the WBL

WHARTON BEHAVIORAL LAB

2022 ANNUAL REPORT

Wharton
UNIVERSITY of PENNSYLVANIA

Maurice Schweitzer

Cecilia Yen Koo Professor
Professor of Operations, Information and Decisions
Professor of Management

The Wharton Behavioral Lab has had a great year. We continue to support a broad set of Wharton scholars conducting cutting-edge (and often challenging) behavioral research.

In 2022, we supported research from 53 faculty across seven Wharton departments, and we supported 48 published articles and 117 working papers. In addition to supporting a growing demand for online studies, the pace of in-person studies has returned to pre-pandemic levels. Our in-person studies have become higher-touch. Compared to pre-pandemic in-person studies that often asked participants to complete surveys, our in-person participants are exposed to taste tests, video recording, eye-tracking, and physio measures.

In the Wharton Behavioral Lab, we also implemented new systems for scheduling and paying participants. In making these changes, we transitioned from being the largest user of cash at the University of Pennsylvania (including the hospital gift shop!) to being completely cash-free.

We also started a Workshop series for Wharton faculty and Ph.D. students focused on human subjects and behavioral research methods. These workshops bring together research staff, such as leading members of the Internal Review Board and Wharton Computing, and Wharton scholars including faculty and Ph.D. students to share their knowledge about new developments and methods.

Finally, I want to extend my gratitude to the incredible Wharton Behavioral Lab staff. Our facility is remarkable, but what makes the Wharton Behavioral Lab the best place to conduct behavioral research in the world is our extraordinary staff.

Wharton

History

Prior to the Wharton Behavioral Lab (WBL), Wharton faculty spent a significant portion of their time recruiting participants and executing studies, thereby limiting their creative capacity to design and pose studies. At the same time, the School faced several challenges regarding behavioral research, such as recruiting new faculty in the field and allocating research dollars. In response to these growing challenges, Wharton created the WBL.

The WBL in its current form began in Spring 2005 with a single lab located in Jon M. Huntsman Hall (JMHH). The initial proposal estimated that the research volume would range between 5,000 and 14,000 participant-hours annually (with the lower number being the 2005 volume). In the first year, actual volume exceeded those estimates and a second location was added in Steinberg-Dietrich Hall (SHDH). This immediate high volume was interpreted as evidence that the WBL addressed a major deficiency in research support that had slowed the rate of research productivity and/or reduced the sample sizes used in behavioral research projects. In 2020, the on-campus volume was over 30,000 participant-hours and online volume was over 1,000,000 completed surveys/experiments. This growth since 2005 has resulted from increased numbers of faculty doing behavioral research and increased volume per researcher.

The WBL serves as a key to unlocking vast impact from the research of Wharton's faculty. Since opening in 2005, the WBL has established itself as the preeminent laboratory of its kind, attracting faculty and doctoral students from around the world. The Wharton School is the leading place for behavioral research with over 55 faculty utilizing the WBL on a regular basis.

The WBL provides faculty and doctoral students a dedicated research space, experienced staff, and financial resources to support behavioral, business-related research. The scale of the WBL enables Wharton to efficiently and profoundly boost faculty research productivity.

"The WBL allows me to think much bigger in the questions I ask and the way I can find answers, build more consequence into my studies, gain more confidence in my findings, and ultimately, do research that stands to have a bigger impact."

CAIT LAMBERTON,
ALBERTO I. DURAN PRESIDENT'S DISTINGUISHED PROFESSOR,
PROFESSOR OF MARKETING

Wharton

WBL Team

Meet the dedicated team members of The Wharton Behavioral Lab.
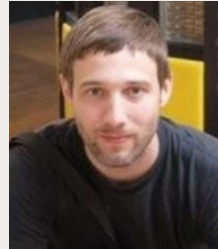
Maurice Schweitzer
Academic Director

Cecilia Yen Koo Professor
Professor of Operations, Information and Decisions
Professor of Management

Mary Spratt
Associate Director

Scheduling, Financials, Hiring/Staff Management, Advertising and Promotion

Robert Botto
IT Director

Lab hardware and software systems, Research programming support, Psychophysiological methods

Bob Stewart
Senior IT Support Specialist

Lab hardware and tech support, Qualtrics administrative support, Evaluation and implementation of new technologies

Patricia James
Business Administrator

Budgeting and financial liaison

Susan McCafferty
Sr. Research Coordinator

Special Panels - Online Studies

Mturk/Prolific implementation, Field Studies, Reimbursements, Financials, Qualtrics liaison

Emily Rosa
Sr. Research Coordinator

On-campus studies

Session coordination and implementation, RA hiring and training, Cash management

Sophie Bartholomew
Lab Coordinator

Session coordination and implementation, RA hiring and training,

Lee Dandelias
Research Assistant

Study implementation, Participant check-in/check-out

Katerina Bratke
Research Assistant

Study implementation, Participant check-in/check-out

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WBL Academic Advisory Board

The Advisory Board includes leading behavioral science faculty from across the Wharton School. These scholars offer guidance, advice, and review large proposals along with Maurice Schweitzer, the academic director of the WBL.
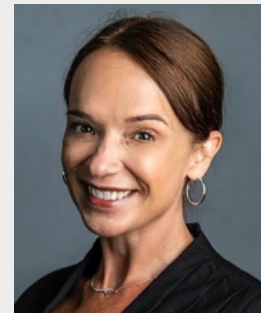
Andrew Carton
Associate Professor, Management

Judd Kessler
Howard Marks Associate Professor, Business Economics & Public Policy

Cait Lamberton
Alberto I. Duran President's Distinguished Professor Professor of Marketing

Michael Platt
James S. Riepe Universtiy Professor - Marketing, Psychology, Neuroscience

Joseph Simmons
Dorothy Silberberg Professor of Applied Statistics Professor Operations, Information and Decisions

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The Numbers - On Campus Studies

The WBL's newly renovated on-campus labs are located in Steinberg-Dietrich Hall.

10,729

COMPLETED SURVEYS

2022 saw a return to pre-pandemic numbers in terms of participant engagement. The WBL will continue its efforts to retain current levels while also attracting new users.
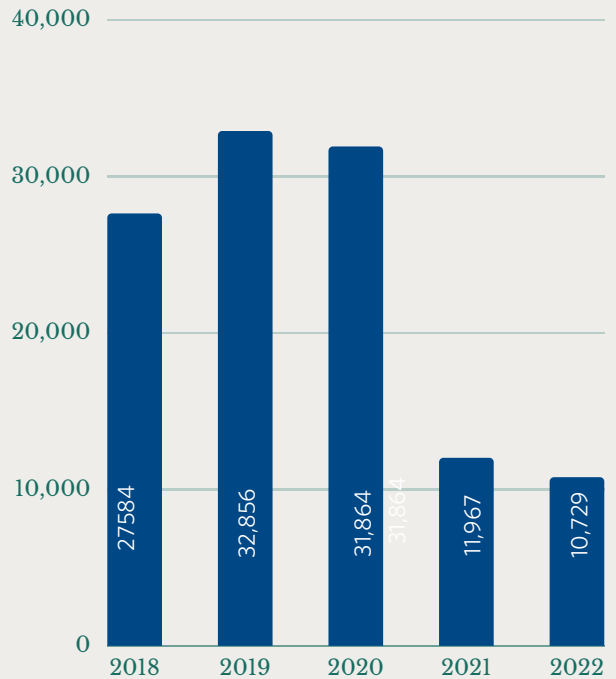
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84 ON-CAMPUS +55 REMOTE SESSIONS

A typical on-campus session includes up to 4 separate experiments delivering between 250 and 400 participants.

A session is a group of experiments that are run at the same time in the same location.

RESEARCH PARTICIPANTS (completed surveys)

Year	Value
2018	27584
2019	32,856
2020	31,864
2021	11,967
2022	10,729

HUMAN SUBJECT PAYMENTS ($000s)

Wharton
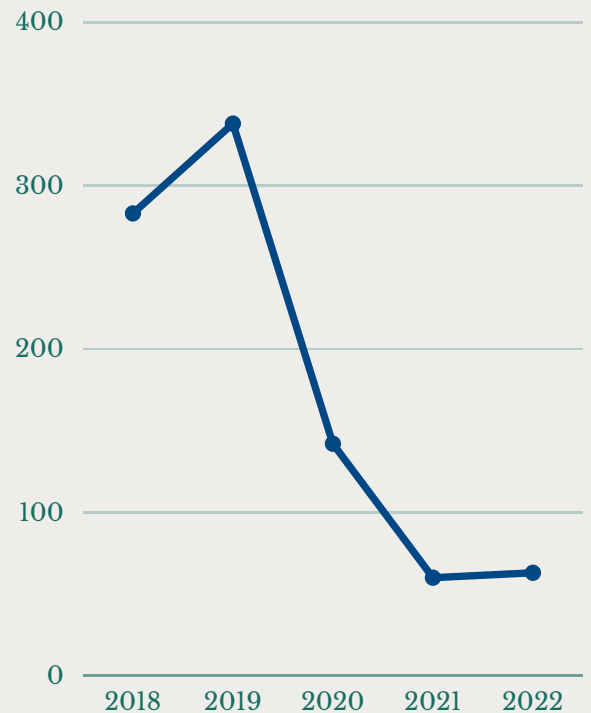
The Numbers - Specialized Panels

Specialized panels include field studies, MTurk, Prolific and Qualtrics

RESEARCH PARTICIPANTS (completed surveys)

| Year	Participants
2017	333,381
2018	538,674
2019	640,033
2020	1,126,793
2021	1,013,425
2022	948,062

19%

DECREASE IN NUMBER OF ONLINE STUDIES

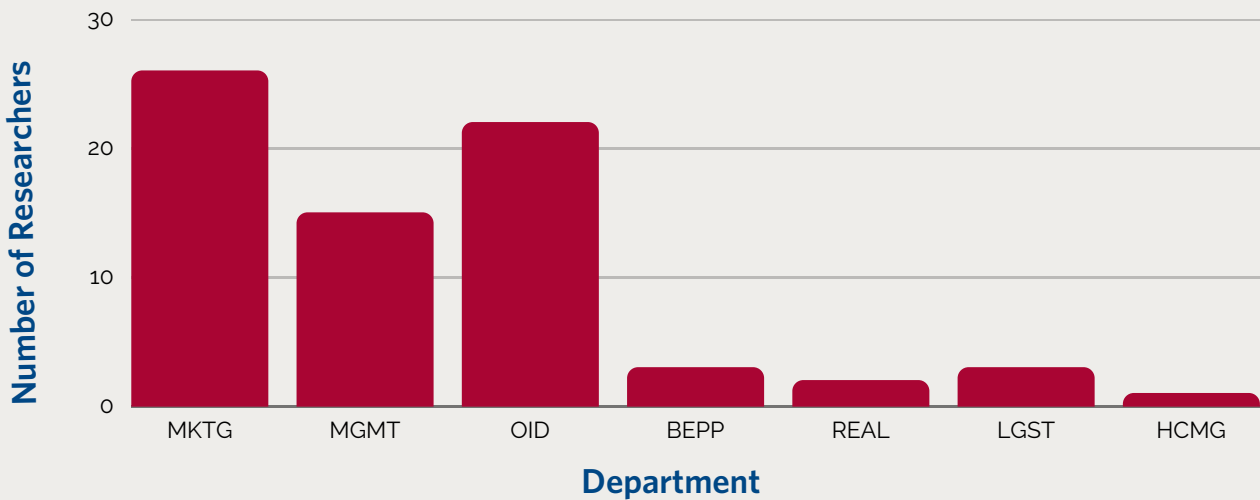The WBL reached over 900,000 participants conducting over 2,576 studies with online panels.

2576

SPECIALIZED PANEL STUDIES

Researchers use specialized panels to target large sample sizes and reach specific target demographics.

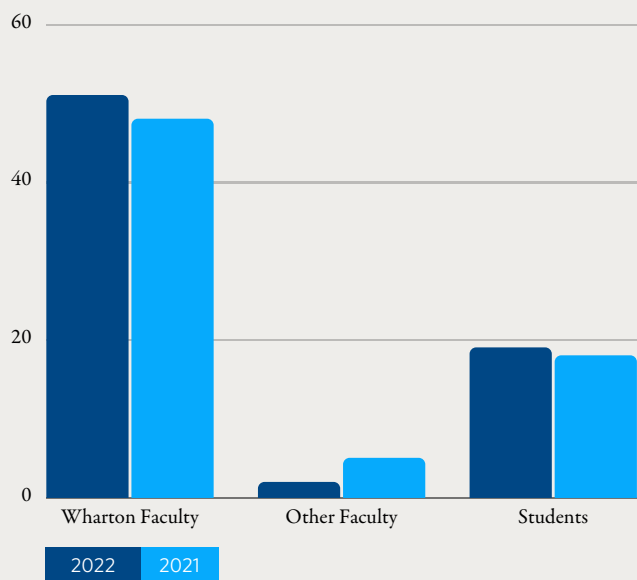## Human Subject Payments ($000s)
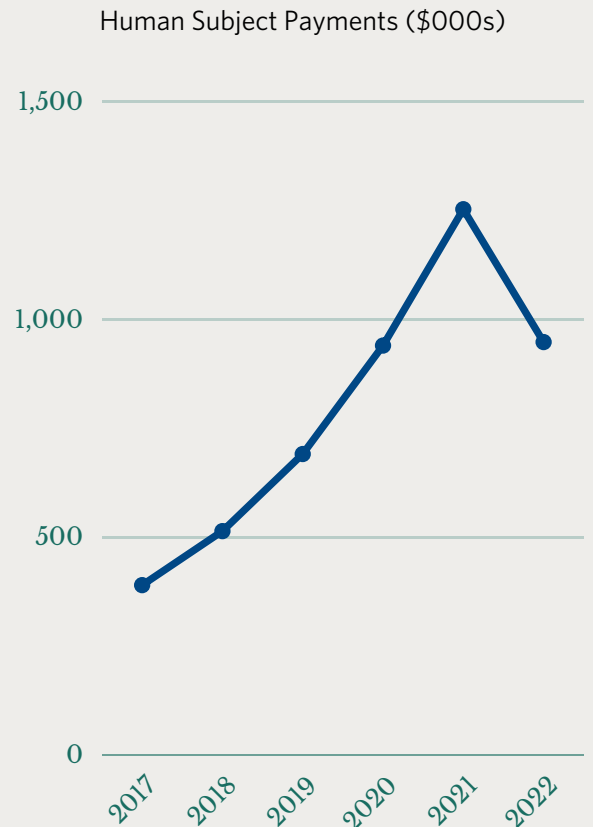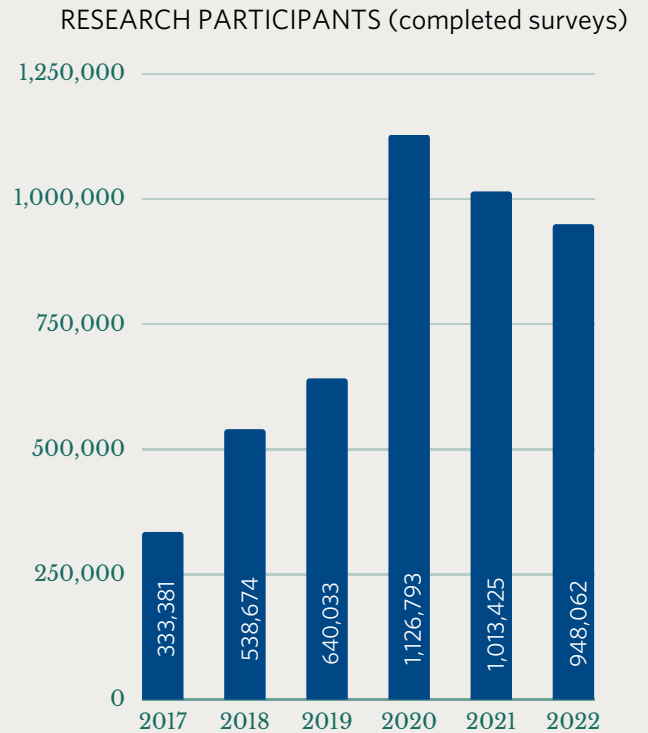
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Researchers - Faculty Engagement

2022 Total Users by Department

NOTE: MKTG continues to lead with 26 PIs followed closely behind by OID and MGMT with 22 and 15 respectively. Wharton faculty members sponsor almost all research done by doctoral students.

The WBL continues to see high levels of engagement from our faculty. The total number of primary investigators for CY2022 was 72. This number is comprised of 53 faculty and 19 students spanning over 7 departments.

Based on current requests for on-campus and specialized samples we expect growth to continue in 2023.

2022-2021 Usage of WBL Services by User Type

Note: Wharton Faculty includes Visiting Faculty and Post-docs

Wharton

Publications

Cumulative List of Papers and Research Projects - 2022
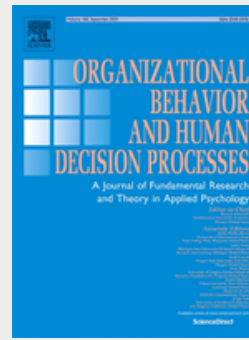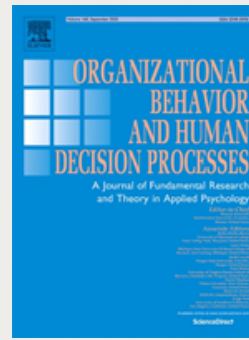

Published Articles

1. Aka, A., & Bhatia, S. (2022). Machine Learning Models for Predicting, Understanding, and Influencing Health Perception. <u>Journal of the Association for Consumer Research</u>, 7(2), 142-153. Chicago

2. Arnett, R.D. (2023) Uniting through difference: Rich cultural-identity expression as a conduit to inclusion. <u>Organization Science</u>.

3. Barack*, D.L., Ludwig*, V.U., Parodi, F., Ahmed, N., Brannon, E. M , Ramakrishnan, A., Platt, M.L. (2022) Attention deficits linked with proclivity to explore while foraging [Preprint]. [*equal contributions] https://psyarxiv.com/nyvjq/

4. Berger, Jonah, Matt Rocklage, and Grant Packard (2022) "Expression Modalities: How Speaking Versus Writing Shapes Word of Mouth", <u>Journal of Consumer Research,</u> 49(3), 389-408.

5.Berger, Jonah, Wendy Moe, and David Schweidel (2023), "Linguistic Drivers of Content Consumption", <u>Journal of Marketing.</u>

6. Berger, Jonah., Kim, Yoonduk., and Meyer, Robert., "What Makes Content Engaging? Emotional Dynamics Shape Success". <u>Journal of Consumer Research</u>, 48(2), 235-250, 2022.

7. Bitterly, T.B., Van Epps, E., & Schweitzer, M. (2022) The Predictive Power of Exponential Numeracy. <u>Journal of Experimental Social Psychology</u>. 101, 104347.

8. Boghrati, Reihane, Jonah Berger, and Grant Packard (2023), "Style, Content, and the Success of Ideas", <u>Journal of Consumer Psychology</u>.

9. Cameron, L*. & Rahman, H*. 2022. "Expanding the Locus of Resistance: The Constitution of Control and Resistance in the Gig Economy". <u>Organization Science</u>

10. Cameron, L. Chan, C. & Anteby, M. 2022. "Heroes from Above But Not (Always) From Within: Gig Workers Responses to the Public Moralization of their Work." <u>Organizational Behavior and Human Decision Processes</u>

11. Cameron, L. 2022. ""Making Out" While Driving: The Relational and Efficiency Game in the Gig Economy." <u>Organization Science.</u>

12. D'Ambrogio, S., Werksman, N., Platt, M. L., & Johnson, E. N. (2022). How celebrity status and gaze direction in ads drive visual attention to shape consumer decisions. <u>Psychology & Marketing.</u> https://doi.org/10.1002/mar.21772

Wharton

Publications

Cumulative List of Papers and Research Projects - 2022
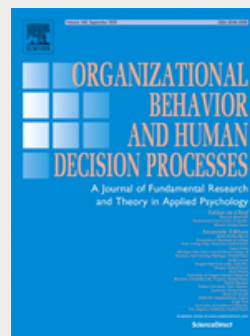

Published Articles continued

13. Dew, R., Ansari, A., & Toubia, O. (2022). Letting logos speak: Leveraging multiview representation learning for data-driven branding and logo design. Marketing Science, 41(2), 401-425.

14. Exley, C. L., & Kessler, J. B. (2022). The gender gap in self-promotion. The Quarterly Journal of Economics, 137(3), 1345-1381.

15. Hafenbrack, A. C., LaPalme, M. L., & Solal, I. (2022). Mindfulness meditation reduces guilt and prosocial reparation. Journal of Personality and Social Psychology, 123(1), 28-54.

16. Harari, D., Parke, M. R., & Marr, J. C. 2022. When helping hurts helpers: Anticipatory versus reactive helping, helper's relative status, and recipient self-threat. Academy of Management Journal, 65(6): 1954-1983.

17. Harrison, S. H., & Nurmohamed, S. (2023). Dirty creativity: An inductive study of how creative workers champion new designs that are stigmatized. Organizational Behavior and Human Decision Processes, 175, 104224.

18. Hart, E. & Schweitzer, M. (2022) When we should care more about relationships than favorable deal terms in negotiation: The Economic Relevance of Relational Outcomes (ERRO). Organizational Behavior and Human Decision Processes, 168, 104108.

19. Hmurovic, J., Lamberton, C., & Goldsmith, K. (2022). Examining the Efficacy of Time Scarcity Marketing Promotions in Online Retail. Journal of Marketing Research, https://doi-org.ezproxy2.library.drexel.edu/10.1177/00222437221118856

20. Hu, B., & Simmons, J. P. (2022). Does constructing a belief distribution truly reduce overconfidence?. Journal of Experimental Psychology: General.

21. Kang, P., & Schweitzer, M. (2022). Emotional deception in negotiation. Organizational Behavior and Human Decision Processes. 173, 104193

22. Kang, P., Daniels, D., & Schweitzer, M. (2022). How past experiences shape decisions about future behaviors: A large-scale natural field experiment with volunteer crisis counselors. Proceedings of the National Academy of Science. 119(45) e2204460119.

23. Kirgios, E., A. Rai, E. Chang, K.L. Milkman (2022). "When Seeking Help, Women and Racial/ethnic Minorities Benefit from Explicitly Stating their Identity.", Nature Human Behavior.

24. Kundro, T & Rothbard, N. P. 2023. Does Power Protect Female Moral Objectors? How and When Moral Objectors - Gender, Power, and Use of Organizational Frames Influence Perceived Self-Control and Experienced Retaliation. Academy of Management Journal, Vol. 66, No. 1, 306-334. https://doi.org/10.5465/amj.2019.1383

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Publications

Cumulative List of Papers and Research Projects - 2022

Published Articles continued

25. Lamberton, Cait, Tom Wein, Andrew Morningstar and Sakshi Ghai (2023), "From What to How: Dignity, Human Rights and the Sustainable Development Goals,", under review at the Journal of the Academy of Marketing Science.

26. Levine, E.E. (2022). Community standards of deception: Deception is perceived to be ethical when it prevents unnecessary harm. Journal of Experimental Psychology: General, 151(2), 410-436

27. Ludwig, V.U.*, Crone, D.L.*, Clifton, J. D. W. Clifton, Rebele, R. Schor, J., Platt, M.L. (2022). Resilience of primal world beliefs to the initial shock of the COVID-19 pandemic. Journal of Personality. [*equal contributions] For free preprint: https://psyarxiv.com/kfgd9/ - for published article: https://onlinelibrary.wiley.com/doi/10.1111/jopy.12780

28. Ludwig, V.U., Berry, B.*, Cai, J.Y.*, Chen, N.M.*, Crone, D.L., Platt, M.L. (2022). The impact of disclosing emotions on ratings of interpersonal closeness, warmth, competence, and leadership ability. Frontiers in Psychology, 13. [*equal contributions] https://www.frontiersin.org/articles/10.3389/fpsyg.2022.989826/full

29. Melumad, Shiri, "Vocalizing Search: How Voice-Assisted Search Alters Queries," forthcoming at Journal of Consumer Research.

30. Milkman, K. L., Gandhi, L., Patel, M. S... & Duckworth, A. L. (2022). A 680,000-person megastudy of nudges to encourage vaccination in pharmacies. Proceedings of the National Academy of Sciences, 119(6), e2115126119. https://doi.org/10.1073/pnas.2115126119

31. 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). "A 680,000-Person Megastudy of Nudges to Encourage Vaccination in Pharmacies", Proceedings of the National Academy of Sciences, Vol. 119(6).

32. Moon, A., & VanEpps, E. (2022). Giving suggestions: Using quantity requests to increase donations. Journal of Consumer Research.

33. Morgan, Carter, Claudia Townsend, Rebecca Reczek and Cait Lamberton (2023), "Friends Interrupted: How Reunions after Social Separation Motivate Physically Transformative Consumer Behavior", Journal of the Association for Consumer Research, forthcoming.

Wharton

Publications
## Cumulative List of Papers and Research Projects - 2022
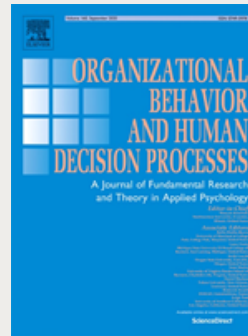
Published Articles continued

34. Parke, M. R., Tangirala, S., Sanaria, A., & Ekkirala, S. 2022. How strategic silence enables employee voice to be valued and rewarded. Organizational Behavior and Human Decision Processes. https://doi.org/10.1016/j.obhdp.2022.104187.

35. Rafieian, Hoori* and Marissa A. Sharif* (2022), "It's the Effort That Counts: The Effect of Self-Control on Goal Progress Perceptions", Journal of Marketing Research, forthcoming.

36. Rai, A., M.A. Sharif, E.H. Chang, K.L. Milkman, A.L. Duckworth (2022). "A Field Experiment on Subgoal Framing to Boost Volunteering: The Tradeoff Between Goal Granularity and Flexibility.", Journal of Applied Psychology.

37. Reece, A.,* Cooney, G.,* Bull, P., Chung, C., Dawson, B., Fitzpatrick, C., Glazer, T., Knox D., Liebscher, A., & Marin, S. (2023). The CANDOR corpus: Insights from a large multimodal dataset of naturalistic conversation. Science Advances.

38. Ren, Z. B., Dimant, E., & Schweitzer, M. (2023). Beyond belief: How social engagement motives influence the spread of conspiracy theories. Journal of Experimental Social Psychology, 104, 104421.

39. Rothbard, N. P., Ramarajan, L., Ollier-Malaterre, A., & Lee, S. S. (2022). OMG! My boss just friended me: How evaluations of colleagues disclosure, gender, and rank shape personal/professional boundary blurring online. Academy of Management Journal, 65(1), 35-65.

40. Schaumberg, R. L., & Skowronek, S. E. (2022). Shame broadcasts social norms: The positive social effects of shame on norm acquisition and normative behavior. Psychological Science, 33(8), 1257-1277.

41. Sharif, Marissa A. and Kaitlin Woolley (2022), "Working to Unlock Rewards: Leveraging Goals in Rewards Systems to Increase Consumer Persistence.", Journal of Consumer Research, 49(4), 634-656.

42. Silver, I. & Silverman, J.* (2022). Doing good for (maybe) nothing: How reward uncertainty shapes observer responses to prosocial behavior. Organizational Behavior and Human Decision Processes.

43. Silver, I., Shaw, A. (2022). When and why "staying out of it" backfires in moral and political disagreements. Journal of Experimental Psychology: General.

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Publications

Cumulative List of Papers and Research Projects - 2022
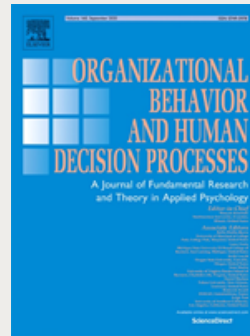
Published Articles continued

44. Southwick, D. A., Liu, Z. V., Baldwin, C., Quirk, A. L., Ungar, L. H., Tsay, C. J., & Duckworth, A. L. (2023). The trouble with talent: Semantic ambiguity in the workplace. Organizational Behavior and Human Decision Processes, 174, 104223.

45. Weingarten, Evan, and Jonah Berger (2023), "Discussing Proximal Pasts and Far Futures", Journal of Consumer Psychology.

46. Wilson, Anne (2022), "Clouded Motives and Pharmacological Calvinism: How Recreational Use of a Drug Affects Moral Judgments of its Medical Use", Journal of Public Policy & Marketing.

47. Woolley, Kaitlin and *Marissa A. Sharif (2022), "Down a Rabbit Hole: How Prior Consumption Shapes Subsequent Media Consumption", Journal of Marketing Research, 59(3) 453-471

48. Yip, J. & Schweitzer, M. (2022) Norms for Behavioral Change (NBC) model: How injunctive norms and enforcement shift descriptive norms in science. Organizational Behavior and Human Decision Processes, 168, 104109.

Published Articles and Working Papers Historical Data

Wharton
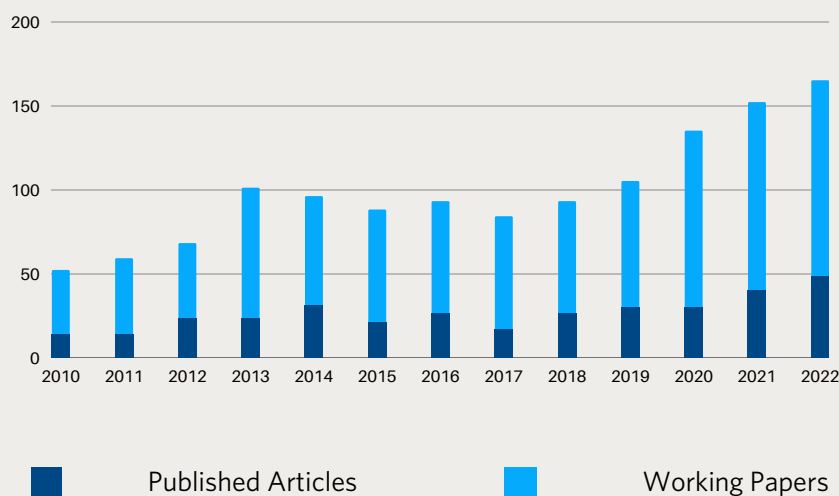
2022 Summary

48 Published Articles
117 Working Papers

72 Active Researchers
53 Faculty, 19 Students

7 Academic Departments
Mktg, Mgmt, Oid, Bepp, Real, Lgst & Hcmg

On Campus Studies
- 139 Sessions
- 10,729 completed surveys
- 10% decrease in completed studies from previous year.

Specialized Panels
- 2,576 studies
- 948,062 total participants
- 19% decrease in completed studies from previous year

Goals looking forward....

1. Increase the current high levels of productivity and efficiency in the on-campus labs and in specialized samples.

2. Obtain new sources of external financial support for the WBL.

3. Development and implementation of infrastructure software for quality control, participant characteristics database, and accounting.

4. Continue and increase IT and RA support of eye-tracking equipment, physiological equipment, and emotion coding software as easily used research tools.

5. Increase the number of Wharton faculty and graduate students using the WBL.

"WBL keeps Wharton at the cutting edge of experimental research in business schools."

**REBECCA SCHAUMBERG,
ASSISTANT PROFESSOR,
OPERATIONS, INFORMATION AND DECISIONS**

Wharton