



MITGOV/LAB

# Behavioral Science in the Field

## Course Syllabus

/ A novel graduate course in Kenya providing an interdisciplinary approach to Behavioral Science, with three tracks in economics, political science, and social psychology, and training in the full cycle of lab-in-the-field research, including fieldwork, open science, design, data collection, and analysis.

KELLY ZHANG & CHANING JANG / JANUARY 2020\*

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*Location:* Nairobi, Kenya

*Dates:* Pilot course — January 5, 2020 - January 31, 2020

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**MIT GOV/LAB** is a group of political scientists focusing on innovation in citizen engagement and government responsiveness. MIT GOV/LAB is based in the Political Science Department of the Massachusetts Institute of Technology (<https://mitgovlab.org/>).

**Busara Center for Behavioral Economics** is an organization that works with researchers and organizations to advance and apply behavioral science in pursuit of poverty alleviation. (<https://www.busaracenter.org/>).

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## Course Overview

The Behavioral Science in the Field Course is a collaboration between The Massachusetts Institute of Technology Governance Lab (MIT GOV/LAB) and the Busara Center for Behavioral Economics, to train graduate students from the U.S. and local universities in East Africa in cutting-edge behavioral science research. Conducted in Kenya, the course is structured as an intensive deep dive into interdisciplinary behavioral science and provides students the opportunity to develop novel behavioral science games to answer research that will result in data collection.

In recent years, behavioral sciences, or ways to better understand determinants of human behavior, have emerged as a leading innovation across disciplines and sectors. These novel methods and data allow us to measure what incentivizes individual and group behavior to inform numerous interventions; for example, targeted online marketing, incentives for healthier eating, improved educational pedagogy, enhanced community policing protocols, effective policy design for compliance with public health ordinances or paying taxes. Lab in the field experiments, in particular, are one of the gold standards to test behavior using a method that most closely resembles real life. Training in behavioral sciences is a critical skill for students to master from across disciplines and is one of the most exciting developments for bridging the gap between theory and practice with proven potential to achieve real-world impacts.

The course will provide students with practical experience in implementing a lab in the field experiment. To encourage innovative thinking beyond disciplinary boundaries, the course will be open to PhD students in the social sciences more broadly (e.g. political science, economics, business, psychology).

## Goals

Graduate students participating in the course will gain hands-on experience in designing and implementing behavioral games in the lab, and come away with a novel behavioral game and data for an academic publication. At the end of this course, students will be able to:

- Identify and recognize the fundamental assumptions/premises of different disciplines
- Judge and assess the appropriate tools to tackle research question
- Combine inductive and deductive learning in the development of research questions
- Develop original research questions that are meaningful to the local context
- Recognize and respect the perspective of the research subject in the research process
- Design a novel lab experiment or behavioral measure
- Plan a well-designed and well-implemented lab in the field project
- Develop productive and long-lasting relationships between disciplines and cultures

## Outputs

- Original research question
- Lab protocol for new game
- Pre-analysis plan
- Descriptive summary and pre-analysis plan results
- Blog post

## Expert Mentoring

The course is designed with comprehensive mentoring and iterative feedback sessions throughout the course with disciplinary and topic experts. Experts from economics, social psychology, and political science included in the pilot:

Guest speakers:

- Joshua Dean, University of Chicago
- Alexandra Scacco, WZB Berlin and Shana Warren, New York University
- Daniel Posner, University of California Los Angeles

Pre-analysis plans and game design:

- Macartan Humphreys, Columbia University and WZB Berlin
- Alexandra Scacco, WZB Berlin

Issue area experts:

- Amanda Robinson, Ohio State University
- George Oforu, London School of Economics
- Johannes Haushofer, Princeton University
- Joshua Dean, University of Chicago
- Lorenzo Casaburi, University Zurich
- Julian Dyer, University of Toronto
- Catherine Thomas, Stanford University

## Schedule

### **June-October 2019 - Recruitment**

- Recruitment and application stage for PhD students in the U.S. and East Africa

### **January 2020 - Course and Fieldwork Intensive**

#### Week 1 – Literature: (Location: Busara, Nairobi, Kenya)

Seminars on experiments in economics, political science, and social psychology.

- Behavioral Economics (Channing Jang, Nathaniel Peterson)
- Social Behavior (Rebecca Littman)
- Political Behavior (Kelly Zhang)
- Guest speaker call-ins (Joshua Dean, Alexandra Scacco, Shana Warren, Daniel Posner)
- Student presentations on research interests
- Common tools in behavioral science experiments
- Busara lab session to participate in common lab games

#### Week 2 - Contextualize: (Location: Field Site)

Exploratory fieldwork to refine research questions.

- Visit to fieldsite in Kenya for focus groups and interviews
- Best practices for contextualizing games and qualitative research
- Best practices for field research and research ethics

#### Week 3 - Design: (Location: Busara, Nairobi, Kenya)

Develop novel experiments using open science tools.

- Students propose an original research question and design
- Initial draft of pre-analysis plan
- Initial draft of lab protocol
- Game programming for pilot
- Office hours with course facilitators, lab staff, and issue area experts

#### Week 4 - Pilot: (Location: Busara, Nairobi, Kenya and Field Site)

Pilot new behavioral game and finalize research design.

- Students pilot their game with a small sample
- Refine pre-analysis plan, lab protocol, and game programming
- Final student presentations of research design

### **March-May 2020 - Data collection**

- Finalize lab protocols
- Refine pre-analysis plans
- Register pre-analysis plans
- Submit IRB protocols
- Data collection for 1,500 individuals, to be used by graduate students for publication

# Behavioral Economics

*Instructors:* Channing Jang and Nathaniel Peterson, Busara Center for Behavioral Economics

## *Pre-Course Reading*

- Thaler, Richard H. Prize Lecture. NobelPrize.org. Nobel Media AB 2019. Sun. 29 Dec 2019.

## *Course Readings*

1. O'Donoghue, Ted, and Matthew Rabin. "Doing it now or later." *American Economic Review* 89, no. 1 (1999): 103-124.
2. Kremer, Michael, Jean Lee, Jonathan Robinson, and Olga Rostapshova. "Behavioral biases and firm behavior: Evidence from Kenyan retail shops." *American Economic Review* 103, no. 3 (2013): 362-68.
3. Tversky, Amos, and Daniel Kahneman. "The framing of decisions and the psychology of choice." *Science* 211, no. 4481 (1981): 453-458.
4. Mani, Anandi, Sendhil Mullainathan, Eldar Shafir, and Jiaying Zhao. "Poverty impedes cognitive function." *Science* 341, no. 6149 (2013): 976-980.
5. Berkouwer, Susanna B., and Joshua T. Dean. "Inattention and credit constraints in energy efficiency adoption: Evidence from Kenya." (2019).

## Supplemental Readings

### *Background*

- Tversky, A., & Kahneman, D. (1992). Advances in prospect theory: Cumulative representation of uncertainty. *Journal of Risk and uncertainty*, 5(4), 297-323.
- Thaler, R. (1985). Mental accounting and consumer choice. *Marketing science*, 4(3), 199-214.
- Rabin, M. (1998). Psychology and economics. *Journal of economic literature*, 36(1), 11-46.

### *Time and Risk Preference*

- Laibson, D. (1997). Golden eggs and hyperbolic discounting. *The Quarterly Journal of Economics*, 112(2), 443-478.
- Frederick, S., Loewenstein, G., & O'donoghue, T. (2002). Time discounting and time preference: A critical review. *Journal of economic literature*, 40(2), 351-401.
- Tanaka, T., Camerer, C. F., & Nguyen, Q. (2010). Risk and time preferences: Linking experimental and household survey data from Vietnam. *American Economic Review*, 100(1), 557-71.
- Charness, G., Gneezy, U., & Imas, A. (2013). Experimental methods: Eliciting risk preferences. *Journal of Economic Behavior & Organization*, 87, 43-51.
- Andreoni, J., Kuhn, M. A., & Sprenger, C. (2015). Measuring time preferences: A comparison of experimental methods. *Journal of Economic Behavior & Organization*, 116, 451-464.
- Balakrishnan, U., Haushofer, J., & Jakiela, P. (2017). How soon is now? evidence of present bias from convex time budget experiments (No. w23558). National Bureau of Economic Research.

*Social Preference*

- Camerer, C. F., & Thaler, R. H. (1995). Anomalies: Ultimatums, dictators and manners. *Journal of Economic perspectives*, 9(2), 209-219.
- Charness, G., & Rabin, M. (2002). Understanding social preferences with simple tests. *The Quarterly Journal of Economics*, 117(3), 817-869.
- Henrich, J., Boyd, R., Bowles, S., Camerer, C., Fehr, E., Gintis, H., & McElreath, R. (2001). In search of homo economicus: behavioral experiments in 15 small-scale societies. *American Economic Review*, 91(2), 73-78.
- Bénabou, R., & Tirole, J. (2006). Incentives and prosocial behavior. *American economic review*, 96(5), 1652-1678.
- Mazar, N., Amir, O., & Ariely, D. (2008). The dishonesty of honest people: A theory of self-concept maintenance. *Journal of marketing research*, 45(6), 633-644.
- Ariely, D., Bracha, A., & Meier, S. (2009). Doing good or doing well? Image motivation and monetary incentives in behaving prosocially. *American Economic Review*, 99(1), 544-55.
- Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world?. *Behavioral and brain sciences*, 33(2-3), 61-83.

*Scarcity / Poverty*

- Haushofer, Johannes, and Ernst Fehr. "On the psychology of poverty." *Science* 344.6186 (2014): 862-867.
- Shah, A. K., Mullainathan, S., & Shafir, E. (2012). Some consequences of having too little. *Science*, 338(6107), 682-685.

*Social Networks*

- Breza, E. (2015). Field experiments, social networks, and development. *The Oxford Handbook on the Economics of Networks*.

*Development*

- Kremer, Michael, Gautam Rao, and Frank Schilbach. "Behavioral development economics." *Handbook of Behavioral Economics 2* (2019).
- Woodhouse, Philip, et al. "African farmer-led irrigation development: re-framing agricultural policy and investment?." *The Journal of Peasant Studies* 44.1 (2017): 213-233.
- Emerick, Kyle, et al. "Technological innovations, downside risk, and the modernization of agriculture." *American Economic Review* 106.6 (2016): 1537-61.
- Dean, J. T. (2019). Noise, cognitive function, and worker productivity. Mimeo.
- Bhanot, S. P., Han, J., & Jang, C. (2018). Workfare, wellbeing and consumption: Evidence from a field experiment with Kenya's urban poor. *Journal of Economic Behavior & Organization*, 149, 372-388.
- Niederle, M., & Vesterlund, L. (2007). Do women shy away from competition? Do men compete too much?. *The quarterly journal of economics*, 122(3), 1067-1101.
- Cardenas, J. C., & Carpenter, J. (2008). Behavioural development economics: Lessons from field labs in the developing world. *The Journal of Development Studies*, 44(3), 311-338.

## Social Behavior

*Instructor:* Rebecca Littman, Massachusetts Institute of Technology

### *Pre-Course Reading*

- Tankard, M. E., & Paluck, E. L. (2016). Norm perception as a vehicle for social change. *Social Issues and Policy Review*, 10(1), 181-211.

### *Course Readings*

1. Peysakhovich, A., Nowak, M. A., & Rand, D. G. (2014). Humans display a 'cooperative phenotype' that is domain general and temporally stable. *Nature communications*, 5, 4939.
2. Gächter, S., & Schulz, J. F. (2016). Intrinsic honesty and the prevalence of rule violations across societies. *Nature*, 531(7595), 496.
3. Everett, J. A., Ingbreten, Z., Cushman, F., & Cikara, M. (2017). Deliberation erodes cooperative behavior—Even towards competitive out-groups, even when using a control condition, and even when eliminating selection bias. *Journal of Experimental Social Psychology*, 73, 76-81.
4. Scacco, A., & Warren, S. S. (2018). Can social contact reduce prejudice and discrimination? Evidence from a field experiment in Nigeria. *American Political Science Review*, 112(3), 654-677.
5. Blum, A., C. Hazlett, and D. Posner (2019). Measuring Ethnic Biases: Can Misattribution- Based Tools from Social Psychology Reveal Group Biases that Economics Games Cannot? Working Paper.

## Supplemental Readings

### *Cooperation and Punishment*

- Jordan, J. J., & Rand, D. G. (2019). Signaling when no one is watching: A reputation heuristics account of outrage and punishment in one-shot anonymous interactions. *Journal of personality and social psychology*.
- Arechar, A. A., & Rand, D. G. (2019). Learning to be selfish? A large-scale longitudinal analysis of Dictator games played on Amazon Mechanical Turk.

### *Intergroup Interactions*

- Cikara, M., Bruneau, E., Van Bavel, J. J., & Saxe, R. (2014). Their pain gives us pleasure: How intergroup dynamics shape empathic failures and counter-empathic responses. *Journal of experimental social psychology*, 55, 110-125.

### *Morality*

- Cushman, F., Gray, K., Gaffey, A., & Mendes, W. B. (2012). Simulating murder: The aversion to harmful action. *Emotion*, 12(1), 2.



*Social Norms*

- Stagnaro, M. N., Arechar, A. A., Rand, D. G. (2017). From good institutions to generous citizens: Top-down incentives to cooperate promote subsequent prosociality but not norm enforcement. *Cognition*, 167, 212-254.
- Tankard, M. E., & Paluck, E. L. (2017). The effect of a Supreme Court decision regarding gay marriage on social norms and personal attitudes. *Psychological science*, 28(9), 1334-1344.

## Political Behavior

*Instructors:* Kelly Zhang, Massachusetts Institute of Technology Governance Lab

*Pre-Course Reading*

- Ofosu, George Kwaku. "Experimental Research in African Politics." *Oxford Research Encyclopedia of Politics*. 25 June 2019.

*Course Readings*

1. Habyarimana, James, Macartan Humphreys, Daniel N. Posner, and Jeremy M. Weinstein. 2007. "Why Does Ethnic Diversity Undermine Public Goods Provision?" *American Political Science Review* 101(4): 709–25.
2. Gregory A. Huber, Seth J. Hill, and Gabriel S. Lenz. 2012. "Sources of Bias in Retrospective Decision-Making: Experimental Evidence on Voters' Limitations in Controlling Incumbents." *American Political Science Review*, Vol. 106 (4 November): 720-41.
3. McClendon, Gwyneth and Riedl, Rachel Beatty. "Religion as a Stimulant of Political Participation: Experimental Evidence from Nairobi, Kenya," *The Journal of Politics* 77, no. 4 (October 2015): 1045-1057.
4. Voors, Maarten J., Eleonora E. M. Nillesen, Philip Verwimp, Erwin H. Bulte, Robert Lensink, and Daan P. Van Soest. 2012. "Violent Conflict and Behavior: A Field Experiment in Burundi." *American Economic Review*, 102 (2): 941-64.
5. Finan, F. and Schechter, L. (2012), Vote-Buying and Reciprocity. *Econometrica*, 80: 863-881.

## Supplemental Readings

*Background*

- Blair, G., Cooper, J., Coppock, A., & Humphreys, M. (2019). Declaring and Diagnosing Research Designs. *American Political Science Review*, 113(3), 838-859.
- Graeme Blair, Alexander Coppock, Margaret Moor. "When to Worry About Sensitivity Bias: A Social Reference Theory and Evidence from 30 Years of List Experiments." *Revise and resubmit, American Political Science Review*.
- Grossman, G. 2011. "Lab-in-the-field Experiments." *Newsletter of the APSA Experimental Section*. 2(2):13-19.

*Governance*

- Grossman, G. and Baldassarri, D. (2012), The Impact of Elections on Cooperation: Evidence from a Lab-in-the-Field Experiment in Uganda. *American Journal of Political Science*, 56: 964-985.
- Martin, Lucy. 2016. "Taxation, Loss Aversion, and Accountability: Theory and Experimental Evidence for Taxation's Effect on Citizen Behavior." Working Paper.
- Lierl, M.. (2019). Can Elections Reduce Embezzlement? Experimental Evidence on Selection Effects, Public Trust and Citizens' Tolerance for Embezzlement. Working Paper.
- Casey, Katherine, Rachel Glennerster, and Edward Miguel. 2012. "Reshaping Institutions: Evidence on Aid Impacts Using a Preanalysis Plan." *Quarterly Journal of Economics* 127 (4): 1755-1812.

*Conflict/Post-Conflict*

- Zeitzoff, Thomas. 2014. "Anger, Exposure to Violence and Intragroup Conflict: A 'Lab in the Field' Experiment in Southern Israel." *Political Psychology*. 35(3): 309-335.
- Blair, Robert, Legitimacy After Violence: Evidence from Two Lab-in-the-Field Experiments in Liberia (January 23, 2018).
- Gilligan, M.J., Pasquale, B.J. and Samii, C. (2014), Civil War and Social Cohesion: Lab-in-the-Field Evidence from Nepal. *American Journal of Political Science*, 58: 604-619.
- Paluck, E.L. & Green, D.P. (2009). Deference, dissent, and dispute resolution: A field experiment on a mass media intervention in Rwanda. *American Political Science Review*, 103(4), 622-644.

*Identity Politics*

- Carlson, Elizabeth. 2015. "Ethnic Voting and Accountability in Africa: A Choice Experiment in Uganda." *World Politics* 67(2): 353-85.
- Adida, C., Laitin, D., & Valfort, M. (2016). "One Muslim is Enough!" Evidence from a Field Experiment in France. *Annals of Economics and Statistics*, (121/122), 121-160.
- Nugent, Elizabeth, The Psychology of Repression and Polarization in Authoritarian Regimes (August 11, 2017).
- Lars Ivar Oppedal Berge, Kjetil Bjorvatn, Simon Galle, Edward Miguel, Daniel N Posner, Bertil Tungodden, Kelly Zhang, 2019. Ethnically Biased? Experimental Evidence from Kenya, *Journal of the European Economic Association*.
- Robinson, Amanda. Nationalism and Interethnic Trust: Experimental Evidence from an African Border Region. 2016. *Comparative Political Studies* 49 (14): 819-854.
- Cilliers, Jacobus, Oeindrila Dube, and Bilal Siddiqi. "The white-man effect: How foreigner presence affects behavior in experiments." *Journal of Economic Behavior & Organization* 118 (2015) 397-414

## Open Science Resources

Compiled with the assistance of [BITSS](#) (Berkeley Initiative for Transparency in the Social Sciences).

### Pre-Analysis Plan Registries

- American Economic Association ([AEA Social Science Registry](#))
- Evidence in Governance and Politics ([EGAP](#))
- [AsPredicted](#)
- Center for Open Science ([OSF](#))

### Pre-Analysis Plan Resources

- [A pre-analysis plan checklist](#)
- [10 Things to Know About Pre-Analysis Plans](#)
- [Working toward a Common Rule for Transparent, Reproducible, and Ethical Research](#)
- [Better pre-analysis plans through design declaration and diagnosis](#)
- [DeclareDesign](#)
- [Journal of Development Economics template for pre-analysis plan](#)
- [World Bank Reproducibility Training](#)
- [Manual of Best Practices in Transparent Social Science Research](#)
- [NBER - Research Transparency & Reproducibility in Economics and Beyond](#)
- [2019 FASST/ BITSS Transparency Training Workshop](#)
- [Research Transparency and Reproducibility Training Workshop Materials](#)
- [BITSS Resource Library](#)
  - Previous RT2s resources [here](#)
  - Videos from training [here](#)
  - [Research Transparency and Reproducibility Training \(RT2\) Participant Manual](#)
  - [Demo for power analysis with DeclareDesign](#)
  - [Introduction to Pre-Analysis Plans](#)
  - [PAP Starter in R using DeclareDesign](#)
  - [Reproducibility and Replicability](#)

### Relevant Papers

- Christensen, Garret, and Edward Miguel. "Transparency, Reproducibility, and the Credibility of Economics Research." *Journal of Economic Literature* 56, no. 3 (September 2018): 920–80.
- Coffman, Lucas C., and Muriel Niederle. 2015. "Pre-analysis Plans Have Limited Upside, Especially Where Replications Are Feasible." *Journal of Economic Perspectives*, 29 (3): 81-98.
- Blair, Graeme, Jasper Cooper, Alexander Coppock, and Macartan Humphreys. "Declaring and Diagnosing Research Designs." *American Political Science Review* 113, no. 3 (2019): 838–59. doi:10.1017/S0003055419000194.
- Ofosu, George K. and Daniel N. Posner. "Pre-analysis Plans: A Stocktaking." 2019. *Working Paper*.
- Casey, Katherine, Rachel Glennerster, and Edward Miguel. 2012. "Reshaping Institutions: Evidence on Aid Impacts Using a Preanalysis Plan." *Quarterly Journal of Economics* 127 (4): 1755-1812.