

ERIKA L. KIRGIOS

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EDUCATION

The Wharton School, University of Pennsylvania **Expected 2022**
Ph.D. Candidate in Operations, Information, and Decisions
Advisor: Katy Milkman
Dissertation Committee Chair: Maurice Schweitzer
Dissertation Committee: Angela Duckworth, Modupe Akinola, Sendhil Mullainathan

Princeton University **2017**
B.A. in Computer Science, *summa cum laude*
Minors in Neuroscience and Cognitive Science

RESEARCH INTERESTS

Diversity, Discrimination, Prosocial Behavior, Behavior Change

PUBLICATIONS

Kirgios, E.L., Rai, A., Chang, E.H., Milkman, K.L. (2022). When Seeking Help, Women and Racial/Ethnic Minorities Benefit from Explicitly Stating their Identity. *Nature Human Behaviour*.

Milkman, K.L., D. Gromet, H. Ho, J. Kay, T. 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, A. 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, A.L. Duckworth. (2021). A Mega-Study Approach to Applied Behavioral Science. *Nature*, 600(7889), 478-483.

Chang, E.H., **Kirgios, E.L.**, Smith, R.K. (2021). Large-Scale Field Experiment Shows Null Effects of Team Diversity on Others' Willingness to Support the Team. *Journal of Experimental Social Psychology*, 94, 104099.

Kirgios, E.L., Chang, E.H., Milkman, K.L. (2020). Going It Alone: Competition Increases the Attractiveness of Minority Status. *Organizational Behavior and Human Decision Processes*, 161, 20-33.

Chang, E.H.*, **Kirgios, E.L.***, Rai, A., Milkman, K.L. (2020). The Isolated Choice Effect and Its Implications for Gender Diversity in Organizations. *Management Science*, 66(6), 2752-2761. *denotes equal authorship

Kirgios, E.L., Chang, E.H., Levine, E.E., Milkman, K.L., Kessler, J.B. (2020). Forgoing Earned Incentives to Signal Pure Motives. *Proceedings of the National Academy of Sciences*, 117(29), 16891-16897.

Kirgios, E.L., Mandel, G., Park, Y., Milkman, K.L., Gromet, D., Kay, J., Duckworth, A.L. (2020). Teaching Temptation Bundling to Boost Exercise: A Field Experiment. *Organizational Behavior and Human Decision Processes*, 161, 20-35.

MANUSCRIPTS UNDER REVIEW

Rai, A., Chang, E.H., **Kirgios, E.L.**, Milkman, K.L. Group Size Influences Perceptions of Diversity and Likelihood of Hiring Women and Racial Minorities. Under second round review at *Organization Science*.

Chang, E.H., **Kirgios, E.L.** Demographic “Stickiness”: Implications of Impact Aversion for Inequality and Diversity in Organizations. Under second round review at *Management Science*.

Chang, E.H., **Kirgios, E.L.**. When Does Diversity Beget Diversity? The Divergent Effects of Racial and Gender Diversity on U.S. Corporate Boards. Revise and resubmit at *Strategic Management Journal*.

WORKING PAPERS

Blunden, H., **Kirgios, E.L.**, Rai, A., Chang, E.H., Milkman, K.L. When Flattery Fails: Documenting the Negative Consequences of Ingratiation for Advice Seekers. Target: *Academy of Management Journal*.

Kirgios, E.L., Silver, I.M., Chang, E.H. Do concrete diversity goals attract or repel job applicants? Evidence from the field.

SELECTED RESEARCH IN PROGRESS

Kirgios, E.L., Athey, S., Duckworth, A.L., Graci, H., Karlan, D., Luca, M., Milkman, K.L., Offer-Westort, M., Udry, C. Combating the Spread of COVID-19: Testing the Effectiveness of Quiz-Style Health Messaging for Promoting Behavior Change. *Field experiments with 29k and 11k participants completed*. Target: *Management Science*.

Kirgios, E.L.. The Role of Advocate Identity and Narrative Persuasion Strategies in Encouraging Collective Action. *Field experiment with 70k participants completed*.

Kirgios, E.L., Rai, A., Chang, E.H., Milkman, K.L., Small, D.A. Pay-It-Forward or Help Others? Analyzing the Impact of Pay-It-Forward Messaging on Charitable Giving. *Field experiment with 9k participants completed*.

GRANTS

National Science Foundation Graduate Research Fellowship, 2017-2020

Wharton Leadership Center Grant, 2021

Mack Institute for Innovation Management Research Grant, 2020, 2021

Judith & William Bollinger Fellowship, 2020

Marketing Science Institute Research Grant, 2020

Baker Retailing Center Grant, 2019

Wharton Doctoral Programs Travel Grant, 2019

The Russell Ackoff Doctoral Student Fellowship Award, Wharton Risk Center, 2018, 2019, 2020

AWARDS AND HONORS

Paul R. Kleindorfer Scholar Award, 2021

Best Micro Paper Award, East Coast Doctoral Conference, 2019

Marjorie Weiler Prize for Excellence in Writing, 2018

Princeton Computer Science Senior Thesis Prize, 2017

U.S. Presidential Scholar, 2013

CONFERENCE PRESENTATIONS

When Seeking Help, Women and Racial Minorities Benefit from Explicitly Stating their Identity. (Kirgios, Rai, Chang, & Milkman).

- Subjective Probability, Utility, and Decision Making Conference, Virtual, 2021
- Academy of Management Annual Meeting, Virtual, 2021
- International Association for Conflict Management Conference, Virtual, 2021
- Society for Personality and Social Psychology, Virtual, 2021
- Behavioral Insights Global Online Seminar, Virtual, 2020
- Society for Judgment and Decision Making, Virtual, 2020
- Academy of Management Annual Meeting, Virtual, 2020

Do concrete diversity goals attract or repel job applicants? Evidence from the field. (Kirgios, Silver, & Chang).

- Society for Judgment and Decision Making, Virtual, 2021 (forthcoming)
- Academy of Management Annual Meeting, Virtual, 2021

Forgoing Earned Incentives to Signal Pure Motives. (Kirgios, Chang, Levine, Milkman, & Kessler).

- CHIBE Roybal Mini Symposium, Virtual, 2020
- International Association for Conflict Management Conference, Virtual, 2020
- East Coast Doctoral Conference, Canceled due to COVID-19, 2020
- Society for Personality and Social Psychology Judgment and Decision Making Pre-Conference, New Orleans, LA, 2020

Going It Alone: Competition Increases the Attractiveness of Minority Status. (Kirgios, Chang, & Milkman).

- Society for Personality and Social Psychology, New Orleans, LA, 2020
- Society for Judgment and Decision Making, Montreal, Canada, 2019
- Academy of Management Annual Meeting, Boston, MA, 2019
- International Association for Conflict Management Conference, Dublin, Ireland, 2019
- East Coast Doctoral Conference, New York, NY, 2019

The Isolated Choice Effect and Its Implications for Gender Diversity in Organizations. (Chang, Kirgios, Rai, & Milkman).

- Subjective Probability, Utility, and Decision Making Conference, Amsterdam, Netherlands, 2019
- Behavioral Science and Policy Association Annual Conference, New York, NY, 2019

CHAIRED SYMPOSIA

- The Consequences of Self- and Other-Signaling on Diversity-Related Cognition and Decisions (Symposium Co-chair with James Carter). Academy of Management, Virtual, 2021.
- Diversity Perceptions and Decision-Making are Shaped by Strategic Motives (Symposium Co-chair with Joyce He). Society for Personality and Social Psychology, New Orleans, LA, 2020.
- Gender and Workplace Decision-Making: Women's Strategic Choices Throughout the Pipeline (Symposium Co-chair with Joyce He). Academy of Management, Boston, MA, 2019.
- Competition and Aggressive Behavior: Contextual and Perceptual Predictors of Competitive and Cooperative Decision-Making. International Association for Conflict Management, Dublin, Ireland, 2019.

TEACHING INTERESTS

Leading Diversity in Organizations, Managerial Decision Making, Negotiations

TEACHING EXPERIENCE

Guest Lecturer in Evaluating Evidence (Undergraduate research methods course, Fall 2019 and 2020, Spring 2021)

Teaching Assistant for Negotiations (Undergraduate, Fall 2019 and Fall 2020)

Teaching Assistant for Managerial Decision Making (MBA, Spring 2019)

Undergraduate Advising: Judgment and Decision Making Research Immersion (Undergraduate, Fall 2018)

PROFESSIONAL SERVICE

Ad Hoc Reviewer for *Management Science*, 2018-Present

Co-Organizer of Women in Business Academia Conference, 2018, 2019

Co-Organizer of Interdisciplinary Doctoral Student Journal Club, 2019

Treasurer of Wharton Society for Advancement of Women in Business Academia, 2017-2019

PhD Social Chair of Operations, Information, Decisions Department, 2018-2020

SELECTED MEDIA COVERAGE

- “These Are the Best Ways to Up Your Workout Habits”, *CNN*, December 8, 2021
- “A Penny for Your Squats”, *New York Times*, December 8, 2021
- “Battling the Perennial Want/Should Conflict”, *Rotman Magazine*, April 13, 2021
- “Behavior Change”, *Useful Science Podcast*, March 23, 2021
- “The science of how to stick to New Year’s resolutions and truly change your habits”, *CNN*, January 1, 2021
- “Can Being the ‘Token’ Give Women and Minorities a Competitive Edge?”, *HBS Working Knowledge*, October 27, 2020
- “Unplanned Giving: If You’re Paid to Do Good, Does it Count?”, *The American Scholar*, October 7, 2020

APPENDIX: ABSTRACTS FROM PUBLISHED AND WORKING PAPERS

Kirgios, E.L., Chang, E.H., Milkman, K.L. (2020). Going It Alone: Competition Increases the Attractiveness of Minority Status. *Organizational Behavior and Human Decision Processes*.

Past research demonstrates that people prefer to affiliate with others who resemble them demographically. However, we posit that when competing for scarce opportunities, strategic considerations moderate the strength of this tendency toward homophily. Across six experiments, we find that anticipated competition weakens people's desire to join groups that include similar others. When expecting to compete against fellow group members, women are more willing to join all-male groups and Black participants are more willing to join all-White groups than in the absence of competition. We show that this effect is mediated by the belief that being distinct will lead your performance to stand out. Our findings offer a new perspective to enrich past research on homophily, shedding light on the instances when minorities are more likely to join groups in which they will be underrepresented.

Chang, E.H., **Kirgios, E.L.**, Rai, A., Milkman, K.L. (2020). The Isolated Choice Effect and Its Implications for Gender Diversity in Organizations. *Management Science*.

We highlight a feature of personnel selection decisions that can influence the gender diversity of groups and teams. Specifically, we show that people are less likely to choose candidates whose gender would increase group diversity when making personnel selections in isolation (i.e., when they are responsible for selecting a single group member) than when making collections of choices (i.e., when they are responsible for selecting multiple group members). We call this the isolated choice effect. Across six preregistered experiments ($n = 3,509$), we demonstrate that the isolated choice effect has important consequences for group diversity. When making sets of hiring and selection decisions (as opposed to making a single hire), people construct more gender-diverse groups. Mediation and moderation studies suggest that people do not attend as much to diversity when making isolated selection choices, which drives this effect.

Kirgios, E.L., Chang, E.H., Levine, E.E., Milkman, K.L., Kessler, J.B. (2020). Forgoing Earned Incentives to Signal Pure Motives. *Proceedings of the National Academy of Sciences*.

Policy makers, employers, and insurers often provide financial incentives to encourage citizens, employees, and customers to take actions that are good for them or for society (e.g., energy conservation, healthy living, safe driving). Although financial incentives are often effective at inducing good behavior, they've been shown to have self-image costs: Those who receive incentives view their actions less positively due to the perceived incompatibility between financial incentives and intrinsic motives. We test an intervention that allows organizations and individuals to resolve this tension: We use financial rewards to kick-start good behavior and then offer individuals the opportunity to give up some or all of their earned financial rewards in order to boost their self-image. Two preregistered studies—an incentivized online experiment ($n = 763$) on prosocial behavior and a large field experiment ($n = 17,968$) on exercise—provide evidence that emphasizing the intrinsic rewards of a past action leads individuals to forgo or donate earned financial rewards. Our intervention allows individuals to retroactively signal that they acted for the right reason, which we call motivation laundering. We discuss the implications of motivation laundering for the design of incentive systems and behavioral change.

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

Temptation bundling pairing a pleasurable indulgence with a behavior that provides delayed rewards combats present bias by making behaviors with delayed benefits more instantly gratifying. If people are sophisticated and capable of following self-set rules to overcome present bias, they could benefit from learning about temptation bundling. Participants in a four-week exercise-boosting program (N = 6792) received either an audiobook with encouragement to temptation bundle, only an audiobook, or neither an audiobook nor encouragement to temptation bundle. Giving participants audiobooks and encouraging temptation bundling boosted their likelihood of a weekly workout by 10 to 14% and average weekly workouts by 10 to 12% during and up to seventeen weeks post-intervention. Relative to giving audiobooks alone, encouraging temptation bundling had a modest positive effect on exercise on the extensive margin. The marginal benefit of encouraging temptation bundling may be small because free audiobooks leak information: Simply providing an audiobook to exercise program participants suggests they should temptation bundle.

Chang, E.H., **Kirgios, E.L.**, Smith, R.K. (2021). Large-Scale Field Experiment Shows Null Effects of Team Diversity on Others' Willingness to Support the Team. *Journal of Experimental Social Psychology*

Demographic diversity in the United States is rising, and increasingly, work is conducted in teams. These co-occurring phenomena suggest that it might be increasingly common for work to be conducted by demographically diverse teams. But to date, in spite of copious field experimental evidence documenting that individuals are treated differently based on their demographic identity, we have little evidence from field experiments to establish how and whether teams are treated differently based on their levels of demographic diversity. To answer this question, we present the results of a preregistered, large-scale (n=9496) field experiment testing whether team demographic diversity affects outsiders' responses to the team. Participants were asked via email to donate money to support the work of a team that was described and depicted as demographically diverse, or not. Even though the study was well-powered to detect even small effects (i.e., differences of less than 1.5 percentage points in donation rates), we found no significant differences in people's willingness to donate to a more diverse versus a less diverse team. We also did not find moderation by participant gender, racial diversity of the participant's zip code, or political leaning of the participant's zip code, suggesting that the lack of a main effect is not due to competing mechanisms cancelling out a main effect. These results suggest past research on the effects of demographic diversity on team support may not generalize to the field, highlighting the need for additional field experimental research on people's responses to demographically diverse teams.

Milkman, K.L., D. Gromet, H. Ho, J. Kay, T. 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, A. 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, A.L. Duckworth. (2021). A Mega-Study Approach to Applied Behavioral Science. *Nature*.

Increasingly, policymakers are turning to behavioral science for insights about how to improve citizens' decisions and outcomes. Typically, different scientists test different intervention ideas in different samples using different outcomes over different time intervals. The lack of comparability of such individual investigations limits their potential to inform policy. To address this limitation and accelerate the pace of discovery, we introduce the megastudy, a massive field experiment in which the effects of many different interventions are compared in

the same population on the same objectively measured outcome for the same duration. In a megastudy targeting physical exercise among 61,293 members of an American fitness chain, 30 scientists from 15 different U.S. universities worked in small, independent teams to design a total of 54 different four-week digital programs encouraging exercise (or interventions). We show that 45% of these interventions significantly boosted weekly gym visits by 9 to 27%; the top performing intervention offered micro-rewards for returning to the gym after a missed workout. Although only 8% of interventions created behavior change that was significant and measurable after the four-week intervention, in aggregate, we detect carry-over effects that are proportionally similar to those measured in prior research. Forecasts by impartial judges failed to predict which interventions would be most effective underscoring the value of testing many ideas at once and, hence, the potential for megastudies to improve the evidentiary value of behavioral science.

Rai, A., Chang, E.H., **Kirgios, E.L.**, Milkman, K.L. Group Size Influences Perceptions of Diversity and Likelihood of Hiring Women and Racial Minorities. Under second round review at *Organization Science*.

Why do some groups face backlash for lacking diversity, while others escape censure? We suggest that a group's size and Bayesian reasoning may help explain this puzzle. Because each member of a group represents the outcome of a selection decision, people have more information about larger homogeneous groups. Thus, we theorize that, consistent with Bayesian reasoning, people make different inferences about larger homogeneous groups than smaller ones, with downstream consequences for diversity management. Across a field study and three experiments, we examine how a homogeneous group's size influences diversity-related perceptions and hiring decisions. We first examine U.S. corporate boards in the S&P 1500, finding that among larger boards, all-male boards and all-White boards are significantly underrepresented relative to chance expectations. This underrepresentation increases as a function of board size, suggesting that larger groups work harder to avoid homogeneity. Moreover, larger homogeneous boards are more likely than smaller ones to add women or underrepresented racial minorities. We corroborate these field results with three experiments that generalize our findings to other settings. One experiment also examines the underlying mechanisms for the effect: Larger homogeneous groups are viewed as having (i) selection processes that are more likely to be unfair; (ii) less diversity; and (iii) greater impression management concerns than smaller homogeneous groups, all of which predict a greater likelihood of diversifying. Our findings highlight the role of group size in shaping diversity-related perceptions and decisions, and the benefits of incorporating Bayesian reasoning into theories about how groups are judged and selected.

Kirgios, E.L., Rai, A., Chang, E.H., Milkman, K.L. (2022). When Seeking Help, Women and Racial/Ethnic Minorities Benefit from Explicitly Stating their Identity. *Nature Human Behaviour*.

Receiving help can make or break a career, but women and racial minorities do not always receive the instrumental support they seek. Across two audit experiments one with politicians and another with students as well as an online experiment (total N = 5,145), we test whether women and racial minorities benefit from explicitly mentioning their demographic identity in requests for help (e.g., by including statements like As a Black woman. . . in their communications). We propose that when someone highlights their marginalized identity, it activates prospective helpers' motivations to avoid prejudiced reactions. This ultimately increases prospective helpers' willingness to provide support. Consistent with this theorizing, when marginalized identity group members explicitly mentioned their demographic identity in help-seeking emails, politicians and students responded 24.4% (7.42 percentage-points) and 79.6% (2.73 percentage-points) more often, respectively. Our online experiment suggests this effect is driven by prospective helpers' increased desire to respond without prejudice.

Chang, E.H., **Kirgios, E.L.** Demographic “Stickiness”: Implications of Impact Aversion for Inequality and Diversity in Organizations. Under second round review at *Management Science*.

Impact aversion or desire to maintain the status quo appears to influence decisions about whether to change the demographic composition of a group when filling a vacated position. People tasked with replacing a departing group member are disproportionately likely to choose a replacement with the same demographic identity, leading to demographic stickiness in group composition. We find evidence of this effect in 2,434 U.S. federal judge appointments over 75 years, in the selection of 5,616 S&P 1500 board directors from 2014 to 2019, and in two preregistered experiments (n=1400). The propensity to choose new group members based on whether they demographically resemble their predecessors suggests that demographic change in organizations will be slow, which may lead to a pessimistic outlook regarding the persistence of inequality in homogeneous organizations. However, this effect also suggests that once progress towards diversification has occurred, it should be sticky, so backsliding is less likely than might otherwise be expected. An optimistic outlook is that one-time interventions to change group composition should have a lasting impact, and change agents committed to diversification can have enduring effects on equality beyond their tenure.

Chang, E.H., **Kirgios, E.L.** When Does Diversity Beget Diversity? The Divergent Effects of Racial and Gender Diversity on U.S. Corporate Boards. Revise and resubmit at *Strategic Management Journal*.

Organizations often treat gender and racial inequality as one issue with uniform solutions, but we suggest this may be misguided. Racial segregation in the United States is widespread, so dominant demographic group members (i.e., White men) may more frequently interact with women than with racial minorities. People with little previous contact with outgroup members are more likely to learn new stereotype-disconfirming information about the outgroup through intergroup contact. Thus, intergroup contact may reduce racial biases but not gender biases. We find evidence consistent with this theorizing when examining director additions to S&P 1500 corporate boards from 2013 to 2019. Our work highlights differences in the consequences of intergroup contact for gender and racial diversity and provides guidance to those wanting to reduce inequality in organizations.

Blunden, H., **Kirgios, E.L.**, Rai, A., Chang, E.H., Milkman, K.L. When Flattery Fails: Documenting the Negative Consequences of Ingratiation for Advice Seekers. Target: *Academy of Management Journal*.

Flattery, the act of giving someone compliments or praise, has been characterized in prior organizational research as one of the most universally successful influence strategies. We counter this conception with theory and evidence illuminating when and why flattery can backfire. Integrating social exchange theory with research on authenticity, we propose that flattery can generate a negative behavioral response from the recipient (i.e., can backfire) when the flatterer is deemed inauthentic. We find evidence consistent with our theorizing in three preregistered experiments. In a field experiment (N = 2,544), U.S. city councilors were less likely to respond to a request for career advice when the request included flattery. In a second experiment (N = 499), people judged flatterers as inauthentic, and were accordingly less likely to provide them (versus non-flatterers) with a referral. A final experiment (N = 1,989) revealed that the negative effect of flattery was attenuated when the flattery was highly warranted, and thus less likely to seem inauthentic. Our theorizing illuminates the boundary conditions of the positive effects of flattery, contributing to a more nuanced understanding of the power and pitfalls of ingratiation and authenticity at work.