Psychology of Climate Change
Mondays & Wednesdays, 4:00-5:30PM
Weill Hall 1230
Fall 2017

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Office Hours: Thursday, 12:30-2:30pm or by appointment

Course Description

Climate change often feels like a problem that our brains have been hardwired to ignore. Climate change is abstract and complex, making it hard for non-scientists (including policy-makers) to understand. For most Americans, it is a problem that will harm people who are far away in time and geography. And the significant political polarization surrounding climate change has turned it into a form of identity politics. Yet like so many environmental problems—from habitat destruction to overconsumption of natural resources—climate change is the result of human behavior. If we want to solve or mitigate these problems, we must first understand what is driving these beliefs and behaviors.

Most policy to address environmental issues such as climate change has focused on legal or economic tools such as prohibiting certain forms of pollution or giving subsidies for renewable energy. In this discussion-based policy seminar, we will examine an alternative framework for motivating environmentally friendly behavior: psychological and social incentives. We will explore factors affecting climate change beliefs and behaviors, including reactions to and support for policies. The focus will be primarily on the US, and we will discuss policise and private interventions that have incorporated social psychological research to promote climate change mitigation as well as potential new applications of this research. Although this class will mainly cover climate change and other environmental issues, the psychological tools we will discuss are used in other domains as well, so will be useful to students interested in a range of policy topics.

Course Objectives

- Gain a critical understanding of the social and psychological factors that influence climate change beliefs and behaviors, including topics such as information deficits, identity, social norms, motivated reasoning, psychological distance, and habits;
- Learn to evaluate (and improve) existing climate and environmental policy interventions using social psychological principles;
- Develop the ability to apply behavioral intervention tools to real-world problems;
- Enhance analytical and writing skills via short policy memos.

Text:
No text is required. Readings will be provided via Canvas. They include excerpts from popular books and textbooks, academic articles, and news reports. The syllabus and assignments are subject to change – the syllabus on Canvas will always be the most updated version.

Grading and Evaluation
Class Participation and Attendance: 10%
Article Presentation: 10%
Policy Memos: 45% (15% each)
Cumulative Final Exam: 35%

Class participation and attendance

Attendance: This is a small and discussion-heavy course, and I expect you to attend all of the classes. Attendance will be taken every day. You may miss two classes for any reason, and you do not need to give a reason for those classes. Any unexcused absences beyond these two classes will affect your grade. Absences beyond those two classes may be excused with written documentation of UM-related activities, job interviews, or illness. However, you will still be expected to meet all expectations for the course.

If you miss a class, it is your responsibility to get class notes and any assignment updates from your fellow students before the next class. It is also your responsibility to get any assignments to the instructor *before* the day of the absence, otherwise they will be considered late. *Missing an in-class presentation without an excused absence will result in a failing grade for that assignment.*

Lateness: I understand that sometimes life happens and you may arrive a few minutes late. However, arriving late is disruptive and disrespectful to your fellow students who arrived on time. Therefore, chronic lateness will be noted and will affect your grade.

Laptops & Cell Phones: I will (grudgingly) permit the use of laptops and tablets in the classroom, on an honor system. Electronic devices can be helpful for easy access to the readings and note-taking, but they should be used only for activities related to this class. **However, research consistently shows that students who use laptops/tablets during class learn less and perform poorer in the class.** Despite even the best intentions, screens can be distracting to you and to those around you. Cell phones should be turned off and off your desk: **I take off participation grade points every time I notice texting.**

Participation: This is an active seminar course and I expect you to be present to class in both body *and* mind. You are encouraged to ask questions and make substantive contributions to class discussions. To facilitate class discussions, you are expected to show up to class having completed any readings assigned for that day.

I also expect that you will listen and respond respectfully to your classmates' contributions. This means actively engaging with their viewpoints rather than just waiting for your next chance to talk. Some of us are more comfortable than others about speaking in class, so encouraging your

fellow students to have their voices heard is vital. There will also be opportunities to write ideas rather than say them out loud.

Assignments (See handout for more details on assignments)
Discussion Comments: To facilitate class discussions, you must post one discussion comment about each day's readings to Canvas before the start of class. See handout for more details.

Article presentations: Each student will present one article to the rest of the class in a 10-minute oral presentation. See handout for more details.

Policy Memos: Assignments include three short policy memos that should take the rough format of a strategy memo. See handout for more details.

If you are new to policy writing, please refer to the Ford School Writing Center's excellent examples and guides: https://fordschool.umich.edu/intranet/writing-center.

Handing in Assignments: All written assignments should be submitted as Word documents in Canvas by the start of class on the day they are due. Give yourself plenty of time to submit each assignment. Canvas tells me exactly when your assignment was submitted, and you will be penalized even if it is a few minutes late. If you miss class because of a pre-scheduled activity, you are still required to submit any assignments before the start of that class.

Final Exam: The final exam will be held on Dec 20. The exam will be cumulative and will cover content from both in-class discussions and the readings. It will include a mix of multiple choice, fill-in-the-blank, and short answer questions.

Late Policy: I will subtract 10% for assignments submitted after the start of class, and another 10% for each additional 24 hours thereafter that an assignment is late. Assignments that are more than 3 days late will not be accepted. If you miss class because of sickness, you should email me before the assignment is due to get an extension, in which case the assignment will be due within 3 days of the day you were sick or absent.

Academic Honesty and Learning Environment:

Ford School Academic Expectations: If you haven't already, familiarize yourself with the academic expectations of the Ford School: http://fordschool.umich.edu/academics/expectations. This link contains more details about plagiarism, learning differences, and use of technology.

Plagiarism and References: I take plagiarism very seriously. Familiarize yourself with UM's guide to academic integrity and plagiarism here: www.lib.umich.edu/academic-integrity/understanding-academic-integrity-and-plagiarism-students. You can use the citation style of your choice (APA, MLA, etc), as long as you are consistent and citing your sources. When in doubt, add a citation and a reference even if you are just referencing an idea (that is, even if you do not quote directly the source). Make sure the sources you are referencing are reputable (aka, not Wikipedia, not a blog). **You may (and are encouraged to!) discuss the**

course and readings with classmates outside of class. However, all written assignments and article presentations should be your work and your work alone.

Writing Help: In addition to the feedback you will get from me and from your peers, I encourage you to work with the Ford School's writing tutors. You can make these appointments online, using the following link: http://www.fordschool.umich.edu/writing-center/

Class Notes Policy: Any notes from the course (both the ones that I provide and the ones that you take) may not be posted on a web site, made available for file sharing, or distributed in any medium (print or electronic). The only exception is to provide a copy to a student in the class who has been absent from class.

Accommodations for Students with Disabilities: If you believe you need an accommodation for a disability, please let me know at your earliest convenience. Some aspects of this course may be modified to facilitate your participation and progress. As soon as you make me aware of your needs, we can work with the Office of Services for Students with Disabilities to help us determine appropriate accommodations. I will treat any information you provide as private and confidential.

Student Mental Health and Well-Being Resources: The University of Michigan is committed to advancing the mental health and wellbeing of its students. A variety of issues, such as strained relationships, increased anxiety, alcohol/drug problems, and depression, directly impact students' academic performance. If you or someone you know is feeling overwhelmed, depressed, and/or in need of support, services are available. For help, contact Counseling and Psychological Services (CAPS) and/or University Health Service (UHS). For a listing of other mental health resources available on and off campus, visit: http://umich.edu/~mhealth/

Ford School Inclusivity Statement: Members of the Ford School community represent a rich variety of backgrounds and perspectives. We are committed to providing an atmosphere for learning that respects diversity. While working together to build this community we ask all members to:
- share their unique experiences, values and beliefs
- be open to the views of others
- honor the uniqueness of their colleagues
- appreciate the opportunity that we have to learn from each other in this community
- value one another's opinions and communicate in a respectful manner
- keep confidential discussions that the community has of a personal (or professional) nature
- use this opportunity together to discuss ways in which we can create an inclusive environment in Ford classes and across the UM community

<p style="text-align: center;">**Psychology of Climate Change**
Class Schedule and Outline
NOTE: All Readings, as well as links for discussion comments and assignments, are on Canvas</p>

Class 1 (Sept. 6): Introductions

Homework due:
- o None

Class 2 (Sept. 11): Why psychology?
Why is research from psychology useful to environmental policy? Where has it been used before? What are some promising applications to policy that haven't yet been tapped?

Homework due:
- Reading
  - o White House (2015) Fact Sheet: President Obama Signs Executive Order (SBST)
  - o Carrico et al (2015) US climate policy needs behavior
  - o Dietz et al. (2009) Household actions can provide a behavioral wedge…

(Sept. 13): NO CLASS
Section 1: Information

Class 3 (Sept. 18): Getting people to act without getting them to think – Nudges
Using libertarian paternalism to improve environmental outcomes.

Homework due:
- Reading
  - o Johnson et al (2012) Beyond nudges
  - o Cho (2013) Making green behaviors automatic
- Article Presenter: TBD
  - o Presenter's article: Shealy & Klotz (2015) Well-endowed ratings systems

Class 4 (Sept. 20): Myths and misunderstandings: Which behaviors do we care about?
Which behaviors are well suited to behavioral interventions? Which are not? How can policymakers find behaviors that have the most bang for their buck?

Homework due:
- Reading
  - o Gardner & Stern (2008) The Short List
  - o Carrico et al (2009) Costly myths
- Article Presenter: TBD
  - o Presenter's article: Truelove & Parks (2012) Perceptions of behaviors …

Class 5 (Sept. 25): Linear minds in a curved world
People aren't always great at processing information, especially information about numbers. How does this affect their understanding of environmental problems? How can policymakers present information in a way that is understandable to the public?

Homework due:
- Reading

o   Wagner & Weitzman (2015) Climate Shock Chapters 1-2
        o   Attari et al (2010) Public perceptions of energy use and savings
    •   Article Presenter: TBD
        o   Presenter's article: Guy et al (2013) Comparing the atmosphere to a bathtub

Class 6 (Sept. 27): Individual Feedback and Implications of the Smart Grid
Personalized feedback about energy use has become a popular tool by utilities to reduce consumption. How and how well does this work?

Homework due:
    •   Reading
        o   Fowlie et al (2015) Costs of Residential Energy Efficiency Policy Brief
        o   Nadel (2015) E2E Study generating more heat than light
        o   Ehrhardt-Martinez et al (2010) Advanced metering initiatives and residential feedback programs (Executive Summary ONLY)

Class 7 (Oct. 2): Labeling
Labelling goods for their effect on the environment is a common way of conveying environmental information. How do consumers process that information?

Homework due:
    •   Reading
        o   Hahnel et al (2015) The power of putting a label on it
        o   Larrick et al (2015) Designing better energy metrics
    •   Article Presenter: TBD
        o   Presenter's article: Griskevicious et al (2010) Going green to be seen

Class 8 (Oct. 4) Limits of Information
Most environmental interventions are based on educating the public. But what are the limits to "education"?

Homework due:
    •   Reading
        o   Kollmuss & Agyeman (2002) Mind the gap
    •   Article Presenter: TBD
        o   Presenter's article: Bamberg & Möser (2007) Twenty years after…

Section 2: Motivation

Class 9 (Oct. 9): Physical and psychological distance
Environmental problems are often far removed from the people causing the problems. What can we do to close that gap and make polluters (or over-consumers) care about their behaviors?

Homework due:
    •   Reading
        o   Leary et al (2011) Self, identity, and reactions to distal threats
        o   Slovic (2007) Psychic numbing and genocide
        o   Weber (2006) Experience-based and description-based perceptions of long-term risk.
    •   Assignment
        o   Policy Memo 1 Due: MLS Ratings

Class 10 (Oct. 11): **Scare tactics: Just terrify people into action!**
A lot of climate change messaging works by trying to make people afraid of the dire consequences of climate change. Does this work?

    Homework due:
- Reading
    - Tannenbaum et al (2015) Appealing to fear
    - Feinberg & Willer (2011) Apocalypse soon?
- Article Presenter: TBD
    - Presenter's article: Hornsey et al (2016) A cautionary note about message of hope

(Oct. 16): FALL BREAK – No class

Class 11 (Oct. 18): Political ideology and morals
Liberals and conservatives differ in the values and morals they hold dear. How do these differing values affect people's reactions to climate change science and to specific climate policies?

    Homework due:
- Reading
    - Feinberg & Willer (2012) The moral roots of environmental attitudes
    - Rossen et al (2015) Two distinct moral pathways to climate change skepticism
- Article Presenter: TBD
    - Presenter's article: Hamilton & Saitto (2014) A four party view of environmental concern

Class 12 (Oct. 23): Environment*al* identity
Who cares about climate and the environment? Why would they do such a thing? How can communicators take advantage of these values?

    Homework due:
- Reading
    - Clayton (2003) Environmental identity
    - Steg et al (2005) Factors influencing the acceptability of energy policies (paying particular attention to the type of values they talk about)
- Article Presenter: TBD
    - Presenter's article: Scannell & Gifford (2010) Natural and civic place attachment

Class 13 (Oct. 25): Environment*alist* identity
Who calls themselves an environmentalist? Why does it matter? What voices are heard in the environmental movement?

    Homework due:
- Reading
    - Mohai (2003) Dispelling old myths
    - Pearson & Shuldt (2014) Facing the diversity crisis in climate science
- Article Presenter: TBD
    - Presenter's article: Bashir (2013) The ironic impact of activists

Class 14 (Oct. 30): Motivated Reasoning (Act 1)

People are very good at confirming their own biases. What does this mean for the way we process information about environmental policies?

Homework due:
- Reading
    - Kahan et al. (2012) The polarizing impact of science literacy
    - Campbell & Kay (2014) Solution aversion
- Article Presenter: TBD
    - Presenter's article: Feygina et al (2010) System justification and global warming

Class 15 (Nov. 1): Motivated Reasoning (Act 2)

Homework due:
- Reading
    - Kahan (2015) Geoengineering and climate change polarization
    - Raimi & Leary (2014) Belief superiority in the environmental domain
- Article Presenter: TBD
    - Presenter's article: Hart & Nisbet (2012) Boomerang effects in science communication

Class 16 (Nov. 6): Personal Experience
People often base their beliefs about even abstract problems on their own personal experience. What does this mean for policymakers who are trying to convince them to act on something they haven't yet experienced?

Homework due:
- Reading
    - Joireman et al (2010) Effect of outdoor temperature…
    - Myers et al. (2012) The relationship between personal experience…

Class 17 (Nov. 8): Social Norms
Peer pressure doesn't end in middle school. How does our desire to keep up with the Jones's influence our beliefs and behaviors?

Homework due:
- Reading
    - Cialdini et al (2006) Managing social norms for persuasive impact
- Article Presenter: TBD
    - Presenter's article: Nolan (2008) Normative social influence is underdetected

Class 18 (Nov. 13): Social Comparisons

Homework due:
- Reading
    - OPower Ted Talk
    - Costa & Kahn (2013) Energy conservation "nudges" and environmentalist ideology
- Article Presenter: TBD
    - Presenter's article: Geiger & Swim (2016) Climate of silence

Section 3: The Big Scale

Class 19 (Nov. 15): Commitment & Consistency
How does past behavior influence future behavior? What is the benefit of getting people to commit to an action in advance?

Homework due:
- Reading
  - o Cialdini (2009) Influence Chapter 3
- Assignment
  - o Policy Memo 2 Due: Iron Eyes Cody PSA

Class 20 (Nov. 20): Spillover of behaviors
What are the unintended consequences of behavior change? Does getting people to do one good behavior make them more (or less) likely to others?

Homework due:
- Reading
  - o Truelove et al (2014) Spillover of proenvironmental behaviors
  - o Wagner (2011) Going green but getting nowhere
  - o Gillingham et al (2013) The rebound effect is overplayed
- Article Presenter: TBD
  - o Presenter's article: Steinhorst et al (2015) Saving electricity - for the money or for the environment?

Class 21 (Nov. 22): Spillover of policy support

Homework due:
- Reading
  - o Fairbrother (2016) Geoengineering, moral hazard, and trust in climate science
  - o Campbell-Arvai et al (2017) The effects of learning about carbon-dioxide removal on mitigation

Class 22 (Nov. 27): Getting Behaviors to Stick – Habits
The good, the bad, and the ugly of habits – how can making behaviors automatic help to make them stick?

Homework due:
- Reading
  - o Tugend (2015) Turning a New Years resolution into a habit
  - o Neal et al (2012) How do habits guide behavior?
- Article Presenter: TBD
  - o Presenter's article: Verplanken et al (2016) Testing the habit discontinuity hypothesis

Class 23 (Nov. 29): Efficacy, Fatalism, & Mental Health
Climate change can be depressing and stressful. How do people battle against the drop in the bucket problem?

Homework due:
- Reading
  - o Stoknes (2015) What we thinking about when we try not to think about global warming Chapter 18
  - o Swim et al (2009) Psychology and global climate change (SECTIONS 3 & 4 ONLY).

- Article Presenters: TBD
    - Presenter's article: Fraser et al (2013) Sustaining the conservationist

Class 24 (Dec. 4): Community-based social marketing
CBSM has become a popular tool in environmental campaigns. What is it and how can it be used for climate behaviors?

Homework due:
- Reading
    - Mckenzie-Mohr & Smith (2006) Quick reference: Community-based social marketing
    - Kennedy (2010) Using CBSM techniques to enhance environmental regulation

Class 25 (Dec. 6): Collective Guilt and Collective Action
Much of the topics we've discussed are ways that individuals think and act. But global climate change requires cooperation and collective action. What are the ways groups of people might be persuaded to work together?

Homework due:
- Reading
    - Ferguson & Branscombe (2010) Collective guilt
    - Kollock (1998) Social dilemmas: The anatomy of cooperation
- Assignment
    - Policy Memo 3 Due: Transportation and CBSM

Class 26 (Dec. 13): Wrap Up

Homework due:
- None!

Final Exam: Dec 21 8-10 AM