

NOTE: This syllabus is from Fall 2023, so it will be a tad different in Spring 2025. However, it should give you an idea of what to expect. Please contact me at schipani@sas.upenn.edu if you have any questions. Or see [this article](#) in Penn Today to get a feel of the class and my teaching style.

Science Communication in Democracy

Instructor

Name: Vanessa Schipani (she/they)

Contact: schipani@sas.upenn.edu

Website: www.vanessaschipani.com

Office Hours: By appointment

Description

This course examines the role of science and science communication in democracy through diverse readings, the examination of case studies and discussions with invited journalists, scientists and philosophers. While those without a background in philosophy are welcome, this course is geared towards advanced undergraduates and graduate students.

Central Questions: Do we need science to play an authoritative role in policymaking in order to overcome societal challenges, such as pandemics and climate change? If we give science such authority, do we threaten the stability of democracy? Why do we value democracy to begin with? If people have limited knowledge of science, how does that impact their ability to meaningfully participate in a policymaking process that utilizes science? Does democracy require this participation? How can we formulate science-based policies that limit freedoms if people reasonably disagree with the value assumptions that scholars now argue are inherent to science? In other words, if science isn't objective, does it conflict with democracy? Can we resolve these issues by improving science communication and public trust in science? If so, what's the best way to do so? Or must we trade in democracy for technocracy, or rule by experts, in order to overcome societal challenges?

Course Objectives: You'll learn to critically think, write and debate about the role of science and science communication in democracy. My aim as an instructor is to help you to come to and to communicate your own conclusions about the central questions of the course. In line with UPenn's [SNF Paideia Program](#)'s mission, this course provides you "with the knowledge, skills, and ethical frameworks necessary to be informed, engaged, and effective community members, and to lead fulfilling and integrated personal, professional, and civic lives."

Assignments

25% – Final Paper, due Dec 21 at midnight (2,450 – 2,550 words): You'll be required to make a thorough argument about a topic discussed during the class in your final paper. I'll provide a list of potential topics, but you're welcome to choose anything that pertains to the class, even tangential topics, so long as I approve it. The argument you make in an op-ed (see below) can be expanded in your final

paper. For those who haven't written a philosophy paper before, don't fret: I'll go over the ins and outs of philosophical writing in class.

25% – Discussion Questions, due (almost) every class at 9am (100 – 150 words): You'll be required to submit one in-depth question per class on the assigned readings, which we'll use to structure in-class discussion. Your questions can address aspects of the readings you didn't understand and/or found particularly interesting. You can also connect ideas in the assigned readings to other ideas discussed in the course, your other courses, life experiences or broader cultural discourse. You'll be graded on effort, e.g. depth of thought, not correctness. They'll be due the morning of class at 9am.

15% – Public Philosophy Assignment, due Nov 21 at 9am (950 – 1,050 words): You'll have two options for this assignment. I'll be available for brainstorming about this beforehand. Approval of topics is required at least a week before submission. I'll be available to help you edit your op-eds and short stories to get them published, but this isn't required.

- Journalistic Op-Ed: You must make an argument to a public audience about a topic in the news related to the course. Good op-eds are informative, clearly argued and accessible. Passion with substance is key. Use your voice. You'll be graded on effort, originality and clarity of argumentation.
- Short Story: You must tell a fiction or non-fiction story about a topic related to the course. These stories could come from your life experiences, the news, something you read in class, etc. Good short stories often feature flawed characters who grow and change. You'll be graded on effort, originality and quality of prose.

15% – Attendance and Participation: You'll be allowed one unexcused absence. Any more than that will negatively impact your grade unless you can provide proof of a reasonable excuse, e.g. sickness or team sports obligations. You'll be graded on your participation in class. If you visit my office hours for a discussion on the topic of the class you missed, you can make up for your absences but use this option sparingly. In-class discussion is crucial to success in this class. Participating in philosophy courses can seem intimidating. Before our second class meeting, please read this (short) [guide](#) on inclusive, respectful, and constructive philosophical discussion.

10% – Presentation on Final Paper Argument, due Dec 6 and 11 in class: At the end of the semester, you'll be required to present your final paper arguments to the class. Using PowerPoint, or another presentation tool, is strongly recommended.

10% – Conversation Assignment, due Oct 19 at 9am (450 – 550 words plus recording/screenshot): You'll have two options for this assignment. Approval of topics/questions is required before submission. To gain points for this assignment, you must show me the debate on your feed or send me the recording of your conversation. You must also write summary critically reflecting on what you learned from the interaction and what you think your community learned.

- Social Media Debate: You must pose a detailed question to your social media audiences (i.e. Twitter/X, Instagram, Tik Tok, Facebook, etc) about a topic related to the course to incite debate. You must then engage with your audience's responses to your question.
- Chat with a Friend or Relative: You must pose a detailed question to a friend or relative about a topic related to the course and record your conversation. Conversations should be at least 30 minutes long.

2% each – Extra Credit: Summaries of public talks, due two weeks after the talk at 9am (450 – 550 words): Since the public talks take place outside of class, I won't make attendance mandatory.

However, I strongly encourage attendance. If you attend, you can get extra credit for writing a summary of the talk. This should include what you think the speaker's central thesis was, what you agreed and disagreed with them about and why.

Speakers

The course coincides with three public talks by Sean Illing, Kareem Khalifa and T.Y. Branch, thanks to funding from the SNF Paideia Program. These scholars and others will also visit our class.

In person:

- **Sept 18:** [T.Y. Branch](#), a post-doctoral fellow at University of Cologne, who works on the role of values in science communication, among other topics.
- **Oct 18:** [Sean Illing](#), a journalist, philosopher and host of Vox's podcast [The Gray Area](#) and co-author of *The Paradox of Democracy: Free Speech, Open Media and Perilous Persuasion*.
- **Nov 6:** [Kareem Khalifa](#), a professor of philosophy at UCLA who works on the role of values in social science research on segregation, among other topics.

Zoom:

- **Nov 1:** [Zeynep Pamuk](#), an assistant professor of government at the London School of Economics and author of *Politics and Expertise: How to Use Science in a Democratic Society*.
- **Oct 7:** [Kevin Elliott](#), a professor of philosophy at Michigan State University, who works on transparency in science, the open science movement, and improving science communication.

Calendar

Part 1: Introduction

Wed Aug 30: Preconceptions of Democracy, Science and Communication

Readings: None

Mon Sept 4: No Class, Labor Day

Wed Sept 6: Democracy in the American Context

Required: Cunningham, "[Framed](#)," *Constitutional*, *The Washington Post* (podcast)

Skim: Stanford Encyclopedia of Philosophy, "[Democracy](#)"

Mon Sept 11: Communication in Democracy

Required: Gershberg & Illing, *The Paradox of Democracy*, Introduction; Postman, *Amusing Ourselves to Death*, Ch. 2; Klein, "[How We Communicate Will Decide Whether Democracy Lives or Dies](#)," *The Ezra Klein Show*, *The New York Times* (podcast)

Optional: Luo, "[How Can the Press Best Serve a Democratic Society?](#)" *The New Yorker*; Waldman, "[The Local-News Crisis Is Weirdly Easy to Solve](#)," *The Atlantic*

Wed Sept 13: Science in Democracy

Required: Elliott, *Values in Science*, Ch. 1-3

Optional: Elliott, *Values in Science*, Ch. 4-6

Part 2: Public Understanding of Science

Mon Sept 18: Science Education, Visit from T.Y. Branch

Required: Branch & Douglas, "[Rethinking the Conceptual Space for Science After the VFI](#)," *Philosophy of Science*; Miller, "[Scientific Literacy: A Conceptual and Empirical Review](#)," *Daedalus*

Skim: Kennedy & Hefferon, "[What Americans Know About Science](#)," Pew

Wed Sept 20: Beyond the Deficit Model: From Motivated Reasoning to Scientific Curiosity

Required: Kahan, "[Why Smart People Are Vulnerable to Putting Tribe Before Truth](#)," *Scientific American*; Baron, "[Philosophical Impediments to Citizens' Use of Science](#)," *The Oxford Handbook of the Science of Science Communication*

Skim: Kahan et al., "[The polarizing impact of science literacy and numeracy on perceived climate change risks](#)," *Nature Climate Change*; Kahan et al., "[Science Curiosity and Political Information Processing](#)," *Political Psychology*; Xu & Petty, "[Two-Sided Messages Promote Openness for Morally Based Attitudes](#)," *Personality and Social Psychology Bulletin*

Mon Sept 25: Beyond Motivated Reasoning: Knowledge of Scientific Process is Key

Required: Douglas, "[Science Communication: Beyond the Deficit Model](#)," Descartes Lectures

Skim: Weisberg et al., "[Knowledge about the nature of science increases public acceptance of science regardless of identity factors](#)," *Public Understanding of Science*

Optional: Kovaka, "[Climate change denial and beliefs about science](#)," *Synthese*

Wed Sept 27: Science Communication as Meaning Making

Required: Halpern & Elliott, "[Science as Experience: A Deweyan Model of Science Communication](#)," *Perspectives on Science*

Part 3: Trust in Experts

Mon Oct 2: Why Should We Trust Experts?

Required: Goldman, "[Experts: Which Ones Should You Trust?](#)" *Philosophy and Phenomenological Research*

Wed Oct 4: Trusting Consensus

Required: Anderson, "[Democracy Public Policy and Lay Assessments of Scientific Testimony](#)," *Episteme*

Optional: Boyd, "[Trusting scientific experts in an online world](#)," *Synthese*

Mon Oct 9: Questioning Consensus

Required: Beatty & Moore, "[Should We Aim for Consensus?](#)" *Episteme*; de Melo-Martín & Intemann, "[Scientific dissent and public policy](#)," *EMBO Reports*

Optional: Landrum & Slater, "[Open Questions in Scientific Consensus Messaging Research](#)," *Erkenntnis*

Wed Oct 11: An Epistemically and Morally Faulty Public?

Required: John, "[Epistemic trust and the ethics of science communication](#)," *Social Epistemology*; Schroeder, "The Limits of Democratizing Science," *Philosophy of Science*

Mon Oct 16: Transparency is Surveillance

Required: Nguyen, "[Transparency is Surveillance](#)," *Philosophy and Phenomenological Research*

Optional: Baier, *Moral Prejudices*, Ch. 6, 7

Part 4: Tensions Between Science and Democracy

Wed Oct 18: The Dewey-Lippmann Debate, Visit from Sean Illing

Required: Illing, "[Intellectuals have said democracy is failing for a century](#)," Vox; Bybee, "Walter Lippmann and John Dewey," Douglas, "[The Role of Scientific Expertise in Democracy](#)," *The Routledge Handbook of Political Epistemology*

Optional: Illing, "[Epistocracy: a political theorist's case for letting only the informed vote](#)," Vox; Dewey, Review of Lippmann's *Public Opinion*; Friedman, "[Lippmann and Dewey: The Unjoined Debate](#)," *Power Without Knowledge*

Mon Oct 23: Public Reason and the Administrative State

Required: Kogelmann & Stich, "[When Public Reason Falls Silent](#)," *Oxford Studies in Political Philosophy Volume 7*

Optional: Stanford Encyclopedia of Philosophy, "[Public Reason](#)"

Wed Oct 25: Science and Variations of Public Reason

Required: Badano & Bonotti, "[Rescuing Public Reason's Accessibility Requirement](#)," *Law and Philosophy*

Mon Oct 30: The Paradox of Scientific Advice, Visit from Zeynep Pamuk

Required: Pamuk, *Politics and Expertise*, Ch. 3

Wed Nov 1: A Proposal for a Science Court

Required: Pamuk, *Politics and Expertise*, Ch. 4,7

Part 5: Case Studies

Mon Nov 6: Segregation, Visit from Kareem Khalifa

Required: Khalifa, Millson & Risjord, "Inquiry and Epistemic Priority," unpublished

Optional: Loessberg, "[Understanding the Controversy: The Kerner Commission, The Harvest of American Racism, and the Dynamics of Incorporating Social Science with Public Policy](#);" Du Bois, "[The Study of the Negro Problems](#)," *The Annals of the American Academy of Political and Social Science*; Bright, "[Du Bois' democratic defence of the value free ideal](#)," *Synthese*

Wed Nov 8: Vaccines

Required: Schipani, "[Scientific Evidence and the EU Court](#)," FactCheck.org; Longoria, "[The Original Anti-Vaxxer](#)," More Perfect, NPR (podcast); Abdelfatah & Arablouei, "[Outbreak](#)," Throughline, NPR (podcast)

Mon Nov 13: COVID-19 (and Op-Ed Writing Tutorial)

Required: Fuller, Lipsitch, Ioannidis [Debate](#), *Boston Review*; Leonhardt, "[Follow the Science?](#)" *The New York Times*; Lewis, "[The Person Who Knows](#)," Against the Rules (podcast)

Optional: John, "[The Two Virtues of Science](#)," *Spontaneous Generations*; O'Leary, "[What Would Convince a Lab Leak Skeptic?](#)" Slate's What's Next: TBD (podcast); Lewis, "[Why the WHO Took Two Years to Say Covid is Airborne](#)," *Nature*

Wed Nov 15: Climate Change

Required: Oreskes & Conway, "[The Denial of Global Warming](#)," *Merchants of Doubt*

Mon Nov 20: New Technologies: Geoengineering and Killer Robots

Required: Pamuk, [Politics and Expertise](#), Ch. 6

Wed Nov 22: No Class, Thanksgiving Break

Mon Nov 27: Flat Earthers

Required: [Beyond the Curve \(documentary\)](#) - Will watch in class!

Wed Nov 29: Abortion and Pregnancy (and Paper Writing Tutorial!)

Required: Maxmen, "[Why Hundreds of Scientists are Weighing in on a High-Stakes Abortion Case](#)," *Nature*; Green, "[Science Is Giving the Pro-life Movement a Boost](#)," *The Atlantic*; Landman, "[Is weed safe in pregnancy](#)," Slate's Unexplainable (podcast)

Optional: Marquis, "[Why Abortion is Immoral](#)," *The Journal of Philosophy*; Thomson, "[A Defense of Abortion](#)," *Philosophy and Public Affairs*

Mon Dec 4: LGBT+ Rights

Required: [How to Survive a Plague \(documentary\)](#); Kielty, "[Born This Way?](#)" Radiolab (podcast)

Optional: Schipani, "[Debate Over Gay Blood Donations](#)," FactCheck.org; Franklin, "[More gay and bisexual men will now be able to donate blood under finalized FDA rules](#)," NPR

Wed Dec 6: Criminal Justice and Brain Development (and Final Paper Presentations!)

Required: O'Leary, "[Is a 25-Year-Old's Brain Mature?](#)" Slate's What's Next: TBD (podcast)

Part 6: Conclusion

Mon Dec 11: The Other Reason Why Policy Fails (and Final Paper Presentations!)

Required: Klein, "[The Book I Wish Every Policymaker Would Read](#)," The Ezra Klein Show, *The New York Times* (podcast)

