



**NYU**

**ROBERT F. WAGNER GRADUATE  
SCHOOL OF PUBLIC SERVICE**

## **PADM-GP 2139**

# **Behavioral Economics and Policy Design**

## **Fall 2024**

### **Instructor and Class Information**

- Professor Tatiana Homonoff
- Email: [tah297@nyu.edu](mailto:tah297@nyu.edu)
- Class meeting:
  - Section 1: Wednesday 10:00-11:40am, 238 Thompson St (GCASL) Room 369
  - Section 2: Wednesday 4:55-6:35pm, 194 Mercer St Room 204
- Office Hours (sign up [here](#)): by appointment Tuesdays 9:00-10:30

### **Course Prerequisite**

CORE-GP 1011: Statistics & CORE-GP 1018: Microeconomics (or equivalent)

### **Course Description**

Standard economic theory assumes that individuals are fully rational decision-makers; however, that is often not the case in the real world. Behavioral economics uses findings from lab and field experiments to advance existing economic models by identifying ways in which individuals are systematically irrational. This course gives an overview of key insights from behavioral science and identifies ways in which these findings have been used to advance policies on education, health, energy, taxation, and more. Additionally, this course will review how government agencies and non-profit organizations have used behavioral insights to improve social policy.

### **Learning Assessment Table**

<b>Course Learning Objective Covered</b>	<b>Corresponding Assignment Title</b>
1. Interpret empirical results from research papers for a policy audience	Weekly Assignments; Bias Presentation
2. Demonstrate knowledge of key theories and policy findings from the field of behavioral economics	Final Exam
3. Apply insights from behavioral economics to policy design	Policy Proposal

## Required Readings

- Thaler, Richard H., and Cass R. Sunstein. **Nudge: The Final Edition**. Yale University Press, 2021.
- Excerpts from the following books (provided via Brightspace):
  - Kahneman, Daniel. **Thinking, Fast and Slow**. New York: Farrar, Straus and Giroux, 2011. Hereafter, referred to as TFS.
  - Mullainathan, Sendhil and Eldar. Shafir. **Scarcity: Why Having Too Little Means so Much**. New York: Times Books, Henry Holt and Company, 2013.
  - Ariely, Dan. **Predictably Irrational: the Hidden Forces That Shape Our Decisions**. New York: Harper Perennial, 2010.

## Course Requirements

- Semi-weekly assignments:
  - Data visualization tweets (x4) – 20% (5% each)
  - Writing assignments (x2) – 15% (7.5% each)
- Class presentation: 10%
- Participation: 10%
- Policy Proposal: 15%
- Final Exam: 30%

## Semi-Weekly Assignments

Researchers working in public policy must frequently adapt their writing style turning a technical, academic journal article into a policy brief for government officials, a New York Times article, a National Public Radio spot, or a tweet. One of the main goals of this class is to learn to digest academic research to make economics insights understandable to a policy audience. These semi-weekly assignments will give students practice in four types of policy writing:

- Data visualization tweets
- Opinion editorial
- Policy brief
- Policy proposals

Students will submit semi-weekly assignments via Brightspace. These will be graded as check ++, check+, check, check minus, no credit which corresponds to 100/95/85/75/0. Late assignments will lose 10 points per 24-hour period starting at the beginning of class in which the assignment is due. One make-up tweet is available to earn additional credit: this can replace a either a missed assignment or the assignment with the lowest grade.

## Lecture Recording Policy

All lectures will be recorded and made temporarily available for students with an excused absence ONLY. Absent students will not be able to zoom into lecture synchronously. Excused absences include: (i) illness (ii) childcare issues (iii) religious holidays (iv) family emergencies. Work-related conflicts do not count as an excused absence. Students with access can view the recordings via Brightspace (Content → Lecture Recordings) until midnight of the day prior to the following lecture after which the link will expire. Students with an excused absence can email [tah297@nyu.edu](mailto:tah297@nyu.edu) for access.

## Technology Support

You have 24/7 support via NYU's IT services. Explore the NYU servicelink knowledgebase for troubleshooting and student guides for all NYU-supported tools (Brightspace, Zoom, etc). Contact [askIT@nyu.edu](mailto:askIT@nyu.edu) or 1-212-998-3333 (24/7) for technology assistance, or contact Zoom's 24/7 technical support (includes a chat function), or review Zoom's support resources. If you do not have the appropriate hardware technology nor financial resources to purchase the technology, consider applying for the NYU Emergency Relief Grant.

## Academic Integrity

Academic integrity is a vital component of Wagner and NYU. All students enrolled in this class are required to read and abide by [Wagner's Academic Code](#). All Wagner students have already read and signed the [Wagner Academic Oath](#). Plagiarism of any form will not be tolerated and students in this class are expected to report violations to me. If any student in this class is unsure about what is expected of you and how to abide by the academic code, you should consult with me.

## Henry and Lucy Moses Center for Students with Disabilities

Academic accommodations are available for students with disabilities. Please visit the [Moses Center for Students with Disabilities \(CSD\) website](#) and click on the Reasonable Accommodations and How to Register tab or call or email CSD at (212-998-4980 or [mosescsd@nyu.edu](mailto:mosescsd@nyu.edu)) for information. Students who are requesting academic accommodations are strongly advised to reach out as early as possible in the semester for assistance.

## NYU's Calendar Policy on Religious Holidays

[NYU's Calendar Policy on Religious Holidays](#) states that members of any religious group may, without penalty, absent themselves from classes when required in compliance with their religious obligations. Please notify me in advance of religious holidays that might coincide with exams to schedule mutually acceptable alternatives.

## Overview of the Semester

	Lecture	Topics	Overview Reading	Assignments: Due at class start
1	Sep 4	Intro to Prospect Theory	TFS ch.25-26	
2	Sep 11	Econometrics Review; Loss Aversion Applications	Econometrics review; Nudge ch.1	
3	Sep 18	Loss Aversion cont.; Probability Weighting	TFS ch.29	Writing Assignment 1
4	Sep 25	The Endowment Effect	TFS ch.27	Tweet 1
5	Oct 2	Present Bias; Commitment Devices	Nudge, ch.2	Presentation 1
6	Oct 9	Defaults	Nudge, ch.13	Tweet 2 Presentation 2
7	Oct 16	Choice Overload; Nudging Debate	Nudge Intro; NYT articles	Tweet 3 Presentation 3
8	Oct 23	Intrinsic vs. Extrinsic Motivation	Predictably Irrational, ch. 4	Presentation 4
9	Oct 30	Social Comparison	Nudge, ch.3	Tweet 4 Presentation 5
10	Nov 6	Salience and Attention	Chetty Senate Testimony	Writing Assignment 2 Presentation 6
11	Nov 13	Scarcity	Scarcity ch. 1 & 5	Presentation 7
12	Nov 20	Applying Behavioral Economics I	EO 13707 Guidance; The Time Tax	Tweet 5 (Make-up)
13	Dec 4	Applying Behavioral Economics II: Guest	Ideas42 reports	Writing Assignment 3
14	Dec 11	Final Review		
	Dec 18	Final Exam		

## Writing Assignments

Writing assignments provide practice in policy writing of different styles. The first two assignments are reading responses on economics journal articles, while the final assignment asks students to put themselves in the shoes of a behavioral economics researcher and design a novel policy intervention around a policy goal of their choosing. All three assignments should pay particular attention to the behavioral models addressed in the reading (Assignments 1 & 2) or used as motivation for the design of the intervention (Assignment 3) and how it differs from the standard model.

Format: please submit all assignments in PDF format.

### Writing Assignment #1: Opinion Editorial

Article: "The Behaviorist Goes to School: Leveraging Behavioral Economics to Improve Educational Performance" by Levitt, List, Neckermann, and Sadoff. There are many parts of this paper, but focus your discussion on the interventions involving loss aversion ONLY.

Style: Think New York Times, The Economist, The Atlantic, NPR, etc. This type of article describes the policy context and findings from academic research, but also expresses the opinions of the author. These articles are aimed at an audience with little-to-no economics or policy experience and are meant to be informative, but also engaging. Please include:

- Description of the policy context and prior research on the policy issue
- Describe the behavioral theory that relates to the intervention
- Summary of the intervention and ties to the theory
- Key finding(s) from the evaluation
- Your personal critique. Possibilities include: Do you think this is a good policy? What are your reservations, if any (ethical, logistical, etc.)? Do you believe the findings from the study (if not, why not)? Can you suggest any other policies based on these findings? Be creative!

Length: One-page, 500 words

### Writing Assignment #2: Policy Brief

Article: "Can social information affect what job you choose and keep?" by Coffman, Featherstone, and Kessler

Style: You have just read the study above and want to convey the findings to other policymakers. If you could only give the key stakeholders a one-page summary of the program findings – what would it say? Policy briefs differ from opinion editorials in that they are (i) intended for a more technically-informed audience and (ii) only include the research findings, not your personal opinions.

Please use the following section headings to organize your brief:

- **Policy Objective** – 1-2 sentence summary of the intervention
- **Behavioral Insight** – which behavioral economics theory is being applied?
- **Background** – what is the policy context and why to we care?
- **Methods** – what is the intervention, sample population, empirical method (e.g., RCT, diff-in-diff...)
- **Results** – describe main results of the intervention
- **Conclusion**

Length: One-page, 500 words

### Writing Assignment #3: Policy Proposal

Imagine that you are a member of the former White House’s Social and Behavioral Sciences Team (<https://sbst.gov/>) and that you are collaborating with a public sector partner (government agency, non-profit, etc.). It is your job to identify a well-defined policy goal of your research partner that you believe can be improved through behavioral science. You will then design a policy intervention based on behavioral economics insights to better achieve this goal. Note that not all problems can be solved with behavioral interventions, so make sure you are selecting a problem that you believe can be addressed with the policy levers we have discussed in this course. You will then describe how you and your agency partner will evaluate the effectiveness of your intervention using a randomized control trial. Make sure to address the points below:

1. **Define the policy problem**: What is the policy goal? Make sure that you are selecting a well-defined, measurable policy outcome that is likely to be a goal of your research partner (e.g., take-up of a government program, tax compliance rate, etc.).
2. **Diagnosis**: Describe the cognitive biases that stand in the way of the policy goal and why behavioral interventions might be of use in this context.
3. **Design the intervention**: Identify your behavioral intervention. Special attention will be given to how your intervention relates to your diagnosis – i.e., your intervention should be directly informed by the biases described in your diagnosis. Be concise, specific, and creative!
4. **Test**: Design your own randomized control trial (RCT) to evaluate your intervention. Be specific – for example: Who is your sample population and how will you recruit them? What data would you need to collect? How will you randomize your sample into experimental groups?
5. **Feasibility**: What are some factors that may hinder your analysis? These may include political feasibility, financial costs, logistical difficulties, sample size considerations, ability to randomize, ethical concerns, etc.

Length: 750 words

## Data Visualization Tweets

Many of the papers we will read for this class can be summarized in one key finding with the rest of the paper is devoted to trying to convince the reader that the finding is correct. However, academics don't always make it easy for readers to find that main takeaway.

For these assignments, you will read an academic article and create a stand-alone tweet that summarizes the main takeaway from the paper. Your text should not exceed 280 characters (note: that says 280 characters, not 280 words!) and should be accompanied by a graphical depiction of the key findings that you create, i.e., do not simply recreate an existing figure from the paper – you must create your own graph/figure based on results in the paper. While there are many interesting findings in each paper, your assignments will be graded on your ability to identify and accurately describe the main causal effect(s) of the intervention. Make sure to include: (i) policy context (ii) behavioral theory (iii) results (iv) graphical depiction.

For ease of interpretation/grading, please include a footnote describing which table or page you found the data used in your graphical depiction. Note: These tweets do not actually need to be tweeted!

Format: please submit all assignments in PDF format.

Tweet 1: "The Power of Certainty: Experimental Evidence on the Effective Design of Free Tuition Programs" by Burland, Dynarski, Michelmore, Owen, and Raghuraman

Tweet 2: "Put Your Money Where Your Butt Is: A Commitment Contract for Smoking Cessation" by Gine, Karlan, and Zinman

Tweet 3: "Why Do Defaults Affect Behavior? Experimental Evidence from Afghanistan" by Blumenstock, Callen, and Ghani

Tweet 4: "Pay Enough or Don't Pay at All" by Gneezy and Rustichini (focus on the volunteering experiment results ONLY)

(MAKE-UP ASSIGNMENT) Tweet 5: "Information Disclosure, Cognitive Biases, and Payday Borrowing" by Bertrand and Morse

## Writing Style Examples

1. Castleman & Page (2016). “Freshman Year Financial Aid Nudges: An Experiment to Increase FAFSA Renewal and College Persistence”
  - Op-ed: [NYT Article](http://www.nytimes.com/2015/01/18/upshot/helping-the-poor-in-higher-education-the-power-of-a-simple-nudge.html?_r=0) [http://www.nytimes.com/2015/01/18/upshot/helping-the-poor-in-higher-education-the-power-of-a-simple-nudge.html?\\_r=0](http://www.nytimes.com/2015/01/18/upshot/helping-the-poor-in-higher-education-the-power-of-a-simple-nudge.html?_r=0)
  - Policy Brief: [SBST Annual Report](https://sbst.gov/#report) <https://sbst.gov/#report>
  
2. Homonoff (2018). “Can Small Incentives Have Large Effects? The Impact of Taxes versus Bonuses on Disposable Bag Use”
  - Op-ed: [The Conversation](https://theconversation.com/paper-or-plastic-how-disposable-bag-bans-fees-and-taxes-affect-consumer-behavior-48858) <https://theconversation.com/paper-or-plastic-how-disposable-bag-bans-fees-and-taxes-affect-consumer-behavior-48858>
  - Policy Brief: [World Bank Blog](http://blogs.worldbank.org/impactevaluations/the-case-for-sticks-over-carrots-its-in-the-bag-guest-post-by-tatiana-homonoff) <http://blogs.worldbank.org/impactevaluations/the-case-for-sticks-over-carrots-its-in-the-bag-guest-post-by-tatiana-homonoff>
  - Tweet: [https://twitter.com/katy\\_milkman/status/612248981989625856](https://twitter.com/katy_milkman/status/612248981989625856)



## Presentations

Each student will be assigned one “heuristic or bias” to present either individually or in a group, depending on class size. Assignments will be announced in the 2<sup>nd</sup>-3<sup>rd</sup> week of class. I have listed one or two articles on each of the topics – often the pioneering article on that specific theory – but you may do your own literature search as well if you choose. These articles can be very challenging so you should feel free to skip the more technical sections.

Each presentation should be roughly 10 minutes long and include slides that your classmates can use as a study guide. Please submit a copy of your slides the night before class. The presentations should include the following:

- Define the heuristic/bias introduced in the reading
- Give an example question or scenario that highlights the meaning of the bias. If possible, test your audience to see if they fall prey to the bias!
- Present at least one example from the assigned readings that shows evidence of this cognitive bias in the lab or field
- Describe at least one example not discussed in the readings of how this cognitive bias could impact behavior in meaningful ways in the real world, ideally focusing on some policy-relevant outcome (spending, employment, tax compliance, health, etc.).

Example: Representativeness Heuristic

Readings: Tversky & Kahneman (1974) Section I; Nudge ch.1

Group 1: Availability Bias

Readings: Tversky & Kahneman (1974) Section II; Nudge ch.1

Group 2: Anchoring and Adjustment

Readings: Tversky & Kahneman (1974) Section III; Nudge ch.1

Group 3: Hot-Hand Fallacy

Readings: Gilovich, Vallone, Tversky (1985); Chen, Moskowitz, Shue (2016)

Group 4: Left-Digit Bias

Readings: Lacetera, Pope, Sydnor (2012)

Group 5: Overconfidence

Readings: Kruger and Dunning (1999); Camerer and Lovallo (1999)

Group 6: Confirmation Bias

Readings: Lord, Ross, Lepper (1979), Bernhardt, Krasa, and Polborn (2008)

Group 7: Projection Bias

Readings: Loewenstein, O'Donoghue, Rabin (2003); Conlin, O'Donoghue, Vogelsang (2007)

# Additional Readings

## Lecture 1: Introduction

- **[Required Reading]** Kahneman, Daniel, and Amos Tversky (1979) "Prospect Theory: An Analysis of Decision under Risk", *Econometrica*, XLVII (1979), 263-291.

## Lecture 2: Loss Aversion

- **[Required Reading]** Homonoff, Tatiana A. 2018. "Can Small Incentives Have Large Effects? The Impact of Taxes versus Bonuses on Disposable Bag Use." *American Economic Journal: Economic Policy*, 10 (4): 177-210.
- **[Required Reading – Writing Assignment #1]** Levitt, Steven D., et al. "The behavioralist goes to school: Leveraging behavioral economics to improve educational performance." *American Economic Journal: Economic Policy* 8.4 (2016): 183-219.
- Pope, Devin G., and Maurice E. Schweitzer. "Is Tiger Woods loss averse? Persistent bias in the face of experience, competition, and high stakes." *The American Economic Review* 101.1 (2011): 129-157.
- Allen, Eric J., Patricia M. Dechow, Devin G. Pope, and George Wu. "Reference-dependent preferences: Evidence from marathon runners." *Management Science* (2016).
- Rees-Jones, Alex. "Quantifying Loss-Averse Tax Manipulation", *The Review of Economic Studies*, Volume 85, Issue 2, 1 April 2018, Pages 1251–1278.
- Engström, Per, Katarina Nordblom, Henry Ohlsson, and Annika Persson. "Tax compliance and loss aversion." *American Economic Journal: Economic Policy* 7, no. 4 (2015): 132-164.

## Lecture 3: Loss Aversion & Probability Weighting

- **[Required Reading: Tweet #1]** Elizabeth Burland, Susan Dynarski, Katherine Micheltore, Stephanie Owen & Shwetha Raghuraman. "The Power of Certainty: Experimental Evidence on the Effective Design of Free Tuition Programs." Forthcoming, *American Economic Review: Insights*.
- Dynarski, Susan, CJ Libassi, Katherine Micheltore, and Stephanie Owen. "Closing the Gap: The Effect of Reducing Complexity and Uncertainty in College Pricing on the Choices of Low-Income Students." *American Economic Review*, 111.6 (2021): 1721-56.
- Field, Erica. "Educational Debt Burden and Career Choice: Evidence from a Financial Aid Experiment at NYU Law School." *American Economic Journal: Applied Economics* (2009): 1-21.
- Hossain, Tanjim, and John A. List. "The behavioralist visits the factory: Increasing productivity using simple framing manipulations." *Management Science* 58.12 (2012): 2151-2167.
- Imas, Alex, Sally Sadoff, and Anya Samek. "Do people anticipate loss aversion?" *Management Science* 63.5 (2016): 1271-1284.

## Lecture 4: The Endowment Effect

- **[Required Reading]** Kahneman, Daniel, Jack L. Knetsch, and Richard H. Thaler. "Anomalies: The endowment effect, loss aversion, and status quo bias." *The journal of economic perspectives* (1991): 193-206.

## Lecture 5: Present Bias & Commitment Devices

- **[Required Reading – Tweet #2]** Giné, Xavier, Dean Karlan, and Jonathan Zinman. "Put your money where your butt is: a commitment contract for smoking cessation." *American Economic Journal: Applied Economics* 2.4 (2010): 213-35.
- Hastings, Justine, and Ebonya Washington. 2010. "The First of the Month Effect: Consumer Behavior and Store Responses." *American Economic Journal: Economic Policy* 2.2 (2010): 142-62.
- Shapiro, Jesse M. "Is there a daily discount rate? Evidence from the food stamp nutrition cycle." *Journal of Public Economics* 89.2 (2005): 303-325.
- Royer, Heather, Mark Stehr, and Justin Sydnor. "Incentives, commitments, and habit formation in exercise: evidence from a field experiment with workers at a fortune-500 company." *American Economic Journal: Applied Economics* 7.3 (2015): 51-84.
- DellaVigna, Stefano, and Ulrike Malmendier. "Paying not to go to the gym." *The American Economic Review* (2006): 694-719.
- Read, Daniel, George Loewenstein, and Shobana Kalyanaraman. "Mixing virtue and vice: Combining the immediacy effect and the diversification heuristic." *Journal of Behavioral Decision Making* 12.4 (1999): 257.
- Jones, Damon. 2010. "Information, Preferences, and Public Benefit Participation: Experimental Evidence from the Advance EITC and 401(k) Savings." *American Economic Journal: Applied Economics*, 2 (2): 147-63

## Lecture 6: Defaults

- **[Required Reading]** Madrian, Brigitte, and Dennis Shea. "The Power of Suggestion: Inertia in 401(k) Participation and Savings Behavior." *Quarterly Journal of Economics*, 116 (2001): 1149-1187.
- **[Required Reading – Tweet #3]** Blumenstock, Joshua, Michael Callen, and Tarek Ghani. "Why Do Defaults Affect Behavior? Experimental Evidence from Afghanistan." *American Economic Review*, 108.10 (2018): 2868-2901.
- Haggag, Kareem, and Giovanni Paci. "Default tips." *American Economic Journal: Applied Economics* 6.3 (2014): 1-19.
- Samuelson, William, and Richard Zeckhauser. "Status quo bias in decision making." *Journal of risk and uncertainty*, 1.1 (1988): 7-59.
- Thaler, Richard, and Shlomo Benartzi (2004) "Save More Tomorrow: Using Behavioral Economics to Increase Employee Savings," *Journal of Political Economy*, February, Vol. 112.1, Part 2, pp. S164-S187.

- Zarek C. Brot-Goldberg, Timothy Layton, Boris Vabson and Adelina Yanyue Wang. "The Behavioral Foundations of Default Effects: Theory and Evidence from Medicare Part D." NBER Working Paper #28331.

## Lecture 7: Choice Overload & Libertarian Paternalism

- **[Required Reading]** New York Times articles:
  - The Power of Nudges, for Good and Bad
  - How Uber Uses Psychological Tricks to Push Its Drivers
  - The Curious Politics of the 'Nudge'
  - Nudges Aren't Enough for Problems Like Retirement Savings
- Johnson, Eric J., and Daniel Goldstein. "Do defaults save lives?" *Science* (2003): 1338-1339.
- Glaeser, Edward L. Paternalism and psychology. No. w11789. National Bureau of Economic Research, 2005.
- Iyengar, Sheena S., and Mark R. Lepper. "When choice is demotivating: Can one desire too much of a good thing?" *Journal of personality and social psychology* 79.6 (2000): 995.
- Sethi-Iyengar, Sheena, Gur Huberman, and Wei Jiang. "How much choice is too much? Contributions to 401 (k) retirement plans." *Pension design and structure: New lessons from behavioral finance* 83 (2004): 84-87.

## Lecture 8: Intrinsic vs. Extrinsic Motivation

- **[Required Reading – Tweet #4]** Gneezy, U., and A. Rustichini (2000) "Pay enough or Don't pay at All" *Quarterly Journal of Economics*, 791-810.
- Deci, Edward L. "Effects of externally mediated rewards on intrinsic motivation." *Journal of personality and Social Psychology* 18.1 (1971): 105.
- Gneezy, Uri, and Aldo Rustichini. "A fine is a price." *The Journal of Legal Studies* 29.1 (2000): 1-17.
- Heyman, James, and Dan Ariely. "Effort for payment a tale of two markets." *Psychological Science* 15.11 (2004): 787-793.
- Ariely, Dan, Anat Bracha, and Stephan Meier. "Doing good or doing well? Image motivation and monetary incentives in behaving prosocially." *The American Economic Review* (2009): 544-555.
- Mellström, Carl, and Magnus Johannesson. "Crowding out in blood donation: was Titmuss right?" *Journal of the European Economic Association* 6.4 (2008): 845-863.
- Lacetera, Nicola, Mario Macis, and Robert Slonim. "Will there be blood? Incentives and displacement effects in pro-social behavior." *American Economic Journal: Economic Policy* 4.1 (2012): 186-223.

## Lecture 9: Social Comparison

- **[Required Reading]** Allcott, Hunt. "Social norms and energy conservation." *Journal of Public Economics* 95.9 (2011): 1082-1095.

- **[Required Reading – Writing Assignment #2]** Coffman, Lucas C., Clayton R. Featherstone, and Judd B. Kessler. "Can social information affect what job you choose and keep?" *American Economic Journal: Applied Economics* 9.1 (2017): 96-117.
- Goldstein, Noah, Robert Cialdini, and Vidas Griskevicius (2008). "A Room with a Viewpoint: Using Norm-Based Appeals to Motivate Conservation Behaviors in a Hotel Setting." *Journal of Consumer Research*, Vol. 35, pages 472-482.
- Bond, Robert M., et al. "A 61-million-person experiment in social influence and political mobilization." *Nature* 489.7415 (2012): 295-298.
- Schultz, P. Wesley, et al. "The constructive, destructive, and reconstructive power of social norms." *Psychological science* 18.5 (2007): 429-434.
- Allcott, Hunt, and Todd Rogers. "The Short-Run and Long-Run Effects of Behavioral Interventions: Experimental Evidence from Energy Conservation." *The American Economic Review* 104.10 (2014): 3003-3037.
- Allcott, Hunt, and Judd B. Kessler. *The welfare effects of nudges: A case study of energy use social comparisons*. No. w21671. National Bureau of Economic Research, 2015.
- Hallsworth, Michael, John A. List, Robert D. Metcalfe, and Ivo Vlaev. "The behavioralist as tax collector: Using natural field experiments to enhance tax compliance." *Journal of Public Economics* 148 (2017): 14-31.

## Lecture 10: Salience and Attention

- **[Required Reading]** Chetty, Raj, Adam Looney, and Kory Kroft. 2009. "Salience and Taxation: Theory and Evidence." *American Economic Review*, 99(4): 1145-77.
- Gallagher, Kelly Sims, and Erich Muehlegger. "Giving green to get green? Incentives and consumer adoption of hybrid vehicle technology." *Journal of Environmental Economics and management* 61.1 (2011): 1-15.
- Chetty, Raj, and Emmanuel Saez. 2013. "Teaching the Tax Code: Earnings Responses to an Experiment with EITC Recipients." *American Economic Journal: Applied Economics*, 5(1): 1-31.
- Finkelstein, Amy. "E-ztax: Tax salience and tax rates." *The Quarterly Journal of Economics* 124.3 (2009): 969-1010.
- Goldin, Jacob, and Tatiana Homonoff. "Smoke gets in your eyes: cigarette tax salience and regressivity." *American Economic Journal: Economic Policy* 5.1 (2013): 302-336.

## Lecture 11: Scarcity

- **[Required Reading]** Bertrand, Marianne, Sendhil Mullainathan, and Eldar Shafir. "A behavioral-economics view of poverty." *The American Economic Review* 94.2 (2004): 419-423.
- **[Required Reading – Tweet #5 (Make-up)]** Bertrand, Marianne, and Adair Morse. "Information disclosure, cognitive biases, and payday borrowing." *The Journal of Finance* 66.6 (2011): 1865-1893.

- Shah, Anuj K., Sendhil Mullainathan, and Eldar Shafir. "Some consequences of having too little." *Science* 338.6107 (2012): 682-685.
- Mani, Anandi, Sendhil Mullainathan, Eldar Shafir, and Jiaying Zhao. "Poverty impedes cognitive function." *Science* 341, no. 6149 (2013): 976-980.
- Carvalho, Leandro S., Stephan Meier, and Stephanie W. Wang. "Poverty and economic decision-making: Evidence from changes in financial resources at payday." *American Economic Review* 106, no. 2 (2016): 260-84.

## Lecture 12: Applying Behavioral Economics I

- **[Required Reading]** Executive Order 13707 Guidance Document
- **[Required Reading]** Lowrey, Annie. (2021) "The Time Tax: Why is so much American bureaucracy left to average citizens?" *The Atlantic*.
- Bhargava, S., & Manoli, D. (2015). Psychological frictions and the incomplete take-up of social benefits: Evidence from an IRS field experiment. *American Economic Review*, 105(11), 3489-3529.
- Bettinger, E. P., Long, B. T., Oreopoulos, P., & Sanbonmatsu, L. (2012). The role of application assistance and information in college decisions: Results from the H&R Block FAFSA experiment. *The Quarterly Journal of Economics*, 127(3), 1205-1242.
- Castleman, B. L., & Page, L. C. (2016). Freshman year financial aid nudges: An experiment to increase FAFSA renewal and college persistence. *Journal of Human Resources*, 51(2), 389-415.
- Homonoff, Tatiana, and Jason Somerville. "Program Recertification Costs: Evidence from SNAP." *American Economic Journal: Economic Policy*, 2021.
- Goldin, Jacob, et al. "How much to save? Decision costs and retirement plan participation." *Journal of Public Economics*, 191 (2020): 104247.
- Goldin, Jacob, et al. Tax Filing and Take-Up: Experimental Evidence on Tax Preparation Outreach and Benefit Claiming. *National Bureau of Economic Research #28398*, 2021.
- Social and Behavioral Sciences Team, Annual Report (2015, 2016)

## Lecture 13: Applying Behavioral Economics II

- Ideas42, Behavioral Design Team Playbook