

PHILIPP MUSFELD – CURRICULUM VITAE

PhD Student in Cognitive Psychology

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I am a cognitive psychologist with a strong background in methods and analytics. I am enthusiastic about human information processing and memory. I use statistical and computational modeling with a special focus on Bayesian statistics to formalize and test theoretical ideas about cognitive processes. I am passionate about open science.

EDUCATION

- 10/2020 – 09/2024 ● **PhD in Cognitive Psychology**, University of Zurich, Switzerland
 - Thesis: *Revisiting Hebb: New Insights Into the Mechanisms Underlying Repetition Learning*
 - Grade: Summa cum Laude – Passed with distinction
 - Advisor: Prof. Klaus Oberauer, Prof. John Wixted
- 10/2022 – 12/2022 ● **International Visiting PhD Student**, University of Toronto Mississauga, Canada
 - Project: *Investigating the Neuropsychological Mechanisms of Repetition Learning*
 - Advisor: Dr. Keisuke Fukuda
- 10/2017 – 09/2020 ● **Master of Science in Psychology**, University of Bonn, Germany
 - Grade: \emptyset 1.0 (scale: 1.0 - 6.0, 1.0 = best) – Passed with distinction
 - Thesis: *Investigating the Interplay between Person Factors and Appraisal Dimensions in (non-)criminal Decisions*
- 10/2014 – 09/2017 ● **Bachelor of Science in Psychology**, University of Cologne, Germany
 - Grade: \emptyset 1.0 (scale: 1.0 - 6.0, 1.0 = best) – Passed with distinction
 - Thesis: *False Memories in Short-Term Memory Due to Encoding Errors*
- 08/2006 – 06/2014 ● **Higher Education Entrance Qualification**, Freiherr-vom-Stein-Gymnasium Oberhausen, Germany
 - Grade: \emptyset 1.0 (scale: 1.0—6.0, 1.0 = best) – Passed with distinction

ACADEMIC POSITIONS

- Since 09/2024 ● **Postdoctoral Researcher**, University of Zurich – Cognitive Psychology Unit
 - Project: *Cooperation of Working Memory and Long-Term Memory*
 - Funding: Swiss National Science Foundation
- 10/2020 – 09/2024 ● **Doctoral Student**, University of Zurich – Cognitive Psychology Unit
 - Project: *Cooperation of Working Memory and Long-Term Memory*
 - Funding: Swiss National Science Foundation
- 10/2019 – 12/2019 ● **Research Intern**, University of California, San Diego – Cognitive Psychology Unit
 - Topic: *Cognitive Models for Eyewitness Identification Procedures*
 - Advisor: Prof. John Wixted
- 06/2015 – 04/2019 ● **Research Assistant**, University of Cologne – Department for Research Methods and Experimental Psychology

OTHER RELEVANT POSITIONS

- 04/2019 – 10/2020 ● **Working Student – Data Science**, SKOPOS ELEMENTS, Cologne, Germany
 - Responsibilities: Data analysis, data visualization and creation of online dashboards

SCHOLARSHIPS, GRANTS & Awards

- 09/2024 ● **Travel Award** of the Swiss Academy of Humanities and Social Sciences
 - Travel contribution for participation in the 65th Annual Meeting of the Psychonomic Society New York City, USA (CHF 1000)
- 02/2024 ● **Open Science Award** of the Department of Psychology, University of Zurich
 - Competitive award for the exemplary implementation of Open Science Practices (CHF 250)
- 06/2023 ● **Graduate Campus Short Grant**, University of Zurich,
 - Competitive grant for organizing a workshop on *Methods for Bayesian Inference in Complex Cognitive Models* at the University of Zurich (CHF 4000)
- 10/2022 – 12/2022 ● **Graduate Campus Travel Grant**, University of Zurich,
 - Competitive grant for a research visit at the University of Toronto Mississauga (CHF 3400)
- 10/2022 ● **Graduate Conference Award of the Psychonomic Society**
 - Competitive award for graduate student members of the Psychonomic Society (\$1000)
- 10/2019 – 12/2019 ● **PROMOS Scholarship for Internships Abroad (DAAD)**
 - Funding for a scientific internship at the University of California, San Diego (2500€)
- 10/2015 – 10/2018 ● **German National Scholarship Program**, Universities of Cologne and Bonn
 - Government scholarship for exceptionally gifted students (3x 3600€)

ADMINISTRATIVE & COMMUNITY ROLES

Review Activities

- Since 08/2024 ● Psychological Science
- Since 04/2024 ● Journal of Memory and Language
- Since 05/2023 ● Memory & Cognition

Memberships

- Since 06/2022 ● Member at the European Society for Cognitive Psychology (ESCoP)
- Since 10/2020 ● Member at the Psychonomic Society

Administrative Work

- Since 05/2023 ● Representative of Junior Scientists in the Institute's Evaluation Committee
- Since 02/2023 ● Representative of Junior Scientists in the Institute's Assembly
- Since 10/2021 ● Responsible for Open Science Practices in the Lab

SOFTWARE & PROGRAMMING SKILLS

R & RStudio:	<i>Expert</i>	●●●●●●	Alteryx:	<i>Expert</i>	●●●●●○
Stan:	<i>Expert</i>	●●●●●○	MS Office:	<i>Expert</i>	●●●●●○
Javascript:	<i>Proficient</i>	●●●○○○	Tableau:	<i>Proficient</i>	●●●●○○
Python:	<i>Proficient</i>	●●●○○○	Git:	<i>Proficient</i>	●●●●○○
EEGLab:	<i>Proficient</i>	●●●○○○	Shiny:	<i>Proficient</i>	●●●●○○
Matlab:	<i>Novice</i>	●●○○○○	SQL:	<i>Novice</i>	●●○○○○

LANGUAGE SKILLS

German: *Native language* ●●●●●● English: *Fluent (C1)* ●●●●●●

PEER-REVIEWED PUBLICATIONS

- 09/2024 ● **Musfeld, P.** (2024). *Revisiting Hebb: New Insights Into the Mechanisms Underlying Repetition Learning* [University of Zurich]. <https://doi.org/10.5167/UZH-262321>
- 04/2024 ● **Musfeld, P.**, Dutli, J., Oberauer, K., & Bartsch, L. M. (2024). Grouping in Working Memory Guides Chunk Formation in Long-Term Memory: Evidence from the Hebb Effect. *Cognition*, 248, 105795. <https://doi.org/10.1016/j.cognition.2024.105795>
- 03/2024 ● Dames, H., **Musfeld, P.**, Popov, V., Oberauer, K., & Frischkorn, G. T. (2024). Responsible Research Assessment Should Prioritize Theory Development and Testing Over Ticking Open Science Boxes. *Meta-Psychology*, 8. <https://doi.org/10.15626/MP.2023.3735>
- 10/2023 ● **Musfeld, P.**, Souza, A. S., & Oberauer, K. (2023). Testing Expectations and Retrieval Practice Modulate Repetition Learning of Visuo-Spatial Arrays. *Journal of Experimental Psychology: Learning, Memory, and Cognition*. <https://doi.org/10.1037/xlm0001298>
- 09/2023 ● Bartsch, L. M., & **Musfeld, P.** (2023). Delayed memory for complex visual stimuli does not benefit from distraction during encoding. *Memory & Cognition*. <https://doi.org/10.3758/s13421-023-01471-x>
- 04/2023 ● **Musfeld, P.**, Souza, A. S., & Oberauer, K. (2023). Repetition learning is neither a continuous nor an implicit process. *Proceedings of the National Academy of Sciences*, 120(16), e2218042120. <https://doi.org/10.1073/pnas.2218042120>

PREPRINTS & MANUSCRIPTS IN PREPARATION

- Preprint ● Rodriguez, A., **Musfeld, P.**, Bartsch, L. M. (2024) *The Flexibility of Working Memory in Drawing on Episodic Long-Term Memory Representations in Serial Recall*.
- In Preparation ● Oberauer, K., Aust, F., & **Musfeld, P.** (in preparation). *Variance, bias, and computational cost of estimating the Bayes factor using bridge sampling and the Savage-Dickey density ratio*.
- In Preparation ● Lange, J., Freyer, N., **Musfeld, P.**, Schönbrodt, F., Leising, D. (in preparation). *A Checklist for Incentivizing and Facilitating Good Theory Building*.
- In Preparation ● Gärtner, A., Leising, D., Lange, J., **Musfeld, P.**, Freyer, N., & Schönbrodt, F. D. (in preparation). *Responsible Research Assessment II: A specific proposal for hiring and promotion in psychology*.
- In Preparation ● **Musfeld, P.**, Dutli, J., Fukuda, K., & Oberauer, K. (in preparation). *The Role of Episodic Memory for Repetition Learning*.
- In Preparation ● **Musfeld, P.**, Ngiam, W., Adam, K., Kozlova, O., Bulatova, O., & Fukuda, K. (in preparation). *Assessing the Electrophysiological Consequences of Long-Term Learning on Visual Working Memory Representations*.

INVITED TALKS

- 11/2023 ● **Musfeld, P.** (2023, November). *What the Hebb?! Revisiting the Mechanisms Underlying Repetition Learning*. Chair of Computational Modeling in Psychology, Ludwig-Maximilians-Universität München, Germany

- 10/2022 ● **Musfeld, P.** (2022, October). *Repetition Learning is Neither a Continuous Nor an Implicit Process*. Perception, Cognition, and Language Cluster, University of Toronto Mississauga, Canada

CONFERENCE CONTRIBUTIONS (TALKS / ABSTRACTS / POSTERS)

- 06/2024 ● **Musfeld, P.**, Dutli, J., Fukuda, K., & Oberauer, K. (2024, June). *The Role of Episodic Memory for Repetition Learning in the Hebb Paradigm*. **Poster** presented at the 4th International Conference on Working Memory (ICWM), Leeds, United Kingdom
- 05/2024 ● **Musfeld, P.**, Kozlova, O., Yeo, Y., & Fukuda, K. (2024, May). *Repetition Learning Depends on Explicit Retrieval from Episodic Memory: Evidence from EEG*. **Talk** presented at the 49th Psychologie und Gehirn (PuG), Hamburg, Germany.
- 09/2023 ● **Musfeld, P.**, Kozlova, O., Yeo, Y., & Fukuda, K. (2023, September). *Repetition Learning Depends on Explicit Retrieval from Episodic Memory: Evidence from EEG*. **Talk** presented at the 23rd Conference of the European Society for Cognitive Psychology (ESCoP), Porto, Portugal.
- 06/2023 ● **Musfeld, P.**, Kozlova, O., Yeo, Y., & Fukuda, K. (2023, June). *Repetition Learning Depends on Explicit Retrieval from Episodic Memory: Evidence from EEG*. **Talk** presented at the 2023 Working Memory Symposium (WMS), virtual.
- 03/2023 ● **Musfeld, P.**, Souza, A. S., Oberauer, K. (2023, March). *Overcoming the Aggregated Learning Curve: A Bayesian Hierarchical Modeling Approach to Measure Learning Processes*. **Talk** presented at the 65th Conference of Experimental Psychologists (TeaP), Trier, Germany.
- 11/2022 ● **Musfeld, P.**, Krasnoff, J., Souza, A. S., & Oberauer, K. (2022, November). *Hebb Repetition Learning: Neither Continuous Nor Implicit – Insights from a New Modeling Approach*. **Poster** presented at the 63rd annual meeting of the Psychonomic Society, Boston, USA.
- 08/2022 ● **Musfeld, P.**, Krasnoff, J., Souza, A. S., & Oberauer, K. (2022, August). *Repetition Learning is not an Implicit Process: The Importance of Repetition Awareness in the Hebb Repetition Effect*. **Talk** presented at the 22nd Conference of the European Society for Cognitive Psychology (ESCoP), Lille, France.
- 08/2022 ● **Musfeld, P.**, Mizrak, E., & Oberauer, K. (2022, August). *How Are Chunks Represented in Working Memory? Evidence Against the Pointer Analogy*. **Poster** presented at the 22nd Conference of the European Society for Cognitive Psychology (ESCoP), Lille, France.
- 06/2022 ● **Musfeld, P.**, Krasnoff, J., Souza, A. S., & Oberauer, K. (2022, June). *Hebb Repetition Learning: Neither Continuous Nor Implicit – Insights from a New Modeling Approach*. **Talk** presented at the 2022 Working Memory Symposium (WMS), virtual.
- 03/2022 ● **Musfeld, P.**, Krasnoff, J., Souza, A. S., & Oberauer, K. (2022, March). *Chicken or Egg? The Role of Awareness in Long-term Learning by Repeated Exposure*. **Talk** presented at the 64th Conference of Experimental Psychologists (TeaP), virtual.
- 03/2022 ● Aust, F., & **Musfeld, P.** (2022, March). *Performance of Bayes factor approximations for comparing nested hierarchical SDT models*. **Talk** presented at the 64th Conference of Experimental Psychologists (TeaP), virtual.

- 10/2021 ● **Musfeld, P.**, Souza, A. S., & Oberauer, K. (2021, October). *Testing Working Memory Boosts Long-Term Learning of Visual Arrays*. **Poster** presented at the 62nd annual meeting of the Psychonomic Society, virtual.
- 06/2021 ● **Musfeld, P.**, Souza, A. S., & Oberauer, K. (2021, June). *Testing Working Memory Boosts Long-Term Learning of Visual Arrays*. **Talk** presented at the 2021 Virtual Working Memory Symposium (VWMS), virtual.
- 03/2017 ● **Musfeld, P.**, Aust, F., & Stahl, C. (2017, March). *False Recognition in Short-Term Memory May Be in Part Due to Encoding Errors*. **Poster** presented at the 59th Conference of Experimental Psychologists (TeaP), Dresden, Germany.

RESEARCH COLLABORATIONS

Canada: Keisuke Fukuda, Toronto; *USA*: William XQ Ngiam, Chicago; Kirsten Adam, Rice; Olga Kozlova, Rice; *Germany*: Christopher Donkin, Munich; Frederik Aust, Cologne; Felix Schönbrodt, Munich; Daniel Leising, Dresden; Jens Lange, Hamburg; *Portugal*: Alessandra S. Souza, Porto; *Switzerland*: Klaus Oberauer, Zurich; Gidon T. Frischkorn, Zurich; Lea M. Bartsch, Zurich; Joscha Dutli, Zurich; Ven Popov, Zurich; *United Kingdom*: Claudia von Bastian, Sheffield; Eleanor Hyde, Sheffield

TEACHING & SUPERVISION

- 02/2024 – 07/2024 ● **University of Zurich – BSc Psychology:**
Supervision of Bachelor Thesis (6 ECTS)
Topic: *Dissociating the effects of familiarity and meaning on working memory performance*
- 02/2024 – 07/2024 ● **University of Zurich – MSc Psychology**
Seminar: *Introduction to Bayesian Statistics (4 ECTS)*
- 02/2023 – 07/2023 ● **University of Zurich – BSc Psychology**
Seminar: *Conducting a Research Project in Experimental Psychology (8 ECTS)*
- 02/2023 – 07/2023 ● **University of Zurich – BSc Psychology**
Supervision of Bachelor Thesis (6 ECTS)
Topic: *Clinical Efficacy of Memory Reconsolidation in Trauma Therapy with PTSD and Phobia*
- 02/2022 – 07/2022 ● **University of Zurich – BSc Psychology**
Seminar: *Conducting a Research Project in Experimental Psychology (8 ECTS)*
- 02/2022 – 07/2022 ● **University of Zurich – BSc Psychology**
Supervision of Bachelor Thesis (6 ECTS)
• Topic: *Reconsolidation Theory – Is it possible to modify established memories?*
- 04/2021 – 10/2021 ● **University of Bonn – MSc Psychology**
Co-Supervision of Master Thesis (30 ECTS)
• Topic: *Decision Making in the Context of Dissexual Behavior: The Role of Appraisal Processes and Personality Factors*
- 10/2018 – 03/2019 ● **University of Cologne – MSc Psychology**
Seminar: *Creating Reproducible Manuscripts with RMarkdown (2 ECTS)*
- 09/2017 ● **University of Cologne – BSc Psychology (Co-Teaching)**
Seminar: *Introduction to R for Psychology (1 ECTS)*
- 09/2016 ● **University of Cologne – BSc Psychology (Co-Teaching)**
Seminar: *Introduction to R for Psychology (1 ECTS)*

ACADEMIC AND PERSONAL TRAININGS

- 10/2023 ● Workshop *Advanced Machine Learning and Natural Language Processing* (Rudolf Debelak), University of Zurich
- 07/2023 ● Workshop *Advanced Analysis of EEG Data using Matlab* (Andreas Keil), University of Zurich
- 04/2023 ● Workshop *Introduction to Machine Learning for Psychologists* (Yannick Rothacher), University of Zurich
- 09/2022 ● Sixth Summer School on *Statistical Methods for Linguistics and Psychology – Track: Advanced Bayesian Data Analysis*, University of Potsdam
- 07/2022 ● Sixth European Summer School on *Computational and Mathematical Modeling of Cognition, 2022*, Szklarska Poreba, Poland
- 05/2022 ● Workshop *Advanced Methods and Applications for Bayesian Data Analysis* (Rafael Polania), University of Zurich
- 02/2022 ● Workshop *Writing Research Articles in Psychology* (Simon Milligan), University of Zurich
- 08/2021 ● Workshop *Designing Better Experiments and Improving your Statistical Inferences* (Daniel Lakens), University of Zurich
- 03/2021 ● Workshop *Methods and Applications for Bayesian Data Analysis* (Rafael Polania), University of Zurich
- 02/2021 ● Workshop *Bayesian Model Comparison* (Julia Haaf), University of Zurich
- 11/2020 ● Workshop *Cognitive Modeling in R* (Klaus Oberauer), University of Zurich

Zurich, October 2, 2024

