



## **2021 ANNUAL REPORT** The Wharton Behavioral Lab

### A MESSAGE FROM THE ACADEMIC DIRECTOR



### Maurice Schweitzer

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

he Wharton Behavioral Lab opened the doors to our newly renovated space in Steinberg Hall-Dietrich Hall in 2021! As many parts of the university remained virtual this past year, we completed the installation of hardware, video, and software systems to create state-of-the art lab rooms and break-out rooms.

The break-out rooms, are equipped to run individual studies (e.g., eye-tracking), dyadic studies (e.g., negotiations), and groups studies. And as the university transitions to mask-optional participation, the WBL is prepared to relaunch initiatives, such as facial coding, physio measures and taste stimuli in experiments. The Wharton Behavioral Lab facility and staff is an area of excellence at Wharton that is unmatched by any of our peers.

Through the pandemic, The Wharton Behavioral Lab remained a major force advancing Wharton scholarship. Though we were unable to run in-person studies during much of 2021, demand for online studies remained high. In 2021, The Wharton Behavioral Lab supported the research of 53 faculty across 8 Wharton departments. Reflecting this broad engagement, the Wharton Behavioral Lab supported 40 published articles and 112 working papers in 2021.

Finally, I would like to recognize the work of Sigal Barsade, a valued and long-serving member of our advisory board. We suffered a deep loss with her passing, and in addition to her wise counsel, she was an active and creative Wharton Behavioral Lab user, a colleague, and a friend.



# New Facilities



Two 20-seat labs



Six break out rooms



State-of -the-art technology



Break-Out Room Network Cameras (Pan, Tilt, Zoom)



Break-Out Room Overhead Cameras



# 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





# 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, WBL 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



Susan McCafferty Sr. Research Coordinator Special Panels - Online Studies Mturk/Prolific implementation, Field Studies, Reimbursements, Financials, Qualtrics liaison



Emily Rosa Lead Lab Coordinator 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



## 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.



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



Sigal Barsade Joseph Frank Bernstein Professor, Professor of Management



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



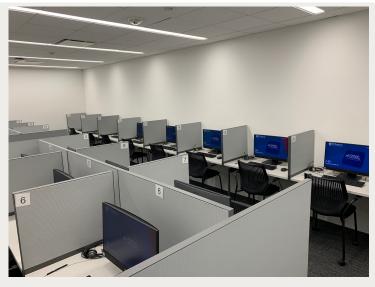
Judd Kessler Howard Marks Associate Professor, Business Economics & Public Policy



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



## The Numbers - On Campus Studies



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



2021 saw a return to campus and the WBL operated in a hybrid situation. Most of our studies remained remote but we were able to welcome some participants back to the physical lab and in-person studies.



#### 10 ON-CAMPUS + 71 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.

40,000 30,000 20,000 10,000 23,499 ,584 32,856 31,864 11,967 27. 0 2017 2018 2019 2020 2021

#### RESEARCH PARTICIPANTS (completed surveys)

#### HUMAN SUBJECT PAYMENTS (\$000s)





## The Numbers - Specialized Panels



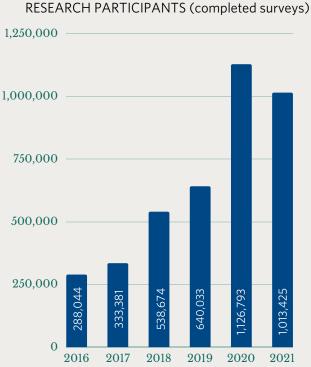
Specialized panels include field studies, MTurk, Prolific and Qualtrics

16% **INCREASE IN NUMBER OF ONLINE STUDIES** 

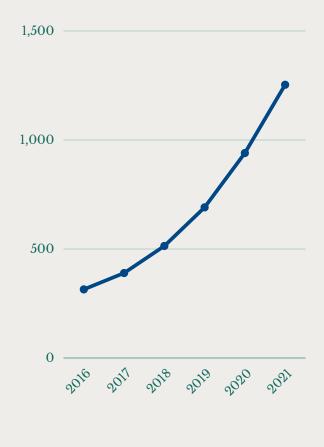
The WBL reached over 1,000,000 participants conducting over 3,184 studies with online panels.



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

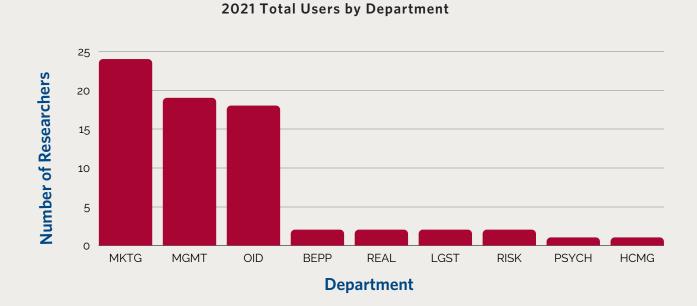


#### Human Subject Payments (\$000s)





## Researchers - Faculty Engagement

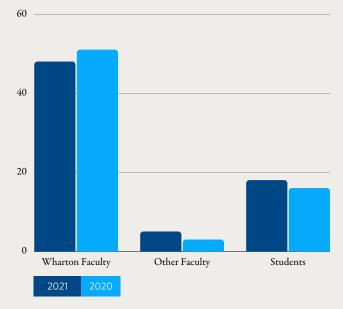


NOTE: MKTG continues to lead with 24 PIs followed closely behind by OID and MGMT with 19 and 18 respectively. Wharton faculty members sponsor almost all research done by doctoral students.

Even with the current health crisis we have seen high levels of engagement from our faculty. The total number of primary investigators for CY2021 was 71. This number is comprised of 53 faculty and 18 students spanning over 9 departments.

Based on current requests for on-campus and specialized samples we expect growth to continue in 2022.

#### 2021-2020 Usage of WBL Services by User Type



Note: Wharton Faculty includes Visiting Faculty and Post-docs



#### Cumulative List of Papers and Research Projects - 2021









### Published Articles

1. Berger, Jonah, Matt Rocklage, and Grant Packard (2022) How Speaking Versus Writing Shapes What Consumers Say, and Its Impact, Forthcoming, Journal of Consumer Research.

2. Berger, Jonah, Yoon Duk Kim, and Robert Meyer (2021) What makes Content Engaging? How Emotional Dynamics Shape Success, Journal of Consumer Research.

3. Cameron, L. 2022. "Making Out" While Driving: The Relational and Efficiency Game in the Gig Economy. Organization Science.

4. Cameron, L., Thomason, B., & Conzon, V. 2021. "Risky Business: Gig Workers and the Navigation of Ideal Worker Expectations During the COVID-19 Pandemic". Journal of Applied Psychology

5.Carton, A. M., Knowlton, K., Coutifaris, C., Kundro, T. G., & Boysen, A. P. (forthcoming). Painting a Clear Picture while Seeing the Big Picture: When and Why Leaders Overcome the Tradeoff Between Concreteness and Scale. <u>Academy of Management Journal</u>.

6. Chaudhry, S.J., Hand, M., & Kunreuther, H. (2021). Broad bracketing for low probability events. <u>Journal of Risk and Uncertainty</u>, 61(3), 211-244.

7. Cobb, J. A., Keller, J. R., & Nurmohamed, S. in press. How do I compare? The effect of work-unit demographics on reactions to pay inequality. <u>ILR Review.</u> (Authors listed alphabetically).

8. Gaspar, J. P., & Schweitzer, M. E. (2021). Confident and cunning: Negotiator self-efficacy promotes deception in negotiations. Journal of Business Ethics, 171(1), 139-155.

9. Guo, Yang (Jenny) and Cait Lamberton (2021), "When does Sharing Stigmatize? Saving Money (vs. Seeking Variety) Through Access-Based Consumption," <u>Frontiers in Psychology</u>.

10. Hafenbrack, A.C., LaPalme, M. L., & Solal, I. (In press). Mindfulness meditation reduces guilt and prosocial reparation. <u>Journal of</u> <u>Personality and Social Psychology</u>. https://doi.org/10.1037/pspa0000298

11. Harari, D.\*, Parke, M.R.\*, & Carson Marr, J.\* (in press) When helping hurts helpers: Anticipatory versus reactive helping, helper's relative status, and recipient self-threat. <u>Academy of Management Journal</u>. \*All authors contributed equally

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



#### Cumulative List of Papers and Research Projects - 2021





### Published Articles continued

13. Hart, E., VanEpps, E. M., & Schweitzer, M. E. (2021). The (better than expected) consequences of asking sensitive questions. <u>Organizational Behavior and Human Decision Processes</u>, 162, 136-154.

14. 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. <u>Nature Human Behaviour</u>.

15. Kovacheva, Aleksandra, Hristina Nikolova and Cait Lamberton (forthcoming), "Will You Buy a Surprise? Gender Differences in the Purchase of Surprise Offerings," Journal of Retailing, TBD.

16. Kovacheva, Aleksandra, Hristina Nikolova and Cait Lamberton (2021), "Consumers' Response to Promotional Gifts: The Role of Gender, Transactional Value, and Reciprocity," <u>Psychology & Marketing</u>.

17. Laurino Dos Santos, Henrique and Jonah Berger (2022), The Speed of Stories: Semantic Progression and Narrative Success, forthcoming Journal of Experimental Psychology: General.

18. Levine, E.E. (2021). Community standards of deception: Deception is perceived to be ethical when it prevents unnecessary harm. Journal of Experimental Psychology: General. Advance online publication. https://doi.org/10.1037/xge0001081

19. Mellers, B., Yin, S., & Berman, J. (2021). Reconciling loss aversion and gain seeking. Current Directions, in press.

20. Melumad, Shiri, Robert J. Meyer and Yoon Duk Kim (2021), "The Dynamics of Distortion: How Successive Summarization Alters the Retelling of News," Journal of Marketing Research, 58(6), 1058-1078

21. 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 (in press). A 680,000-Person Megastudy of Nudges to Encourage Vaccination in Pharmacies. <u>Proceedings of the National Academy of Sciences.</u>

22. Milkman, K.L., M.S. Patel, L. Gandhi, H.N. Graci, D. Gromet, H. Ho, J.S. Kay, T.W. Lee, M. Akinola, J. Beshears, J.E. Bogard, A. Buttenheim, C. Chabris, G.B. Chapman, J.J. Choi, H. Dai, C.R. Fox, A. Goren, M.D. Hilchey, J. Hmurovic, L.K. John, D. Karlan, M. Kim, D. Laibson, C. Lamberton, B.C. Madrian, M.N. Meyer, M. Modanu, J. Nam, T. Rogers, R. Rondina, S. Saccardo, M. Shermohammed, D. Soman, J. Sparks, C. Warren, M. Weber, R. Berman, C.N. Evans, C.K. Snider, E. Tsukayama, C. Van den Bulte, K.G. Volpp, A.L. Duckworth (2021). A Megastudy of Text-Based Nudges Encouraging Patients to Get Vaccinated at an Upcoming Doctor's Appointment. <u>Proceedings of the National Academy of Sciences</u>, Vol. 118(20).



#### Cumulative List of Papers and Research Projects - 2021



### Published Articles continued

23. Nurmohamed, S., Kundro, T. G., & Myers, C. M. 2021. Against the odds: Underdog versus favorite narratives to offset prior experiences of discrimination. <u>Organizational Behavior and Human Decision Processes</u>.

24. Packard, Grant and Jonah Berger (2021) How Concrete Language Shapes Customer Satisfaction, <u>Journal of Consumer Research</u>, 47(5), 787-806.

25. Rifkin, Jacqueline and Jonah Berger (2021), How Nonconsumption Can Turn Ordinary Items into Perceived Treasures, Journal of the Association of Consumer Research, 6(3), 350-361.

26. Rifkin, Jacqueline, Katherine Crain, and Jonah Berger (2021), Penny for Your Preferences: Leveraging Self-Expression to Increase Prosocial Giving, Journal of Marketing, 85(3), 204-219.

27. Rothbard, Nancy P., Ramarajan, Lakshmi, Ollier-Malaterre, Ariane, Lee, Serenity. OMG! My Boss Just Friended me: How Evaluations of Colleagues' Disclosure, Gender, and Rank Shape Personal/Professional Boundary Blurring Online, In press. <u>Academy of Management Journal</u>. Published ahead of print December 30, 2020, doi:10.5465/amj.2018.0755 - Appearing in February 2022 AMJ

28. Ryan Dew, Asim Ansari, Olivier Toubia (2022) Letting Logos Speak: Leveraging Multiview Representation Learning for Data-Driven Branding and Logo Design. <u>Marketing Science</u> (Articles in Advance).

29. Sharif, Marissa A. and Daniel M. Oppenheimer (2021), The Effect of Salient Categories in Relative Encoding Biases on Memory-Based Judgments, <u>Organizational Behavior and Human Decision Processes</u>, 162, 1-8.

30. Sharif, Marissa A. and Kaitlin Woolley (2022), Working to Unlock Rewards: Leveraging Goals in Rewards Systems to Increase Consumer Persistence, Journal of Consumer Research, forthcoming.

31. Sharif, Marissa A. and Suzanne B. Shu (2021), Nudging Persistence After Failure Through Emergency Reserves, <u>Organizational</u> <u>Behavior and Human Decision Processes</u>, 163, 17-29.

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

33. Silver, I., Mellers, B. & Tetlock, P. (2021). Predicting wise teamwork: Collective calibration predicts the effectiveness of group discussion, Journal of Experimental Social Psychology, in press.



#### Cumulative List of Papers and Research Projects - 2021



### Published Articles continued

34. Silver, I., Kelly, B., & Small, D. A. (2021). Selfless first movers and Self-interested followers: Order of entry signals purity of motive in pursuit of the greater good. Journal of Consumer Psychology.

35. Silver, I., Mellers, B., & Tetlock, P. (2021). Wise Teamwork: Collective confidence calibration predicts the effectiveness of group discussion. Journal of Experimental Social Psychology.

36. Strohminger and Jordan (in press). Corporate Insecthood. Cognition.

37. Toubia, Olivier, Jonah Berger, and Josh Eliashberg (2021), Quantifying the Shape of Stories Predicts Their Success, <u>Proceedings of the National Academy of Sciences</u>, 118(26).

38. Warren, D. E., & Schweitzer, M. E. (2021). When weak sanctioning systems work: Evidence from auto insurance industry fraud investigations. <u>Organizational Behavior and Human Decision Processes</u>, 166, 68-83.

39. Woolley, Kaitlin and \*Marissa A. Sharif (2021), Down a Rabbit Hole: How Prior Consumption Shapes Subsequent Media Consumption, Journal of Marketing Research, forthcoming

40. Yin, S., Arkes, H., McCoy, J., Cohen, M., & Mellers, B. (2021). Conflicting goals influence physicians' expressed beliefs to patients and colleagues. <u>Medical Decision Making</u>.

#### 200 150 100 50 0 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 **Published Articles** Working Papers

#### Published Articles and Working Papers Historical Data

Wharton

# 2021 Summary



#### 40 Published Articles 112 Working Papers



71 Active Researchers 53 Faculty, 18 Students



9 Academic Departments

Mktg, Mgmt, Oid, Bepp, Real, Risk, Lgst, Hcmg, & Psych

#### On Campus Studies

- 81 Sessions
- 11,967 total participants
- 62% decrease in completed studies from previous year.

#### **Specialized Panels**

- 3,184 studies
- 1,013,425 total participants
- 16% increase 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



