

Curriculum Vitae

Dr. Sarah Humberg, Dipl.-Math.

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Professional Positions

- Since 04/2019 Postdoctoral research associate at the Department of Psychology, University of Münster
Section of Psychological Assessment and Personality Psychology
- Since 04/2014 Research associate at the Department of Psychology, University of Münster
Evaluation and Quality Management
- 12/2012 – 03/2014 Doctoral research associate at the Department of Mathematics, University of Münster
Section Topology
- 10/2008 – 12/2012 Teaching assistant at the Department of Mathematics, University of Münster

Education

- 10/2013 – 03/2019 PhD (Dr. rer. nat.) at the Department of Psychology, University of Münster
Section of Psychological Assessment and Personality Psychology
Dissertation: "The adaptiveness of favorable, enhanced, and accurate self-views: Conceptual, statistical, and methodological considerations."
- 10/2006 – 08/2012 Diploma in Mathematics, University of Münster
Diploma Thesis: "Hopf rings and the Homology of Eilenberg - Mac Lane - Spaces"
- 09/2010 – 01/2011 Term abroad at the Université de Nice Sophia Antipolis, Nice, France

Awards and Funding

- Awards: *EAPP Dissertation Award 2020* of the European Association of Personality Psychology
Heinz-Heckhausen Young Researcher Award 2020 of the German Psychological Society (DGPs)
Best Dissertation Award 2019 of the University of Münster
SPSP Student Publication Award 2020 (for the publication Humberg, Nestler, & Back, 2019)
- Poster Awards:* 2014 at the 17th *European Conference on Personality* (by the EAPP)
2023 at the 8th *Biennial ARP Conference* (by the ARP)
- Funding: Travel grants by the German Academic Exchange Service (DAAD) for the 18th *European Conference on Personality* | 2020 *Annual Convention of the Society for Personality and Social Psychology* | 8th *Biennial Meeting of the Association for Research in Personality*
- Travel grant by the European Association of Personality Psychology for the 19th *European Conference on Personality*
- Travel grants by the University of Münster for the 1st *International Convention of Psychological Science* | 14th *meeting of the section Differential Psychology and Psychological Assessment of the German Psychological Society* | 3rd and 4th *World Conferences on Personality*

Research Interests

Psychological methods:

- Response Surface Analysis (RSA) and its extensions
- Multilevel Structural Equation Modeling
- Regression techniques for testing discrepancy hypotheses
- Information-theoretic approaches for multiple hypotheses evaluation

Personality and individual differences:

- Consequences of (intellectual and personality) self-knowledge and self-enhancement on psychological and social adjustment
- Relationship formation based on between-person similarity

Professional Memberships

- German Psychological Association (DGPs), *Sections "Personality Psychology and Psychological Assessment" and "Quantitative Methods and Evaluation"*
- European Association of Personality Psychology (EAPP)
- Society for Personality and Social Psychology (SPSP)

Teaching

Lectures:

- Advanced Statistics
- Test theory

Seminars:

- Advanced Statistics
- Introduction to scientific work methods
- Exercise courses for various advanced lectures in mathematics

Invited Talks and Workshops

- 05/2023 Invited Talk "Response Surface Analysis" in the research colloquium of the University of Hamburg, Department for Quantitative Methods in Psychology
- 03/2023 Invited Workshop "Response Surface Analysis" at the FDZ Spring Academy 2023 (Institute for Educational Quality Improvement, IQB, Humboldt-University of Berlin)
- 03/2022 Invited Workshop "Response Surface Analysis" at the FDZ Spring Academy 2022 (Institute for Educational Quality Improvement, IQB, Humboldt-University of Berlin)
- 02/2020 Invited Talk "Response Surface Analysis" at the Close Relationships Preconference of the 2020 Annual Convention of the Society for Personality and Social Psychology (SPSP), New Orleans
- 03/2018 Invited Talk "Response Surface Analysis" in the research colloquium of the IPN – Leibniz Institute for Science and Mathematics Education, Kiel
- 11/2015 Invited Workshop "Response Surface Analysis for the Investigation of Congruence Hypotheses" at the 3rd Meeting of the DFG Netzwerk zur diagnostischen Kompetenz von Lehrkräften (Network for the diagnostic competence of teachers), Münster
- 07/2015 Invited Workshop "Response Surface Analysis for the Investigation of Congruence Hypotheses" at the University Koblenz-Landau

Publications

Journal Articles (Peer-Reviewed)

2024 / in press

Humberg, S., Grund, S., & Nestler, S. (in press). Estimating nonlinear effects of random slopes: A comparison of multilevel structural equation modeling with a 2-step, a single-indicator, and a plausible values approach. *Behavior Research Methods*.
[Supplement: osf.io/xucwf]

Humberg, S., Kuper, N., Rentzsch, K., Gerlach, T. M., Back, M. D., & Nestler, S. (in press). Investigating the effects of congruence between within-person associations: A comparison of two extensions of response surface analysis. *Psychological Methods*.
[Supplement: osf.io/vb4da]

Scharbert, J., **Humberg, S.**, Kroencke, L., Reiter, T., Sakel, S., Horst, J. ter, Utesch, K., Gosling, S. D., Harari, G., Matz, S. C., Schoedel, R., Stachl, C., Aguilar, N. M. A., Amante, D., Aquino, S. D., Bastias, F., Bornamanesh, A., Bracegirdle, C., Campos, L. A. M., . . . Back, M. D. (2024). Psychological well-being in Europe after the outbreak of war in Ukraine. *Nature Communications*, *15*(1), 1202. <https://doi.org/10.1177/09567976231222288>

2023

Humberg, S., Gerlach, T.M., Franke-Prasse, T., Geukes, K., & Back, M.D. (2023). Is (actual or perceptual) personality similarity associated with attraction in initial romantic encounters? A dyadic response surface analysis. *Personality Science*, *4*, 1-25. <https://doi.org/10.5964/ps.7551>
[Preprint: psyarxiv.com/vcp85 | Open Data + Code: osf.io/vqps | Preregistration: osf.io/cwt5h]

Kroencke, L., **Humberg, S.**, Breil, S. M., Geukes, K., Zoppolat, G., Balzarini, R. N., Alonso-Ferres, M., Slatcher, R. B., & Back, M. D. (2023). Extraversion, social interactions, and well-being during the COVID-19 pandemic: Did extraverts really suffer more than introverts? *Journal of Personality and Social Psychology*, *125*(3), 649–679. <https://doi.org/10.1037/pspp0000468>
[Preprint: psyarxiv.com/jb8cg | Open Data + Code: osf.io/y726z | Preregistration: osf.io/y726z]

Nestler, S., & **Humberg, S.** (2023). Univariate autoregressive structural equation models as mixed-effects models. *Structural Equation Modeling: A Multidisciplinary Journal*, *1-10*.
<https://doi.org/10.1080/10705511.2023.2212865>.

Park, Y., Gordon, A. M., **Humberg, S.**, Muise, A., & Impett, E. A. (2023). Differing levels of gratitude between romantic partners: Concurrent and longitudinal links with satisfaction and commitment in six dyadic datasets. *Personality Science*, *4*, 1-22. <https://doi.org/10.5964/ps.10537>
[Open Access: ps.psychopen.eu/index.php/ps/article/view/10537 | Preregistration + Data + Code: psycharchives.org/en/item/f418e402-acee-4730-bd20-512b6a359eb2]

Salditt, M., **Humberg, S.**, & Nestler, S. (in press). Gradient tree boosting for hierarchical data. *Multivariate Behavioral Research*, *58*(5), 911-937. <https://doi.org/10.1080/00273171.2022.2146638>

2022

Förster, N., **Humberg, S.**, Hebbecker, K., Back, M. D., & Souvignier, E. (2022). Should teachers be accurate or (overly) positive? A competitive test of teacher judgment effects on students' reading progress. *Learning and Instruction*, *77*, 101519. <https://doi.org/10.1016/j.learninstruc.2021.101519>

Humberg, S., Dufner, M., Schönbrodt, F. D., Geukes, K., Hutteman, R., van Zalk, M. H. W., Denissen, J. J. A., Nestler, S., & Back, M. D. (2022). The true role that suppressor effects play in condition-based regression analysis: None. A reply to Fiedler (2021). *Journal of Personality and Social Psychology*, *123*(4), 884–888. <https://doi.org/10.1037/pspp0000428>
[Preprint: psyarxiv.com/6j34w | Supplement: osf.io/fbshg]

Humberg, S. & Grund, S. (2022). Response surface analysis with missing data. *Multivariate Behavioral Research*, *57*, 581-602. <http://doi.org/10.1080/00273171.2021.1884522>

Humberg, S., Schönbrodt, F. D., Back, M. D., & Nestler, S. (2022). Cubic response surface analysis: Investigating asymmetric and level-dependent congruence effects with third-order polynomial models. *Psychological Methods*, 27(4), 622–649. <https://doi.org/10.1037/met0000352>.
[Preprint: psyarxiv.com/v6m35 | Example Code: osf.io/drv3a]

Nestler, S. & **Humberg, S.** (2022). A Lasso and a regression tree mixed-effect model with random effects for the level, the residual variance, and the autocorrelation. *Psychometrika*, 87, 506–532. <https://doi.org/10.1007/s11336-021-09787-w>

2021

Mielke, I., **Humberg, S.**, Leckelt, M., Geukes, K., & Back, M. D. (2021). Do narcissists self-enhance? Disentangling the associations between narcissism and positive versus enhanced self-views across aspects of narcissism, content domains, and comparison criteria. *Social Psychological and Personality Science*, 12(5), 580–592. <https://doi.org/10.1177/1948550620930543>
[Preprint: psyarxiv.com/vfmkp | Open Data + Code: osf.io/6ehzc | Preregistration: osf.io/pnxjd]

Nestler, S., & **Humberg, S.** (2021). GIMME's ability to recover group-level path coefficients and individual-level path coefficients. *Methodology*, 17(1), 58–91. <https://doi.org/10.5964/meth.2863>

Wieczorek, L.L., **Humberg, S.**, Gerstorf, D., & Wagner, J. (2021). Understanding loneliness in adolescence: A test of competing hypotheses on the interplay of extraversion and neuroticism. *International Journal of Environmental Research and Public Health*, 18, 1–26. <https://doi.org/10.3390/ijerph182312412>
[Open Access: mdpi.com/1660-4601/18/23/12412 | Preregistration + Data + Code: osf.io/4dgku]

2020

Mota, S., **Humberg, S.**, Krause, S., Fatfouta, R., Geukes, K., Schröder-Abé, M., & Back, M. D. (2020). Unmasking Narcissus: A competitive test of existing hypotheses on (agentic, antagonistic, neurotic, and communal) narcissism and (explicit and implicit) self-esteem across 18 samples. *Self and Identity*, 19(4), 435–455. <http://doi.org/10.1080/15298868.2019.1620012>
[Preprint: osf.io/ewk3r | Open Data + Code: osf.io/9nz3d | Preregistration: osf.io/phvkc]

2019

Deventer, J., **Humberg, S.**, Lüdtke, O., Nagy, G., Retelsdorf, J., & Wagner, J. (2019). Testing competing hypotheses on the interplay of importance and support of the basic psychological needs at work and personality development with response surface analysis. *Collabra: Psychology*, 5(1), 39. <https://doi.org/10.1525/collabra.214>.
[Open Access: collabra.org/article/10.1525/collabra.214 | Open Data: osf.io/h54a2]

Humberg, S., Dufner, M., Schönbrodt, F. D., Geukes, K., Hutteman, R., Küfner, A. C. P., van Zalk, M. H. W., Denissen, J. J. A., Nestler, S., & Back, M. D. (2019). Is accurate, positive, or inflated self-perception most advantageous for psychological adjustment? A competitive test of key hypotheses. *Journal of Personality and Social Psychology*, 116(5), 835–859. <https://doi.org/10.1037/pspp0000204>
[Preprint: osf.io/9w3bh | Open Data + Code: osf.io/m6pb2]

Humberg, S., Nestler, S., & Back, M. D. (2019). Response surface analysis in personality and social psychology: Checklist and clarifications for the case of congruence hypotheses. *Social Psychological and Personality Science*, 10(3), 409–419. <https://doi.org/10.1177/1948550618757600>
[Preprint: osf.io/mhfzy | Example Code: osf.io/yvw93]

Mota, S., Leckelt, M., Geukes, K., Nestler, S., **Humberg, S.**, Schröder-Abé, M., Schmukle, S. C., & Back, M. D. (2019). A comprehensive examination of narcissists' self-perceived and actual socioemotional cognition ability. *Collabra: Psychology*, 5(1), 6. <https://doi.org/10.1525/collabra.174>
[Open Access: collabra.org/article/10.1525/collabra.174 | Open Data + Code: osf.io/jtrfm]

Nestler, S., **Humberg, S.**, & Schönbrodt, F. D. (2019). Response surface analysis with multilevel data: Illustration for the case of congruence hypotheses. *Psychological Methods*, 24(3), 291–308. <https://doi.org/10.1037/met0000199>
[Example Code: osf.io/jhyu9]

- Humberg, S.,** Dufner, M., Schönbrodt, F. D., Geukes, K., Hutteman, R., van Zalk, M. H. W., Denissen, J. J. A., Nestler, S., & Back, M. D. (2018). Enhanced versus simply positive: A new condition-based regression analysis to disentangle effects of self-enhancement from effects of positivity of self-view. *Journal of Personality and Social Psychology, 114*(2), 303-322. <https://doi.org/10.1037/pspp0000134>
[Preprint: osf.io/smmh7 | Open Data + Code: osf.io/e8p5r]
- Humberg, S.,** Dufner, M., Schönbrodt, F. D., Geukes, K., Hutteman, R., van Zalk, M. H. W., Denissen, J. J. A., Nestler, S., & Back, M. D. (2018). Why condition-based regression analysis (CRA) is indeed a valid test of self-enhancement effects: A response to Krueger et al. (2017). *Collabra: Psychology, 4*(1), 26. <https://doi.org/10.1525/collabra.137>
[Open Access: collabra.org/article/10.1525/collabra.137]
- Schönbrodt, F. D., **Humberg, S.,** & Nestler, S. (2018). Testing similarity effects with dyadic response surface analysis. *European Journal of Personality, 32*(6), 627-641. <https://doi.org/10.1002/per.2169>
[Preprint: psyarxiv.com/8mpua | Example Code: osf.io/ftsrd]

Book Chapters

- Humberg, S.,** Förster, N., Kaiser, J., Schönbrodt, F. D. (2017). Konsequenzen akkurater Lehrerurteile: Response Surface Analyse als statistisches Verfahren zur Untersuchung von Übereinstimmungshypothesen. In A. Südkamp, A.-K. Praetorius (Hrsg.). *Diagnostische Kompetenz von Lehrkräften: Theoretische und methodische Weiterentwicklungen* (S. 174-200). Münster: Waxmann.
[Example Code: osf.io/yzq59]

Published Software

- Schönbrodt, F. D. & **Humberg, S.** (2023). RSA: An R package for response surface analysis. Retrieved from <https://cran.r-project.org/package=RSA>