2015
Explaining Health Behavior: Insights from Behavioral Economics
Spring 2: March 23 – May 13, 2015
Monday & Wednesday, 1:30-3:20 pm
Classroom: Kresge G-1

Instructor:
Ichiro Kawachi, M.D., Ph.D.
Professor of Social Epidemiology
Chair, Department of Social & Behavioral Sciences
E-mail: ikawachi@hsph.harvard.edu

Teaching Assistants:
Flora Or
e-mail: jfo256@mail.harvard.edu

Michael Gilbert
e-mail: michaelgilbert@mail.harvard.edu

Course Objectives
The course introduces students to the application of theories and constructs from behavioral sciences (particularly behavioral economics and social psychology) to the field of health behavior. Individual sessions will cover foundational concepts in behavioral economics, including: a) bounded rationality and dual process theory; b) heuristics and biases in decision-making; c) prospect theory, framing effects, and loss aversion, d) choice architecture, asymmetric paternalism and the use of default options (“nudges”); e) the problem of inter-temporal choice, self-control, and addiction; and f) the optimal use of incentives vs. commitments to promote behavior change. Examples of questions posed by the class include: “How can we incorporate novel insights from behavioral economics to improve the success of behavior change (e.g. to reduce obesity or promote smoking cessation)?”; “How can incentives be crafted to guide consumer choice? For example, why is a tax on junk foods more effective than subsidies for healthy foods?”

What This Course is Not
This course is designed as a non-technical survey of the application of behavioral economics insights to behavior change. It does not delve into formal theories in behavioral economics (translation: there are very few equations in my lectures), and hence, the course does not have
prerequisites such as prior course-work in economics. Students looking for a course on behavioral economics taught by a behavioral economist should look to the class taught by Margaret McConnell, Assistant Professor of Global Health Economics in GHP (“Behavioral Economics and Global Health”), or classes taught in KSG or FAS (e.g. by Todd Rogers, Sendhil Mullainathan, David Laibson, and others).

**Pre-requisites:** None. The course fulfills the theory requirement for Masters level students in SBS, MPH students in the professional stream, and will be of interest to students taking the Health Communications Concentration.

**Format:** Lectures.

### Final Course Grade Distribution

Final Course Grades will be distributed as follows:

- Mid-term quiz (April 22) 30%
- Final Exam (May 13) 70%
2015 Spring 2 Session
Explaining Health Behavior: Insights from Behavioral Economics
Room Kresge G-1 –Monday & Wednesday, 1:30-3:20

Session 1 – March 23 (Monday)

Topics:
- Introduction to the course.
- Bounded rationality and dual process theory

Instructor: Professor Kawachi

Lesson Objectives:
1. Understand the relevance of behavioral economics for explaining health behavior.
2. Define the classical economics account of “rationality” and contrast it with the behavioral economics concept of “bounded rationality”.
3. Explain dual process theory and the two systems of cognition.
4. Describe three major heuristics used by System 1: the availability heuristic, the representativeness heuristic, and the affect heuristic.

Readings:

Session 2 – March 25 (Wednesday)

*LOCATION IN HMS*

Topic: Emotions and the affect heuristic

Instructor: Professor Kawachi

Learning Objectives:
- Understand how emotions affect judgment and choice via the affect heuristic.
• Understand the differences between emotion-based and cognition-based judgments in decision-making.
• Explain the concepts of evaluability and proportion dominance.

Readings:


Session 3 – March 30 (Monday)

Topic: Anchors, choice architecture, default options (“nudges”) & asymmetric paternalism

Instructor: Professor Kawachi

Learning Objectives:

1. Describe the influence of decoy effects and anchoring bias on decision-making and choice.
2. Describe the use of default options, “nudges”, and “choice architecture” to guide behavior.
3. Contrast “asymmetric paternalism” with classical paternalism, as applied to public health policy.
4. Explain Wansink’s concept of “mindless eating” and the use of portion size control to curb over-eating.

Readings:


2. Sue D. Pedersen, Jian Kang & Gregory A. Kline. Portion control plate for weight loss in


**Session 4 – April 1 (Wednesday)**

**Topics:**
- Prospect theory, loss aversion, and endowment effects.
- Framing effects

**Instructor:** Professor Kawachi

**Learning Objectives:**

1. Explain concept of *loss aversion* from *prospect theory*.
2. Discuss the utility as well as the limitations of the use of *loss-framed messages* in health communication.
3. Contrast framing effects in behavioral economics vs. sociology.

**Readings:**


**Session 5 – April 6 (Monday)**
Topic: Inter-temporal choice and the problem of self-control

Instructor: Professor Kawachi

Learning Objectives:

1. Understand the concept of *inter-temporal choice* as applied to health behavior.
2. Critically analyze the classical discounted utility model (DUM) from classical economics, and contrast it with *hyperbolic discounting* from behavioral economics.
3. Discuss approaches by which time preference has been assessed empirically.
4. Understand the health policy implications of the behavioral economics approach to modeling inter-temporal choice.

Readings:


Session 6 – April 8 (Wednesday)

Topic: Incentives vs. Commitments

Instructor: Professor Kawachi

Learning Objectives:

1. Distinguish between the use of incentives vs. commitments to influence behavior.
2. Describe the pros and cons of incentives vs. commitments.
3. Understand the principles of designing optimal incentives and commitments.
4. Describe the behavioral economics principles involved in “super-charging” incentives to alter behavior.

Readings:


**Session 7 – April 13 (Monday)**

**1.30 – 2.30 pm**
Preparation for mid-term quiz (self-directed study)

**2.30 – 3.20 pm**

**Topic:** Behavioral economic interventions to promote healthy food choices

**Guest Lecturer:** Anne Thorndike, Assistant Professor of Medicine, Massachusetts General Hospital

**Readings:**


Session 8 – April 15 (Wednesday)

1.30-2.20 pm

**Topic:** Behavioral approaches to reducing sugar-sweetened beverage consumption.

**Guest Lecturer:** Jason Block, Assistant Professor of Medicine, Harvard Medical School

**Readings:**


2.30-3.20 pm

**Topic:** Can we nudge our way to better food choices?

**Guest Lecturer:** Christina Roberto, Assistant Professor SBS.

**Readings:**


April 20 (Monday) Patriot’s Day (Boston Marathon)

Session 9 – April 22 (Wednesday)

1.30-2.20 pm
MID-TERM QUIZ – see sample from previous year attached to the syllabus

2.30-3.20 pm

Topic: mHealth for boosting compliance with medical treatment

Guest Lecturer: Dr. Trishan Panch, MD MPH
Chief Medical Officer
Wellframe

Session 10 – April 27 (Monday)

Guest Lecture by BurnsGroup, a New York City-based advertising agency:
Speakers: Joanne McKinney, Alison Earl, Scott Buckley

Topic:
A COMMERCIAL LENS TO DRIVING BEHAVIOR CHANGE
A provocative perspective on target and insight, driving creative thinking at all stages of change

A 2-PART LECTURE:
FIRST HOUR: Exploration of targeting, segmentation and insight in the context of behavior models and demonstrated through real life advertising examples

SECOND HOUR: Break-out session, to put theory into practice — developing insight, creative brief and marketing ideas for addressing compliance/adherence in smoking cessation.

PRE-WORK:
In advance of the class, students will be provided insights (actual consumer quotes) from 100 recently relapsed smokers, answering the question as to how they feel about their relapse. Students will be asked to review the quotes before class, and come with their own ideas on an overriding and driving insight to the mindset of the failed quitter, gleaned from the quotes. We
will work in small groups to define insights, craft a creative brief (format provided) and brainstorm marketing ideas to share with the class in the final 15 minutes.

**Session 11 – April 29 (Wednesday)**

**Topic:** Social influence

**Instructor:** Professor Kawachi

**Learning Objectives:**
1. Describe key constructs and measures (reachability, degree & closeness centrality, betweenness) in sociometric analysis.
2. Describe the “three degrees of influence rule”.
3. Critically analyze the threats to causal inference in empirical studies of social influence across social networks.

**Readings:**


**Session 12 – May 4 (Monday)**

**Topics:**
- Social norms
- Strategic interactions, social preferences, and behavioral game theory.

**Instructor:** Professor Kawachi

**Learning Objectives:**
1. Define what is a “norm” – how is it different from customs
2. Explain the rational choice theory account of norms. Critique it.
3. Describe game theoretical accounts of norms (e.g. the norm for fairness and reciprocity).

Readings:

Session 13 – May 6 (Wednesday)

Topic: Expectations – and why behavior interventions occasionally misfire
Instructor: Professor Kawachi

Learning Objectives:
1. Understand how our expectations shape our subsequent experiences.
2. Provide examples of how expectations can be manipulated to influence choice (in either healthy or unhealthy directions).
3. List and describe situations under which behavioral interventions can misfire – substitution effects, behavioral compensation, “mere peanuts”, moral licensing and “what the hell” effects.

Reading:

Session 14 – May 11 (Monday)

Topic: Behavioral economics and health policy – what it adds and does not add.
Instructor: Professor Kawachi

Learning Objectives:
1. Critique the potential of applying behavioral economics to health care policy (e.g. designing employee health incentives).
2. Debate the application of behavioral economics to public health policy (e.g. recent debates in UK government).

Readings:


Session 15 – May 13 (Wednesday)

FINAL EXAM (2 hour written exam in short-answer format)
Student Name: ____________________

MID-TERM QUIZ (from 2014)
SBS 503 “Explaining Health Behavior”

Instructions
1. Write down your name at the top of this sheet 😊
2. You have 50 minutes (1.30-2.20 pm) to complete this quiz – write down your answers in the space provided.

Question 1
Fear appeals are commonly used in graphic warning labels on cigarette packs. **List** the reasons why they can backfire?

![Image of smoking causes blindness warning]

Question 2
Anti-smoking campaigns frequently appeal to the emotion of sadness. Explain why this might **backfire**.

![Image of warning: Crying won’t help when Obamacare won’t pay for your treatment]

Question 3
Why are health claims (such as “low fat” labels) advantageous for junk food manufacturers, but are often counter-productive from the point of view of encouraging **actual** healthy food choices?
**Question 4**
In order to boost compliance with cancer screening, which is more effective – messages that emphasize the loss in quality of life from delayed diagnosis, or messages that emphasize peace of mind from knowing your result? *Why?* (justify your answer).

**Question 5**
*Subsidies* on healthy beverages (e.g. bottled water) are politically more popular than *taxes* on unhealthy beverages (sugar-sweetened beverages), but they are also less likely to be *effective* in guiding consumer choice. *Why?*
TA resources

**What Heroin Addiction Tells Us About Changing Bad Habits.** January 5, 2015
NPR story about heroin addiction in Vietnam (featuring interviews with Wendy Wood).