The Science of Behavior Change

Instructors: Professors Katherine Milkman (kmilkman@wharton.upenn.edu) and Angela Duckworth (aduckworth@characterlab.org)

Office hours: Wednesdays, 12-12:30 pm in Huntsman 566. Each student may have up to two office hour slots. Please sign up as needed via the online scheduling tool: https://www.signupgenius.com/go/8050849A5A72BA7FF2-office

Teaching assistants: Tim Lee and Edward Chang (psycoidd490@gmail.com)

Schedule: Wednesdays 9:00am to 12:00pm in Huntsman 540/541

Course Overview

This seminar introduces advanced undergraduates to sustainable strategies for behavior change in health, education, and savings. It is intended for juniors and seniors who are seriously considering an advanced degree in behavioral science or a related field.

Weekly readings cover classic and current research from both psychology and economics. To help students develop the skill of reading and critiquing scientific literature, we assign different students to lead a portion of our class each week.

Although there are no formal prerequisites for this class, it is particularly well-suited to students who have taken (and enjoyed) courses like OIDD 290: Decision Processes, PPE 203/PSYC 265: Behavioral Economics and Psychology, PSYC 266: Positive Psychology, and MKTG 266: Marketing for Social Impact. Auditing is not permitted.

Class Participation

This seminar’s success will depend entirely on students’ level of participation. Students should attend each class and come prepared to discuss each assigned reading in detail. Read all assigned articles in entirety and very carefully before each class.

Laptop Policy

Laptops are not allowed for use unless you obtain prior permission from the instructors.

Assignments

1. Pairs Presentation

Pairs of students will be responsible for leading the discussion of assigned articles for each class. You and your partner should be prepared to do the following when you lead:

   1. Lead a 5-minute activity (e.g., a short discussion, a survey designed to illustrate a key point from the reading) (5 minutes).
   2. For each paper assigned:

      a. Summarize the key findings the assigned article and describe the methodological approach (2 minutes per article).
      b. Be prepared to open a conversation about key strengths and weaknesses in the assigned reading when the instructors ask you to share your thoughts (2 minutes per article)
3. Be prepared to note key themes across the assigned readings, incorporating comments from the discussion to close the discussion segment of class (3-5 minutes total)

2. Behavior Change Program First-Person Experience (propose program by 9/11, begin participating in program by 9/18, present observations about your experience on 11/13, and turn in paper by 11/20)

Participate in one professional behavior change program of your choosing (e.g., Weight Watchers, StickK, Fabulous, Headspace, Zombies Run! 5k Training, Charity Miles 100). Write your own (4 to 5 page double-spaced, excluding references) report that:
   1. Describes the design of this program
   2. Relates this program to concepts discussed in the course
   3. Suggests improvements to this program, and
   4. Includes 5 to 10 references from the scientific literature.

In-class presentations will be 2 minutes in length and due on 11/13. Presentations may not include slides or handouts. They should cover points 1-3 above. If you choose to participate as a team in the same program, you will be grouped for in-class presentations and notified in advance.

NOTE: For programs that are not free, course funds may be used to cover the cost of enrollment. Please work with the course TA to get approval for (1) your selected behavior change program (before enrolling) and (2) having any associated costs covered by the course.

3. Literature Review (Due: 10/9)

You will be required to complete one (4 to 5 pages double-spaced, excluding references) literature review on a behavior change strategy. The paper should be in APA format (see http://www.apastyle.org/). You are encouraged to include 10 to 15 citations. Ideally, this literature review will cover a topic that becomes central to the focus of your final research proposal on a novel behavior change intervention (e.g., if your proposed behavior change intervention will rely heavily on reminders, a literature review on reminders would be the perfect choice).

4. Research Proposal for a Novel Behavior Change Intervention

1. Present your idea for a novel behavior change intervention in class on 10/23. You will receive written feedback on your idea from your peers and from us. You will have 2 to 3 minutes. PowerPoint slides and/or handouts are entirely optional.

2. Give a final in-class presentation of an original research proposal* for a field study of a specific behavior change technique on 12/4 (final day of class) -- either of your own invention or derivative of an already-studied technique. This (brief) presentation should include all of the aspects of the research proposal described below.

3. Your final paper is due on 12/11 and will take the form of an 8-page, double-spaced research proposal that includes the following sections:
a. Motivation for this behavior change intervention, including 10 to 12 references to the scientific literature
   i. What real-world problem does this intervention address and why is it important?
   ii. What contribution will the proposed study make to the scientific literature? In other words, what will we learn about behavior change from this study? (Note that this will constitute an improved literature review based on the one your turn in 10/9, reflecting our feedback to you.)

b. Hypothesis

c. Study design
   i. Study sample (e.g., college undergraduates; nursing home patients)
   ii. Procedure

d. Anticipated results and, if the data do not fit this pattern, how you will interpret null findings

e. Optionally, in the Appendix, scripts or other text constituting the behavior change intervention itself

The final paper will be graded based on the following criteria:

- Does it motivate the problem with a practical contribution?
- Does it motivate the problem scientifically? That is, is it offering a new/compelling idea? Does it add to the research literature?
- Does it cover relevant, key findings from the literature? Does it do so thoroughly and accurately?
- Does it have a well-developed hypothesis that is clearly articulated, compelling, and novel?
- Does it include a compelling study design for testing the hypothesis using field data? The control group should be thoughtful and the strengths and limitations of the study design should be well-articulated.
- Is it well-written and clear?

Grading

- 15% Class Participation
- 15% In-Class Presentation (in Pairs) on Assigned Readings
- 15% Literature Review
- 15% Behavior Change Experience Paper
- 40% Final Paper and Presentation (15% for in-class presentation and 25% for final paper)

Late submission policy
Late assignments will be penalized one point for every 24 hours late.
<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Lead</th>
<th>Student Presenter</th>
<th>Guest</th>
<th>Deadlines</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/28</td>
<td>Introduction: Nudges and Boosts</td>
<td>Katy &amp; Angela</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9/4</td>
<td>Make It Fun</td>
<td>Katy</td>
<td>Edward Chang</td>
<td>Judd Kessler</td>
<td></td>
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<tr>
<td>9/11</td>
<td>Pre-Commitment Strategies</td>
<td>Katy</td>
<td>Kyler Li, Jason Knies</td>
<td>Colin Camerer</td>
<td>Propose your choice of Behavior Change Program</td>
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<tr>
<td>9/18</td>
<td>Goal Setting and Planning</td>
<td>Angela</td>
<td>Zoe Schwingel-Sauer, Sarah Fendrich</td>
<td>Maya Shankar (10:45 - 11:30am)</td>
<td>Begin Behavior Change Program by This Date</td>
</tr>
<tr>
<td>9/25</td>
<td>Beliefs and Appraisal</td>
<td>Angela</td>
<td>Christina Rancan, Olivia Podos</td>
<td>Piyush Tantia</td>
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<tr>
<td>10/2</td>
<td>Social Motives to Change</td>
<td>Katy</td>
<td>Sudhatada (Kate) Wattanavekin, Tiffany Shyu</td>
<td>Deirdre Mylod</td>
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<tr>
<td>10/9</td>
<td>Salience</td>
<td>Angela</td>
<td>Emma Ronzetti, Meghna Sreenivas</td>
<td>Raina Merchant</td>
<td>Literature Review Due</td>
</tr>
<tr>
<td>10/16</td>
<td>Microenvironments</td>
<td>Angela</td>
<td>Christina Steele, Canyon Kornicker</td>
<td>Jason Riis</td>
<td></td>
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<tr>
<td>10/23</td>
<td>Defaults, Active Choice and Information Leakage</td>
<td>Katy</td>
<td>Kelly Jiang, Kimberly Halberstadter</td>
<td>N/A</td>
<td>In-Class Presentation on Research Proposal Paper</td>
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<td>10/30</td>
<td>Prosocial Nudges</td>
<td>Angela</td>
<td>Tim Lee</td>
<td>Shlomo Benartzi</td>
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<tr>
<td>11/6</td>
<td>Behaviorally-Informed Incentives</td>
<td>Katy</td>
<td>George Cary, Amanda Ngo</td>
<td>Mitesh Patel</td>
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<tr>
<td>11/13</td>
<td>Habits</td>
<td>Angela</td>
<td>Rebecca Suh, Kelly Flynn</td>
<td>N/A</td>
<td>In-Class Presentation on Behavior Change Experience</td>
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### Detailed Course Reading List

**8/28: Introduction**


**9/4: Make It Fun (Guest: Judd Kessler)**

*Presenter: Edward Chang (TA)*


**9/11: Pre-Commitment Strategies (Guest: Colin Camerer)**

*Student Presenter: Kyler Li, Jason Knies*


**9/18: Goal Setting and Planning (Guest: Maya Shankar)**

*Student Presenter: Zoe Schwingel-Sauer, Sarah Fendrich*


**9/25: Beliefs & Appraisal (Guest: Piyush Tantia)**

*Student Presenter: Christina Rancan, Olivia Podos*


**10/2: Social motives to change (Guest: Deirdre Mylod)**

*Student Presenter: Sudthatada Wattanavekin, Tiffany Shyu*


10/9: Salience (Guest: Raina Merchant)

**Student Presenter: Emma Ronzetti, Meghna Sreenivas**


10/16: Microenvironments (Guest: Jason Riis)

**Student Presenter: Christina Steele, Canyon Kornicker**


10/23: Defaults, Active Choice, and Information Leakage (Guest: N/A, In-Class Presentation on Research Proposal Paper)

**Student Presenter: Kelly Jiang, Kimberly Halberstadter**


10/30: Prosocial Nudges (Guest: Shlomo Benartzi)

**Student Presenter:** Tim Lee


11/6: Behaviorally-Informed Incentives (Guest: Mitesh Patel)

**Student Presenter:** George Cary, Amanda Ngo


11/13: Habits (Guest: N/A, In-Class Presentation on Behavior Change Experience)

**Student Presenter:** Rebecca Suh, Kelly Flynn


11/20: When Are We Ready for Behavior Change? (Guest: Todd Rogers)

**Student Presenter:** Julia Comer, Alana Adams


**12/4: Conclusion (Guest: N/A, Final In-Class Presentation on Research Proposal Paper)**