Six Years of Impact

BEHAVIOR CHANGE FOR GOOD INITIATIVE

A Joint Initiative of The Wharton School and the School
of Arts & Sciences at the University of Pennsylvania

Behavior Change for Good
Arts & Sciences · Wharton
UNIVERSITY *of* PENNSYLVANIA

LETTER FROM KATY AND ANGELA

We founded the Behavior Change for Good Initiative in 2017 at the University of Pennsylvania with an audacious goal: to accelerate the discovery of new tactics that could be used to promote sustainable behavior change at scale. We're thrilled to share the results of our first six years of work towards this objective.

In our initiative's first six years, we developed and tested a new paradigm for conducting team behavioral science research at scale—the megastudy. A "megastudy" is a massive field experiment in which many different interventions are tested synchronously in one large sample using a common, objectively measured outcome. In 2021, we published a major paper in _Nature_ introducing this methodology for studying new ways of changing behavior, and we applied this method to the challenge of boosting gym attendance. Since then, we've run megastudies on improving students' grades and encouraging vaccination during the COVID-19 pandemic, leading to multiple publications in the prestigious _Proceedings of the National Academy of Sciences_. We've also run a number of high impact field experiments on behavior change, including a study that led to 8% more volunteering by crisis counselors at a national suicide prevention network (published in the _Journal of Applied Psychology_) and a study conducted in partnership with the city of Philadelphia that involved designing, implementing, and evaluating a city-wide COVID vaccine lottery (published in _Nature Human Behavior_). With more recently launched megastudies, we're poised to make significant contributions to knowledge about how to promote emergency savings, improve elementary school students' engagement with math, and boost college student retention over the next several years.

Our work has been covered by major media outlets including _The New York Times, CNN, The Washington Post,_ and _NPR_. It has also informed our award-winning teaching at Penn as well as advice we've offered to the White House, state and city leaders, in Congressional testimony, and to organizations like Walmart, CVS Health, WW, Zearn, Crisis Text Line, and 24 Hour Fitness.

We couldn't have made such strides toward our ambitious goals to advance science and share new knowledge widely without the ingenuity and collaborative spirit of our interdisciplinary scientific team, the dedication of our staff, the commitment of our organizational partners, and the generosity of our funders. We're tremendously grateful for what we've been able to accomplish together in the last six years and eager to find new ways to use behavioral science for good in the years ahead.

Sincerely,

PROFESSORS KATY MILKMAN AND ANGELA DUCKWORTH
Co-Directors of the Behavior Change for Good Initiative
University of Pennsylvania

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OVERVIEW

WHAT DO WE DO?

The Behavior Change for Good Initiative (BCFG) at the University of Pennsylvania unites a world-class, interdisciplinary team of academic experts in behavioral science with leading organizational partners to help advance the science and practice of behavior change We conduct megastudies—massive random-assignment A/B tests—to identify what interventions work at scale to change behavior. A megastudy simultaneously tests many different ideas that members of our Scientific Team propose could change a valued target behavior. Our novel approach to research gives us a way of determining which interventions designed to change behavior work best overall, what works best for whom, and how to most effectively use behavioral science to transform people's lives for the better.

WHAT'S OUR MISSION?

1. Identify actionable and scalable ways to improve people's health, financial security, and educational outcomes.
2. Build bridges between different academic disciplines to advance the science of lasting behavior change.
3. Disseminate the insights we generate widely for use in future research and in practice.

WHERE HAS OUR RESEARCH FOCUSED TO DATE?

- Health (promoting exercise, crisis counseling, and vaccination)
- Finance (promoting emergency savings)
- Education (promoting academic achievement)

WHO IS THE BCFG SCIENTIFIC TEAM?

BCFG's team unites over 160 world-renowned, interdisciplinary scientists to advance the science of behavior change. BCFG Team Scientists are experts in economics, psychology, sociology, medicine, computer science, neuroscience, law, management, and marketing.

![Behavior Change for Good — Arts & Sciences · Wharton — University of Pennsylvania]

BCFG TEAM SCIENTISTS BY THE NUMBERS

169	**2**	**4**	**20**
BRILLIANT TEAM SCIENTISTS	NOBEL PRIZE WINNERS	MACARTHUR GENIUS AWARD WINNERS	TED TALKERS WITH OVER 1M VIEWS EACH

15	**14**
AUTHORS OF *NEW YORK TIMES* OR *WALL STREET JOURNAL* BEST-SELLERS	MEMBERS OF THE NATIONAL ACADEMIES OF SCIENCES, ENGINEERING, AND MEDICINE

> "There are many good ideas that behavioral scientists have identified in the lab that are relevant to the world, but which work to promote change? That is a question that the Behavior Change for Good Initiative is doing an excellent job answering."

BCFG Team Scientist Max Bazerman
Jesse Isidor Straus Professor of Business Administration, Harvard Business School

> "It's challenging to study long-term behavior change in consequential real world settings. I commend the Behavior Change for Good Initiative for the important work they've done to make inroads in this arena."

BCFG Team Scientist Wendy Wood
Provost Professor of Psychology and Business, University of Southern California

> "There are many important differences between the highly educated individuals disproportionately studied in traditional lab settings and the populations that real policies will affect. By facilitating large-scale experimentation in the real world, BCFG is leading the way in conducting policy-relevant research."

BCFG Team Scientist Neil Lewis, Jr.
Assistant Professor of Communication and Social Behavior, Cornell University

HOW MUCH FUNDING HAS BCFG RAISED?

$10+
MILLION RAISED

HOW VISIBLE IS BCFG TO THE PUBLIC?

8,000+
NEWSLETTER SUBSCRIBERS

7,500+
TWITTER FOLLOWERS

3,500+
LINKEDIN FOLLOWERS

1,500+
YOUTUBE CHANNEL SUBSCRIBERS

45
TEAM SCIENTISTS FEATURED ON OUR CHANNEL

40+
VIDEOS

40,000+
VIEWS

OUR MEGASTUDY APPROACH

We've pioneered a radical new approach to conducting behavioral science research. A "megastudy" is a team science approach to research in which different collaborators develop many, unique interventions targeting a common outcome that are simultaneously tested in the field. Megastudies allow researchers to determine which interventions work most and least effectively at scale.

WHAT ARE THE BENEFITS OF MEGASTUDIES?

THEY POOL THEORETICALLY DISTINCT INTERVENTIONS, BUILDING BRIDGES ACROSS DISCIPLINES. Megastudies present an opportunity for interdisciplinary scientists to launch their interventions in parallel, learning from each other through collaboration to solve a single problem.

THEY GENERATE APPLES-TO-APPLES COMPARISONS OF INTERVENTION EFFICACY. Each intervention in a megastudy is tested over the same timeframe on the same population. Random assignment to interventions allows for apples-to-apples comparisons of the efficacy of each idea.

THEY ACCELERATE THE PACE OF DISCOVERY. By launching numerous, tightly-controlled experiments simultaneously, megastudies speed up the pace of science.

THEY FACILITATE THE PUBLICATION OF NULL RESULTS. The megastudy approach ensures that all interventions tested are published, even those that produce null results. Understanding what doesn't show promise as a means of changing behavior in a given field setting is just as important as understanding what does.

THEY MOVE BEYOND ONE-SIZE-FITS-ALL SOLUTIONS. Megastudies make it possible to determine which interventions work best for whom, not just what works best on average. This allows us to move beyond offering one-size-fits-all prescriptions to policymakers.

WHERE CAN YOU LEARN MORE ABOUT MEGASTUDIES?

Our flagship article introducing megastudies:
Milkman, K.L. et al. (2021).

Megastudies Improve the Impact of Applied Behavioural Science. Nature. *Nature.*

Our megastudy guide:
Duckworth, A.L. and K.L. Milkman (2022).

A Guide to Megastudies. *PNAS Nexus.*

Coverage of our unique approach to science in *The Philadelphia Citizen:*

Changing Behavior… for Good.

A *Freakonomics* **podcast episode:**

Could Solving This One Problem Solve All the Others?

> *Megastudies provide an incredible opportunity to capitalize on advances in machine learning to identify which behavioral interventions change real-world outcomes for different types of people. This provides the promise of implementing interventions with precision."*

BCFG Team Scientist Rahul Ladhania
(and former BCFG post-doctoral scholar), Assistant Professor of Health Informatics, Health Management and Policy, University of Michigan School of Public Health

BCFG'S RESEARCH

ENCOURAGING EXERCISE: A MEGASTUDY WITH 24 HOUR FITNESS

Milkman, K.L., D. Gromet, H. Ho, J.S. Kay, T.W. Lee, P. Pandiloski, Y. Park, A. Rai, M. Bazerman, J. Beshears, L. Bonacorsi, C. Camerer, E. Chang, G. Chapman, R. Cialdini, H. Dai, L. Eskreis-Winkler, A. Fishbach, J.J. Gross, S. Horn, A. Hubbard, S.J. Jones, D. Karlan, T. Kautz, E. Kirgios, J. Klusowski, A. Kristal, R. Ladhania, G. Loewenstein, J. Ludwig, B. Mellers, S. Mullainathan, S. Saccardo, J. Spiess, G. Suri, J.H. Talloen, J. Taxer, Y. Trope, L. Ungar, K.G. Volpp, A. Whillans, J. Zinman, and A.L. Duckworth (2021)

nature — [Megastudies Improve the Impact of Applied Behavioral Science](#)
Nature

WHY ENCOURAGE EXERCISE?

51% of American adults exercise less frequently than recommended.

9% of global premature deaths are attributable to inadequate physical activity.

WHO WERE THE PARTICIPANTS?

61,293 gym members of 24 Hour Fitness (one of the largest fitness chains in the U.S.)

HOW WAS OUR MEGASTUDY OF EXERCISE DESIGNED?

We tested **54** variations of a 4-week digital program designed by 30 Team Scientists to encourage exercise among gym members.

EACH DIGITAL PROGRAM DESIGNED TO ENCOURAGE EXERCISE INCLUDED:

An online registration experience during which participants planned the timing of their weekly gym visits, received encouragement, and learned about incentives to exercise

Text message reminders 30 minutes before each planned workout

Text messages and emails throughout the 4-week program to encourage exercise

Points for each gym visit made during the program (redeemable for an Amazon gift card)

WHAT DID WE LEARN?

Every program except one directionally increased weekly gym visits compared to a placebo control program during the 4-week intervention.

23 programs significantly increased weekly gym visits.

5 interventions **significantly outperformed** a "best practice" intervention designed with insights from previous research:

THE 5 TOP PERFORMING INTERVENTIONS	INCREASED WEEKLY GYM VISITS BY
Offering a micro-incentive (worth 9 cents) for returning to the gym after a missed workout	27%
Offering a 10x larger than usual monetary incentive (worth $1.75) per gym visit	25%
Communicating that an increasing majority of Americans exercise at least three times per week	24%
Offering a micro-incentive (worth 16 cents) for returning to the gym after a missed workout	23%
Allowing participants to choose whether they would earn points for going to the gym or lose points for skipping the gym	19%

* note that due to the winner's curse, these estimates are likely upwardly biased

> "*Drawing on my years of studying and applying persuasion science, I helped design a treatment condition that called attention to the rising rates of exercise among Americans. It was exciting to be part of this megastudy effort.*"

BCFG Team Scientist Robert Cialdini
Regents' Professor Emeritus of Psychology
and Marketing, Arizona State University

Public health experts, behavioral science practitioners, and laypeople were all unable to reliably predict the absolute or relative effectiveness of the programs tested, demonstrating the value of megastudies for informing policy.
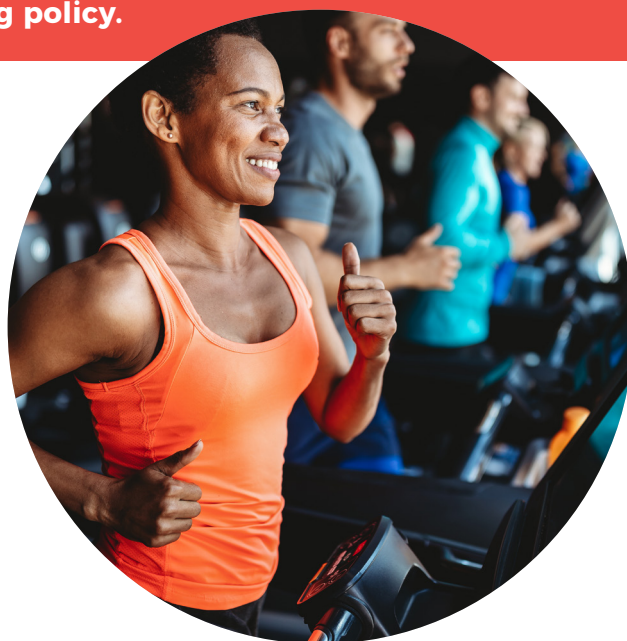
WHERE CAN YOU LEARN MORE ABOUT OUR FINDINGS?

[A Penny for Your Squats?](#) (2021), *The New York Times*

[These Are the Best Ways to up Your Workout Habits, According to Study of Over 60,000 People](#) (2021), *CNN Health*

[Study Reveals Keys to Developing Workout Habits](#) (2021), *NBC News*

[How 'Megastudies' Are Changing Behavioural Science](#) (2021), *Nature Podcast*

WHAT ADDITIONAL PUBLICATIONS RESULTED FROM THIS MEGASTUDY?

Kirgios, et al. (2020). [Teaching Temptation Bundling to Boost Exercise: A Field Experiment. Organizational Behavior and Human Decision Processes.](#) *Organizational Behavior and Human Decision Processes.*

Kirgios et al. (2020). [Forgoing Earned Incentives to Signal Pure Motives. The Proceedings of the National Academy of Sciences.](#) *The Proceedings of the National Academy of Sciences.*

Chang, Kirgios, and Smith (2021). [Large-Scale Field Experiment Shows Null Effects of Team Demographic Diversity on Outsiders' Willingness to Support the Team.](#) *Journal of Experimental Social Psychology.*

> "*We were pleased to partner with BCFG on the StepUp Program and to have the opportunity to use insights from leading behavioral scientists to help our club members change their lives through fitness.*"

24 Hour Fitness

INCREASING VACCINE UPTAKE AT DOCTORS' APPOINTMENTS

Milkman, K.L., M.S. Patel, L. Gandhi, H.N. Graci, D.M. Gromet, H. Ho, J.S. Kay, T.W. Lee, M. Akinola, J. Beshears, J.E. Bogard, A. Buttenheim, C.F. Chabris, G.B. Chapman, J.J. Choi, H. Dai, C.R. Fox, A. Goren, M.D. Hilchey, J. Hmurovic, L.K. John, D. Karlan, M. Kim, D. Laibson, C. Lamberton, B.C. Madrian, M.N. Meyer, M. Modanu, J. Nam, T. Rogers, R. Rondina, S. Saccardo, M. Shermohammed, D. Soman, J. Sparks, C. Warren, M. Weber, R. Berman, C.N. Evans, C.K. Snider, E. Tsukayama, C. Van den Bulte, K.G. Volpp, and A.L. Duckworth (2021)

PNAS — Proceedings of the National Academy of Sciences of the United States of America

A Megastudy of Text-Based Nudges Encouraging Patients to Get Vaccinated at an Upcoming Doctor's Appointment
Proceedings of the National Academy of Sciences

WHY STUDY VACCINATION?

In Fall 2020, the COVID-19 vaccine was not yet available, but its rollout was imminent. We saw an opportunity: by identifying effective strategies for encouraging flu vaccination, we could be ready with tools for encouraging COVID-19 vaccines when they became available.

WHO WERE THE PARTICIPANTS?

47,306 primary care patients from two large regional health systems (Penn Medicine and Geisinger)

HOW WAS THE MEGASTUDY DESIGNED?

We tested **19** different SMS (text) messages designed by **26** scientists to boost flu vaccination rates among primary care patients.

The behavioral science-informed SMS messages encouraged patients to get their flu shot at their upcoming primary care appointment and were sent up to three days in advance of their appointment.

WHAT DID WE LEARN?

All 19 messages directionally **increased flu shot rates** compared to usual care (**6** messages significantly increased flu shot uptake).

Our text messages led to a **5%** boost in flu vaccination uptake, on average.

The top-performing message communicated a vaccine was "reserved for you" and increased vaccination rates by **11%** (6.7% if adjusted for the winner's curse).

WHAT ADDITIONAL PUBLICATIONS RESULTED FROM THIS MEGASTUDY?

Patel, et al. (2022). **A Randomized Trial of Behavioral Nudges Delivered Through Text Messages to Increase Influenza Vaccination Among Patients With an Upcoming Primary Care Visit.** *American Journal of Health Promotion.*

Buttenheim, et al. (2022). **Effects of Ownership Text Message Wording and Reminders on Receipt of an Influenza Vaccination.** *JAMA Network Open.*

INCREASING VACCINATION AT WALMART PHARMACIES

Milkman, K.L., L. Gandhi, M.S. Patel, H.N. Graci, D.M. Gromet, H. Ho, J.S. Kay, T.W. Lee, J. Rothschild, J.E. Bogard, I. Brody, C.F. Chabris, E. Chang, G.B. Chapman, J.E. Dannals, N.J. Goldstein, A. Goren, H. Hershfield, A. Hirsch, J. Hmurovic, S. Horn, D.S. Karlan, A.S. Kristal, C. Lamberton, M.N. Meyer, A.H. Oakes, M.E. Schweitzer, M. Shermohammed, J. Talloen, C. Warren, A. Whillans, K.N. Yadav, J.J. Zlatev, R. Berman, C.N. Evans, R. Ladhania, J. Ludwig, N. Mazar, S. Mullainathan, C.K. Snider, J. Spiess, E. Tsukayama, L. Ungar, C. Van den Bulte, K.G. Volpp, and A.L. Duckworth (2022)

PNAS Proceedings of the National Academy of Sciences of the United States of America

A 680,000-Person Megastudy of Nudges to Encourage Vaccination in Pharmacies
Proceedings of the National Academy of Sciences

WHO WERE THE PARTICIPANTS? 689,693 Walmart pharmacy patients

HOW WAS THE MEGASTUDY DESIGNED?

We tested **22** different SMS (text) messages designed by **27** scientists to encourage Walmart pharmacy patients to get their flu shot at a Walmart pharmacy.

The messages included appeals to humor, social norms, communal responsibility, and more, and they were largely distinct from those tested in the primary care setting.

WHAT DID WE LEARN?

All 22 reminder messages significantly increased vaccination rates by an average of **7%.**

The top-performing message conveyed that a vaccine was "waiting for you" and increased vaccination rates by **10%** (9.3% if adjusted for the winner's curse).

Sending multiple reminder messages yielded better results than sending a single reminder.

WHERE CAN YOU READ MORE ABOUT THE FINDINGS FROM BOTH OF OUR 2020 VACCINATION MEGASTUDIES?

These are the Text Messages That Get People to Take Vaccines (2021), *The Washington Post*

This Simple Text Message Can Encourage People to Get Vaccinated, Researchers Say (2021), *CNN Health*

Building Trust and Battling Barriers: The Urgent Need to Overcome Vaccine Hesitancy (2021), United States House of Representatives Select Subcommittee on the Coronavirus Crisis

> " *Testing behavioral science ideas in field settings is critical, but operationalizing such studies is challenging. Through their megastudies, BCFG expands the opportunities for researchers to evaluate their hypotheses in realistic settings and facilitates clean comparisons among many interventions. I am enormously appreciative for being invited to contribute ideas for how to increase vaccination rates in two megastudies.* "

BCFG Team Scientist Gretchen Chapman
Professor of Social and Decision Sciences, Carnegie Mellon University

COULD A GEO-TARGETED VACCINE REGRET LOTTERY BOOST VACCINATION?

Milkman, K.L., L. Gandhi, S.F. Ellis, H.N. Graci, D.M. Gromet, R.S. Mobarak, A.M. Buttenheim, A.L. Duckworth, D. Pope, A. Stanford, R. Thaler, and K.G. Volpp (2022)

nature human behaviour

A Citywide Experiment Testing the Impact of Geographically Targeted, High-Pay-Off Vaccine Lotteries
Nature Human Behavior

WHY DID WE DESIGN, IMPLEMENT AND EVALUATE THE PHILLY VAX SWEEPSTAKES?

Vaccination saves lives, particularly vaccination against COVID-19.

In the summer of 2021, many Philadelphians remained vulnerable and unvaccinated against COVID-19.

Regret lotteries had been used successfully to encourage other health behaviors, but their value for encouraging vaccines hadn't yet been tested.

WHO WERE THE PARTICIPANTS?

1,064,805 Philadelphia adult residents

HOW WAS THE MEGASTUDY DESIGNED?

It was a "regret lottery:" All residents were entered but **winners** could only accept their prize if they had previously **received** a COVID-19 **vaccine**.

It was geographically-targeted: Across three drawings, residents of three randomly selected zip codes received half the lottery prizes available.

WHAT DID WE LEARN?

Increasing residents' odds of winning a **prize of** up to **$50,000** by a factor of **50 to 100** by geo-targeting their **zip codes** did not boost vaccinations.

The impact of the overall sweepstakes on **Philadelphia** was more ambiguous; it may have been a cost-effective way to **encourage vaccination** in the city.

> *The Philly Vax Sweepstakes was a prime example of science meeting policy. We partnered with the city of Philadelphia to test the value of lotteries for increasing vaccination at scale during a critical moment in the pandemic. I enjoyed contributing to this BCFG project."*

BCFG Team Scientist Devin Pope
Professor of Behavioral Science and Economics,
The University of Chicago Booth School of Business

COULD A GEO-TARGETED VACCINE REGRET LOTTERY BOOST VACCINATION?

> " The most important lesson I took away from this project is that even for this amazing team, the many steps between a simple conceptual idea to a large-scale implementation under time pressure matter. To paraphrase a well-known graduate of the LSE: 'You can't always test what you want...'"

BCFG Team Scientist Richard Thaler
Professor of Behavioral Science and Economics at
The University of Chicago Booth School of Business
and Nobel Laureate

WHERE CAN YOU LEARN MORE ABOUT OUR FINDINGS?

What We Learned From Philadelphia's Vaccine Lottery (2022), *The Philadelphia Inquirer*

The Vaccine Lottery Seemed Like a Great Idea. Why Didn't it Work? (2022), *Freakonomics M.D.*

Vaccine Jackpot (2022), *Science Magazine*

HOW DID OUR LEADERSHIP SUPPORT AN EVIDENCE-BASED APPROACH TO ENCOURAGING VACCINATION?

Starting in 2021, BCFG became a key source of insights for policymakers and scientists on how to apply evidence to increase vaccination rates

WHERE DID WE SHARE OUR RESEARCH AND EXPERTISE?

A White House briefing

Congressional testimony

Multiple presentations to the National Institutes for Health

Repeated conversations with the Centers for Disease Control and Prevention

Via the National Academies' Societal Experts Action Network

Through international news outlets (NPR, The Economist, CNN, The Washington Post, and beyond)

Click For More Information

The top performing interventions **INCREASED VACCINATION RATES** by reminding patients a shot was **reserved** or **waiting** for them

11% PRIMARY CARE PATIENTS

What role can behavioral science play in COVID vaccine adoption?

JOIN US!

TUNE IN TO CNBC'S FACEBOOK PAGE ON TUESDAY AT 2:30 P.M. ET.

DR. KATY MILKMAN WHARTON PROFESSOR AND BEHAVIORAL SCIENTIST

BCFG X CHIBE PRESENT:

A Virtual Briefing on Tactics Tested for Encouraging COVID-19 Vaccination

11/5/2021, 12-1 PM ET

@COVIDOVERSIGHT

BUILDING TRUST AND BATTLING BARRIERS: THE URGENT NEED TO OVERCOME VACCINE HESITANCY

SOPHIA BUSH   DR. JEROME ADAMS   DR. MILKMAN   DR. BENJAMIN   JOSHUA GARZA

Thursday, July 1, 2021 at 9:00 AM E.T.

SUBSCRIBE

COVID-19 Vaccination Field Guide: 12 Strategies for Your Community

> *"I led a team which determined that the financial incentives offered by many US states in 2021 didn't succeed in changing vaccination behavior in a substantial way."*

BCFG Team Scientist Harsha Thirumurthy
Associate Professor of Medical Ethics and Health Policy, Perelman School of Medicine

Thirumurthy, et al. (2022). **Association between statewide financial incentive programs and COVID-19 vaccination rates**. *PLOS ONE.*

WHAT WORKS TO REDUCE SELF-CONTROL FAILURE?

Duckworth, A.L., K.L. Milkman, and D. Laibson (2018)

## WHY DID WE WRITE THIS REVIEW ARTICLE?

Research on self-control has grown explosively in recent years.

Self-control failures can contribute to many of society's great challenges, undermining our health, financial security, and educational achievement.

Careful syntheses of the best evidence that policymakers can use to help people overcome self-control failure and reduce self-defeating behaviors are lacking.

SELECTED MEDIA COVERAGE

A Smarter Way to Think About Willpower (2019), *The Washington Post*
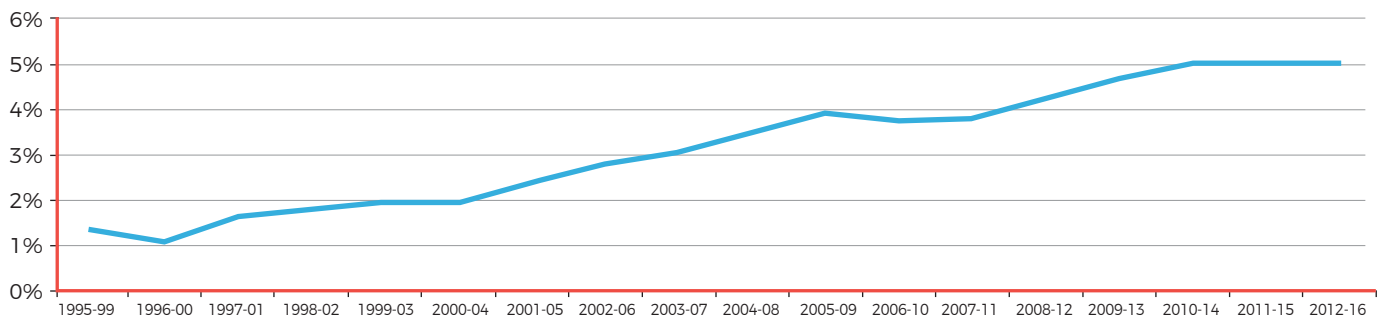
Average percentage of articles in *Psychological Science* that used the term "self-control."

> *The more researchers use their tools to work in concert, rather than in niche silos, the faster our pool of knowledge will grow. This realization, as I explored in the context of willpower, provides the launch pad for BCFG."*

BCFG Team Scientist David Laibson
Professor of Economics, Harvard University

ADVICE-GIVING HELPS THE ADVISOR

Eskreis-Winkler, L., K.L. Milkman, D.M. Gromet, and A.L. Duckworth (2019)

WHAT WAS THE RESEARCH QUESTION?

When students give their peers advice on study strategies, does it improve the advisor's own academic outcomes?

WHO WERE THE PARTICIPANTS?

1,982 students from 7 diverse public U.S. high schools

SELECTED MEDIA COVERAGE

Your Own Advice (2019), *Choiceology* podcast

HOW DID WE TEST OUR HYPOTHESIS?

We randomly assigned some students to complete an **8-minute intervention** in which they answered **14** questions, which solicited their advice for younger students about helpful study habits (e.g., where to study, how to avoid distraction, etc.).

WHAT DID WE LEARN?

Asking high school **students** to **give advice** about helpful **study habits improved** their own report card **grades** in math and in the subject they most hoped to improve in over the course of a single academic quarter.

> 66 *This work would not have been possible without BCFG. The study was run in high schools, a context where things can and often do go wrong. Everything BCFG does is mega. They run megastudies. They are also mega-respectful to participants; they are mega-rigorous in their methods, they are mega-efficient and mega-smart. It's no surprise they get mega results.*"

BCFG Team Scientist Lauren Eskreis-Winkler
(and former BCFG post-doctoral scholar and Penn PhD student), Assistant Professor of Management and Organizations at the Kellogg School of Management at Northwestern University

MOTIVATION LAUNDERING

Kirgios, E.L., E.H. Chang, E.E. Levine, K.L. Milkman, and J.B. Kessler (2020)

WHAT WAS THE RESEARCH QUESTION?

Will people give up earned financial rewards to convince themselves that self-improvement or acts of generosity were intrinsically motivated?

WHO WERE THE PARTICIPANTS?

17,968 gym members (plus 763 letter writers from an online panel)

HOW DID WE TEST OUR HYPOTHESIS?

Two large experiments gave participants the opportunity to treat the positive feelings elicited during their tasks—either **writing letters to sick children or exercising**—as their reward. In each case, participants were given the option to forego incentives they earned for completing these activities.

WHAT DID WE LEARN?

If people are prompted to treat their **goal progress as a reward** and forego cash incentives they earned for virtuous behavior, **many more** will **take the opportunity** than would without this framing. This form of "motivation laundering" helps people convince themselves they were motivated by the act itself.

> **❝** *This work benefited from the Behavior Change for Good Initiative's incredible infrastructure for running large-scale field experiments. The BCFG team makes it easy (and fun!) to do great field research.* **❞**

BCFG Team Scientist Erika Kirgios
(and former Wharton PhD student), Assistant Professor of Behavioral Science, The University of Chicago Booth School of Business

TEACHING TEMPTATION BUNDLING TO BOOST EXERCISE

Kirgios, E.L., G.H. Mandel, Y. Park, K.L. Milkman, D.M. Gromet, J.S. Kay, and A.L. Duckworth (2020)

ORGANIZATIONAL BEHAVIOR AND HUMAN DECISION PROCESSES

Teaching Temptation Bundling to Boost Exercise: A Field Experiment

Organizational Behavior and Human Decision Processes

WHAT WAS THE RESEARCH QUESTION?

Does helping people bundle temptations (e.g., listening to an exciting audiobook or binge-watching a favorite TV show) with exercise yield benefits?

WHO WERE THE PARTICIPANTS?

6,792 members of 24 Hour Fitness

SELECTED MEDIA COVERAGE

The Science of How to Stick to New Year's Resolutions and Truly Change Your Habits (2021), *CNN Health*

HOW DID WE TEST OUR HYPOTHESIS?

Gym members who signed up for a program to help them build exercise habits were either 1) encouraged to **exercise more**, 2) given a promotional code that allowed them to download a **free audiobook** and encouraged to exercise more, or 3) given a promotional code for a free audiobook that they were encouraged to **enjoy only while exercising** more ("temptation bundling").

WHAT DID WE LEARN?

Both providing **free audiobooks** in the context of a program designed to promote exercise and encouraging "temptation bundling" **increased** people's weekly workout **frequency** by **10-12%** for up to **17** weeks post-intervention.

> **❝** *Professor Milkman and Professor Duckworth's Science of Behavior Change Undergraduate Seminar began my journey with the Behavior Change for Good Initiative. I was one of several peers whose interests and career aspirations were shaped by the course material. Inspired by the course, I pursued a senior honors thesis that helped produce this fascinating paper. BCFG is a special place. It fosters growth and learning in a supportive and engaging environment for people at all stages of their research careers.* **❞**

Graelin Mandel
(Former Wharton undergraduate), Incoming PhD student, The University of Chicago Booth School of Business
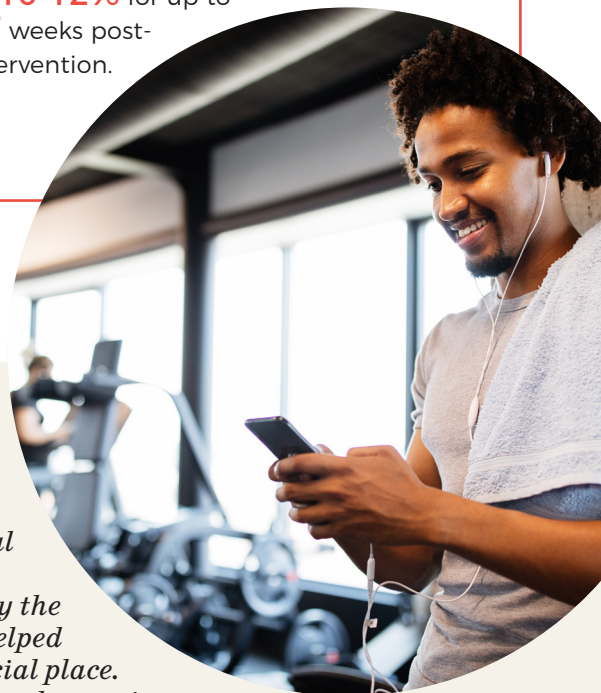
A "COPY AND PASTE" NUDGE TO PROMOTE GOAL ACHIEVEMENT

Mehr, K.S., A.E. Geiser, K.L. Milkman, and A.L. Duckworth (2020)

JACR

Copy-Paste Prompts: A New Nudge to Promote Goal Achievement

Journal of the Association for Consumer Research

WHAT WAS THE RESEARCH QUESTION?

Does nudging people to deliberately copy and paste their successful peers' strategies for goal achievement add value?

WHO WERE THE PARTICIPANTS?

1,028 people recruited through an online panel

SELECTED MEDIA COVERAGE

The Copy-Paste Technique is the Easiest, Most Effective Self-Improvement Hack, a New Wharton Study Finds (2022), *Inc. Magazine*

HOW DID WE TEST OUR HYPOTHESIS?

Participants were randomly assigned to three different experimental conditions. Some were instructed to **"copy and paste"** another person's motivational strategy to exercise by first asking another person for their strategy and then using the strategy themselves. Others were either given a motivational strategy someone else had obtained or received no strategy at all.

WHAT DID WE LEARN?

Participants who were prompted to "copy and paste" someone else's life hack exercised up to **56 more minutes**, on average, than those who received no such prompt.

> "It was exciting to work on this project about a new way to nudge healthier decisions. I am so grateful for BCFG's support of our research."

Katie Mehr
Fifth-year PhD student, The Wharton School at the University of Pennsylvania

THE BENEFITS OF MAKING BIG GOALS MORE GRANULAR

Rai, A., M.A. Sharif, E.H. Chang, K.L. Milkman, and A.L. Duckworth (2022)

A Field Experiment on Subgoal Framing to Boost Volunteering: The Trade-Off Between Goal Granularity and Flexibility *Journal of Applied Psychology*

WHAT WERE THE RESEARCH QUESTIONS?

Does breaking big goals into smaller, bite-sized chunks increase achievement in the field?

Are more flexible subgoals more valuable?

WHO WERE THE PARTICIPANTS?

9,108 crisis counselors

HOW DID WE TEST OUR HYPOTHESIS?

Crisis counselors were encouraged to meet their yearly **200 hour** volunteering **goal** by either 1) volunteering **some each week**, 2) volunteering **8 hours every two weeks,** or 3) by volunteering **4 hours every week** (to reach 200 hours total)

WHAT DID WE LEARN?

Nudging people to break a big 200 hour yearly volunteering **goal** into **smaller**, bite-sized **chunks** (**4 hours** of volunteering **per week** or **8 hours** every two weeks) produced an **8% increase** in hours volunteered during our 3-month intervention.

> " *I loved working at BCFG as a Research Coordinator. At BCFG I learned first-hand how to conduct large-scale field studies on behavior change. This experience helped prepare me to lead my own field experiments and partner with BCFG as a PhD student on a large-scale test of a costless nudge to increase volunteering.* "

Aneesh Rai
(Former BCFG Research Coordinator), Fifth-year PhD student, The Wharton School at the University of Pennsylvania

The Science of Behavior Change
Undergraduate Seminar

BCFG's co-directors Angela Duckworth and Katy Milkman taught an advanced undergraduate seminar from 2018-2020 called "The Science of Behavior Change" at the University of Pennsylvania. The small, selective seminar covered foundational research on behavior change and was widely popular and beloved.

Student Perspectives on the Course

"Possibly the best course that I've taken at Penn. From the readings to the discussions we had in class to the guest speakers who came from a myriad of areas in the field of behavior change, I learned so much and am so much more inspired about making an impact in the world through the behavioral change space."

"This class helped me think about my life, the world, and research on a deeper level. I feel like I am so much more skilled, aware, and smart because of this course! Drs. Duckworth and Milkman are phenomenal professors who care so deeply about their students. The class felt like a tight-knit community. I am so grateful for this amazing experience."

Fall 2019 class

Partial class photo on Zoom: fall 2020

"I have never taken a class at Penn like this one! I loved Dr. Duckworth's and Dr. Milkman's graduate-seminar approach, especially because they fine-tuned it to the upperclassman-undergrad experience. The class was very organized, well-structured, and thoroughly engaging. This class has challenged my ability to think about complex societal problems, ask questions, and use constructive feedback."

"This is the kind of course that brought me to Wharton. Stellar, star professors who communicated the material well and made discussions super interesting. The intimacy and maturity of the seminar made me feel part of something special."

Fall 2018 class

"Angela and Katy got me so interested in behavior change that I think I'd apply for a PhD in this field rather than the field I was previously considering before taking this course."

BCFG'S EVENTS

BCFG'S INAUGURAL SCIENTIFIC GATHERING

2017

The year BCFG opened its doors, we hosted an inaugural gathering of 20 Team Scientists at the University of Pennsylvania. Event highlights included a fireside chat with Nobel Laureate Daniel Kahneman and the live recording of a _Freakonomics_ episode featuring Team Scientists.

In the evening, Angela Duckworth co-hosted a live episode of the game-show _Tell Me Something I Don't Know_ featuring Team Scientists as contestants. In the show, guests offered facts to be judged on three criteria: Did the hosts already know this fact? Is this fact worth knowing? Is this fact demonstrably true? In our special episode, BCFG Team Scientists Colin Camerer, Ayelet Fishbach, David Laibson, Max Bazerman, Katy Milkman, Kevin Volpp, and Dean Karlan all offered their best facts. Max Bazerman left victorious, but you'll have to listen to the episode to find out why...

TELL ME SOMETHING I DON'T KNOW!

WITH STEPHEN J. DUBNER
Host of Freakonomics Radio

A CONFERENCE LIKE NO OTHER

In June of 2019, we hosted over 80 team scientists and industry partners on Penn's campus for a celebration of our work so far. Nobel Laureate Richard Thaler and National Academy of Sciences member Robert Cialdini delivered the event keynotes. The day was capped off with a live taping of *Freakonomics* featuring our co-founders as well as Team Scientists Michael Norton, Laurie Santos, Justin Sydnor, Tom Gilovich, and Richard Thaler at the Merriam Theater in downtown Philadelphia in front of a sellout crowd.

HEALTHY HABITS ROUNDTABLE AND SPECIAL ISSUE OF OBHDP

2019

In partnership with our close friends at the Center for Health Incentives and Behavioral Economics, we co-hosted a Healthy Habits Roundtable sponsored by WW (formerly Weight Watchers). Numerous Team Scientists convened along with several trainees to share the latest insights from their research on lasting behavior change.

> *It was a pleasure to co-host the Healthy Habits Roundtable with BCFG. The insights shared by researchers allowed us to make important contributions to the science of healthy habits that can help meaningfully improve people's lives."*

Kevin Volpp

BCFG Team Scientist, Director of the Center for Health Incentives & Behavioral Economics, Mark V. Pauly President's Distinguished Professor at Perelman School of Medicine and Health Care Management at the Wharton School

This event led to the production of a <u>special issue</u> of *Organizational Behavior and Human Decision Processes* on healthy habits featuring articles contributed by 16 BCFG Team Scientists.

WHO EDITED THE SPECIAL ISSUE?

Team scientists Katy Milkman, Dilip Soman, and Kevin Volpp

WHAT ARTICLES WERE FEATURED IN THIS SPECIAL ISSUE?

<u>Nudging: Progress to date and future directions</u> By John Beshears and Harry Kosowsky

<u>Teaching temptation bundling to boost exercise: A field experiment</u> By Erika Kirgios, Graelin Mandel, Yeji Park, Katherine Milkman, Dena Gromet, Joseph Kay, and Angela Duckworth

<u>What is a habit? Diverse mechanisms that can produce sustained behavior change</u> By Kevin Volpp and George Loewenstein

<u>Behavior change</u> By Angela Duckworth and James Gross

<u>Dodging dietary defaults: Choosing away from healthy nudges</u> By Helen Colby, Meng Li, and Gretchen Chapman

<u>Target, distance, and valence: Unpacking the effects of normative feedback</u> By Jonathan Bogard, Magali Delmas, Noah Goldstein, and Stephanie Vezich

<u>Returnable reciprocity: Returnable gifts are more effective than unreturnable gifts at promoting virtuous behaviors</u> By Julian Zlatev and Todd Rogers

<u>When wanting closure reduces patients' patience</u> By Annabelle Roberts and Ayelet Fishbach

<u>Designing in-app messages to nudge behavior change: Lessons learned from a weight management app for young adults</u> By Carmina Valle, Brooke Nezami, and Deborah Tate

BCFG'S RESEARCH SEMINARS

CAMPUS EVENTS

A presentation from **Dean Karlan**

Professor of Economics & Finance at the Kellogg School of Management of Northwestern University

The Topic: Randomizing Religion: The Impact of Protestant Evangelism on Economic Outcomes

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A presentation from **Shlomo Benartzi**

BCFG Distinguished Senior Fellow and Professor Emeritus at the UCLA Anderson School of Management

The Topic: Helping People Save: Simple, Scalable Changes Can Lead to Dramatic Shifts in Creating Financial Security

ONLINE EVENTS

To continue scientific dialogue during the early days of the COVID-19 pandemic, we launched a popular online academic seminar series that attracted more than 4,000 registrants and drew 600-900 participants, live each week. Our YouTube channel featuring these online talks now boasts over 1,300 subscribers and 36,000+ total views.

WHO DID WE FEATURE IN OUR ONLINE EVENTS, AND WHAT TOPICS DID THEY COVER?

A presentation by **Judd Kessler**

Professor of Business Economics and Public Policy at The Wharton School of the University of Pennsylvania

The Topic: The Gender Gap in Self-Promotion

A presentation by **Ethan Kross**

Professor of Psychology and Management/Organizations at the University of Michigan Ross School of Business

The Topic: Self-Talk: How You Do It Matters

A presentation by **Gretchen Chapman**

Professor of Psychology, Social and Decision Sciences at Carnegie Mellon University

The Topic: Numerical Cognition and Federal Budgetary Expenditures

A presentation by **Betsy Levy Paluck**

Professor of Psychology and Public Affairs at Princeton University

The Topic: Prejudice Reduction: Progress and Challenges

A presentation by **Francesca Gino**

Tandon Family Professor of Business Administration at Harvard University

The Topic: Piqued Curiosity

A presentation by **Susan Athey**

The Economics of Technology Professor at Stanford University

The Topic: Designing and Analyzing Behavioral Experiments With Machine Learning

WHO DID WE FEATURE IN OUR ONLINE EVENTS AND WHAT TOPICS DID THEY COVER?

A presentation by **Colin Camerer**

Robert Kirby Professor of Behavioral Finance and Economics at the California Institute of Technology

The Topic: New Perspectives on Habit Formation From Machine Learning and Neuroscience

A presentation by **Dean Karlan**

Professor of Economics & Finance at the Kellogg School of Management of Northwestern University

The Topic: Nudge Today, Almost Gone Tomorrow

A presentation by **Marissa Sharif**

Assistant Professor of Marketing at the The Wharton School of the University of Pennsylvania

The Topic: Leveraging Flexibility to Increase Goal Persistence

A presentation by **Muriel Niederle**

Professor of Economics at Stanford University

The Topic: The Role of Competitiveness in Education and Labor Market Outcomes (based on joint work with Thomas Buser and Hessel Oosterbeek)

A presentation by **Duncan Watts**

Stevens University Professor at the University of Pennsylvania

The Topic: The Effects of Task Complexity on Group Synergy

A presentation by **John Beshears**

Terrie F. and Bradley M. Bloom Associate Professor of Business Administration at Harvard University

The Topic: Consumption Responses to Mortgage Payments

A presentation by **Modupe Akinola**

Sanford C. Bernstein & Co. Associate Professor of Leadership and Ethics at Columbia University

The Topic: Thriving Under Pressure

A presentation by **Alison Wood Brooks**

Associate Professor of Negotiation, Organizations, and Markets at Harvard University

The Topic: How to Talk Gooder: The Science (and Serendipity) of Conversation

A presentation by **Max Bazerman**

Jesse Isidor Straus Professor of Business Administration at Harvard University

The Topic: Allocating Scarce Resources Under COVID Wisely

A presentation by **Ulrike Malmendier**

Edward J. and Mollie Arnold Professor of Finance and Professor of Economics at the University of California, Berkeley

The Topic: Exposure to Grocery Prices and Inflation Expectations

WHO DID WE FEATURE IN OUR ONLINE EVENTS AND WHAT TOPICS DID THEY COVER?

A presentation by **Eli Finkel**

Professor of Psychology and Management & Organizations at Northwestern University

The Topic: Joint vs. Separate Bank Accounts and Marital Quality
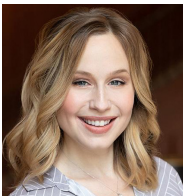
A presentation by **Hal Hershfield**

Associate Professor of Marketing, Behavioral Decision Making, and Psychology at the University of California, Los Angeles

The Topic: Pennies and Dollars

A presentation by **Ashley Whillans**

Assistant Professor of Business Administration in the Negotiation, Organizations & Markets Unit at Harvard Business School

The Topic: Time and Happiness During COVID

A presentation by **Hunt Allcott**

Principal Researcher at Microsoft Research

The Topic: Digital Addiction

A presentation by **Anuj Shah**

Associate Professor of Behavioral Science at the University of Chicago Booth School of Business

The Topic: Perceptions of Imperfect Strangers

A presentation by **Katy Milkman**

James G. Dinan Professor of Operations, Information and Decisions at The Wharton School of the University of Pennsylvania

The Topic: A Mega-Study Approach to Applied Behavioral Science

A presentation by **David Rand**

Erwin H. Schell Professor and Associate Professor of Management Science and Brain and Cognitive Sciences at MIT Sloan School of Management

The Topic: Understanding and Reducing the Spread of Misinformation Online

A presentation by **Neil Lewis Jr.**

Assistant Professor of Communication and Social Behavior at Cornell University

The Topic: Whose Minds Matter? Sampling, Measurement, Inference, and Application Considerations as We Diversify the Behavioral Sciences

A presentation by **David Yeager**

Associate Professor of Psychology at University of Texas at Austin

The Topic: Beliefs Count Twice

A presentation by **Cass Sunstein**

*Robert Walmsley University Professor of Law at Harvard University*

**The Topic: Hayekian Behavioral Economics**

VIRTUAL BCFG AUTHORS SERIES

Since 2021, we've hosted monthly online events with BCFG scientists who've written books in order to bring their applied insights to a wider audience. In the fall of 2022, we began partnering with Psychgeist Media on these events.
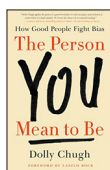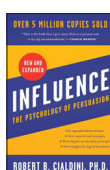
Authors@BCFG Fall 2021
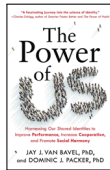
Jay Van Bavel, *Professor at New York University*

Author of *The Power of Us*
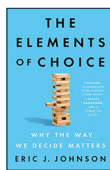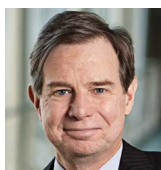
Eric Johnson, *Professor at University of Columbia*

Author of *The Elements of Choice*

Dolly Chugh, *Professor at New York University*

Author of *The Person You Mean to Be*

Bob Cialdini, *Emeritus Professor at Arizona State University*

Author of *Influence*

Wendy Wood, *Professor at University of Southern California*

Author of *Good Habits, Bad Habits*

Behavioral Science Authors Spring 2021

Ayelet Fishbach, *Professor at The University of Chicago*
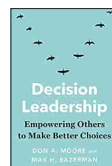
Author of *Get It Done*

John List, *Professor at The University of Chicago*

Author of *The Voltage Effect*

Behavioral Science Authors Spring 2021

Nina Mazar & Dilip Soman

Professor at Boston University (Mazar); Professor at University of Toronto (Soman)

Authors of *Behavioral Science in the Wild*

Don Moore & Max Bazerman

Professor at University of California, Berkeley (Moore); Professor at Harvard University (Bazerman)

Authors of *Decision Leadership*

Behavioral Science Authors Fall 2022

Cassie Holmes

Professor at University of California, Los Angeles

Author of *Happier Hour*
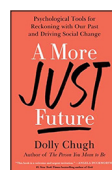
Dolly Chugh

Professor at New York University

Author of *A More Just Future*

Max Bazerman

Professor at Harvard University

Author of *Complicit*

> " *BCFG's Behavioral Science Author Series presented me with a terrific opportunity to share the insights from my book with an audience that might not otherwise have encountered my work. The engagement from the audience was inspiring.*"
>
> **BCFG Team Scientist Dolly Chugh**, Jacob B. Melnick Term Professor, Leonard N. Stern School of Business, New York University

BCFG TEAM SCIENTISTS

Modupe Akinola, Professor at Columbia Business School

Dolores Albarracín, Professor at the University of Pennsylvania

Hunt Allcott, Professor at Stanford University

David Asch, Professor at the University of Pennsylvania

Susan Athey, Professor at Stanford University

Linda Babcock, Professor at Carnegie Mellon University

Max Bazerman, Professor at Harvard Business School

Shlomo Benartzi, Professor Emeritus at the University of California, Los Angeles Anderson School of Management

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John Beshears, Associate Professor at Harvard Business School

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Christopher Bryan, Assistant Professor at McCombs School of Business of the University of Texas at Austin

Alison Buttenheim, Professor at the University of Pennsylvania School of Nursing

Colin Camerer, Professor at the California Institute of Technology

Scott Carrell, Professor at the University of California, Davis

Ben Castleman, Associate Professor at the University of Virginia

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Uri Gneezy, Professor at the Rady School of Management of the University of California, San Diego

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Daniel Goldstein, Senior Principal Research Manager at Microsoft Research

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Johannes Haushofer, Professor at Stockholm University

Jim Heckman, Professor at the University of Chicago

Hal Hershfield, Professor at the University of California, Los Angeles Anderson School of Management

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Sendhil Mullainathan, Professor at the University of Chicago Booth School of Business

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Muriel Niederle, Professor at Stanford University

Mike Norton, Professor at Harvard Business School

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Ziad Obermeyer, Associate Professor at the University of California, Berkeley School of Public Health

Axel Ockenfels, Professor at the University of Cologne

Gabriele Oettingen, Professor at New York University

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Emily Oster, Professor at Brown University

Ted O'Donoghue, Professor at Cornell University

Mitesh Patel, Chief Clinical Transformation Officer and National Vice President of Ascension

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Jason Riis, CEO and Chief Behavioral Scientist at Behavioralize

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Dilip Soman, Professor at the Rotman School of Management of the University of Toronto

Jann Spiess, Assistant Professor at Stanford Graduate School of Business

Charles Sprenger, Professor at the California Institute of Technology

Bradley Staats, Professor at Kenan-Flagler Business School of the University of North Carolina, Chapel Hill

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Gaurav Suri, Associate Professor at San Francisco State University

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Justin Sydnor, Professor at the University of Wisconsin School of Business

Bridget Terry Long, Professor at the Harvard Graduate School of Education

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Lyle Ungar, Professor at the University of Pennsylvania

Oleg Urminsky, Professor at the University of Chicago Booth School of Business

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Greg Walton, Professor at Stanford University

Caleb Warren, Associate Professor at the Eller College of Management of the University of Arizona

Duncan Watts, Professor at the University of Pennsylvania

Elke Weber, Professor at Princeton University

Ashley Whillans, Assistant Professor at Harvard Business School

Robb Willer, Professor at Stanford University

Alison Wood Brooks, Associate Professor at Harvard Business School

Wendy Wood, Professor at the University of Southern California

George Wu, Professor at the University of Chicago Booth School of Business

David Yeager, Associate Professor at the University of Texas at Austin

Jonathan Zinman, Professor at Dartmouth College

Julian Zlatev, Assistant Professor at Harvard Business School

2023 BCFG STAFF

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Executive Director

Joseph Kay, PhD
Manager of Research Operations

Sean F. Ellis, PhD
Research Project Manager

Alex Luscher
Research and Communications Coordinator

Rayyan Mobarak
Research Coordinator

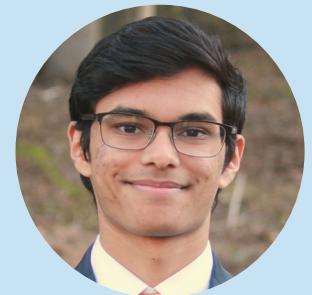**Maddy Paxson**
Research Coordinator

Ramon Silvera Zumaran
Research Coordinator

Doug Sandler
Undergraduate Research Assistant

Anna Swartley
Undergraduate Research Assistant

Akhilesh Tumu
Undergraduate Research Assistant

BCFG ALUMNI

We've been fortunate to work with many talented pre-doctoral research coordinators. We're excited to see where their careers will take them!

Lauri Bonacorsi
JD, Northwestern Pritzker School of Law; Associate Attorney, Sidley Austin LLP

Heather Graci
Assistant Editor Behavioral Scientist

Aden Halpern
Research Coordinator Penn Medicine

Hung Ho
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Daniel Jaro
Research Coordinator Johns Hopkins Center for Psychedelic & Consciousness Research

Tim Lee
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Pepi Pandiloski
PhD candidate in Political Economy, Development, and Networks, The University of Chicago

Yeji Park
PhD candidate in Social Psychology Princeton University

Aneesh Rai
PhD candidate in Operations, Information, and Decisions The Wharton School

Jake Rothschild
Traveler

Undergraduate and Graduate Research Assistants

We've also had the pleasure of working with the following research assistants:

Elsa Baumgartner
Christina Chang
Xinyi (Cindy) Chen
Lan-Ting Chiang
Joan Darty
Ibrahim El-Morsy
Ilyssa Delos Reyes
Ye Zhuan (Carin) Gan
Amanda Geiser
Analexis Glaude
Karen Herrera
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Javion Joyner
Canyon Kornicker
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Stephanie Loo
Ynizi Lu
Graelin Mandel
Dana Max
Anita Mo
Angelina Pan
Joseph Peanasky
Jared Peterson
Mira Potter-Schwartz
Bhavna Saluja
Jordyn Schor
Danielle Schweitzer
Yichen Shao
Julia Snoy
Maria Staszkiewicz
Maayan Waldman
Samantha Wu-Georges
Andrew Yang
Marco Yap
Jill Yu
Patrick Zhang

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Sun Capital Partners

Warren Lichtenstein

Executive Chairman
Steel Partners

John Alexander

President
Alexander Production
Company

Abby *and* **Jeremy Schiffman**

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Center *for* Health Incentives & Behavioral Economics

CHAN ZUCKERBERG INITIATIVE

FLU LAB

Michael & Susan Dell FOUNDATION

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NATIONAL BUREAU OF ECONOMIC RESEARCH

NIH National Institute on Aging

Penn Medicine
Center for Precision Medicine

Robert Wood Johnson Foundation

SCHMIDT FUTURES

100 YEARS | SOCIAL SCIENCE RESEARCH COUNCIL

PARTNERS

24 HOUR FITNESS

BLACK DOCTORS
||COVID-19|| CONSORTIUM

Character LAB
RESEARCH NETWORK

City of Philadelphia

CRISIS TEXT LINE |

Geisinger
Health Plan

The **Nudge** Unit

Penn Medicine

Walmart Pharmacy

Way to Health

Behavior Change for Good
Arts & Sciences · Wharton
UNIVERSITY *of* PENNSYLVANIA