Frederik Aust

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Education

Ph.D. in Psychology (summa cum laude)   12/2013–1/2021
UNIVERSITY OF COLOGNE   Cologne, DE

- Thesis: Exemplars as least-committed alternative to dual representations in learning and memory

Diploma in Psychology (1.0)   10/2006–3/2012
HEINRICH-HEINE-UNIVERSITY   Düsseldorf, DE

Employment

University of Amsterdam   9/2020–*current*
Psychological Methods   Amsterdam, NL
POSTDOCTORAL RESEARCHER

University of Cologne   12/2013–8/2020
Research Methods and Experimental Psychology   Cologne, DE
POSTDOCTORAL RESEARCHER, RESEARCH ASSOCIATE

University of Missouri   1–2/2017
Perception and Cognition Lab   Columbia, MO
VISITING RESEARCHER

Leibniz Research Centre for Working Environment and Human Factors   7/2012–11/2013
    Dortmund, DE
Perceptual Cybernetics
RESEARCH ASSOCIATE

Selected publications

Sarafoglou, A., Kuhlmann, B. G., **Aust**, **F.**, & Haaf, J. M. (2022). Theory-informed refinement of bayesian hierarchical MPT modeling. https://psyarxiv.com/kvyt5/

Aust, **F.**, & Stahl, C. (2020). The enhancing effect of 200 mg caffeine on mnemonic discrimination is at best small. *Memory*, *28*(7), 858–869. https://doi.org/10.1080/09658211.2020.1781899

Heycke†, T., **Aust**†, **F.**, Banaji, M. R., Cone, J., Dessel, P. V., Ferguson, M., Hu, X., Jiang, E. C., Kurdi, B., Rydell, R., Spitzer, L., Stahl, C., Vitiello, C., & Houwer, J. D. (2020). Of two minds: A registered replication [Accepted in principle at *Psychological Science*]. https://psyarxiv.com/v674w/

Aust, **F.**, Haaf, J. M., & Stahl, C. (2019). A memory-based judgment account of expectancy-liking dissociations in evaluative conditioning. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *45*(3). https://doi.org/10.1037/xlm0000600

Stahl, C., & **Aust**, **F.** (2018). Evaluative conditioning as memory-based judgment. *Social Psychological Bulletin*, *13*(3), 1–30. https://doi.org/10.5964/spb.v13i3.28589

† indicates shared first authorship. For complete list of publications see below.

Awards and grants

1. Prize in 13. Dissertation Competition of the German Society for Psychology's (DGPs) section General and Cognitive Psychology   2023

Amsterdam Brain and Cognition Talent Grant for "Informative and efficient Bayesian hypothesis tests for lesion studies" with principle investigators Eric-Jan Wagenmakers and Edward de Haan   2022   125.000€

Society for the Improvement of Psychological Science (SIPS) Mission Award for the creation and maintenance of the R package `papaja`   2019 $500

Center for Open Science (COS) Preregistration Challenge Award for Aust, Haaf, & Stahl (2018)   2018 $1.000

University of Cologne Graduate School travel awards   2017   1.680€

University of Cologne Graduate School travel awards   2016   930€

University of Cologne Graduate School travel awards   2015   668€

German Psychological Society travel award   2014   381€

Ruhr-University Bochum Graduate School travel award   2014   1.300€

Professional service

Editorial assistant at *Experimental Psychology*   4/2014–6/2018

Member of W3 Social Psychology chair appointments committee at the University of Cologne Psychology Department   2–7/2017

Organizational activities

Together with František Bartoš, Lukas Lengersdorff, Alexandra Sarafoglou, Jonas Petter, Šimon Kucharskýy, Angelika Stefan, Don van den Bergh, Eric-Jan Wagenmakers, and Richard Morey, part of the organizing committee for the eighth annual two–day JASP workshop "Theory and Practice of Bayesian Hypothesis Testing" at the University of Amsterdam, the Netherlands, and online
29–30/8/2022
55 participants

Together with František Bartšs, Lukas Lengersdorff, Alexandra Sarafoglou, Manuel Villarreal, Lauren Montgomery, Jonas Petter, Šimon Kucharský, Angelika Stefan, Johnny van Doorn, Eric-Jan Wagenmakers, and Michael Lee, part of the organizing committee for the one–week "Tenth Annual JAGS and Stan Workshop: Bayesian Modeling for Cognitive Science" at the University of Amsterdam, the Netherlands
22–26/8/2022
25 participants

Together with Angelika Stefan, Richard Morey, and Eric-Jan Wagenmakers part of the organizing committee for the seventh annual two–day JASP online workshop "Theory and Practice of Bayesian Hypothesis Testing"
26–27/8/2021
73 participants

Together with Christoph Stahl, Chirstian Unkelbach, and Jan Crusius founded the Open Science Working Group at the University of Cologne Psychology Department
2/2017–8/2021

Together with Tobias Heycke organized a doctoral student colloquium at the University of Cologne Psychology Department
3/2014–9/2016

Together with Tobias Heycke organized a one-day workshop "An Introduction to Bayesian Statistics: The Philosophy, Bayesian Linear Models, and Practical Data Analysis" for the graduate school at University of Cologne Faculty of Human Sciences
23/10/2015
25 participants

Adhoc reviewing

- Advances in Methods and Practices in Psychological Science (1)
- Behavior Research Methods (6)
- Cognition & Emotion (2)
- Collabra Psychology (2)
- Computational Brain & Behavior (2)
- Experimental Psychology (2)
- Journal of Cognitive Psychology (1)
- Journal of Experimental Psychology: General (2)
- Journal of Experimental Psychology: Human Perception and Performance (2)
- Journal of Experimental Psychology: Learning Memory and Cognition (5)
- Journal of Individual Differences (1)
- Journal of Mathematical Psychology (1)
- Neuroscience & Biobehavioral Reviews (2)
- PeerJ Computer Science (2)
- Perspectives on Psychological Science (1)
- Proceedings of the Human Factors and Ergonomics Society Annual Meeting (1)
- Psychological Methods (6)
- Social Psychological Bulletin (1)

Invited presentations

Aust, **F.** (2023a). *Exemplars as a least-committed alternative to dual-representations in learning and memory* [Invited talk at Abschlusssymposium of the 13. Dissertation Competition of the German Society for Psychology's (DGPs) section General and Cognitive Psychology, University of Siegen, Germany].

Aust, **F.** (2022). *Friends don't let friends copy-paste: Computationally reproducible apa-style manuscripts with the R package papaja* [Invited talk at Faculty of Psychology, University of Basel, Basel, Switzerland].

Aust, **F.** (2019). *An alternative to copy-paste reporting: Create dynamic, submission-ready, APA-style manuscripts in R with papaja* [Invited talk at Psychological Methods Lab, Ruhr-University, Bochum, Germany].

Aust, **F.** (2017b). *A global-matching account of verbatim and gist processes in false recognition* [Invited talk at Quantitative Colloquim, Department of Psychological Sciences, University of Missouri, Columbia, MO].

Aust, **F.** (2015). *Incremental validity of Useful Field of View subtests for the prediction of instrumental activities of daily living* [Invited talk at Psychological Assessment and Differential Psychology Colloquim, Department of Experimental Psychology, Heinrich-Heine-University, Düsseldorf, Germany].

Publications

† indicates shared first authorship.

Preprints

Aust, **F.**, Van Doorn, J., & Haaf, J. M. (2022). Translating default priors from linear mixed models to repeated-measures ANOVA and paired t-tests. https://psyarxiv.com/by2d9/

Pawel, S., **Aust**, **F.**, Held, L., & Wagenmakers, E. J. (2022). Power priors for replication studies. https://arxiv.org/abs/2207.14720

Sarafoglou, A., Kuhlmann, B. G., **Aust**, **F.**, & Haaf, J. M. (2022). Theory-informed refinement of bayesian hierarchical MPT modeling. https://psyarxiv.com/kvyt5/

Heycke†, T., **Aust**†, **F.**, Banaji, M. R., Cone, J., Dessel, P. V., Ferguson, M., Hu, X., Jiang, E. C., Kurdi, B., Rydell, R., Spitzer, L., Stahl, C., Vitiello, C., & Houwer, J. D. (2020). Of two minds: A registered replication [Accepted in principle at *Psychological Science*]. https://psyarxiv.com/v674w/

Stahl, C., & **Aust**, **F.** (2016). False memory for perceptually similar but conceptually distinct line drawings. https://psyarxiv.com/zr7m8/

Journal articles

Pawel, S., **Aust**, **F.**, Held, L., & Wagenmakers, E. J. (2023). Normalized power priors always discount historical data. *Stat*. https://doi.org/10.1002/sta4.591

Sarafoglou, A., **Aust**, **F.**, Marsman, M., Bartŏs, F., Wagenmakers, E. J., & Haaf, J. M. (2023). Multibridge: An R package to evaluate informed hypotheses in binomial and multinomial models. *Behavior Research Methods*. https://doi.org/10.3758/s13428-022-02020-1

Stahl, C., Bena, J., **Aust**, **F.**, Mierop, A., & Corneille, O. (2023). A conditional judgment procedure for probing evaluative conditioning effects in the absence of feelings of remembering. *Behavior Research Methods*.

Van Den Bergh, D., Wagenmakers, E. J., & **Aust**, **F.** (2023). Bayesian repeated-measures analysis of variance: An updated methodology implemented in JASP. *Advances in Methods and Practices in Psychological Science*. https://doi.org/10.1177/25152459231168024

van Doorn, J., Haaf, J. M., Stefan, A. M., Wagenmakers, E., Cox, G. E., Davis-Stober, C. P., Heathcote, A., Heck, D. W., Kalish, M., Kellen, D., Matzke, D., Morey, R. D., Nicenboim, B., van Ravenzwaaij, D., Rouder, J. N., Schad, D. J., Shiffrin, R. M., Singmann, H., Vasishth, S., … **Aust**, **F.** (2023). Bayes factors for mixed models: A discussion. *Computational Brain & Behavior*. https://doi.org/10.1007/s42113-022-00160-3

Van Doorn†, J., **Aust**†, **F.**, Haaf, J. M., Stefan, A., & Wagenmakers, E. J. (2023). Bayes factors for mixed models: Perspective on responses. *Computational Brain & Behavior*. https://doi.org/10.1007/s42113-022-00158-x

Bartoš, F., **Aust**, **F.**, & Haaf, J. M. (2022). Informed bayesian survival analysis. *BMC Medical Research Methodology*, *22*(1), 1–22. https://doi.org/10.1186/s12874-022-01676-9

Kovacs, M., Holcombe, A., **Aust**, **F.**, & Aczel, B. (2021). Tenzing and the importance of tool development for research efficiency. *Information Services & Use*, *1*, 1–9. https://doi.org/10.3233/ISU-210109

Van Doorn, J., **Aust**, **F.**, Haaf, J. M., Stefan, A. M., & Wagenmakers, E. J. (2021). Bayes factors for mixed models. *Computational Brain & Behavior*, *1*, 1–13. https://doi.org/10.1007/s42113-021-00113-2

Aust, **F.**, & Stahl, C. (2020). The enhancing effect of 200 mg caffeine on mnemonic discrimination is at best small. *Memory*, *28*(7), 858–869. https://doi.org/10.1080/09658211.2020.1781899

Holcombe, A. O., Kovacs, M., **Aust**, **F.**, & Aczel, B. (2020). Documenting contributions to scholarly articles using CRediT and tenzing. *PLOS ONE*, *15*(12). https://doi.org/10.1371/journal.pone.0244611

Moran, T., Hughes, S., Hussey, I., Vadillo, M. A., Olson, M. A., **Aust**, **F.**, & Bading, K. (2020). Incidental attitude formation via the surveillance task: A preregistered replication of the Olson and Fazio (2001) study. *Psychological Science*, *0956797620968526*. https://doi.org/10.1177/0956797620968526

Aust, **F.**, Haaf, J. M., & Stahl, C. (2019). A memory-based judgment account of expectancy-liking dissociations in evaluative conditioning. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *45*(3). https://doi.org/10.1037/xlm0000600

Klein, O., Hardwicke, T. E., **Aust**, **F.**, Breuer, J., Danielsson, H., & Mohr, A. H. (2018). A practical guide for transparency in psychological science. *Collabra: Psychology*, *4*(1). https://doi.org/10.1525/collabra.158

Silberzahn, R., Uhlmann, E. L., Martin, D., Anselmi, P., **Aust**, **F.**, & Awtrey, E. C. (2018). Many analysts, one data set: Making transparent how variations in analytic choices affect results. *Advances in Methods and Practices in Psychological Science*, *1*(3), 337–356. https://doi.org/10.1177/2515245917747646

Stahl, C., & **Aust**, **F.** (2018). Evaluative conditioning as memory-based judgment. *Social Psychological Bulletin*, *13*(3), 1–30. https://doi.org/10.5964/spb.v13i3.28589

Heycke, T., **Aust**, **F.**, & Stahl, C. (2017). Subliminal influence on preferences? A test of evaluative conditioning for brief visual conditioned stimuli using auditory unconditioned stimuli. *Royal Society Open Science*, *4*(9). https://doi.org/10.1098/rsos.160935

Rouder, J. N., Haaf, J. M., & **Aust**, **F.** (2017). From theories to models to predictions: A bayesian model comparison approach. *Communication Monographs*, *1*, 1–16. https://doi.org/10.1080/03637751.2017.1394581

Aust, **F.**, & Edwards, J. D. (2016). Incremental validity of Useful Field of View subtests for the prediction of instrumental activities of daily living. *Journal of clinical and experimental neuropsychology*, *38*(5), 497–515. https://doi.org/10.1080/13803395.2015.1125453

Aust†, **F.**, Diedenhofen†, B., Ullrich, S., & Musch, J. (2013). Seriousness checks are useful to improve data validity in online research. *Behavior research methods*, *45*(2), 527–535. https://doi.org/10.3758/s13428-012-0265-2

Aust, **F.**, Moehlenbrink, C., & Jipp, M. (2011). Operationalization of learned carelessness an experimental approach. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, *55*. https://doi.org/10.1177/1071181311551360

Books and book chapters

Wagenmakers, E.-J., & **Aust**, **F.** (n.d.). The strength of evidence. In E.-J. Wagenmakers & D. Matzke (Eds.), *Bayesian inference from the ground up* (Vol. 1). JASP Publishing.

Aust, **F.** (2023b). *Exemplars as a least-committed alternative to dual-representations in learning and memory* [Doctoral dissertation, University of Cologne]. https://kups.ub.uni-koeln.de/64657/

Caldwell, A. R., Lakens, D., Parlett-Pelleriti, C. M., Prochilo, G., & **Aust**, **F.** (2022). *Power analysis with Superpower*. Retrieved November 12, 2022, from https://aaroncaldwell.us/SuperpowerBook/

Miscellaneous Scientific Writings

Aust, **F.** (2017a, August 28). *A conceptual introduction to mathematical modeling of cognition*. JEPS Bulletin. Retrieved November 9, 2022, from https://blog.efpsa.org/2017/08/28/a-conceptual-introduction-to-mathematical-modelling-of-cognition/

R packages

afex Analysis of Factorial Experiments	109 GitHub stars	
Henrik Singmann, Ben Bolker, Jake Westfall, Frederik Aust, & Mattan S. Ben-Shachar	10,089 dl/mo	

papaja Prepare American Psychological Association Journal Articles with R Markdown — 583 GitHub stars / 1,296 dl/mo

Frederik Aust & Marius Barth

citr RStudio Addin to Insert Markdown Citations — 395 GitHub stars / Not yet on CRAN

Frederik Aust

prereg R Markdown Templates to Preregister Scientific Studies — 48 GitHub stars / 434 dl/mo

Frederik Aust & Lisa Spitzer

indiedown Individual R Markdown Templates — 25 GitHub stars / 578 dl/mo

Christoph Sax, Kirill Müller, Angelica Becerra, & Frederik Aust

retractcheck Retraction Scanner — 24 GitHub stars / 267 dl/mo

Chris Hartgerink & Frederik Aust

rmdfiltr 'Lua'-Filters for R Markdown — 42 GitHub stars / 1,135 dl/mo

Frederik Aust

jab Automagically compute Jeffrey's Approximate Bayes factors — 2 GitHub stars / Not yet on CRAN

Frederik Aust

Contributed code to the following packages: `MPTmultiverse`, `Superpower`, `bookdown`, `broom`, `ggeffects`, `rmarkdown`

Teaching and mentoring

Supervision

Research internships — 4 students

Martin Papenberg (B.Sc, 2012), Philipp Musfeld (B.Sc, 2015), Axel Gehlen (B.Sc, 2018), Sebastiaan de Vries (M.Sc, 2021)

B.Sc. theses psychology — 5 students

Philipp Musfeld (2017), Amelie Jörgensen (2023), Eeva Hökkä (2023), Sacha van de Hoef (2023), Sam Semegne (2023)

M.Sc. theses psychology — 1 student

František Bartoš (2021)

University courses

Bayesian Statistics Practical — 2022

B.Sc. Psychology, University of Amsterdam, 8 students — 2×2 hrs/wk

Computational reproducibility: A minimum necessary condition for credibility — 17/11/2020

Guest lecture in *Good Research Practices* course at University of Amsterdam — 2 hrs

Mathematical Modeling in Psychology — 2020

B.Sc. Psychology, University of Amsterdam, 14 students, with Julia M. Haaf — 4 hrs/wk

Statistics 2 Practical   2020
B.Sc. Psychology, University of Cologne, 69 students   2×2 hrs/wk

Statistics 2 Practical   2019
B.Sc. Psychology, University of Cologne, 62 students   2×2 hrs/wk

Multivariate Statistics Practical   2017–2018
M.Sc. Psychology, University of Cologne, 36 students   2×2 hrs/wk

Statistics 2 Practical   2017
B.Sc. Psychology, University of Cologne, 67 students   2×2 hrs/wk

Multivariate Statistics Practical   2016–2017
M.Sc. Psychology, University of Cologne, 47 students   2×2 hrs/wk

Statistics 1 Practical   2015–2016
B.Sc. Psychology, University of Cologne, 53 students   2×2 hrs/wk

Statistics 1 Practical   2014–2015
B.Sc. Psychology, University of Cologne, 95 students   3×2 hrs/wk

Practical Experimenting   2014
B.Sc. Psychology, University of Cologne, 10 students   2 hrs/wk

Statistics 2 Practical   2014
B.Sc. Psychology, University of Cologne, 85 students   3×2 hrs/wk

Statistics 1 Practical   2013–2014
B.Sc. Psychology, University of Cologne, 32 students   2 hrs/wk

INTERNATIONAL WORKSHOPS

Friends don't let friends copy-paste: How to create computationally reproducible APA-style manuscripts with the R package papaja   10/04/2022 — 1 day
Dresden University of Technology, Dresden, Germany

Friends don't let friends copy-paste: How to create computationally reproducible APA-style manuscripts with the R package papaja   16/11/2022 — 3 hrs
As part of the lecture series *Practices and Tools of Open Science*, Leibniz Institute of Psychology, Trier, Germany

Friends don't let friends copy-paste: How to create computationally reproducible APA-style manuscripts with the R package papaja   4/11/2022 — 1 day
University of Hagen, Hagen, Germany

Friends don't let friends copy-paste: How to create computationally reproducible APA-style manuscripts with the R package papaja   24–26/10/2022 — 3 days
Linköping University, Linköping, Sweden

Reproducible research practices for psychologists   27–28/4/2022 — 2 days
KU Leuven, Leuven, Belgium, with Johannes Breuer

An alternative to copy-paste reporting: Create computationally reproducible, submission-ready, APA-style manuscripts in R with papaja   19/3/2022 — 3 hrs
Conference of Experimental Psychologists (TeaP) 2022, Cologne, Germany, with Marius Barth

A fully reproducible publication workflow: Analysis, report, and revision   9–10/11/2021 — 3 days
Linköping University, Linköping, Sweden

An alternative to copy-paste reporting: Create computationally reproducible, submission-ready, APA-style manuscripts in R with papaja   5/6/2020 — 1 day
Laboratoire Inter-universitaire de Psychologie, France

An alternative to copy-paste reporting: Create computationally reproducible, submission-ready, APA-style manuscripts in R with papaja   17/1/2020 — 1 day
Max Planck School of Cognition Academy, Berlin, Germany

An alternative to copy-paste reporting: Create computationally reproducible, submission-ready, APA-style manuscripts in R with papaja   25/8/2019 — 1 day
European Conference on Visual Perception, Leuven, Belgium, with Marius Barth

Developing your personal workflow for transparent and reproducible research   9/7/2019 — 5 hrs
Society for Improving Psychological Science 2019 conference, Rotterdam, Netherlands, with Johannes Breuer

papaja: Prepare APA journal articles reproducibly with R Markdown
Behavioral Science Institute, Radboud University, Nijmegen, The Netherlands

19–20/11/2018
2 days

A practical primer on transparent research workflows
EASP Solid Science Training Workshop, Bordeaux, France

7/9/2018
5 hrs

A practical primer on transparent research workflows
ESCON Transfer of Knowledge Conference, Cologne, Germany, with Johannes Breuer

4/9/2018
5 hrs

papaja: Prepare APA journal articles reproducibly with R Markdown
Linköping University, Linköping, Sweden

13–14/8/2018
2 days

papaja: Prepare APA journal articles reproducibly with R Markdown
Peer Mentoring Project Methods and Statistics, University of Zürich, Zürich, Switzerland

30/11–1/12/2017
2 days

Data Visualization in R
Society for Personality and Social Psychology's Annual Convention 2017, San Antonio, TX

20/1/2017
3 hrs