Dirk U. Wulff

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Research interests

I am interested in the cognitive underpinnings of human memory and decision making, which I study using experimental studies, computational modeling, network analysis, natural language processing, and process tracing. My broader interests include: bounded rationality, information search, semantic memory, statistical modeling, and movement control.

Education & Employment

2016-	Researcher at the Center for Cognitive and Decision Sciences, Department of Psychology, University of Basel.
2016-	Adjunct Researcher at the Center for Adaptive Rationality (ARC), Max Planck Institute for Human Development, Berlin.
2015	PhD from the University of Basel (summa cum laude)
2014-2016	Postdoctoral Researcher at the Center for Adaptive Rationality (ARC), Max Planck Institute for Human Development, Berlin.
2010-2014	Doctoral student at the department for Cognitive and Decision Sciences, University of Basel, and at the Center for Adaptive Rationality (ARC), Max Planck Institute for Human Development, Berlin.
2010	Academic visit to Human Memory Lab at UC Davis, California.
2004-2010	Diploma in Psychology at Philipps-University Marburg

Publications

In press /preprints

Wulff XXX

Siew, C. S. Q., Wulff, D. U., Beckage, N., & Kenett, Y. (2018, October 9). Cognitive Network Science: A review of research on cognition through the lens of network representations, processes, and dynamics. https://doi.org/10.31234/osf.io/eu9tr

Haslbeck, J. M. B., & Wulff, D. U. (2017, July 24). Estimating the number of clusters via normalized cluster instability. arXiv:1608.07494v3

Kieslich, P. J., Henninger, F., Wulff, D. U., Haslbeck, J. M. B., Schulte-Mecklenbeck, M. (2018). Mouse-tracking: A practical guide to implementation and analysis. In M. Schulte-Mecklenbeck, A. Kuehberger, & J. G. Johnson (Ed.), *A handbook of process tracing methods* (2. ed.). Psychology Press.

Wulff, D. U., Haslbeck, J. M. B., Kieslich, P. J., Henninger, F., Schulte-Mecklenbeck, M. (2018). Mouse-tracking: Detecting types in movement trajectories. In M. Schulte-Mecklenbeck, A. Kuehberger, & J. G. Johnson (Ed.), *A handbook of process tracing methods* (2. ed.). Psychology Press. 10.31234/osf.io/6edca

Wulff, D. U., & Hertwig, R. (2018). Uncovering the anatomy of search without technology. In M. Schulte-Mecklenbeck, A. Kuehberger, & J. G. Johnson (Ed.), *A handbook of process tracing methods* (2. ed.). Psychology Press. 10.31234/osf.io/bruy6

Wulff, D. U., Markant, D., Pleskac, T. J., & Hertwig, R. (2018). Adaptive search: What you see is up to you. In R. Hertwig, T. J., Pleskac, T. Pachur, & ARC Research Group (Ed.), *Taming Uncertainty*. MIT Press.

Hertwig, R., Pleskac, T. J., Pachur, T., & ARC Research Group (2018). Taming Uncertainty. MIT Press.

Hertwig, R., Wulff, D. U., & Mata, R. (2018). Three gaps and what they mean for risk preferences. *Philosophical Transactions of the Royal Society: Biological Sciences*

Journal articles (peer reviewed)

Wulff, D. U., Mergenthaler-Canseco, M., & Hertwig, R. (2018). A meta-analytical review of two modes of learning and the description-experience gap. *Psychological Bulletin*, *144*(2), 140-176.

Wulff, D., U., & Van den Bos, W., (2017). Modeling choices in delay discounting. *Psychological Science*.

Wulff, D., U., & Pachur, T., (2016). Modeling valuations from experience? A comment on Ashby and Rakow (2014). *Journal of Experimental Psychology: Learning, Memory and Cognition*.

Kollewe, K., Escher, C. M., Wulff, D. U., Fathi, D., Paracka, L., Mohammadi, B., ... & Dressler, D. (2016). Long-term treatment of chronic migraine with OnabotulinumtoxinA: efficacy, quality of life and tolerability in a real-life setting. Journal of Neural Transmission, 123(5), 533-540.

Wulff, D. U., Hills, T., & Hertwig, R. (2015). How short- and long-run frames impact search and choice in decisions from experience. Cognition,144, 29-37.

Wulff, D. U., Hills, T., & Hertwig, R. (2015). The description-experience gap and online product reviews. Journal of Behavioral Decision Making, 28, 214-223

Hertwig, R., & Wulff, D. (2014). Risikoentscheidungen: Die Kluft zwischen Erfahrung und Beschreibung. Controlling: Zeitschrift für erfolgsorientierte Unternehmenssteuerung, 26, 630-636.

Proceedings articles (peer reviewed)

Wulff, D. U. Hills, T., Lachman, M., & Mata, R. (2016) The Aging Lexicon: Differences in the Semantic Networks of Younger and Older Adults. Proceedings of the Cognitive Science Society, 38.

Wulff, D. U. Hills, T., Hertwig, R. (2013) Wormholes in Memory: Is memory one representation or many?. Proceedings of the Cognitive Science Society, 35.

Wulff, D. U. Hills, T., Hertwig, R. (2012) Adaptive Information Search and Decision Making over Single and Repeated Plays. Proceedings of the Cognitive Science Society, 34.

Book chapters

van den Bos, W., Jenny, M. A., & Wulff, D. (2015). Open minded psychology. In S. A. Moore (Ed.), Issues in open research data (pp. 107-127). London: Ubiquity Press.

R packages (available through CRAN)

Wulff, D. U. (2018). memnet: network tools for memory research. R package.

Haslbeck, J. M. B., & Wulff, D. U. (2018). cstab: Selection of number of clusters via normalized vlustering instability. R package.

Kieslich, P. J., Wulff, D. U., Henninger, F., Haslbeck, J. M. B., & SchulteMecklenbeck, M. (2016). Mousetrap: An R package for processing and analyzing mouse-tracking data. R package.

Awards & Grants

2017	Select Speaker Award of the Psychonomic Society
2016	Otto Hahn Medal (9,000$, Dissertation prize of the Max Planck Society)
2014	Funding for the Summer Institute on Bounded Rationality from the Joachim-Herz Foundation ($240,000)
2013	Funding for the 6th JDM Workshop for Early-Career Researchers from the European Association for Decision Making ($4000)
2011	Best Student Poster Award, 3rd place, Annual Conference for Judgment and Decision Making 2011.
2011	Scholarship of the European Campus of Excellence.
2011	Scholarship of the Summer Institute on Bounded Rationality of the Max Planck Institute for Human Development.

Invited presentations

Wulff, D. U. (2018). Two modes and the description-experience gap. Presented at the EADM Summer school, University of Salzburg, Austria.

Wulff, D. U. (2018). Measuring the (dis-)continuous mind. Presented at the Faculty of Psychology and Sports Science, Bielefeld, Germany.

Wulff, D. U. (2018). Aging lexicon: Differences in the semantic networks of younger and older adults. Presented at the Department of Psychology, University of Zürich, Switzerland.

Wulff, D. U. (2017). Two modes of learning and the description-experience gap. Presented at the TAPMI – Max Planck Winter School on Bounded Rationality, TAPMI, Manipal, India.

Wulff, D. U. (2016). The issue of flexibility in computational (and verbal) models of JDM. Workshop presented at the 9th JDM workshop for Young Researchers at the University of Basel, Basel, Switzerland.

Wulff, D. U. (2016). A meta-analytic review of the description-experience gap. Department for Consumer Behavior, University of Bern, Switzerland.

Wulff, D. U. (2016). Hard, but worth it: Two case studies in raw data meta-analysis. Department for Consumer Behavior, University of Bern, Switzerland.

Wulff, D. U. (2012). Information Search in Decisions from Experience. DR@W Forum at University of Warwick, UK.

Editor

Complexity	Guest editor for Special issue "Cognitive Network Science: A new Frontier"

Ad-hoc reviewer (* multiple times)

Nature Human Behavior, Psychological Science*, Journal of Experimental Psychology: General*, Journal of Experimental Psychology: Learning, Memory & Cognition*, Cognition*, Cognitive Science, Management Science, Decision, Journal of Behavioral Decision Making*, Journal of Medical Decision Making, Judgment and Decision Making*, Organizational Behavior and Human Decision Processes*, Risk Analysis, Memory & Cognition, Journal of Applied Research in Memory and Cognition, Journal of Cognition, Quarterly Journal of Experimental Psychology, Journal of Applied Research in Memory and Cognition, Acta Psychologica, Social Psychology, Frontiers in Psychology, PLOS ONE, Computational Statistics*, Behavior Research Methods*, Human Brain Mapping

Teaching

2017-	R Bootcamp. Introductory R courses (www.rbootcamp.com).
2017-	'Natural Language processing as a tool for psychological research', Seminar, University of Basel
2016-	'Networks in Psychology, Seminar, University of Basel 'What are good decisions', Seminar, University of Basel
2015-2016	'How to write a Bachelor thesis', University of Basel
2011-2012	Undergraduate research seminars at University of Basel.

Supervision

Master	
Bachelor	
Interns	

Academic events

2018-	Co-Convenor of the Symposium for the Aging Lexicon, University of Basel, together with Rui Mata (University of Basel) and Simon De Deyne (University of Melbourne)
2014-	Co-Organizer of the Summer Institute for Bounded Rationality, Max Planck Institute for Human Development, Berlin, Germany, together with Jolene Tan (University of Konstanz)
2013-	Organizer of the 6th JDM Meeting for Early Career Researchers, Max Planck Institute for Human Development, Berlin, Germany