

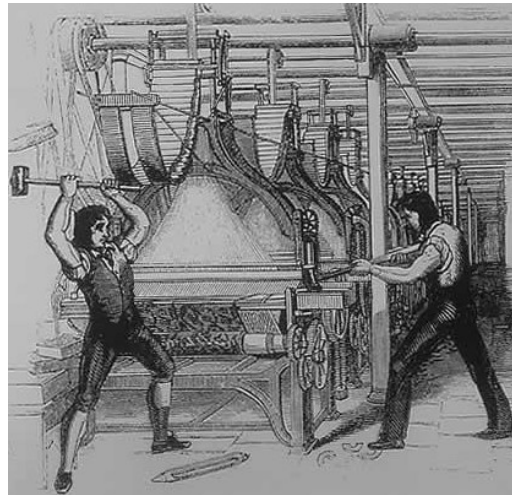
Honor 407: Science, Technology and Policy

Winter 2014

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Epler 106
Tuesdays and Thursdays
2:00 pm – 3:50 pm

Office hours TBA



Course Summary:

Science, technology and politics are constantly providing unique and often controversial interactions. Topics include climate change, vaccines, genetic patents and wire tapping - science and technology are core to the work of government and central to many of our political debates. Why does some science become important in policy debates, while other scientific findings seem to be overlooked or actively ignored? This seminar will explore the relationship between science and politics, how the two compete at times and depend on each other at other times. The role and control of technology in our society will also be explored, including asking if there are more just or democratic ways to manage technology. This seminar is designed to be accessible to an interdisciplinary group - science, social science, and history all play a role in exploring these issues.

Course Goals:

There are several goals for this course that should help in both exploring a new domain and in progressing towards your own thesis research and writing:

- Reading and Deciphering Complex Texts: Developing the ability to understand the structure of arguments or claims in articles and texts. Ability to critically review these claims, the research methods and arguments.

- Analysis: Skills and the practice of synthesizing multiple arguments to understand social systems. Applying these understandings to data to reach well-founded conclusions.
- Collaboration: Appreciation of the interdisciplinary nature of science and the humanities, and how to work across different perspectives.
- Research: Exploring a new topic through secondary data sources and developing your own understanding of the issue. Analyzing this issue with the concepts in the literature.

Reading and Required Texts:

At the end of this document is the course schedule – it includes details on when we will be reading various pieces and when items are due.

There are two primary texts for this course.

Required:

Kleinman, Daniel Lee. 2003. *Impure Cultures: University Biology and the World of Commerce*. Univ of Wisconsin Press.

Stone, Deborah. 2001. *Policy Paradox: The Art of Political Decision Making*, 3rd ed. W. W. Norton & Company.

Brief Description of Assignments

Three main assignments are expected of you this term. More detailed handouts will be provided. Assignments are due at the beginning of class for the day listed on the schedule! The assignments are:

Discussion (20 Points)

Be prepared to participate in class. This means understanding the reading and being prepared to discuss. Simply offering opinions or personal anecdotes are not enough – unless you can frame them with the reading! Timely attendance is critical – miss three classes and your grade will fall one letter grade. Miss five and it is an automatic fail for the course.

Why five? That's over a quarter of our course meetings, and I would not expect much learning with that attendance rate.

Precis (30 points)

Each student will select a week to write a précis of the texts assigned for that week and lead the class discussion. A précis is a summary of an argument or text. But it is not just a simplified restatement – it is also a reflection of how the author came to the conclusion, the context of the argument with other ideas, reflection on pertinent historical contexts or audience of the piece.

Why do this? A précis forces you to really understand a piece of writing in a new way – it becomes almost a dialogue between you and the author, you become more aware of the fine points of the argument. Ultimately you may even come to a new, more synthetic understanding all your own.

The précis will be due the Thursday before the week of readings. So if you sign up for Week 4's texts, then you need to read and write the précis by the Thursday of Week 3. These will be shared as a reading assignment for your classmates for the week you select.

Yes, this is extra work in that week – so avoid midterms! But it also means you get a free week for the one you prepared early for – enjoy that respite!

How long are these précis? They should be more than two pages, but no longer than four. They will be distributed to your classmates – so a certain economy of language might be welcomed.

Final Paper (50 points)

This is an original piece of research or reflection to cap the term off. It is also a chance to tryout the skill needed for the thesis. You will need to select a research topic to explore early in the term. This topic will allow you to explore a particular science or technology issue and apply the ideas we will discuss during the term. This is an exciting opportunity for various disciplinary backgrounds to share their perspective. If you are in the natural sciences, it is a chance to explore how your field is influenced by social and political forces. A great topic are those things in your field that are taken for granted – such as instruments, constants or methods. For those in the humanities, it is a chance to explore historical pathways in science.

To facilitate success in this project, I have several intermediary due dates for this project to give you feedback and help as I can. There will also be a draft due in November to allow for more feedback and to also help you in being a project manager of your own research.

The paper itself needs to be 3,500 words in length. That is about 10 pages – but the word count is my metric to make sure the issue is discussed thoroughly enough. A key skill we will work on this term is managing writing projects. This is a skill that takes practice.

The final paper will have three deadlines:

Research Topic and Short Synopsis: A short paragraph on your topic, the issues you might explore. Due *January 23, 2014*.

First Draft of Paper: This can be a full-length draft, or a partial draft. Key to success on this draft is to have a clear structure of the paper, and enough developed writing to see how rich the material is. Due *February 27, 2014*.

Final Paper: The final is due during finals week. It will be a complete and fully edited document. It will include a title, clear arguments, sources, citations and a bibliography. We will discuss this in class as well. Due *March 18, 2014*.

Course Policies

Please review these policies – they guide expectations for all students so that its fair for everyone.

Attendance: We are learning through readings, discussions, and our own research. All of this requires a community to test ideas, explore theories and to discover new concepts. So attendance is critical! It helps you, it helps your fellow scholars, and its required. Here are the details:

- Miss three class meetings and your grade will fall one letter grade.
- Miss five class meetings and its is an automatic fail for the course.
- Being late 10 minutes or more is equal to missing class.

If something comes up – the best thing you can do is talk to me. Email me or stop me after class.

Late Work: Assignments are **due in my mailbox by 5:00 pm** on the day they are listed on the schedule. All researchers and scholars struggle with meeting deadlines. But the mark of a great academic (or professional) is not just being intelligent but also delivering their thoughts on time to others. So meeting deadlines is not just an arbitrary requirement – it is essential to learning. If you are going to have a challenge with a due date – talk to me before hand! Permission is easier to ask for than forgiveness. Each day you are late is a 10% drop. After the third day – its not going to count.

Schedule and Assignments: Managing deadlines and your time is a critical skill. The course schedule is attached. It is your go-to document! You can load it into Google Calendar, or your phone, or your calendar. Whatever works – but find something that works to keep track of this! Claims that you forgot or were never told – well, those are not options.

Classroom Conduct: Thorough and exciting learning settings are often a little uncomfortable. Ideas will fly, arguments will fail, and succeed. Sometimes it's a little embarrassing. We are all coming from different places in life, and with different experiences that are all valid. Don't take bumps in the road personally – its part of the process.

At the same time, there is a limit to how far arguments or claims can go.

Engage ideas – not individuals.

Personal attacks are known as *ad hominem* – and while they are a staple of politics they are not acceptable here. Prejudice, discriminatory statements, or hurtful attacks will be called out – and might become a learning moment.

Please do not eat in class. It is hard to talk and eat.

Technology: No phones. I know all the tricks of how to text or comment with sly typing under the table, under a piece of paper... I will ask offenders to leave and mark them absent.

I discourage laptops too. I know many take notes on them – but that level of note taking can prevent you from really participating or hearing. If your readings are electronic – I understand. Make an extra effort to listen, make eye contact and stay engaged.

Plagiarism: Scholars seek to explore new ideas and communicate them effectively. This takes an enormous level of work – so taking these ideas and representing them as your own is serious and will result in a zero for the assignment. Plagiarism is not just copying text – it includes paraphrasing or rewording ideas without attributing them to the source.

For a simple discussion of plagiarism, see here:
<http://library.pdx.edu/tutorials/citation/7>

For a long and legalistic one (that formally applies to us all) see here:
<http://www.pdx.edu/dos/psu-student-code-conduct#ProscribedPSU>

Additional Resources/Support: If you have a disability and require assistance obtaining resources, please see me. I am happy to accommodate as needed. You will also need to register with the Student Resource Center in Smith Rm 435 or call 503-725-4150.

Course Schedule and Assignments

(May change, but will be with warning!)

	Readings	Assignments
Week 1: <i>Getting our feet wet on science, technology and politics....</i>		
1/7	Scudder "In the Laboratory With Agassiz"	
1/9	Stone, Chapter 1 in <u>The Policy Paradox</u>	
Week 2: <i>What is special about science?</i>		
1/14	Stone, Chapters 2-3 in <u>The Policy Paradox</u>	
1/16	Stone, Chapters 4-5 in <u>The Policy Paradox</u>	
Week 3: <i>Making sense of how science really works</i>		
1/21	Merton "The Normative Structure of Science" Kuhn "The Structure of Scientific Revolutions" pp 10-42	
1/23	Callon, "Four Models for the Dynamics of Science" in <u>STS Handbook</u> Hess, "Science in an Era of Globalization" in <u>Alternative Pathways in Science and Industry</u>	Paper topic due.
Week 4: <i>Approaches to Study of Science: SCOT</i>		
1/28	Bijker: "King of the Road: Social Construction of the Safety Bicycle"	
1/30	Bijker continued	
Week 5: <i>Approaches to Study of Science: Actors and Objects</i>		
2/4	Latour, "Circulating Reference" in <u>Pandora's Hope</u>	
2/6	Latour continued	
Week 6: <i>Risk and Culture</i>		
2/11	Perrow, "Introduction" in <u>Normal Accidents</u> 15	
2/13	Douglas and Wildavsky, selections from <u>Risk and Culture</u>	

Week 7: <i>Environment and Science</i>		
2/18	Lach, Denise, Steve Rayner, Helen Ingram. 2005. “Taming the Waters: Strategies to Domesticate the Wicked Problems of Water Resource Management.” <i>International Journal of Water</i> 3(1). Sarewitz, Dan. 2004. “How Science Makes Environmental Controversies Worse.” <i>Environmental Science and Policy</i> 7 : 385-403	
2/20	Yearley, “The Environmental Challenge to Science Studies” in the <i>STS Handbook</i>	
Week 8: <i>Science, the University and Industry</i>		
2/25	Kleinman, <i>Impure Culture</i>	
2/27	Kleinman continued	Paper draft due.
Week 9: <i>Science, the University and Industry</i>		
3/4	Kleinman continued	
3/6	Kleinman continued	
Week 10: <i>Politics and Science</i>		
3/11	Winner, “Do Artifacts have Politics” in <i>The Whale and the Reactor</i>	
3/13	Stone, Chapter 15 and Conclusion in <i>Policy Paradox</i>	
Finals Week		
3/18		Final Paper Due