**Science Policy and Expertise**

**UCLA Department of Public Policy**

Undergrad: Pub Pol 191A Sem 1  
Graduate: Pub Pol 290 Dis 1

Fall Quarter 2015  
Mondays and Wednesdays 3:30 to 4:45  
Class location: Public Affairs 3343

**Instructor**

Aaron Panofsky  
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**Course description**

Any glance at the headlines will show that science, scientists, and other experts are increasingly wrapped up in today’s social problems. Experts are called upon to deliver decisive answers and cut through controversy. But just as often they’re at the root of these controversies, generating objects or ideas that spur social disagreements.

This course is an advanced introduction to the critical social analysis of science and expertise. It aims to give students tools for understanding what happens when science and expertise intersect complex social problems. Using a theoretically informed perspective we’ll examine cases of controversial issues in both traditional policy settings and other contexts addressing issues such as:

- Different understandings of what science is, and how these affect policies for better science  
- How government policies affect scientific research  
- How public participation affects scientific and medical research  
- How mutual misunderstanding between scientists, policy makers, and the public affects science policy  
- How we should understand the relationship(s) between science and religion
Through these topics we’ll address some major thematic questions:

- How can we reconcile the need for expertise, which is controlled by a small elite, with public participation and the democratic governance of science?
- Why does the addition of scientific expertise multiply and intensify public controversies when it is usually intended to generate consensus and resolution?
- How should we square the competing images of science as, on the one hand, an “ivory tower” devoted to truth and, on the other, as an interest group like any other with compromising ties to government and corporate power?
- What kind of control should the public and cultural values have over the conduct and dissemination of science?

Students completing this course will gain tools for thinking critically about the role of science in contemporary social problems where knowledge and expertise are at stake. Policy students, in particular, will gain a more reflexive self-understanding of the difficulties in applying their own expertise in the decision making process.

**Reading materials**

Most reading materials for this class will be book chapters or articles. These will be posted on the course website which is accessible through your my.ucla.edu account.

There is also one short book that should be purchased:

**Course expectations, attendance, participation, and grading**

This course is a limited enrollment seminar, which means that its success is dependent on the active participation of all class members. This means that students must 1) attend all classes on time, 2) do all required readings, 3) participate in class discussions and activities, and 4) complete all assignments.

**THE GAME:** This class has an additional feature, which is that together we will be playing a role-playing game that will make the themes of the class come alive through a historical simulation. Briefly, the game is a simulation of the events surrounding the Kansas Board of Education’s decision-making process in 1999 about what information about evolution should be included in the state’s curriculum standards.

Details will be forthcoming, but what you need to know now is that each student will be assigned a Role and will need to take actions, make speeches, and ask questions in accord with that Role. You will have opportunities to “win” the game by meeting your Role’s individual goals and also by meeting the collective goals of the faction or group to which your Role belongs.

Roughly half the grading in this class comes from your satisfactory completion of the assignments and participatory tasks of the game.
These factors will determine your grade:

- Participation: 15%
- Midterm exam: 40%
- Game paper 1: 10%
- Game paper 2: 10%
- Game postmortem analysis: 25%

**Graduate student requirements**

Graduate students taking this course will be held to a higher grading standard, reflecting their greater academic experience. Their final postmortem paper analysis should attempt to integrate their broader policy interests.

**No extension policy**

All assignments must be completed on the specific date they’re due. **Note:** The Midterm and Post-game analysis will be due on the dates in the syllabus. The two Game paper due dates will differ for students depending on the Role they’re playing in the game. These Game papers are meant to impact the play of the game so they must be posted on the class website at the appropriate time. Late assignments will not be accepted without an official excuse from the Dean of Students—a doctor’s note alone won’t cut it.

**Assignments**

Students in this class will be expected to complete three different assignments:

**Midterm**

In Week 5 a take-home exam will be handed out. It will feature questions that will ask you to think creatively and synthesize arguments from the readings in the first half of the class probing their policy relevance. Students will give me a hard copy of the paper in class and prior to class use the TurnItIn.com online system—details will be forthcoming on this. No late exams will be accepted.

**Game Papers**

Each student will write two short papers during the course of the Kansas 1999 game simulation. These will form the basis of the speeches or other activities you undertake during the game. They will be public documents that you will post to the class website. Other students will use them to understand your position on particular issues and to develop their strategies in response. These assignments will have different due dates depending on the role you’ve been assigned in the class, but they will all occur during Weeks 7-10.

**Postmortem Game Analysis**

Each student will hand in a final paper during finals week in which you will analyze the activities of the game in terms of the literature and analytic perspectives introduced in the first half of the class. A set of questions and guidelines will be handed out during Week 10, and the paper will be due during finals week. Papers should be turned in electronically using the Turnitin.com online system and dropped off in hard copy at my Public Affairs office 6355.
Class schedule

Week 1

Monday, September 28
Gawande, “The Checklist”

Wednesday, September 30—Two Views of the Structure and Practice of Science I
Merton, “Science and Democratic Social Structure”
Popper, “Science: Conjectures and Refutations”

Week 2

Monday, October 5—Two Views of the Structure and Practice of Science II
Kuhn, Structure of Scientific Revolutions, Ch 2 and 9
Polanyi, The Republic of Science
Gieryn et al., “Professionalization of American Scientists”

Wednesday, October 7—Science and Political Order
Carson, “The Science of Merit and the Merit of Science”
Porter, “The Management of Society by Numbers”
Winner, “Do Artifacts Have Politics?”

Week 3

Monday, October 12—Policy for Science in the US I

Wednesday, October 14—Policy for Science in the US II
Berman, “Not Just Neoliberalism”
Sarewitz, “Social Change and Science Policy”

Optional:
Bozeman and Sarewitz, “Public Values Mapping and Science Policy Evaluation”

Week 4

Monday, October 19—The Politics of Scientists
Readings TBA

Wednesday, October 21—Public Participation: Contesting Expertise
Epstein, “Democracy, Expertise, and AIDS Treatment Activism”
Wynne, “Misunderstood Misunderstandings”
Week 5

**Monday, October 26—Public Participation: Vaccination Politics**

Kaufman, “Regarding the Rise in Autism”
Blume, “Anti-Vaccination Movements and Their Interpretations.”
Kahan, “Vaccine Risk Perceptions and Ad Hoc Risk Communication” (selections)

Optional:

**Wednesday, October 28—Choosing Experts Wisely**

Collins and Evans, “The Third Wave of Science Studies” focus on pages 225-272

Optional:
Symposium on 'The Third Wave of Science Studies'

*Take home exam handed out*

Week 6

**Monday, November 2—Game Prep: Science and Religion**

Readings TBA

*Take home exam due*

**Wednesday, November 4—Game Prep: Evolution**

Readings TBA

Week 7

**Monday, November 9—Game Prep: Religious Critique of Evolution**

Readings TBA

**Wednesday, November 14—Veterans Day, No Class**

Week 8

**Monday, November 16—Campaign for Kansas Board of Education**

Readings TBA

**Wednesday, November 18—Campaign and Election**

Readings TBA

Week 9

**Monday, November 23—KBOE Meeting—The Nature of Science**

Readings TBA

**Wednesday, November 25—KBOE Meeting—Macroevolution**

Readings TBA
Week 10

Monday, November 30—KBOE Meeting—Intelligent Design/Final Vote on Curriculum
Readings TBA

Wednesday, December 2—Debrief
Readings TBA

Week 11

Wednesday, December 9 at Noon

Game Postmortem Analysis Due