



Describing Deferred Acceptance and Strategyproofness to Participants: Experimental Analysis

YANNAI A. GONCZAROWSKI, Harvard University, USA

ORI HEFFETZ, The Hebrew University of Jerusalem, Israel, Cornell University, USA, and NBER, USA

GUY ISHAI, The Hebrew University of Jerusalem, Israel

CLAYTON THOMAS, Microsoft Research, USA

We conduct an incentivized lab experiment to test participants' ability to understand the DA matching mechanism and the strategyproofness property, conveyed in different ways. We find that while many participants can (using a novel GUI) learn DA's mechanics and calculate its outcomes, such understanding does not imply understanding of strategyproofness (as measured by specially designed tests). However, a novel *menu* description of strategyproofness conveys this property significantly better than other treatments. While behavioral effects are small on average, participants with levels of strategyproofness understanding above a certain threshold play the classical dominant strategy at very high rates.

A full version of this paper can be found at <https://yannai.gonch.name/scientific/papers/2024-describing-da-sp-redirect.html>.

CCS Concepts: • **Theory of computation** → **Algorithmic mechanism design**; • **Human-centered computing** → **Laboratory experiments**; • **Applied computing** → **Economics**.

Additional Key Words and Phrases: Deferred Acceptance, Strategyproofness, Behavioral Mechanism Design, Menu Mechanisms

ACM Reference Format:

Yannai A. Gonczarowski, Ori Heffetz, Guy Ishai, and Clayton Thomas. 2024. Describing Deferred Acceptance and Strategyproofness to Participants: Experimental Analysis. In *Conference on Economics and Computation (EC '24)*, July 8–11, 2024, New Haven, CT, USA. ACM, New York, NY, USA, 2 pages. <https://doi.org/10.1145/3670865.3673600>

Acknowledgments

Keren-Or Barashi Gortler, Itamar Bellaiche, Yehonatan Caspi, Gabriela Cohen-Hadid, Ayala Goldfarb, Michael Khalfin, Ido Leshkowitz, Josef Mccrum, Shenhav Or, Yonatan Rahimi and Ohad Weschler provided excellent research assistance. The authors thank Ben Enke, Nicole Immorlica, David Laibson, Assaf Romm, Shigehiro Serizawa, Ran Shorrer, and Leeat Yariv for helpful discussions; participants at the Stanford Institute for Theoretical Economics (SITE) 2023 Experimental Economics, SITE 2023 Market Design, WZB Berlin Matching Workshop, Crown Family Israel Center for Innovation (ICI) 2024 Academic Conference, Virtual Market Design Seminar, 2024 Marketplace Innovations Workshop, 8th Solomon Lew Conference on Behavioral Economics (Tel Aviv), and

Authors' Contact Information: Yannai A. Gonczarowski, yannai@gonch.name, Harvard University, Cambridge, MA, USA; Ori Heffetz, oh33@cornell.edu, The Hebrew University of Jerusalem, Jerusalem, Israel and Cornell University, Ithaca, New York, USA and NBER, Cambridge, MA, USA; Guy Ishai, guy.ishai@mail.huji.ac.il, The Hebrew University of Jerusalem, Jerusalem, Israel; Clayton Thomas, thomas.clay95@gmail.com, Microsoft Research, Cambridge, MA, USA.

Permission to make digital or hard copies of all or part of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. Copyrights for third-party components of this work must be honored. For all other uses, contact the owner/author(s).

EC '24, July 8–11, 2024, New Haven, CT, USA

© 2024 Copyright held by the owner/author(s).

ACM ISBN 979-8-4007-0704-9/24/07

<https://doi.org/10.1145/3670865.3673600>

seminar participants at Bar Ilan, Cornell, and the Hebrew University for comments that significantly improved the paper; and Adam Chafee and his team at the Cornell Business Simulation Lab for their help with running the experiment. The authors gratefully acknowledge research support by the following sources. Gonczarowski: National Science Foundation (NSF-BSF grant No. 2343922), Harvard FAS Inequality in America Initiative, and Harvard FAS Dean's Competitive Fund for Promising Scholarship. Heffetz: Israel Science Foundation (grant No. 2968/21), US-Israel Binational Science Foundation (NSF-BSF grant No. 2023676), Cornell's S.C. Johnson School, and Cornell's Center for Social Sciences. Ishai: Barbara and Morton Mandel Doctoral Program, Bogen Family, and Federmann Center for Rationality. Thomas: NSF CCF-1955205, Wallace Memorial Fellowship in Engineering, and Siebel Scholar award; part of his work was carried out while in Princeton's Department of Computer Science.