MAARTEN W. BOS

Snap Inc.
2850 Ocean Park Blvd
Santa Monica, CA 90405
USA

maarten.w.bos@gmail.com
+1.617.335.7505

PROFILE

Quantitative experimental researcher in decision science, persuasion, and human-technology interaction. Ten+ years experience as lead scientist and manager, translating research and analytics to business outcomes and improvements.

PROFESSIONAL POSITIONS

2018 - 2024	Lead Research Scientist, manager *Snap Inc.*
2017 - 2018	Visiting scholar at the Department of Social & Decision Sciences *Carnegie Mellon University*
2013 - 2017	Research Scientist, behavioral economics group lead *Disney Research*
2011 - 2013	Post-doctoral Research Fellow of Business Administration Negotiation, Organizations & Markets *Harvard Business School*
2012 - 2013	Post-doctoral Research Fellow Center for Sleep and Cognition *Harvard Medical School*
2010 - 2011	Post-doctoral Research Fellow Behavioral Science Institute *Radboud University of Nijmegen*

EDUCATION

2010	PhD, Behavioral Science, Decision Science, Radboud University of Nijmegen
2006	MA, Behavioral Science, University of Amsterdam
2005	BA, Behavioral Science, University of Amsterdam

IMPACT

Business

Leading Disney Research's behavioral economics group, sharing research in critically acclaimed in-house lectures (audiences of 400-500 people), followed-up with in-house innovation projects.
Solid consulting record across The Walt Disney Company and Snap Inc. Examples:
- advising on corporate strategy and innovation strategy for Disney's Parks & Resorts, Disney Consumer Products and Interactive Media, ABC, and ESPN
- advising on research strategy and analytics for Disney's Imagineering division and ESPN
- advising on research strategy and analytics for Snap Inc., Snap's DEI efforts

Academic

Several publications in impactful journals, including *Science*, *Psychological Science*, *Journal of Consumer Psychology*, *Journal of Experimental Social Psychology*, *Journal of the Association for Consumer Research, Journal of Marketing Research, The Review of Economic Studies*, and the computer science conferences CHI, CIKM, CSCW, ICTAI, ICWSM, and IC2S2.

Press / High profile media coverage examples:
https://nyti.ms/2zE6nBD
https://www.wsj.com/articles/how-smartphones-hijack-our-minds-1507307811
https://hbr.org/2011/05/a-counter-intuitive-approach-t
https://towardsdatascience.com/org-scale-analytics-todays-startups-build-societies-do-it-right-4f6185e81482
https://www.npr.org/2019/09/06/758199383/the-distracting-draw-of-smartphones
https://www.ft.com/content/5953739c-3b94-11ea-b84f-a62c46f39bc2

EXAMPLE PROJECTS AT DISNEY RESEARCH AND SNAP INC.

The illusion of design: Framing choices as design processes increases perceived customization of products
Consumers enjoy personalized and customized products. However, producing these products can be costly for companies. We investigated whether a product decision can be framed to make consumers feel as though their product is customized for them, even when it is not. Our work shows that framing the decision as a multi-stage design process leads to greater perceived customization compared to framing the decision as a simple choice.

Personalized marketing: Using computational methods to predict the personal appeal of commercial images
Images attract attention, trigger emotions, and shape first impressions. Years of research have focused on the features (e.g. colors or composition) that make some images more appealing to consumers than others. The shift from product-centric to personalized marketing requires an understanding of an image's appeal for the individual rather than at the group level. Instead of asking "What makes an image appealing?" we need to start asking "What makes an image appealing to this particular consumer?" We show that automatically extracted image features (e.g. average color saturation) in combination with machine learning algorithms can be used to predict the appeal an image exerts on certain types of personalities, which in turn predicts a consumer's attitudes and purchase intentions towards brands that use different images as part of their marketing campaigns.

Increasing consumers' trust in algorithms
Many consumers are averse to relying on algorithms to make decisions normally made by humans. We explored when and why this is true in a wide variety of consumer domains, including recommendation engines for products and movies. We developed and tested a conceptual model, including field studies using real advertising campaigns and incentive-compatible tasks. We find that trust in – and use of – algorithms for a given task depends on the perceived objectiveness of the task, the perceived performance of the algorithm, and consumers' reliance on their feelings, as well as interactions between these variables. As algorithms increasingly outperform humans in a wide variety of consequential tasks, it becomes more important to rely on them. Our work provides insights into how to increase consumers' trust.

Constructing consumer choices: Simple nudges improve consumer experiences and influences decisions
Consumers decisions are influenced by the way choices are presented (referred to as "choice architecture"). Choice architecture has been shown to have wide-reaching and consequential applications, such as increasing retirement contributions and healthy behaviors. We created simple nudges that impact consumer decisions. By presenting choices in partitions (for instance in categories on a menu at a tapas restaurant), we were able to change people's choices.

PUBLISHED MANUSCRIPTS

- Moon, A., & Bos, M.W. (in press). The Illusion of Customization: Framing Choices as a Creative Process Increases Perceived Customization. In *Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems.*

- Gómez-Zará, D., Liu, Y., Neves, L., Shah, N., & Bos, M.W. (2024). Unpacking the exploration–exploitation tradeoff on Snapchat: The relationships between users' exploration–exploitation interests and server log data. *Computers in Human Behavior, Vol. 150.* doi: https://doi.org/10.1016/j.chb.2023.108014. https://doi.org/10.1145/3544548.3581074

- Fang, Q., Zhou, Z., Barbieri, F., Liu, Y., Neves, L., Nguyen, D., Oberski, D.L., Bos, M.W. and Dotsch, R., (2023). Designing and Evaluating General-Purpose User Representations Based on Behavioral Logs from a Measurement Process Perspective: A Case Study with Snapchat. *arXiv preprint arXiv:2312.12111.*

- Peters, H., Liu, Y., Barbieri, F., Baten, R. A., Matz, S. C., & Bos, M. W. (2023). Context-Aware Prediction of User Engagement on Online Social Platforms. *arXiv preprint arXiv:2310.14533.*

- Baten, R. A., Liu, Y., Peters, H., Barbieri, F., Shah, N., Neves, L., & Bos, M. W. (2023). Predicting Future Location Categories of Users in a Large Social Platform. *Proceedings of the International AAAI Conference on Web and Social Media, 17(1)*, 47-58. https://doi.org/10.1609/icwsm.v17i1.22125

- Jiang, J., Dotsch, R., Triguero Roura, M., Liu, Y., Silva, V., Bos, M. W., & Barbieri, F. (2023, April). Reciprocity, homophily, and social network effects in pictorial communication: A case study of Bitmoji stickers. In *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems* (pp. 1-14).

- Seth, A., Cao, J., Shi, X., Dotsch, R., Liu, Y., & Bos, M. W. (2023, April). Cultural Differences in Friendship Network Behaviors: A Snapchat Case Study. In *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems* (pp. 1-14).

- Pei, J., Silva, V., Bos, M., Liu, Y., Neves, L., Jurgens, D., & Barbieri, F. (2023). Semeval 2023 task 9: Multilingual tweet intimacy analysis. arXiv preprint arXiv:2210.01108.

- Jiang, J., Murrugara-Llerena, N., Bos, M. W., Liu, Y., Shah, N., Neves, L., & Barbieri, F. (2022, May). Sunshine with a Chance of Smiles: How Does Weather Impact Sentiment on Social Media?. In *Proceedings of the International AAAI Conference on Web and Social Media* (Vol. 16, pp. 393-404).

- Chowdhury, F.A, Liu, Y., Saha, K., Vincent, N., Neves, L., Shah, N., & Bos, M.W. (2021). Modeling Cyclic and Ephemeral User Behavior on Social Platforms. *ICWSM 2021*, Online.

- Saha, K., Liu. Y., Vincent, N., Chowdhury, F.A., Neves, L., Shah, N., & Bos, M.W. (2021). AdverTiming Matters: Examining User Ad Consumption for Effective Ad Allocations on Social Media. *CHI 2021*, Online.

- Kaghazgaran, P., Bos, M.W., Neves, L., Shah, N. (2020). Social Factors in Closed-Network Content Consumption. *CIKM 2020*, Online.

- Mack, K., Bragg, D., Ringel Morris, M., Bos, M.W., Albi, I., & Monroy-Hernandez, A. (2020). Social App Accessibility for Deaf Signers. *CSCW 2020*, Minneapolis, MN. https://arxiv.org/abs/2008.05691

- Esteky, S., Wooten, D.B., & Bos, M.W. (2020). Illuminating Illumination: Understanding the Influence of Ambient Lighting on Prosocial Behaviors. *Journal of Environmental Psychology*. https://doi.org/10.1016/j.jenvp.2020.101405

- Ng, A., Bos, M.W., Sigal, L., & Li, B. (2020). Predicting Personality from Book Preferences with User-Generated Content Labels. *IEEE Transactions on Affective Computing, Vol. 11, No. 3.* arXiv:1707.06643, 10.1109/TAFFC.2018.2808349.

- Castelo, N., Bos, M.W., & Lehmann, D. (2019). Task dependent algorithm aversion. *Journal of Marketing Research*. https://doi.org/10.1177/0022243719851788.

- Matz, S. C., Segalin, C., Stillwell, D., Müller, S. R., and Bos, M. W. (2019). Predicting the personal appeal of marketing images using computational methods. *Journal of Consumer Psychology*. doi:10.1002/jcpy.1092

- Bipat, T., Bos, M.W., Vaish, R., & Monroy-Hernández, A. (2019). Analyzing the use of camera glasses in the wild. *CHI 2019*, Glasgow, UK. https://arxiv.org/abs/1902.09749

- Frey, S., Donnay, K., Helbing, D., Sumner, R.W., & Bos, M.W. (2018). The rippling dynamics of valenced messages in naturalistic youth chat. *Behavior Research Methods*. doi: 10.3758/s13428-018-1140-6.

- Haggag, K., Pope, D.G., Bryant-Lees, K., & Bos, M.W. (2018). Attribution Bias in Consumer Choice. *The Review of Economic Studies*. https://doi.org/10.1093/restud/rdy054.

- Ding, T., Zhang, C., & Bos, M.W. (2018). Causal Feature Selection for Individual Characteristics Prediction. *30th International Conference on Tools with Artificial Intelligence (ICTAI).* https://doi.org/10.1109/ICTAI.2018.00089

- Frey, S., Bos, M.W., & Sumner, R. (2017). Can you moderate an unreadable message? 'Blind' content moderation via human computation. *Journal of Human Computation, 4:1*, 78-106. 10.15346/hc.v4i1.5.

- Obiorah, M., Harburg, E., Bos, M.W., & Horn, M. (2017). JumpGym: Exploring the Impact of a Jumping Exergame for Waiting Areas. Proceedings of the Annual Symposium on Computer-Human Interaction in Play, pages 13-24. CHI PLAY '17, Amsterdam, The Netherlands.

- Ward, A.F., Duke, K., Gneezy, A., & Bos, M.W. (2017). Brain Drain: The Mere Presence of Smartphones Reduces Cognitive Capacity. *Journal of the Association for Consumer Research 2(2)*.

- Dijksterhuis, A., Strick, M.S., Bos, M.W., & Nordgren L.F. (2014). Prolonged thought: Proposing Type 3 processing. In J.W. Sherman, B. Gawronski, & Y. Trope (Eds.). Dual Process Theories of the Social Mind. New York: Guilford Press.

- Krans, J., Janecko, D., & Bos, M.W. (2013). Unconscious thought reduces intrusion development: A replication and extension. *Journal of Behavior Therapy and Experimental Psychiatry, 44(2)*, 179-185.

- Ritter, S.M., Strick, M., Bos, M.W., Van Baaren, R.B., & Dijksterhuis, A. (2012). Good Morning Creativity: Task reactivation during sleep enhances beneficial effect of sleep on creative performance. *Journal of Sleep Research, 21(6),* 643–647.

- Bos, M.W., Dijksterhuis, A., & Van Baaren, R.B. (2012). Food for thought? Trust your unconscious when energy is low. *Journal of Neuroscience, Psychology, and Economics, 5(2),* 124–13.

- Bos, M.W. & Dijksterhuis, A. (2012). Self-knowledge, Unconscious thought and decision making. In T. Wilson & S. Vazire (Eds.). *Handbook of Self-knowledge* (pp.181-193). New York: Guilford Press.

- Krans, J. & Bos, M.W. (2012). To think or not to think about trauma? An experimental investigation into unconscious thought and intrusion development. *Journal of Experimental Psychopathology 3(2),* 310-321.

- Bos, M.W., & Dijksterhuis, A. (2011). Unconscious thought works bottom-up and conscious thought works top-down when forming an impression. *Social Cognition, 29(6), 727-737.*

- Bos, M.W., Dijksterhuis, A., & Van Baaren, R.B. (2011). The benefits of "sleeping on things": Unconscious thought leads to automatic weighting. *Journal of Consumer Psychology, 21*, 4-8.

- Nordgren, L.F., Bos, M.W., & Dijksterhuis, A. (2011). The best of both worlds: Integrating conscious and unconscious thought best solves complex decisions. *Journal of Experimental Social Psychology, 47(2)*, 509-511.

- Strick, M., Dijksterhuis, A., Bos, M.W., Sjoerdsma, A., Van Baaren, R.B., Nordgren, L.F. (2011). A meta-analysis on unconscious thought effects. *Social Cognition, 29(6),* 738-762.

- Dijksterhuis, A., Van Baaren, R.B., Bongers, K.C.A., Bos, M.W., Van Leeuwen, M.L., & Van der Leij, A.R. (2009). The rational unconscious: Conscious versus unconscious thought in complex consumer choice. In M. Wanke (Ed.), *Social Psychology of Consumer Behavior* (pp.89-108). New York: Psychology Press.

- Dijksterhuis, A., Bos, M.W., Van der Leij, A., & Van Baaren, R.B. (2009). Predicting soccer matches after unconscious and conscious thought as a function of expertise. *Psychological Science, 20(11)*, 1381-1387.

- Bos, M.W., Dijksterhuis, A., & Van Baaren, R.B. (2008). On the goal-dependency of unconscious thought. *Journal of Experimental Social Psychology, 44(4)*, 1114-1120.

- Dijksterhuis, A., Bos, M.W., Nordgren, L.F., & Van Baaren, R.B. (2006). On making the right choice: The deliberation-without-attention effect. *Science, 311(5763)*, 1005–1007.

- Dijksterhuis, A., Bos, M.W., Nordgren, L.F., & van Baaren, R.B. (2006). Making choices without deliberating. *Science, 312(5779)*, 1472.

- Dijksterhuis, A., Bos, M.W., Nordgren, L.F., & van Baaren, R.B. (2006). Complex choices better made unconsciously? *Science, 313(5788)*, 760-761.

- Bos, M.W., Dijksterhuis, A., & Van Baaren, R.B. (2006). De doelafhankelijkheid van onbewust nadenken. Jaarboek Sociale Psychologie, 59-71, ASPO press, Groningen. *(publication in Dutch)*

INVITED TALKS

2024	SPSP Psychology of Media and Technology pre-conference, invited talk
2024	USC, Responsible AI in business: Ethical challenges and opportunities
2024	ACR methods seminar
2023	12th Triennial Invitational Choice Symposium
2023	UC Irvine, AIML seminar series
2023	USC, Anticipating the metaverse, "Privacy by Design: Using Short-Term Data to Model User Behavior"
2021	NTU, Singapore: Behavioral science and innovation in industry, guest lecture
2021	Columbia University, NY: Big Data in Organizational Behavior, guest lecture
2019	SPF 2019, St. Louis, MO: Big Data in Personality and Social Psychology, keynote
2019	11th Triennial Invitational Choice Symposium
2018	Queen's University, Smith School of Business, Management Analytics seminar series
2017	Carnegie Mellon University, Center for Behavioral and Decision Research seminar series
2017	Disney Data and Analytics Conference, Orlando
2017	Carnegie Mellon University, Psychology brown bag series
2017	University of Texas at Austin, Marketing colloquium series
2017	INFORMS conference, Gaming and Entertainment track
2017	University of Georgia IRIS Symposium keynote
2017	Tepper School of Business at Carnegie Mellon University, Business & Technology Club
2017	CMU, Dept of Social and Decision Sciences, Behavioral Science Applications in Industry panel
2016	Berkeley & USC's New Directions in the Psychology of Technology Research Conference
2016	Disney Data and Analytics Conference, Orlando
2015	LeHigh University, Departments of Psychology, Marketing & Management Colloquium series
2015	Carnegie Mellon University, HCII Colloquium series
2013	Carnegie Mellon University, DDMLAB
2012	Dartmouth University, SPRIG Colloquium series
2010	University of Amsterdam, CSCA Colloquium series
2010	Tilburg University, Psychology Colloquium series
2010	Berlin School of mind and brain, Psychology Colloquium series
2010	Max Planck Institute for collective goods - Bonn, Second One-Day Workshop on Intuition
2009	Kellogg School of Management, Northwestern University
2009	Heidelberg University, Psychology Colloquium
2008	Rutgers University, Psychology Colloquium
2008	Princeton University, Psychology Colloquium
2008	UCLA, Evolutionary anthropology Colloquium
2006	ASC Amsterdam, Colloquium on Power and influence
2006	University of Wuerzburg, Psychology Colloquium

CHAIRED MEETINGS / SESSIONS

2023	Association for Consumer Research. "Beyond the Abstract: Bridging the Gap Between Academia and Practice" Seattle, WA (symposium co-chair)
2023	European Association for Consumer Research. "Engaging in Application-Inspired Research" Amsterdam, The Netherlands (symposium co-chair)
2019	Annual Meeting of the Society for Personality and Social Psychology. "Shining a light beyond the ivory tower: Things you didn't know you could do with your PhD". Portland, OR (symposium chair)
2017	29th meeting of the Association for Psychology Science. "Personalization: How-to customize experiences and why it matters". Boston, MA (symposium chair)
2014	17th EASP General Meeting. "How physical dimensions relate to power: Theoretical Perspectives, and Behavioral and Perceptual Findings". Amsterdam, The Netherlands (symposium chair)
2012	2012 meeting of the Society of Experimental Social Psychology. "The future is now: How smart phones are transforming psychological research". Austin, TX (symposium chair)
2008	The 3rd EAESP Meeting on the Psychology of Attitudes - Affective Processes in Evaluation (organizer)

LECTURES & TEACHING

University of California, Los Angeles, CA:
2023   Field Experiments in Strategy, Business Strategy (MBA courses, guest lectures)

The Wharton School of the University of Pennsylvania, Philadelphia, PA:
2018, 2023   Decision Processes (guest lectures in BA course)

Boston University:
2023   Decision Processes

University of California, San Diego, CA:
2021, 2022   Experiments in organizations (guest lectures in MSBAnalytics and BA courses)

University of Southern California, Los Angeles, CA:
2019, 2020   Social cognition research at an industrial research lab (guest lectures in BA, MBA, and MA courses)
2022   Affective computing (guest lecture for BA, MA, and PhD courses)

Seaver College of Pepperdine University, Malibu, CA:
2019, 2021   Principles of Marketing (guest lectures in BA course)

Carnegie Mellon University, Pittsburgh, PA:
2016-2019   Behavioral Economics in Organizations (guest lectures at the department of Social and Decision Sciences) - 2016, 2017, 2019
2014   Marketing (guest lectures and co-supervision of MBA students at Tepper School of Business)
2013, 2014   Research Methods in Cognitive Psychology (supervision of students)

University of Texas at Austin, Austin, TX:
2017   Consumer behavior in a Digital World (guest lectures in MBA, MSc, and BA courses)

Utrecht University, The Netherlands:
2016, 2017   Social cognition research at an industrial research lab (guest lectures in MSc course)

University of Amsterdam, The Netherlands:
2014   MOOC Research Designs (guest / interview)
2005, 2006   Bachelor theses and master theses (full course BA and MA/MS)

Harvard Business School, Boston, MA:
2013   Behavioral approaches to decision making (PhD course, guest lecture)
2011   Behavioral approaches to decision making (PhD course)
2011   Micro OB - Influence (PhD course, guest lecture)
2011   Persuasion and Influence MBA2012 - Influence (MBA course, guest lectures)

Radboud University of Nijmegen, The Netherlands:
2008 - 2011   Conscious and unconscious processes - Decision making (full course BA) - 2008, 2009, 2010, 2011
2007 - 2011   Social influence (full course BA, MA, and Grad level) - 2007, 2008, 2009, 2010, 2011
2007 - 2011   Experimental methods (full course BA/BS and MA/MS) - 2007, 2008, 2009, 2010, 2011
2006 - 2011   Bachelor, master, and honors theses - 2006, 2008, 2009, 2010, 2011

VU Free University of Amsterdam, The Netherlands:
2011   Influence, Persuasion, and Elaboration Likelihood (guest lecture in BA course)

Erasmus University of Rotterdam, The Netherlands:
2010 - 2011   Masterclass in Mobility Management (guest lecture)

Tilburg University, The Netherlands:
2008   Social Influence. Theory and field experiments (full BA course)

TEACHING MATERIALS

- Cuddy, A. J. C., Doherty, K., & Bos, M. W. "OPOWER: Increasing Energy Efficiency Through Normative Influence (A)." Harvard Business School Case 911-016 (2010, Revised 2012).
- Bos, M. W., Cuddy, A. J. C., & Doherty, K. "OPOWER: Increasing Energy Efficiency Through Normative Influence (B)." Harvard Business School Case N911-061 (2011, Revised 2012).
- Cuddy, A. J. C., & Bos, M. W. "OPOWER: Increasing Energy Efficiency Through Normative Influence." Harvard Business School Teaching Note 5-912-032 (2012).

MEDIA COVERAGE AND INTERVIEWS

Recent:
https://nyti.ms/2zE6nBD
https://www.wsj.com/articles/how-smartphones-hijack-our-minds-1507307811
https://hbr.org/2017/08/how-to-keep-email-from-ruining-your-vacation
https://nyti.ms/2zE6nBD

Selected national outlets:
Business Insider, CNN, Economic Times, Entrepreneur, Fast Company, Forbes, Harvard Business Review Blog, Harvard Business School Working Knowledge, Inc., Lifehacker, Mashable, Men's Health, New York Post, Psychology Today, Reddit, Science Alert, Science Daily, Shape Magazine, The Atlantic, The Independent, The New York Times, The Telegraph, Wall Street Journal, Women's Health Magazine.

Selected international outlets:
Algemeen Dagblad (NL), Daily Telegraph (UK), Daily Mail (UK), Financial Times (UK), El Huffington Post (Spain), NU.nl (NL), Telegraaf (NL), The Guardian (UK).

Selected radio interviews:
BBC Radio (UK), Radio 1 KRO (NL), Radio 1 VPRO (NL), Radio538 (NL), The Evening Show (South Korea).

CONSULTING

2017	Keynote "Behavioral science at Disney Research" at Booz Allen Hamilton's Ideas Festival, Boston, MA
2016	Tech topics discussion. Droga5, NY
2016	Keynote "Behavioral science at Disney Research" at MITX, Boston, MA
2016	Keynote "Creativity and behavioral science at Disney Research" at Booz Allen Hamilton, Boston, MA
2011	Masterclass in mobility management at Erasmus University Rotterdam: How to convince employees at big companies to telework more, and reduce personnel commutes
2011	Masterclass Influence, science and practice. Teaching sales managers of a pharmaceutical company to interact effectively with doctors
2010 - 2011	Sales training: "Science sells". Teaching sales managers of the largest energy company in The Netherlands how to sell, using ethical influence techniques
2011	Masterclass "Dealing with the industry" at the Psychiatrist Society, The Netherlands. Teaching Psychiatrists how to get treatment compliance and how to guard against pharmaceutical companies' influence techniques
2011	Masterclass "Dealing with patients". Teaching MDs how to get treatment compliance and how to guard against pharmaceutical companies' influence techniques
2011	Masterclasses in mobility management for PIMMS (PIMMS Transfer: transferring actions in sustainable mobility for European regions). Helping countries increase teleworking at big companies
2010	Masterclass "Guarding against influence" for consumer organizations. Teaching the general public how to recognize influence techniques and make decisions based on their preferences
2009	Masterclass "How to deal with resistance". Teaching engineers of a large cargo company how to communicate effectively
2009	Masterclass "Sales" at Nijenrode Business School, The Netherlands
2008	Masterclass "Effective communication". Regional transport and traffic organization of Gelderland (Dutch province)