Siri Isaksson

ESSAYS IN GENDER ECONOMICS





ESSAYS IN GENDER ECONOMICS

Over the past six years, I have been reflecting on how gender differences in everyday decision-making may translate into economic inequalities. Despite equal access to education, and institutional efforts to close the gender gap in most advanced economies, women remain disadvantaged in terms of hiring, wages, and promotions on the labor market. This seems to suggest that norms, preferences, discrimination, and behavior may be upholding the labor market gender gap.

For instance, if women systematically undervalue their contributions to shared work, this could lead to lower lifetime labor market outcomes. This thesis is my attempt to identify such behavioral channels. In particular, I study gender differences in group work, advice-seeking and retaliation. The first paper asks whether women claim less than appropriate credit for their contributions to successful group-work. A primary motivation for this study is that experimental research is typically conducted on the individual level, but professional life often happens in groups. How women value their individual contributions in a group setting may have a large impact on their working life, since individual contributions to group success are not transparent. This study also examines other related topics. It provides evidence on how gender composition affects team performance. In addition, it studies how men view the contribution of their female counterparts: are men less likely to trust the guality of their female team members' work? Does this affect the success of the group? The second and fourth paper, joint with Emma Heikensten, consider gender differences in advice seeking. Are women less likely to seek advice? Does advisor gender matter? The third paper, joint with Emma Heikensten and Sirus Dehdari Håfström, looks into whether men are more likely than women to seek revenge in a strategic setting. I use laboratory experiments and game show data to answer my research questions, and propose directions for future research on these topics.



SIRI ISAKSSON is a PhD student in Economics and a fellow with the Women and Public Policy Program at Harvard Kennedy School. She holds a B.Sc from Humboldt Universität zu Berlin, and a M.Sc. from Stockholm School of Economics.



Essays in Gender Economics

Siri Isaksson

Akademisk avhandling

som för avläggande av ekonomie doktorsexamen vid Handelshögskolan i Stockholm framläggs för offentlig granskning måndagen den 3 juni 2019, kl 13.15, rum 120, Handelshögskolan, Sveavägen 65, Stockholm

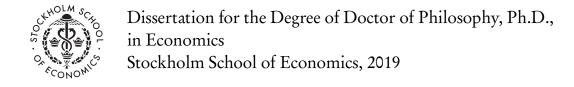


Essays in Gender Economics

Essays in Gender Economics

Siri Isaksson





Essays in Gender Economics
© SSE and Siri Isaksson, 2019

ISBN 978-91-7731-133-1 (printed) ISBN 978-91-7731-134-8 (pdf)

This book was typeset by the author using LATEX.

Front cover photo:

©Julia Hale Burlingham

Back cover photo:

©Emma Fastesson Lindgren

Printed by:

BrandFactory, Göteborg, 2019

Keywords:

Behavioral economics, gender, experimental economics, group work.

For my family and friends.

Foreword

This volume is the result of a research project carried out at the Department of Economics at the Stockholm School of Economics (SSE).

This volume is submitted as a doctoral thesis at SSE. In keeping with the policies of SSE, the author has been entirely free to conduct and present her research in the manner of her choosing as an expression of her own ideas.

SSE is grateful for the financial support provided by the Jan Wallander and Tom Hedelius Foundation which has made it possible to carry out the project.

Göran Lindqvist

Director of Research Stockholm School of Economics Tore Ellingsen

Professor and Head of the Department of Economics Stockholm School of Economics

Acknowledgements

Several people and institutions have contributed to the research presented in this dissertation, and I am deeply grateful, honored, and humbled for everyone who believed in me in this long pursuit. First, I would like to thank Magnus Johannesson, my main adviser. I came to Stockholm School of Economics thinking that I would pursue research in macroeconomics, but in my first year as a master student, I took Magnus' class in Behavioral Economics, which changed the course of my life. Magnus has held great expectations for me, which in turn made me grow as a researcher, and embark on projects that I ex ante thought were impossible. He has contributed to every paper in this dissertation with precise and thoughtful feedback. I am also deeply grateful to my co-advisor Anna Dreber Almenberg. She has constituted an amazing role-model, and a great support and inspiration. Anna's lessons are countless, and have provided a lightning rod during my PhD. I am extremely grateful for her encouragement, which on several occasions helped me overcome my self-doubts. I am very grateful both to Magnus and Anna, for allowing me to be a co-author on our joint projects at an early stage. This experience taught me everything about how to run experiments, and think about experimental design, skills that were crucial for the completion of this thesis. I have also had the great pleasure and privilege to have one of my great role-models and inspirations Katherine Baldiga Coffman as a co-advisor. Katherine has provided me with constant encouragement, inspiration and support. Katherine's mentorship contributed greatly to the fact that I dared to go on the market and present my research in various settings. Katherine has guided the work with my job market paper at every step, and I am extremely grateful for her expert input.

Before I started the PhD, I spent one year in the masters program in Economics at Stockholm School of Economics. In that program, I met someone who made a great impression on me: Adam Altmejd. Even before we started class, I reached out to him on facebook, because I could not wait to get to know

him. He was just as amazing and as I thought, and the friendship that followed has been inspiring and rewarding. While our paths as researchers diverged in the PhD program, Adam has remained an amazing intellectual resource that I could always rely on both in Stockholm and later in Cambridge: to this day I have not encountered a problem which Adam was not able to magically solve. Later that same year, I met my frequent collaborator, Emma Heikensten. We were part of the same writing program and she immediately caught my attention for the radiating person she is. Emma and I have shared many memories as co-authors and friends. She is the type of person who makes you grow and challenge yourself. Being in her presence means working harder and being more inspired, and always pushing the extra mile. In the same formative year as I met Adam and Emma, I also met Elin Molin. While we never worked on research projects together, Elin has been the best of friends and colleague one could ask for. Through the program, I also met my collaborator Sirus Dehdari Håfström, with whom I have shared so many great memories and working days in various places, including at five guys. I am thankful for him both as an amazing co-author and teacher of econometrics. I also want to thank Julia Boguslaw, Clara Fernström, Eskil Forsell, Karl Harmenberg, Dany Kessel, Matilda Kilström, Hannes Malmberg, Elisabet Olme, and Erik Oberg for being such awesome collegues and friends.

In the fourth year of my PhD, I had the immense privilege to be able to go to Harvard University as a visiting fellow in Economics and Computer Science. I am very grateful for Yiling Chen, who invited me. While there I started working on what would become my job market paper on gender differences in group-work. This project also led me to meet Adam Sam, another formative meeting in my life. Adam is an incredible problem solver, innovator, inspiration, and friend. He taught me so many things about the world, big and small: ranging from Marxist theory and automation, to neural networks, and a love for pretzel M and M's. After my first year at Harvard, I became a fellow with the Women and Public Policy Program at Harvard Kennedy School. I am deeply grateful for the opportunity to complete my job market paper that this program provided, and the incredible intellectual community of fellows. Clémentine van Effenterre whom I met through the program, became a very close friend and colleague, and we got to share some amazing moments across the globe since we ended up going on the market in the same year.

While at Harvard, I have had the pleasure of meeting so many talented

I have always admired, Petter Bryman who provided amazing companionship and most importantly knows the lyrics of every song on this planet, Joshua Braver who lights up a room with his spirit and hamantaschen, Zoe Cullen who has been a great role-model and showed me that you can be an excellent economics scholar and cool person at the same time, Lily Hu who is working on some of the most pressing issues of our times while also being a fun friend, and Heather Sarsons who's research has been fundamental for my own and who is one of the funniest people I've met. I also met Johanna Rickne and Olle Folke in the US, who have been a great source of inspiration and wonderful role-models of successful team-work.

Life is more than just work. In Cambridge, my life was made complete by the amazing house that I lived in, Dana McDonough and I went on countless adventures, work-outs, discovered new TV-shows, danced to new music, and generally did everything fun and healthy together. Dana has been the best of friends, and someone who I can always rely on – next birthday-month in Norway GF! The role that the house on Hingham 22 –created by Mike Sorriero – has played in my life in Cambridge can not be overstated, it is what has kept me grounded here and made me feel at home. For instance, the many cozy Sundays on the boat on the Charles will always stay with me. Before grad-school, I spent in college in Berlin and New York City, I am forever grateful to Laura Pantzerhielm, and Max Bach for always being there for me in Berlin, and Julia Burlingham, Oto Gillen and Isabelle Philippe for being my NYC family. Laura was my first intellectual hero and confidante, and she remains my harshest and most eloquent critic.

None of this would have been possible without my family. My gratitude is immense that my mother taught me to "Dolgozni csak pontosan, szépen, ahogy a csillag megy az égen, úgy érdemes" as a child. I am grateful to have a least a corn of her passion, wit, and grit: by passing this over to me she made this PhD possible. Also thank you mum for taking such great care of me during the market in Budapest. I am so grateful to my father for the many lessons of love and care that he has taught me. He has showed me that there are so many ways of being a man which no doubt has inspired me in my work and made this PhD possible. He also taught me the crucial lesson of how to relax and

¹Quote by Hungarian poet József Attila

rest, skills that were absolutely necessary to finish this thesis. I am grateful for having my brother Jens, that I know I can always call and who will always be there for me. Finally, I would like to thank my best friend Maria Elena Guerra Aredal. I can't begin to think of all the life-lessons you've taught me over the years. Our lives have not always been easy, but we have always found a way to move forward as a team and help each other up. This in the end I think is the most important lesson. Mea, I am forever grateful for all the lessons of kindness, empathy and emotional presence that you have taught me.

Stockholm, June 3rd, 2019 Siri Isaksson

Introduction

This thesis contains four papers. The overarching theme is gender differences in strategic decision making. Specifically, it covers gender differences in group work, advice seeking and retaliation. My quest in this work has been to identify and understand decisions women and men make differently on an every-day basis that may determine their economic success. I started working on this line of research together with Emma Heikensten. Initially, I thought that our research could be used to inform people of their biases, and perhaps help them to make better decisions as a consequence.

I want to be clear, that my role as a researcher is not to give people advice on how to behave, but rather to provide an understanding of some of the biases that may influence their decisions, and as a consequence, their success. To give an example, in my first paper, I show that there is a systematic downward bias in how much women think that they contribute to a shared success. This is important to be aware of: if women consistently attribute the credit for shared projects to their team-mates, they may not feel entitled to apply for promotions, or negotiate based on those projects. In the second paper, me and Emma Heikensten show that women seek less advice than men. If women consistently seek less advice than men, this may have a host of adverse effects: they might learn less, have smaller networks, and miss out on opportunities. Making women aware of the existence of these biases, may make them re-evaluate their importance in teams, or seek more help. However, I want to be clear that I do not think that the proper conclusion is that women should necessarily update their behavior and act as men in order to be successful. One important insight that I had during the course of my studies, is that often it is the social perception of behavior rather than the behavior per se that matters: the same action will often be judged differently depending on whether a man or a woman engages in it. What I mean by this, is that if women - for instance - were to speak up and claim their fair contributions, it does not automatically mean that they would get appropriate credit as the attribution of credit is inherently in the hand of third party evaluators. The relevant question then becomes whether and why women and men who engage in the same behavior are judged differently in strategic settings: Are women who appropriately claim 80% of a contribution to a shared project less likely to be believed than men who do the same? Are women socially sanctioned and devalued when they are outspoken about having pulled the weight on a project? If the answer is yes, consistently claiming 50% - and getting 50% - may actually be a rational strategy rather than claim 80% and get 40% for women, even if your contribution was 80%. These are open questions that I intend to answer in future studies. I think bringing in this perspective of differences in social perception given the same actions by men and women is an important next step in my research. My goal is to understand both gender differences in behavior, the social norms surrounding these behaviors, the punishment and social sanctions associated with breaking these norms, and importantly how these norms can be shifted. I look forward to working on these and related questions in the future.

Below is a short summary of each the papers included in this dissertation. In the first paper, "It Takes Two: Gender Differences in Group Work" I ask whether women claim less than appropriate credit for their contributions to successful team work. I also consider related questions: are women less likely to correct the mistakes of their partner? Does gender composition matter for how successful teams are? In order to answer these questions, I introduce a new puzzle which is solved in pairs and permits a clear measure of individual contributions to joint projects. I first establish that there are no gender differences in ability in this puzzle: women and men are equally good at solving the puzzle both on their own and in pairs. I then turn to the question of credit claiming, and show that despite the fact that women and men contribute equally on average, women consistently and significantly claim less credit than men. Interestingly, I also find that women are less likely to correct their partner's mistakes, again despite the fact that they are equally good at this game. In the second paper - "Simon Says: Examining gender differences in advice seeking and influence in the lab" - which is joint with Emma Heikensten, I turn to the question of gender differences in advice seeking. Do women seek less advice than men? Does the type of question matter? In contrast to our initial beliefs, we do find that our female participants seek less advice. Interestingly, the type

of question seems to matter: men seek more advice on the female stereotyped verbal section. In the third paper – "What Goes Around (Sometimes) Comes Around: Gender Differences in Retaliation" which is joint with Sirus Dehdari Håfström and Emma Heikensten – we look at retaliatory behavior. In this paper, we wanted to understand whether women are less likely to seek revenge than men in a strategic setting. The answer is in line with our prior: women do retaliate less than men. Interestingly however, when women do in fact engage in retaliation, they are more effective in warding off future attacks than men. In the fourth paper, "In Favor of Girls: Do Adults Trust Girls More Than Boys for Advice?" me and Emma Heikensten turn to the question of who you would ask for advice: do adults trust boys or girls more for advice? Interestingly, we find that despite the fact that the girls and boys in our setting are equally good as advisors, girls are more likely to be selected first.

On a final note, I want to mention the importance of replication and emphasize that these results should be viewed as a first step towards an understanding of the topics covered in this thesis. I think that several questions that we ask in this thesis deserve more research attention, and that more studies are needed in order answer them. Ideally, the studies presented in this thesis should be replicated, and complemented with new designs to answer the follow-up questions that emerged during the course of this work.

Contents

1	It ta	takes two: Gender differences in group work		1		
	1.1	Introduction				
	1.2	Introducing the Puzzle				
	1.3	Experimental Design	Experimental Design			
	1.4		Relationship to Experiment 1			
	1.5	Empirical Strategy				
	1.6	Results				
		1.6.1 Team Success and Individual Performance	ce	22		
		1.6.2 Credit Claims and Contributions to Suc	cessful Group			
		Work		24		
		1.6.3 Reversions		37		
	1.7	Discussion and Conclusion		39		
	1.8					
		1.8.1 Appendix tables		43		
		1.8.2 Appendix figures		44		
		1.8.3 Appendix: Experimental design: Experi		45		
		1.8.4 Appendix tables: Experiment 1		50		
2	Sim	non Says		59		
	2.1	Introduction		60		
	2.2	Experimental Procedures 6				
	2.3	Empirical Strategy				
	2.4			70		
	2.5	Exploratory Analyses				
		2.5.1 Controlling for individual characteristic question difficulty	cs, beliefs and	73		
		2.5.2 Score of the Advisor		76		

xvi ESSAYS IN GENDER ECONOMICS

		2.5.3 Impact of advice			
	2.6	Discussion and Conclusion			
	2.A	Appendix			
3	Wh	t Goes Around (Sometimes) Comes Around 8			
	3.1	Introduction			
	3.2	Data and definitions			
	3.3	Results			
		3.3.1 Robustness checks: retaliation 9			
		3.3.2 Gender differences in targets 10			
	3.4	Retaliation and success			
	3.5	Discussion			
	3.6	Appendix			
		3.6.1 Episode fixed effects			
		3.6.2 Occupation			
		3.6.3 Probability of receiving questions conditional on posi-			
		tion			
		3.6.4 First retaliation			
4	In fa	vor of girls 12			
	4.1	Introduction			
	4.2	The Game Show			
		4.2.1 Set up			
	4.3	Results			
		4.3.1 Descriptives			
		4.3.2 Analysis and Robustness Checks			
	4.4	Mechanisms			
	4.5	Discussion and Conclusion			
	4.A	Appendix			

Bibliography

- Cameron Anderson, Sebastien Brion, Don A Moore, and Jessica A Kennedy. A status-enhancement account of overconfidence. *Journal of personality and social psychology*, 103(4):718, 2012.
- Lynne M Andersson and Christine M Pearson. Tit for tat? the spiraling effect of incivility in the workplace. *Academy of management review*, 24(3):452–471, 1999.
- Thomas Andre, Myrna Whigham, Amy Hendrickson, and Sharon Chambers. Competency beliefs, positive affect, and gender stereotypes of elementary students and their parents about science versus other school subjects. *Journal of Research in Science Teaching: The Official Journal of the National Association for Research in Science Teaching*, 36(6):719–747, 1999.
- Aaron F Archer. A modern treatment of the 15 puzzle. *The American mathematical monthly*, 106(9):793–799, 1999.
- C. Argyris. Flawed advice and the management trap: How managers can know when they're getting good advice and when they're not. *Oxford University Press, Oxford, New York*, 2000.
- Dan Ariely, Anat Bracha, and Stephan Meier. Doing good or doing well? image motivation and monetary incentives in behaving prosocially. *American Economic Review*, 99(1):544–55, 2009.
- Robert Axelrod and William D Hamilton. The evolution of cooperation. *science*, 211(4489):1390–1396, 1981.
- Ghazala Azmat and Nagore Iriberri. The provision of relative performance feedback: An analysis of performance and satisfaction. *Journal of Economics and Management Strategy*, 25(1):77–110, 2016.

- Ghazala Azmat and Barbara Petrongolo. Gender and the labor market: What have we learned from field and lab experiments? *Labour Economics*, 30:32–40, 2014.
- Linda Babcock, Maria P Recalde, Lise Vesterlund, and Laurie Weingart. Gender differences in accepting and receiving requests for tasks with low promotability. *American Economic Review*, 107(3):714–47, 2017.
- Patryk Babiarz, Cliff Robb, and Ann Woodyard. The demand for financial professionals' advice: The role of financial knowledge, satisfaction, and confidence. 21:291–305, 01 2012.
- Loukas Balafoutas, Nikos Nikiforakis, and Bettina Rockenbach. Direct and indirect punishment among strangers in the field. *Proceedings of the National Academy of Sciences*, 111(45):15924–15927, 2014.
- Brad Barber and Terrance Odean. Boys will be boys: Gender, overconfidence, and common stock investment*. *The Quarterly Journal of Economics*, 116 (1):261–292, 2001.
- Max H Bazerman, Iris Bohnet, Alexandra Vivien Van Geen, et al. When performance trumps gender bias: Joint versus separate evaluation. Technical report, 2012.
- Roel M. W. J. Beetsma and Peter C. Schotman. Measuring risk attitudes in a natural experiment: Data from the television game show lingo. *The Economic Journal*, 111(474):821–848, 2001.
- Richard F Beltramini and Kenneth R Evans. Salesperson motivation to perform and job satisfaction: a sales contest participant perspective. *Journal of Personal Selling & Sales Management*, 8(2):35-42, 1988.
- Jonathan B. Berk, Eric Hughson, and Kirk Vandezande. The price is right, but are the bids? an investigation of rational decision theory. *The American Economic Review*, 86(4):954–970, 1996.
- Sylvia Beyer. Gender differences in the accuracy of self-evaluations of performance. *Journal of Personality and Social Psychology*, 59(5):960–970, 1990.
- Francine D Blau and Lawrence M Kahn. The gender wage gap: Extent, trends, and explanations. *Journal of Economic Literature*, 55(3):789–865, 2017.

- Hayley Blunden, Jennifer M Logg, Alison Wood Brooks, Leslie K John, and Francesca Gino. Seeker beware: The interpersonal costs of ignoring advice. *Organizational Behavior and Human Decision Processes*, 150:83–100, 2019.
- J Aislinn Bohren, Alex Imas, and Michael Rosenberg. The dynamics of discrimination: Theory and evidence. 2017.
- Silvia Bonaccio and Reeshad Dalal. Advice taking and decision-making: An integrative literature review, and implications for the organizational sciences. *Organizational Behavior and Human Decision Processes*, 101(2):127 151, 2006. ISSN 0749-5978.
- Alison Booth and Andrew Leigh. Do employers discriminate by gender? a field experiment in female-dominated occupations. *Economics Letters*, 107 (2):236–238, 2010.
- Pedro Bordalo, Katherine Coffman, Nicola Gennaioli, and Andrei Shleifer. Stereotypes. *Quarterly Journal of Economics*, 131(4):1753 1794, 2016a.
- Pedro Bordalo, Katherine Coffman, Nicola Gennaioli, and Andrei Shleifer. Stereotypes. *The Quarterly Journal of Economics*, 131(4):1753–1794, 2016b.
- Andreas Born, Eva Ranehill, and Anna Sandberg. A man's world? the impact of a male dominated environment on female leadership. 2018.
- Jordi Brandts, Valeska Groenert, and Christina Rott. The impact of advice on women's and men's selection into competition. *Management Science*, 61(5): 1018–1035, 2015.
- Thomas Breda and Son Thierry Ly. Professors in core science fields are not always biased against women: Evidence from france. *American Economic Journal: Applied Economics*, 7(4):53–75, 2015.
- Alan Bundy and Lincoln Wallen. Breadth-first search. In *Catalogue of Artificial Intelligence Tools*, pages 13–13. Springer, 1984.
- Scott Carrell, Marianne Page, and James West. Sex and science: How professor gender perpetuates the gender gap*. *The Quarterly Journal of Economics*, 125 (3):1101–1144, 2010.

- Bogachan Celen, Shachar Kariv, and Andrew Schotter. An experimental test of advice and social learning. *Management Science*, 56(10):1687–1701, 2010.
- Arun G Chandrasekhar, Benjamin Golub, and He Yang. Signaling, shame, and silence in social learning. Technical report, National Bureau of Economic Research, 2018.
- Gina Masullo Chen and Zainul Abedin. Exploring differences in how men and women respond to threats to positive face on social media. *Computers in Human Behavior*, 38:118–126, 2014.
- Tim H Clutton-Brock and Geoffrey A Parker. Punishment in animal societies. *Nature*, 373(6511):209, 1995.
- Katherine B Coffman, Christine L Exley, and Muriel Niederle. When gender discrimination is not about gender. 2017.
- Katherine Coffman Baldiga. Evidence on self-stereotyping and the contribution of ideas. *The Quarterly Journal of Economics*, 129(4):1625–1660, 2014.
- Taya R. Cohen and Chester A. Insko. War and peace: Possible approaches to reducing intergroup conflict. *Perspectives on Psychological Science*, 3(2): 87–93, 2008.
- Shawn Allen Cole and A Nilesh Fernando. The value of advice: Evidence from the adoption of agricultural practices. *HBS Working Group Paper*, 1(1.3):6, 2014.
- David Cooper and John Kagel. A failure to communicate: an experimental investigation of the effects of advice on strategic play. *European Economic Review*, 82:24 45, 2016.
- Martin Copeland, Katherine Reynolds, and Jamie Burton. Social identity, status characteristics and social networks: Predictors of advice seeking in a manufacturing facility. *Asian Journal of Social Psychology*, 11(1):75–87, 2007.
- Christopher Cornwell, David B Mustard, and Jessica Van Parys. Noncognitive skills and the gender disparities in test scores and teacher assessments: Evidence from primary school. *Journal of Human Resources*, 48(1):236–264, 2013.

- Rachel Croson and Uri Gneezy. Gender differences in preferences. *Journal of Economic literature*, 47(2):448–74, 2009a.
- Rachel Croson and Uri Gneezy. Gender differences in preferences. *Journal of Economic literature*, 47(2):448–74, 2009b.
- Martin Daly and Margo Wilson. Homicide. Transaction Publishers, 1988.
- Kay Deaux and Elizabeth Farris. Attributing causes for one's own performance: The effects of sex, norms, and outcome. *Journal of Research in Personality*, 11(1):59 72, 1977.
- Sirus Dehdari. Economic distress and support for far-right parties evidence from sweden. *mimeo*, 2018.
- Esther Duflo and Emmanuel Saez. The role of information and social interactions in retirement plan decisions: Evidence from a randomized experiment. *The Quarterly journal of economics*, 118(3):815–842, 2003.
- Jacquelynne Eccles, Janis Jacobs, and Rena Harold. Gender role stereotypes, expectancy effects, and parents' socialization of gender differences. *Journal of Social Issues*, 46(2):183–201, 1990.
- Catherine C Eckel and Philip J Grossman. Chivalry and solidarity in ultimatum games. *Economic Inquiry*, 39(2):171–188, 2001.
- Ernst Fehr and Simon Gächter. Fairness and retaliation: The economics of reciprocity. *Journal of economic perspectives*, 14(3):159–181, 2000.
- Michael Finke, Sandra Huston, and Danielle Winchester. Financial advice: Who pays. *Journal of Financial Counseling and Planning*, 22(1):18, 2011.
- David Garvin and Joshua Margolis. The art of giving and receiving advice. *Harvard Business Review*, January-February 2015.
- Robert Gertner. Game shows and economic behavior: Risk-taking on "card sharks". *The Quarterly Journal of Economics*, 108(2):507–521, 1993.
- Uri Gneezy, Muriel Niederle, and Aldo Rustichini. Performance in competitive environments: Gender differences. *The Quarterly Journal of Economics*, 118(3):1049–1074, 2003.

- Claudia Goldin and Cecilia Rouse. Orchestrating impartiality: The impact of blind auditions on female musicians. *American Economic Review*, 90 (4):715–741, 2000.
- Vladas Griskevicius, Joshua M Tybur, Steven W Gangestad, Elaine F Perea, Jenessa R Shapiro, and Douglas T Kenrick. Aggress to impress: hostility as an evolved context-dependent strategy. *Journal of personality and social psychology*, 96(5):980, 2009.
- Rema N Hanna and Leigh L Linden. Discrimination in grading. *American Economic Journal: Economic Policy*, 4(4):146–68, 2012.
- Michelle C Haynes and Madeline E Heilman. It had to be you (not me)! womens attributional rationalization of their contribution to successful joint work outcomes. *Personality and Social Psychology Bulletin*, 39(7):956–969, 2013.
- Emma Heikensten and Siri Isaksson. In favor of girls: A field study of adults' beliefs in children's ability. *mimeo*, 2016.
- Benedikt Herrmann, Christian Thöni, and Simon Gächter. Antisocial punishment across societies. *Science*, 319(5868):1362–1367, 2008.
- Björn Tyrefors Hinnerich, Erik Höglin, and Magnus Johannesson. Are boys discriminated in swedish high schools? *Economics of Education review*, 30 (4):682–690, 2011.
- David Hofmann, Zhike Lei, and Adam Grant. Seeking help in the shadow of doubt: The sensemaking processes underlying how nurses decide whom to ask for advice. *Journal of Applied Psychology*, 94(5):1261–1274, 2009.
- C. Holt and S. Laury. Risk aversion and incentive effects. *The American Economic Review*, 92(5):1644–1655, 2002.
- Sander Hoogendoorn, Hessel Oosterbeek, and Mirjam Van Praag. The impact of gender diversity on the performance of business teams: Evidence from a field experiment. *Management Science*, 59(7):1514–1528, 2013.
- Tanjim Hossain and Ryo Okui. The binarized scoring rule. *Review of Economic Studies*, 80(3):984–1001, 2013.

- Radosveta Ivanova-Stenzel and Dorothea Kübler. Gender differences in team work and team competition. *Journal of Economic Psychology*, 32(5):797–808, 2011.
- Raghuram Iyengar and Andrew Schotter. Learning under supervision: an experimental study. *Experimental Economics*, 11(2):154–173, Jun 2008.
- Robert Jensen. The (perceived) returns to education and the demand for schooling. *The Quarterly Journal of Economics*, 125(2):515–548, 2010.
- Michael Jetter and Jay K. Walker. Gender differences in competitiveness and risk-taking among children, teenagers, and college students: Evidence from jeopardy! *IZA Discussion Paper*, (11201), 2017.
- Seeun Jung and Radu Vranceanu. Gender interaction in teams: Experimental evidence on performance and punishment behavior. *Korean Economic Review*, 33(1):95–126, 2015.
- John H Kagel and Alvin E Roth. *The Handbook of Experimental Economics*, *Volume 2: The Handbook of Experimental Economics*. Princeton university press, 2016.
- Victor Lavy. Do gender stereotypes reduce girls' or boys' human capital outcomes? evidence from a natural experiment. *Journal of public Economics*, 92 (10-11):2083–2105, 2008.
- Victor Lavy and Edith Sand. On the origins of gender human capital gaps: Short and long term consequences of teachers stereotypical biases. Technical report, National bureau of economic research, 2015.
- Edward P Lazear and Kathryn L Shaw. Personnel economics: The economist's view of human resources. *Journal of economic perspectives*, 21(4):91–114, 2007.
- Fiona Lee. When the going gets tough, do the tough ask for help? help seeking and power motivation in organizations. *Organizational Behavior and Human Decision Processes*, 72(3):336 363, 1997.
- Erica Lindahl. Comparing teachers' assessments and national test results: evidence from sweden. Technical report, Working Paper, IFAU-Institute for Labour Market Policy Evaluation, 2007.

- John A List. Friend or foe? a natural experiment of the prisoner's dilemma. *The Review of Economics and Statistics*, 88(3):463–471, 2006.
- M. A. Lundeberg, P. W. Fox, and J Punccohar. Highly confident but wrong: Gender differences and similarities in confidence judgments. *Journal of Educational Psychology*, 86(1):114–121, 1994.
- Alice MacLean, Kate Hunt, Sarah Smith, and Sally Wyke. Does gender matter? an analysis of men's and women's accounts of responding to symptoms of lung cancer. *Social Science and Medicine*, 191:134 142, 2017.
- Michael L. McDonald and James D. Westphal. Getting by with the advice of their friends: Ceos' advice networks and firms' strategic responses to poor performance. *Administrative Science Quarterly*, 48(1):1–32, 2003.
- Peter McGee and Stelios Constantinides. Repeated play and gender in the ultimatum game. *The Journal of Socio-Economics*, 42:121–126, 2013.
- Carl Mellström and Magnus Johannesson. Crowding out in blood donation: was titmuss right? *Journal of the European Economic Association*, 6(4):845–863, 2008.
- Andrew Metrick. A natural experiment in "jeopardy!". *The American Economic Review*, 85(1):240–253, 1995.
- Corinne A Moss-Racusin, John F Dovidio, Victoria L Brescoll, Mark J Graham, and Jo Handelsman. Science facultys subtle gender biases favor male students. *Proceedings of the National Academy of Sciences*, 109(41):16474–16479, 2012.
- Sendhil Mullainathan, Markus Noeth, and Antoinette Schoar. The market for financial advice: An audit study. Working Paper 17929, National Bureau of Economic Research, 3 2012.
- David Neumark, Roy J Bank, and Kyle D Van Nort. Sex discrimination in restaurant hiring: An audit study. *The Quarterly journal of economics*, 111 (3):915–941, 1996.
- Muriel Niederle and Lise Vesterlund. Do women shy away from competition? do men compete too much? *The Quarterly Journal of Economics*, 122(3): 1067–1101, 2007.

- Muriel Niederle and Lise Vesterlund. Gender and competition. *Annu. Rev. Econ.*, 3(1):601-630, 2011.
- Nikos Nikiforakis. Punishment and counter-punishment in public good games: Can we really govern ourselves? *Journal of Public Economics*, 92 (1-2):91–112, 2008.
- Yaw Nyarko, Andrew Schotter, and Barry Sopher. On the informational content of advice: a theoretical and experimental study. *Economic Theory*, 29 (2):433–452, Oct 2006.
- Rosaleen OBrien, Kate Hunt, and Graham Hart. It's caveman stuff, but that is to a certain extent how guys still operate: men's accounts of masculinity and help seeking. *Social Science and Medicine*, 61(3):503–516, 2005.
- Richard M. Perloff. *The Dynamics of Persuasion: Communication and Attitudes in the 21st Century*. Lawrence Erlbaum Associates, Mahwah NJ, 2 edition, 2003.
- Thierry Post, Martijn J. van den Assem, Guido Baltussen, and Richard H. Thaler. Deal or no deal? decision making under risk in a large-payoff game show. *American Economic Review*, 98(1):38–71, March 2008.
- Manfred Prenzel and Jörg Doll. Bildungsqualität von Schule: Schulische und außerschulische Bedingungen mathematischer, naturwissenschaftlicher und überfachlicher Kompetenzen. Beltz Weinheim, 2002.
- Nichola J Raihani and Redouan Bshary. The reputation of punishers. *Trends in ecology & evolution*, 30(2):98–103, 2015.
- Michael T Rehg, Marcia P Miceli, Janet P Near, and James R Van Scotter. Antecedents and outcomes of retaliation against whistleblowers: Gender differences and power relationships. *Organization Science*, 19(2):221–240, 2008.
- Ernesto Reuben, Paola Sapienza, and Luigi Zingales. How stereotypes impair women's careers in science. *Proceedings of the National Academy of Sciences*, 111(12):4403–4408, 2014a.
- Ernesto Reuben, Paola Sapienza, and Luigi Zingales. How stereotypes impair womens careers in science. *Proceedings of the National Academy of Sciences*, 111(12):4403–4408, 2014b.

- Peter A Riach and Judith Rich. An experimental investigation of sexual discrimination in hiring in the english labor market. *Advances in Economic Analysis & Policy*, 5(2), 2006.
- Heather Sarsons. Gender differences in recognition for group work. *Harvard University*, 3, 2015.
- Jenny Säve-Söderbergh and Gabriella Sjögren Lindquist. Children do not behave like adults: Gender gaps in performance and risk taking in a random social context in the high-stakes game shows jeopardy and junior jeopardy. *The Economic Journal*, 127(603):1665–1692, 2017.
- Andrew Schotter. Decision making with naive advice. *American Economic Review*, 93(2):196–201, 2003.
- Andrew Schotter and Barry Sopher. Social learning and coordination conventions in intergenerational games: An experimental study. *Journal of Political Economy*, 111(3):498–529, 2003.
- Andrew Schotter and Barry Sopher. Trust and trustworthiness in games: An experimental study of intergenerational advice. *Experimental Economics*, 9 (2):123–145, Jun 2006.
- Andrew Schotter and Barry Sopher. Advice and behavior in intergenerational ultimatum games: An experimental approach. *Games and Economic Behavior*, 58(2):365–393, 2007.
- Arthur Schram, Jordi Brandts, and Klarita Gërxhani. Social-status ranking: a hidden channel to gender inequality under competition. *Experimental Economics*, Feb 2018.
- Sara J Solnick. Gender differences in the ultimatum game. *Economic Inquiry*, 39(2):189–200, 2001.
- Rhea E Steinpreis, Katie A Anders, and Dawn Ritzke. The impact of gender on the review of the curricula vitae of job applicants and tenure candidates: A national empirical study. *Sex roles*, 41(7-8):509–528, 1999.
- Karolina Sylwester, Benedikt Herrmann, and Joanna J Bryson. Homo homini lupus? explaining antisocial punishment. *Journal of Neuroscience*, *Psychology*, and *Economics*, 6(3):167, 2013.

- Josh Terrell, Andrew Kofink, Justin Middleton, Clarissa Rainear, Emerson Murphy-Hill, Chris Parnin, and Jon Stallings. Gender differences and bias in open source: Pull request acceptance of women versus men. *PeerJ Computer Science*, 3:e111, 2017a.
- Josh Terrell, Andrew Kofink, Justin Middleton, Clarissa Rainear, Emerson Murphy-Hill, Chris Parnin, and Jon Stallings. Gender differences and bias in open source: Pull request acceptance of women versus men. *PeerJ Computer Science*, 3:e111, 2017b.
- Per Tullberg and Mattias Sjöstrand. Könsskillnader i måluppfyllelse och utbildningsval., 2016.
- Inga Wernersson. "könsskillnader i skolprestationer idéer om orsaker., 2010.
- Benjamin M Wilkowski, Cynthia M Hartung, Sarah E Crowe, and Christopher A Chai. Men don't just get mad; they get even: Revenge but not anger mediates gender differences in physical aggression. *Journal of Research in Personality*, 46(5):546–555, 2012.
- Wendy M Williams and Stephen J Ceci. National hiring experiments reveal 2: 1 faculty preference for women on stem tenure track. *Proceedings of the National Academy of Sciences*, 112(17):5360–5365, 2015.
- Margo Wilson and Martin Daly. Competitiveness, risk taking, and violence: The young male syndrome. *Ethology and sociobiology*, 6(1):59–73, 1985.
- Alison Wood Brooks, Francesca Gino, and Maurice Schweitzer. Smart people ask for (my) advice: Seeking advice boosts perceptions of competence. *Management Science*, 61(6):1421–1435, 2015.
- Ilan Yaniv and Eli Kleinberger. Advice taking in decision making: Egocentric discounting and reputation formation. *Organizational Behavior and Human Decision Processes*, 83(2):260 281, 2000.
- Amos Zeichner, Dominic J Parrott, and F Charles Frey. Gender differences in laboratory aggression under response choice conditions. *Aggressive behavior*, 29(2):95–106, 2003.