or statements/conclusions. It is never acceptable in this class to denigrate others or to call others by offensive names. Keep the conversation and debate above board at all times. Finally, recognize that this class is a free speech zone. We need to be able to explore some very contentious, contested policy topics in order to fully grasp all the different perspectives on public policies since that is the very basis for the course. This means you likely will hear students who think differently than you utter what may appear to you as insane or otherwise disagreeable things. Keep yourself in check (i.e., discipline yourself and your responses) so that we can have civil, constructive dialogues, and remember, our primary purpose is learning. In order to do that, we have to create a safe space for discussion so that all feel free to join in/contribute.

Disability Accommodation Policy

"Accommodations are collaborative efforts between students, faculty and Disability Access Services (DAS). Students with accommodations approved through DAS are responsible for contacting the faculty member in charge of the course prior to or during the first week of the term to discuss accommodations. Students who believe they are eligible for accommodations but who have not yet obtained approval through DAS should contact DAS immediately at (541) 737-4098."

Late Policy

We will have two late policies in this course.

- 1) For any and all papers (connoted as such in Assignments)
Same day, but later than the beginning of class = 5% penalty (1/2 grade)
Day 2 by 4pm = 15% penalty
Day 3 by 4pm = 30% penalty
Papers turned in after DAY 3 at 4 PM will receive zero credit
- 2) for assignments other than papers--must be turned in on time to get any credit--no excuses. Plan accordingly.

Getting Started

Class 1 - Science: What is it Good for?

Attached Files:

 [Milken Science benefits 2012.docx](#) (154.135 KB)

March 31 – What is Science and What is it Good For? Progress & an Advanced Standard of Living to name a couple of things.....

Milken, Michael. 2012. "Investing in Science, Reaping the Rewards," WSJ (Sept. 7).
<http://online.wsj.com/article/SB10000872396390444914904577621103202289594.html?KEYWORDS=Investing+in+Science+Reaping+the+RewardsKEYWORDS%3DInvesting+in+Science+Reaping+the+Rewards>

Here is a great piece out of the WA Post on the tension b/w science and politics and whether scientists should define research agendas or should politics.

<http://www.oregonlive.com/newsflash/index.ssf/story/just-ducky-researcher-answers-critics-by-promoting/2e83b8d8b05ff39bf91f03cb03981dc7>

Class 2 - Good Science & a Broader View

Attached Files:

 [Steel, Lach & Warner, Science in Society.pdf](#) (1.517 MB)

April 2 -- Good Science & a Broader View on the Subject

Brent Steel, Denise Lach and Rebecca Warner, "Science and Scientists in the U.S. Environmental Policy Process," *The International Journal of Science in Society* 1(2010): 171-188.




Recommended for Graduate Students:

Vannevar Bush, *Science the Endless Frontier, A Report to the President*, July 1945.

<http://www.nsf.gov/od/lpa/nsf50/vbush1945.htm>

Class 3 - The Control of Science

Attached Files:

-  [3 Faces of Tech Determinism\[2\].pdf](#) (2.444 MB)
-  [Morgenthau_Modrn Science & Power\[4\].pdf](#) (7.4 MB)
-  [Pielke_Cook the Books_WSJ 2013.docx](#) (151.858 KB)
-  [The Kept University\[4\].pdf](#) (3.347 MB)

April 7 -- The Control of Science?

- Roger Pielke, Jr. 2013. "Dear Expert, Please Cook the Books," *Wall Street Journal* (January 29). (see attached)
- Bruce Bimber, "Three faces of Technological Determinism," in Merritt Roe Smith and Leo Marx, eds., *Does Technology Drive History: The Dilemma of Technological Determinism* (Cambridge: The MIT Press, 1994): 79-100. (see attached)
- Hans J. Morgenthau, "Modern Science and Political Power," *Columbia Law Review* 64 (1964): 1386-1409. (see attached)
- E. Press and J. Washburn, "The Kept University," *The Atlantic Monthly* (March 2000): 39-54. (see attached)

Recommended for Graduate Students:

- Daniel J. Kevles, "What's New about the Politics of Science?" *Social Research* 73:3 (Fall 2006): 761-778.



Class 4 - Critical Thinking etc.

April 9 -- No Reading. Just bring yourselves!

The Realities of Policymaking, Regulation & Science

Class 5 - Muddling Through

Attached Files:

-  [K & M 1987 pp. 107-111.pdf](#) (1.29 MB)
-  [K & M 1987 pp. 122-133.pdf](#) (1.394 MB)

 [NRC 2012 Sci as Evidence pp. 1-20.pdf](#) (2.923 MB)

April 14 -- Muddling Through & Why Many Politicians Don't Really Want Good Information on Policy, Much Less Implementation Analysis..... i.e., It's Hard to Make Policy in a Completely Rational Manner

National Research Council. 2012. *Using Science as Evidence in Public Policy*. Washington, D.C.: The National Academies Press. Read pp. 1-20 (see attachment). (everyone reads this much of this book.....)

Lindblom, Charles. 1979. "Still Muddling, Not Yet Through," *Public Administration Review*.

Knott & Miller. 1987. *Reforming Bureaucracy: The Politics of Institutional Choice*. Englewood Cliffs, NJ: Prentice-Hall. Read pp. 107-111, and 122-133 (see two attachments).

Class 6 -- Science, Regulation & Politics

 [FINAL_Sci&Reg_SAGE_Dec 7 2012.docx](#) (46.744 KB)

April 16 -- Science, Regulation and Politics

Forthcoming "Science, Regulation and Politics," with Ian Davidson, in Brent Steel, ed., *Science and Politics*. Thousand Oaks, CA: SAGE Publications. (see attached)

Classes 7 & 8 -- Varied Roles of Sci & Scientists in Policy Process

April 21 & April 23-- The Varied Roles of Scientists & Science in the U.S. Policy Process

Keller, Ann C. 2009. *Science in Environmental Policy: The Politics of Objective Advice*. Cambridge, MA: The MIT Press.

--Read only pp. 1 - 84 for Tuesday, April 23

--Finish the book (pp. 85 - 184) Thursday's class.

Uncertainty, Other Knowledges & Normative Science

Class #9-- Of Normative Science and Honest Brokers?

Attached Files:

 [Advocacy_Sci_Lund_WSJ 2013.docx](#) (139.495 KB)

 [Lackey 2013_Norm Science.docx](#) (160.286 KB)

 [Pielke_2007_CHs 1 thru 4.pdf](#) (6.743 MB)

 [Pielke_2007_pp. 116 - 134.pdf](#) (2.926 MB)

April 28 -- Of Normative Science and Honest Brokers?






Pielke, Roger, Jr. 2007.

"Chapters 1 through 4," in *The Honest Broker*, Cambridge University Press: 1 - 53 (see attached)

"When Scientists Politicize Science," in *The Honest Broker*, Cambridge University Press: 116 - 134 (see attached)

- Lackey, Robert. 2012. "Normative Science [A Critique]" *Terra*. (See attached; the article itself is quite short, but is followed by many comments/reactions -- please read all).
- Lund, Nelson. 2013. "A Social Experiment Without Science Behind It," *WSJ* (March 28). (see attached)

Class #10 – Scientific Precision or Uncertainty as the Rule?

-  [End macro magic_Samuelson_2013.docx](#) (155.397 KB)
-  [N Silver 2012_uncertainty pol & econ.pdf](#) (5.734 MB)
-  [Pielke_2007_Uncertainty CH.pdf](#) (3.441 MB)
-  [Unger_Disappear Polr Brs? 2013.docx](#) (149.427 KB)
-  [REVISD Wkshp Concept_March 7 2014.docx](#) (166.693 KB)



April 30 – Scientific Precision or Uncertainty? And some responses....

- Pielke, Roger, Jr. 2007. "Uncertainty," in *The Honest Broker*, Cambridge University Press: 54 - 75 (see attached)
- Unger, Zac. 2013. "Are Polar Bears Really Disappearing?" *Wall Street Journal*(February 9 – 10). (see attached)
- Samuelson, Robert. 2013. "The End of Macro Magic," *Washington Post*(April 22) (see attached)
- Ed Weber, Denise Lach and Brent Steel. (In progress) "Intro Chapter (draft)," edited book volume *Science and Problem Solving under Post-Normal Conditions: Solving Strategies*

For graduate students: (Nate Silver is now at ESPN, formerly of NY Times. Is famous for using his predictive electoral models to get last few US elections close to perfect. He also makes a ton of money using his algorithms.....)

- Silver, Nate. 2012. *The Signal and the Noise*. (see attached for selected readings on politics & economics)
- Charles Perrow's *Normal Accidents* book is also for graduate students interested in uncertainty and how it intersects with organizations. This is a timeless classic.

Class #11 – Is Science the Only Valuable Knowledge in Town?

-  [Scott 1998_Practical Knowledge.pdf](#) (6.213 MB)
-  [FINAL_SNR Pract Forum_3-3-14_EW.doc](#) (116 KB)

May 5 -- Is Science the Only Valuable Knowledge in Town?

- Scott, James. 1998. "Thin Simplifications and Practical Knowledge: Metis," in J. Scott *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*. New Haven, CT: Yale University Press. Read pp. 1 - 8, and 309 - 341. (see attached)

- Edward P. Weber, Jill M. Belsky, Denise Lach, and Antony S. Cheng. Forthcoming. "The Value of Practice-Based Knowledge," *Society and Natural Resources* (see attached; this is still in draft form, but is 99.9% complete)

Different Strokes for Different Folks

The Politics of Science & Technology in Europe & US

May 7 -- The Jasanoff (2007) book.....*Designs on Nature*. Princeton, NJ: Princeton University Press.








- Read Chapters 1 through 4.

May 12 -- The Jasanoff (2007) book.....*Designs on Nature*. Princeton, NJ: Princeton University Press.

- Read Chapters 7 (stem cells) and 9 (the role of universities).
- Read Chapters 10 (the new social contract) and 11 (republics of science)

Policy Analysts & Civic Science

Attached Files:

-  [PSJ FINAL_Sci Pol & Salmon 2010.doc](#) (133 KB)
-  [Radin 2000_CH 4_Pol Analyst Change.pdf](#) (2.139 MB)
-  [Radin 2000_CH 5_POI Analyst.pdf](#) (3.41 MB)
-  [Radin 2000_Ch 6_Pol Analyst.pdf](#) (2.533 MB)
-  [Radin 2000_CH 7_Pol Analyst.pdf](#) (2.656 MB)
-  [Radin 2000_CH 8_Pol Analyst.pdf](#) (2.374 MB)
-  [TABLE 1_Weber et al. PSJ 2010.docx](#) (87.415 KB)

May 14 – The Changing Role of Policy Analysts & the Emergence of Civic Science

Radin, Beryl. 2000. *Beyond Machiavelli: Policy Analysis Comes of Age*. Washington, D.C.: Georgetown University Press

- All read Chapters 4 through 6 (attached)

GRAD STUDENTS continue reading.....

- Read Radin Chapters 7 & 8 too.
- Weber, Leschine & Brock. 2010. "Civic Science and Salmon Recovery Planning in Puget Sound," *Policy Studies Journal*, 38 (2) (May): 235-256 (see two attached docs--one is article, other is table for article))

Class #15 --P Principle/ONLINE Discussion/ugrads only

May 19 – Is the Precautionary Principle Killing People?

- Lomborg, Bjorn. 2013. “The Deadly Opposition to Genetically Modified Food: Vitamin A deficiency has killed 8 million kids in the last 12 years. Help is finally on the way,” & nbsp;Slate. http://www.slate.com/articles/health_and_science/project_syndicate/2013/02/gm_food_golden_rice_will_save_millions_of_people_from_vitamin_a_deficiency.html

INSTRUCTIONS FOR THE ONLINE DISCUSSION EXERCISE are in the BLACKBOARD space.

Big Data, Science & Policy

Attached Files:

-  [New Well Being Gauge_WSJ_April 10.docx](#) (134.171 KB)

May 21 and May 28

Mayer-Schonberger, Viktor, and Kenneth Cukier. 2013. *Big Data: A Revolution that Will Transform How We Live, Work, and Think*. Houghton, Mifflin, Harcourt.

- Class #1 -- Read pp. 1 – 122
- Cronin, Brenda. 2013. "Well-Being Gauge Looks Beyond GDP," WSJ (April 10) (see attached)
- Class #2 -- Finish the big data book (Implications, Risks and How to Control)
- Harford, Tim. 2014. “Big data: are we making a big mistake?” *FT (Financial Times) Magazine*(March 28). <http://www.ft.com/intl/cms/s/2/21a6e7d8-b479-11e3-a09a-00144feabdc0.html#axzz2xNAO5D3t>

Memorial Day Holiday - Monday, May 26

Tyranny of Experts etc.

June 2 -- Tyranny of Experts? A Market Solution?

William Easterly. 2013. *The Tyranny of Experts*. NY: Basic Books.

- Read pp. 1 - 46, and 237 - 351 (see attached)

June 4 -- Some Solutions of Our Own (exercise TBA)

- No new readings; will use class readings to date to help us with this.
- Tom Nichols. 2014. "The Death of Expertise," *The Federalist*. (Jan 17) <http://thefederalist.com/2014/01/17/the-death-of-expertise/>

Final Exam - due June 10

See assignments for actual test. This exam document will not be open to student viewing until it is formally released to students after the last day of class.