

**Changing Human Behavior:
Drivers and Barriers in Environmental Action**

Stanford Environmental & Water Studies Summer Program (SEWSS)



Syllabus (last revised 2/3/2017), Summer 2017

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Class at-a-glance:

Class session: Mon 5:30 - 7:20pm (110 minutes, once/week), Y2E2 111
Discussion Section: Wed 5:30 - 6:20pm (50 minutes, once/week), Location TBD
Instructor: Jen Wang
jw56@stanford.edu, Office: Y2E2 226 (shared)
 Office hours: TBD & by appointment

Class website: TBD – likely through Stanford’s Canvas system (more details to come)

Texts and other resources: There is no required textbook for this class (see below)

Prerequisites: There are no prerequisites for this class. Interested students from all disciplines and grade levels are welcome.

Expected workload: 2 units, or roughly 6 to 8 hours of work each week, including in-class time. The exact time commitment may vary from week to week.

Grading: Letter or credit/no credit

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About the class

Most of us recognize that environmental sustainability and climate change are critical and urgent societal issues that we all have a part in addressing. Yet when it comes to environmental action, most of us could do more. Why don't we? And as engineers, policy-makers, or just informed citizens, what can we do to promote more environmental action?

Changing Human Behavior: Drivers and Barriers in Environmental Action is an introductory survey class focused on the psychological barriers and drivers in environmental action. Beyond the scientific, technological, and structural barriers in addressing climate change, there are notable psychological barriers that often prevent individual citizens from taking action and engaging in behaviors that would help mitigate our human impacts on climate change.

We will use lecture and readings each week in this course to cover a major group of psychological barriers to environmental action: *emotions and motivation, our brain and biases, ideologies, social comparison and norms, habits and sunk costs, perceived risks, and unintended behaviors*. In addition, students will engage in an individual behavior change project where they will select a pro-environmental behavior to adopt themselves, and chronicle their progress over the course of the semester to gain a better understanding of the challenges of changing behavior. Finally, students will work in groups to develop a proposal for addressing a specific psychological barrier to individual environmental action.

Jen Wang studies human attitudes and decision-making related to environmental issues and outcomes. Her research uses multiple social science methods including experiments, surveys, and interviews, and covers topics such as business and sustainability, moral and environmental identities, and social norms.

This course is offered as part of the Stanford Environmental & Water Studies Summer Program. Students are encouraged to visit <http://ewssummer.stanford.edu> and register for this program.

Who should take this class?

If you are a) a human, and b) interested in human impacts on our environment – this class is for you! There are no prerequisites for this class, which means that I do not expect previous background knowledge in the topics of this class, nor in psychology more generally. On the other hand, some students may have a lot of experience with some but not all of the class topics. If this is you, this course is an opportunity for you to learn about the topics currently unfamiliar to you, and to contribute your expertise and insights to our learning community. Everyone, regardless of their specific background knowledge, has some experience taking or not taking environmental action, and I look forward to learning from each of your experiences and what you will bring to the class.

One note is that this class will have overlap in content with both ENVRES 240 (Environmental Decision-Making and Risk Perception) or ENVRES 250 (Environmental Governance), which are offered at Stanford in the Winter. Please feel free to contact me if you are planning on taking either of these and want to find out more about the potential overlap.

Class Objectives

My goal for this class is to help you better recognize, understand, and analyze potential psychological drivers and barriers to environmental action, both in your personal lives as well as at various levels of society. This course will also challenge you to begin thinking about potential strategies you can develop to leverage drivers and address these barriers in yourselves and others. By the end of the course, you should be able to do the following:

1. **Recognize and articulate when psychological drivers and barriers to environmental actions may be in play.** I hope to expose you to the theories and frameworks that will help you make better sense of human behavior when it comes to environmental action, as well as to give you an arsenal of examples of from the real world that you can relate and refer to in understanding the content of the class. I will ask you to engage in the readings and class discussions, as well as to seek out your own personal or real-world examples to share with the class. The first objective of this class is for you to leave the class better informed and able to identify and articulate psychological barriers to environmental actions that you observe in your life and in society more broadly, especially in contexts when others have not thought to consider these drivers and barriers.
2. **Be comfortable conversing in the language of behavior change, and explaining these concepts to others.** One of the reasons that psychological factors are not often considered in the broader conversation about environmental sustainability and climate change is because of siloed knowledge; psychologists talk to psychologists, engineers talk to engineers, policy-makers talk to policy-makers. One of our aims for this class is to equip you with the tools and language to converse with others in the world of behavior change and environmental action, as well as to bring this conversation to other audiences – regardless of whether or not you decide to go deeper on this topic after the course, or not.
3. **Understand more deeply the difficulties of behavior change, and begin to identify potential solutions** to overcome specific barriers, in your own life and in the public domain. We all know that behavior change is difficult – but knowing that behavior is difficult is different than actually understanding and analyzing what specific aspects makes it difficult. One of the class objectives is to experience the difficulties in changing your own behavior, and to apply the knowledge you gain from this class to better understand and explain what is happening within that experience. This will not only help you better engage with the material of the class, but will also give you an opening through which you can think critically – and empathetically – about the challenges of scaling individual-level behavior change more broadly.

Class expectations and what you bring to class:

For many of you, this will be the first time that you will be encountering many of the topics, terms, and ideas presented in this course. This is normal, and is cause for celebration that you will leave the class with your mind open and familiar with an entirely new area of knowledge. Regardless of your previous background however, we ask you to commit to the following to get the most out of class:

- **Engage with the readings, recognizing that they are for you.** There are three reasons that the readings are critical to your success in this class: 1) This class covers a lot of ground quickly and the readings will keep you on pace with the new concepts and frameworks covered; 2) Engaging with the readings allows you to formulate questions, ideas, and discussion topics that are critical to being able to learn from each other when we come

together as a class; and 3) Fully engaging with the readings is an important and relatively straight-forward way by which you will feel that you are making progress of our class objectives, and will feel increasingly competent overall.

- **Turn in assignments and projects on time.** I am committed to giving timely feedback and will return assignments back to you within a week of the due date. To manage this timeline however, late assignments and projects will not be accepted without official instructor approval. In the case of emergencies, please keep me informed of your needs so that we can make the class work for everyone.
- **Bring your readings, reflections, and self to class discussions.** This course is not only relevant in the public domain, but also touches on experiences that we have all had in our own lives. Learning in our class happens when you converse (through readings) with other scholars who have studied these topics before, when you reflect on how these readings relate to your own experiences in the world, and finally when you explore the boundaries and extent of these ideas through collective discussions of our understandings and experiences as a class. This requires your attention, energy, and preparation both in advance of and during our class and discussion sections.
- **Bring up the questions you have.** If I could go back and change one habit I had as a student, both in college and in my early graduate school years, it would be to actually ask the questions that came to mind. I've been there, I know it can be intimidating, and despite what some teachers say it can still feel like someone will think that a question is stupid. I will not. If something is confusing or hard to understand, please give me a chance to understand what I can do better as an instructor – and to try again! I encourage you to share your questions during class or discussion sections or through our class website for everyone's benefits. You can also ask me during office hours or by e-mail.

Class Projects and Evaluation

There are four main components that the class will be evaluated on. Additional details will be provided in separate assignment hand-outs.

1 Behavior change project reflections

Total possible points: 60 points (30%)

Description: Each student in the class will commit to changing a behavior to be more pro-environmental. On alternating weeks, students will turn in a written memo on their progress (for a total of three memos), incorporating reflections on the experience as well as using this memo to integrate, interpret, and apply concepts from their readings both from those two weeks as well as earlier in the class. Each reflection will be graded according to the Reflection Rubric, with the lowest score of the three reflections dropped. The final reflection memo will be longer, and cannot be dropped.

2 Group Project

Total possible points: 90 points (45%)

Description: Working in groups, students will select a real-world behavior to analyze and research. This behavior can either be observed on campus or taken from another setting. Students will conduct research on the behavior (25 points), identify the psychological drivers and barriers at play (25 points), and develop a small proposal of a potential solution or solutions to specific barriers that they will present at the end of the course (40 points).

3 Class Discussions

Total possible points: 40 points (20%)

Description: A portion of each class, will be led directly by student discussion leaders. Each student will serve as a discussion leader (in teams) once during this course. Discussion leaders will be expected to read the articles ahead of time, create and post discussion questions, and facilitate class discussion (25 points). In addition, students will be required to turn in a short written reaction (1 paragraph and 1 question) each week based on that week's readings, which will largely be graded for completion (15 points total) but will also contribute to the materials that discussion leaders can draw on when facilitating class discussions.

4 Class and Discussion section participation

Total possible points: 10 points (5%)

Description: This course is designed to naturally encourage and involve participation and contribution, and to that end we must each do our part. The expectation is that you attend, actively participate, and contribute meaningfully to each class. This includes your attendance, activities, and any cold calls, warm calls, and calls for volunteers to aid discussion. While attendance is not strictly required and class participation is officially allocated only 10 points, consistent positive participation, enthusiasm, and preparedness will be taken into consideration if your final numerical grade is on the border between two grades. Similarly, behaviors that disrupt the learning of your peers and instructor will be taken into consideration if necessary.

Course map

As mentioned above, each week in this course will cover a different major group of psychological barriers to environmental action. This means that we have a lot to get through! As such, we may only go in-depth on one or two specific sub-topics within each group of barriers, and we may spend more or less time on each individual topic.

Below is the current outline of topics for the course, though we may modify this schedule or the timing depending on your interests and the interests of your peers. Note that each topic listed could be its own course! Thus, if you are particularly interested in a particular topic, please let me know. Even if we cannot dive deeply into everyone's interests during class time, I can help point you to additional resources that will match your interests.

Week 1: Introduction to psychological drivers and barriers; Emotions and Motivation

- What are psychological drivers and barriers?
- Why are they important?
- Student introductions
- Emotions and motivations
- *Project: Select behavior for Behavior Change Project*

Week 2: Our brain and biases

- Cognitive biases
- Ignorance, Mistrust, Denial
- Environmental numbness
- Self-efficacy
- *Project: Select behavior for Group Project*

Week 3: Ideologies

- Worldviews
- System justification, rationalization
- Sense-making
- Attributions and appraisals
- *Project: Submit draft of Group problem statement*

Week 4: Social comparison and norms

- Social comparison
- Social norms and networks
- Culture
- Mid-term class feedback
- *Project: Submit draft of Group Project Drivers and Barriers*

Week 5: Habits and sunk costs

- Habits and habit formation
- Conflicting values and goals

Week 6: Discounting, perceived risks, trade-offs

- Physical
- Temporal
- Uncertainty, Judgmental discounting
- Individual differences
- *Project: Submit draft of Group Project solutions*

Week 7: Unintended behavior

- Licensing
- Rebound effects
- Reactance

Week 8: Implications of psychological factors on environmental action

- *In-class Group Project presentations*
- *Reports on Behavior Change project due*

Texts and other resources

In addition to this syllabus, the course website will be your go-to for all resources and information about this class. The class website can be found here: TBD.

We will use an online discussion forum (format TBD) as part of the class website and the course. You are encouraged to share questions and any interesting material with your peers through Piazza, both as a way to get to know your classmates, but also because the power of crowdsourcing may get you an answer more quickly.

This course requires access to a computer and the Internet for accessing course resources and completing assignments. There is 24-hour access to Windows and Macintosh computers at the LaR in Tressider Union (<https://acompan.stanford.edu/tresidder>) and Lathrop library (<https://library.stanford.edu/libraries/lathrop/24-hour-study-room>) in addition to other locations with more limited hours (<http://library.stanford.edu/using/study>).

Accessibility

Students who may need an academic accommodation based on the impact of a disability or learning need must initiate the request with the Office of Accessible Education (OAE). Professional staff will evaluate the request with required documentation, recommend reasonable accommodations, and prepare an Accommodation Letter for faculty dated in the current quarter in which the request is being made. Students should contact the OAE as soon as possible since timely notice is needed to coordinate accommodations. The OAE is located at 563 Salvatierra Walk; Phone: 650.723.1066; <http://studentaffairs.stanford.edu/oea>.

Honor Code

The Honor Code applies to both instructors and students. On my part, I trust that you will abide by Stanford's Honor Code. I am happy to discuss any questions you have about any honor code issues; please remember that the time to raise these questions is while you are preparing your assignments, not afterwards. All of your work must be your original work or must be appropriately attributed. For more information, please see <http://studentaffairs.stanford.edu/communitystandards/policy/honor-code>. Violations of the Honor Code will be taken extremely seriously.

Additional notes

Recordings: If you want to make audio or video recordings of the class, please get permission from the instructor before doing so. Stanford's policy regarding recordings states that "when permission is granted, students may keep recordings only for personal use and may not post recordings on the Internet, or otherwise distribute them."

Syllabus development: Thank you to Colin Ong, Emily Grubert, Heather Truelove, Nik Sawe, Matt Abrahams, Lauren Weinstein, and the Vice Provost for Teaching and Learning for providing ideas, materials and syllabi that I pored over and consulted extensively in preparing this version of the course syllabus.