

## EDWARD H. CHANG

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### EDUCATION

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**The Wharton School, University of Pennsylvania** **Expected 2020**  
Ph.D. Candidate in Operations, Information, and Decisions  
Dissertation Committee: Katherine Milkman (Advisor), Adam Grant, Rebecca Schaumberg,  
Maurice Schweitzer

**Yale University** **2010**  
B.A. in Mathematics and Philosophy, *summa cum laude*

### RESEARCH INTERESTS

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I study why organizations are not as diverse as they might aspire to be and what we can do to improve diversity, equity, and inclusion in the workplace. More generally, I am interested in how we can improve people's decisions and behaviors, with a particular focus on increasing diversity. To explore these questions, I use large-scale field experiments, archival data analysis, and online and laboratory experiments.

### TEACHING INTERESTS

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Organizational Behavior, Managerial Decision Making, Diversity, Groups and Teams,  
Negotiations, Leadership

### PUBLICATIONS

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**Chang, E.H.**, Milkman, K.L., Gromet, D.M., Rebele, R.W., Massey, C., Duckworth, A.L., & Grant, A.M. (2019) The Mixed Effects of Online Diversity Training. *Proceedings of the National Academy of Sciences*, 116(16), 7778–7783.

**Chang, E.H.**, Milkman, K.L., Chugh, D., & Akinola, M. (2019). Diversity Thresholds: How Social Norms, Visibility, and Scrutiny Relate to Group Composition. *Academy of Management Journal*, 62(1), 144–171.

**Chang, E.H.** & Milkman, K.L. (2019) Improving Decisions that Affect Gender Equality in the Workplace. *Organizational Dynamics*.

### WORKING PAPERS

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**Chang, E.H.\***, Kirgios, E.L.\*, Rai, A., & Milkman, K.L. The Isolated Choice Effect and Its Implications for Gender Diversity in Organizations. Revise and resubmit at *Management Science*. \*denotes equal authorship

Kirgios, E.L., **Chang, E.H.**, & Milkman, K.L. Going It Alone: Competition Increases the Attractiveness of Minority Status. Revise and resubmit at *Organizational Behavior and Human Decision Processes*.

**Chang, E.H.** Diversity Signals and Impression Management. Working paper.

Tang, S. & **Chang, E.H.** How Might Female Stereotypes Benefit or Hinder Organizations? CEO Gender Guides Moral Perceptions and Judgments of Organizations. Working paper.

Kirgios, E.L., **Chang, E.H.**, Levine, E.E., Milkman, K.L., & Kessler, J.B. The Reward Recasting Effect: Forgoing Payments to Signal Pure Motives. Working paper.

### SELECTED RESEARCH IN PROGRESS

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**Chang, E.H.**, Kirgios, E.L., & Meng, L. Race, Gender, Intersectionality, and Asking.

Rai, A., **Chang, E.H.**, Kirgios, E.L., & Milkman, K.L. Group Size and Diversity.

Kirgios, E.L., Rai, A., **Chang, E.H.**, Milkman, K.L., & Small, D.A. Pay It Forward. (field experiment with 9k participants completed)

Rai, A., **Chang, E.H.**, Sharif, M.A., Milkman, K.L., & Duckworth, A.L. Flexibility in Scheduling. (field experiment with 6k participants in progress)

### AWARDS & HONORS

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Paul R. Kleindorfer Scholar Award, 2018

- Awarded annually to the Operations, Information, and Decisions PhD student who is making the most outstanding progress towards the completion of their dissertation

Baker Retailing Center Grant, 2018–2020

Graduate Student Travel Award, Society for Personality and Social Psychology, 2018

Best Micro Paper Award, East Coast Doctoral Conference, 2017

Winkelman Fellowship, 2017–2020

- Awarded to two third-year PhD students who have shown the greatest academic job potential across all departments at Wharton

Russell Ackoff Doctoral Student Fellowship, 2016, 2017, 2018, 2019

Wharton Doctoral Programs Travel Grant, 2016, 2017, 2018

Graduate and Professional Student Assembly Travel Grant, 2016, 2017

Highest Rated Paper Presented by a Graduate Student at Society for Judgment and Decision Making Conference, 2016

Marjorie Weiler Prize for Excellence in Writing, 2016

### TEACHING EXPERIENCE

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- TA for Managerial Decision Making (MBA, Prof. Katherine Milkman, Spring 2017, Spring 2018, Spring 2019)

- TA for Foundations of Teamwork and Leadership (MBA, Prof. Sigal Barsade, Fall 2017)

## CONFERENCE PRESENTATIONS

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### **The Isolated Choice Effect and Its Implications for Gender Diversity in Organizations**

- Academy of Management Annual Meeting, Boston, MA, 2019 (scheduled)
  - Showcase Symposium for Managerial and Organizational Cognition Division
- Interdisciplinary Network for Group Research, Lisbon, Portugal, 2019 (scheduled)

### **The Mixed Effects of Online Diversity Training**

- International Association for Conflict Management, Dublin, Ireland, 2019
- Advances with Field Experiments, Boston, MA, 2018
- East Coast Doctoral Conference, New York, NY, 2018
- Society for Personality and Social Psychology, Atlanta, GA, 2018
- Society for Judgment and Decision Making, Vancouver, Canada, 2017
- Wharton-INSEAD Doctoral Consortium, Philadelphia, PA, 2017
- Academy of Management Annual Meeting, Atlanta, GA, 2017

### **Diversity Thresholds: How Social Norms, Visibility, and Scrutiny Affect Group Composition**

- Joe Talks Webinar (for Wharton Alumni), Philadelphia, PA, 2018
- Behavioral Science and Policy Association Annual Conference, Washington, DC, 2018
- Trans-Atlantic Doctoral Conference, London, United Kingdom, 2017
- East Coast Doctoral Conference, New York, NY, 2017
- Society for Personality and Social Psychology, San Antonio, TX, 2017
  - Symposium chosen by the Diversity and Climate Committee to be the featured Diversity Symposium of SPSP 2017
- Wharton-INSEAD Doctoral Consortium, Singapore, 2016
- Society for Judgment and Decision Making, Boston, MA, 2016
- Wharton People and Organizations Conference, Philadelphia, PA, 2016
- Academy of Management Annual Meeting, Anaheim, CA, 2016
- Behavioral Decision Research in Management Conference, Toronto, Canada, 2016
- Yale Whitebox Doctoral Conference, New Haven, CT, 2016

## REVIEWING

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*Academy of Management Journal*

*Management Science*

*Manufacturing and Service Operations Management*

*Organizational Behavior and Human Decision Processes*

## SERVICE

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Organizer of Doctoral Student Journal Club, 2018

Student Representative for Society of Judgment and Decision Making Executive Board, 2017–2018

Vice President of Wharton Society for Advancement of Women in Business Academia, 2017  
Event Chair of Wharton Society for Advancement of Women in Business Academia, 2016  
Organizer of Operations, Information, and Decisions PhD Student Seminar, 2016–2018  
PhD Social Chair of Operations, Information, and Decisions Department, 2017

## SELECTED MEDIA COVERAGE

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- “Why Diversity Training Fails To Achieve Desired Results And How To Fix This” , *Forbes*, June 26, 2019
- “Experts Question Corporate Inclusion Training” , *NPR*, June 7, 2019
- “Sephora: We’re Closing For Training, But Not Because of the SZA Tweet” , *Forbes*, June 5, 2019
- “Sephora closes all US stores for diversity training after racial profiling allegation” , *The Guardian*, June 5, 2019
- “Sephora to Close Stores For Company-Wide Diversity Training. Research Shows That Might Not Be A Good Idea” , *Inc.*, June 5, 2019
- “Does Diversity Training Work?” , *Fortune*, June 3, 2019
- “Why diversity training does not change behaviour” , *Financial Times*, April 22, 2019
- “Why some anti-bias training misses the mark” , *Nature*, April 22, 2019
- “A small step for women: Progress in the boardroom is only a start” , *The Economist*, March 9, 2019

Editorials:

- “Does Diversity Training Work the Way It’s Supposed To?” , *HBR.org*, July 9, 2019
- “On the Board, ‘Twomenism’ is the New Tokenism” , *The Washington Post*, November 3, 2018

## OTHER PROFESSIONAL EXPERIENCE

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Machine Learning Lead, Square, 2011–2015, San Francisco, CA  
Data Scientist, Redfin, 2010–2011, Seattle, WA

## SELECTED RESEARCH ABSTRACTS

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**“Diversity Thresholds: How Social Norms, Visibility, and Scrutiny Relate to Group Composition”** with Katherine L. Milkman, Dolly Chugh, and Modupe Akinola (*Academy of Management Journal*, 2019)

Across a field study and four experiments, we examine how social norms and scrutiny affect decisions about adding members of underrepresented populations (e.g., women, racial minorities) to groups. When groups are scrutinized, we theorize that decision makers strive to match the diversity observed in peer groups due to impression management concerns, thereby conforming to the descriptive social norm. We examine this first in the context of U.S. corporate boards where firms face pressure to increase gender diversity. Analyses of S&P 1500 boards reveal that significantly more boards include exactly two women (the descriptive social norm) than would be expected by chance. This overrepresentation of two-women boards—a phenomenon we call “twokenism”—is more pronounced among more visible companies,

consistent with our theorizing around impression management and scrutiny. Experimental data corroborate these findings and provide support for our theoretical mechanism: decision makers are discontinuously less likely to add a woman to a board once it includes two women (the social norm), and decision makers' likelihood of adding a woman or minority to a group is influenced by the descriptive social norms and scrutiny faced. Together, these findings provide a new perspective on the persistent underrepresentation of women and minorities in organizations.

**“The Mixed Effects of Online Diversity Training”** with Katherine L. Milkman, Dena M. Gromet, Robert W. Rebele, Cade Massey, Angela L. Duckworth, and Adam M. Grant (*Proceedings of the National Academy of Sciences*, 2019)

We present results from a large (N=3,016) field experiment at a global organization testing whether a brief, science-based online diversity training can change attitudes and behaviors towards women in the workplace. Our pre-registered field experiment included an active placebo control and measured participants' attitudes and real workplace decisions up to twenty weeks post-intervention. Among groups whose average untreated attitudes—while still supportive of women—were relatively less supportive of women than other groups, our diversity training successfully produced attitude change but not behavior change. On the other hand, our diversity training successfully generated some behavior change among groups whose average untreated attitudes were already strongly supportive of women prior to training. This study extends our knowledge about the pathways to attitude and behavior change in the context of bias reduction. However, the results suggest that the one-off diversity trainings that are commonplace in organizations are unlikely to be stand-alone solutions for promoting equality in the workplace, particularly given their limited efficacy among those groups whose behaviors policymakers are most eager to influence.

**“The Isolated Choice Effect and Its Implications for Gender Diversity in Organizations”** with Erika L. Kirgios, Aneesh Rai, and Katherine L. Milkman (revise and resubmit at *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 sets of choices (i.e., when they are responsible for selecting multiple group members). We call this the isolated choice effect. Across four preregistered experiments (n=2,103) and an archival analysis of faculty hiring data at a business school, 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. A mediation study shows people do not think as much about group diversity when making isolated selection choices, which drives this effect.

**“Going It Alone: Competition Increases the Attractiveness of Minority Status”** with Erika L. Kirgios and Katherine L. Milkman (revise and resubmit at *Organizational Behavior and Human Decision Processes*)

Past research demonstrates that people prefer to affiliate with others who resemble them demographically and ideologically. However, we posit that this tendency toward homophily may be overridden by a desire to stand out when competing for scarce opportunities. Across six experiments, we find that anticipated competition weakens people's desire to join groups including similar others. When expecting to compete against fellow group members, women are more willing to join all-male groups, Black participants are more willing to join all-White groups, and partisans are more willing to join groups composed of members of the opposite political party at a significantly higher rate than they do in the absence of competition. Two follow-up studies show that participants' desire to stand out from other group members mediates this effect. Our findings highlight an important boundary condition to past research on homophily, shedding light on when and why minorities may prefer to join groups in which they will be underrepresented.

### **“Diversity Signals and Impression Management”** (working paper)

In recent years, increasing scrutiny has been placed on groups and organizations and their levels of diversity. Because groups and organizations have incentives to avoid negative scrutiny and often engage in attempts to manage impressions around scrutinized behaviors, I propose that at least some organizations attend to diversity for impression management reasons, rather than because they believe in the business case (i.e., diversity improves business outcomes) or the moral case (i.e., diversity is the right thing to do) for diversity. In a field study and additional surveys and experiments, I provide evidence that organizations systematically distort signals of their diversity levels in ways that are consistent with an impression management explanation, but inconsistent with prevailing explanations for why organizations attend to diversity. This work augments our understanding of diversity-related behaviors of organizations and may help explain the lack of progress towards racial and gender equality in organizations, given that impression management motives predict that organizations will do the bare minimum on diversity to escape negative scrutiny, while business and moral motives predict that organizations will continuously strive for equality.

### **“How Might Female Stereotypes Benefit or Hinder Organizations? CEO Gender Guides Moral Perceptions and Judgments of Organizations”** with Simone Tang (working paper)

We propose that the gender of the CEO of an organization influences how people evaluate the organization itself. Drawing from the mind perception and gender stereotyping literatures, we show that after moral transgressions, organizations that appoint new female CEOs, rather than male CEOs, are judged more positively. Organizations with female CEOs are perceived as having more experiential minds that are capable of emotions—which are strongly associated with perceived prosocial emotions and actions—compared to those with male CEOs. As a result, people predict that organizations that appoint female CEOs as opposed to male CEOs will be more compassionate and socially responsible going forward, and they are subsequently more willing to invest money in them. However, there are also potential downsides to being perceived as more compassionate: consistent with expectancy violation theory, an organization that commits moral transgressions while the CEO is a woman, rather than a man, is punished more

harshly. Together, our findings have theoretical and practical implications for the factors that influence organization perception and for diversity in the upper echelons of organizations.

**“The Reward Recasting Effect: Forgoing Payments to Signal Pure Motives”** with Erika L. Kirgios, Emma E. Levine, Katherine L. Milkman, and Judd B. Kessler (working paper)

Although we are frequently paid for good deeds (e.g., completing health screenings, recycling, and mentoring), accepting such payments has been shown to lead to less positive evaluations of our rewarded actions. Can the desire to disavow “impure,” extrinsic motives for good deeds be repurposed to promote charitable giving? We present results from an incentivized online experiment (N=454) and a large field experiment (N=17,968) suggesting this is the case. Our pre-registered studies show that prompting people to recognize the non-monetary benefits of incentivized good deeds makes them more willing to forgo or donate monetary incentives earned for those same acts. We call this the “reward recasting effect” and suggest it may be a valuable new method for increasing charitable giving while simultaneously promoting positive behavior change. In Study 1, participants who were paid to write letters of support to hospitalized children were more likely to give up their earnings when encouraged to treat the non-monetary benefits of their behavior (i.e., spreading joy) as their reward. Further, the effect was strongest for those highest on genuine prosociality. In Study 2, participants who completed a month-long exercise rewards program proved more willing to donate their earnings when prompted to treat the non-monetary benefits of the program (i.e., building an exercise habit) as their reward. Taken together, our findings underscore the key role self-signaling plays in our decisions about charitable giving and suggest the value of providing opportunities for people to disavow impure motives for their past actions.

## REFERENCES

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