

# REBECCA L. WAGNER

**Ph.D. Candidate – NSF Predoctoral Fellow**

Department of Psychology – The Pennsylvania State University

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## **Education**

### **Doctor of Philosophy**

2022 – *Expected 2027*

The Pennsylvania State University, University Park, PA  
Cognitive Psychology

### **Master of Science**

2022 – 2024

The Pennsylvania State University, University Park, PA  
Cognitive Psychology

Thesis Title: “*Examining the role of representations recapitulation when rejecting perceptual lures via recollection rejection and novelty rejection*”

### **Bachelor of Science (with honors)**

2017 – 2021

University of Nebraska at Omaha, Omaha, NE  
Psychology – Cognitive Science

## **Peer-Reviewed Publications**

\* denotes co-authorship

### ***Published***

Dubec, L. \*, West, J. T. \*, **Wagner, R. L.**, & Dennis, N. A. (2025). Exploring the neural underpinnings of semantic and perceptual false memory formation. *Neuropsychologia*, 221, 109332. <https://doi.org/10.1016/j.neuropsychologia.2025.109332>.

West, J. T., **Wagner, R. L.**, Steinkrauss, A., & Dennis, N. A. (2025). Investigating the cognitive correlates of semantic and perceptual false memory in older and younger adults: A multi-group latent variable approach. *Journal of Memory and Language*. 142, 104625. <https://doi.org/10.1016/j.jml.2025.104625>.

Turney, I. C., Steinkrauss, A. C., **Wagner, R. L.**, Chamberlain, J. D., West, J. T., Hakun, J. G., Ross, L. A., Kirchhoff, B. A., & Dennis, N. A. (2025). Neural effects of memory training to reduce false memories in older adults: Univariate and multivariate analyses. *Neurobiology of Aging*. 147, 187-202. <https://doi.org/10.1016/j.neurobiolaging.2024.12.007>.

AuBuchon, A. M., **Wagner, R. L.**, & Sackinsky, M. (2024). Children’s rehearsal development parallels that of self-talk in other executive functions. *Developmental Psychology*, 60(7), 1237–1243. <https://doi.org/10.1037/dev0001697>.

AuBuchon, A. M. & **Wagner, R. L.** (2023). Self-generated strategies in the phonological similarity effect. *Memory & Cognition*, 51, 1683-1701. <https://doi.org/10.3758/s13421-023-01418-2>.

**Wagner, R. L.**, Lyon, B. A., & AuBuchon, A. (2022). False memory for words in noise: An at-home Deese-Roediger-McDermott (DRM) experiment across adulthood. *Psi Chi Journal of Psychological Research*, 27(2), 154-165. <https://doi.org/10.24839/2325-7342.JN27.2.154>.

# Rebecca L. Wagner

## *Under Review*

**Wagner, R. L.**, Bowman, C. R., & Dennis, N. A. (*under review*). The differential effect of re-presenting target information on recall-to-reject in younger and older adults. *Memory*.

Becker, A.\*, **Wagner, R. L.\***, & Dennis, N. A. (*in-prep*). Systematically reducing schematic information during encoding differentially impacts true and false memory at retrieval in younger and older adults. *Psychology & Aging*.

## **In-Prep Publications**

**Wagner, R. L.**, Dubec, L., Broderick, M., & Dennis, N. A. (*in-prep*). A univariate investigation into the neural underpinnings of false memory across memory domains in older and younger adults.

Seo, M., **Wagner, R. L.**, Chamberlain, J. D., & Dennis, N. A. (*in-prep*). Hippocampal subfield and cortical correlates of mnemonic discrimination during interference.

## **Pre-Registered Studies**

Dubec, L.\*, **Wagner, R. L.\***, West, J. T., & Dennis, N. A. Exploration into the neural underpinnings of semantic and perceptual false memory formation in younger adults. (OSF [pre-registration](#)).

**Wagner, R. L.\***, Chamberlain, J. D.\*, Dubec, L., & Dennis, N. A. A high-resolution investigation into the effects of interference on representational recapitulation within the subregions of the human medial temporal lobe. (OSF [pre-registration](#)).

**Wagner, R. L.** & Dennis, N. A. Examining the rejection of perceptual lures via recollection and novelty rejection: The role of representational recapitulation during retrieval. (OSF [pre-registration](#)).

West, J. T., **Wagner, R. L.**, Steinkrauss, A. C., & Dennis, N. A. Individual differences in false memories. (OSF [pre-registration](#)).

Skogerboe, H., **Wagner, R. L.**, & AuBuchon, A. M. The effect of list length and stimuli type on young adults' utilization of mnemonic strategies. (OSF [pre-registration](#)).

## **Research Dissemination**

### ***Seminar Talks***

Becker, A. & **Wagner, R. L.** (2026, January 28). *Effects of systematically varying schematic information during encoding on subsequent memory* [Seminar Presentation]. Pennsylvania State University Cognitive Colloquium, University Park, PA.

**Wagner, R. L.** & Distefano, P. (2025, November 11). *Other Software Programs to couple Behavior with Neuroimaging Methods* [Seminar Presentation]. Pennsylvania State University Social, Life, and Engineering Sciences Imaging Center (SLEIC) Workshop Series, University Park, PA.

## Rebecca L. Wagner

**Wagner, R. L.** (2025, April 2). *Aging & the Recall-to-Reject Strategy: Can providing reminders of target items improve older adults' reliance on recollective processing when identifying lures?* [Seminar Presentation]. The Pennsylvania State University Cognitive Colloquium, University Park, PA.

**Wagner, R. L.** (2023, June 2). *Taking a closer look at memory accuracy: Exploring how the strength of representational recapitulation may dictate selection of lure rejection strategies & A high-resolution investigation into the effects of interference on mnemonic similarity within the subfields of the human medial temporal lobe* [Seminar presentation]. Boys Town National Research Hospital 2023 Research Seminar Series, Omaha, NE.

**Wagner, R. L. & Dennis, N. A.** (2023, April 19). *Understanding the cognitive and neural contributions to false memory production during healthy aging* [Seminar presentation]. The Pennsylvania State University Cognitive Colloquium, University Park, PA.

**Wagner, R. L.** (2021, April 23). *Gorilla and REDCap for remote and online data collection* [Seminar presentation]. Boys Town National Research Hospital 2021 Virtual Research Methodology Seminar, Omaha, NE.

**Wagner, R. L., AuBuchon, A. M., Lalonde, K.** (2020, September 15). *Prolific and Gorilla: 100% remote and online data collection* [Seminar presentation]. Boys Town National Research Hospital 2020 Virtual Research Methodology Seminar, Omaha, NE.

### Conference Talks

Skogerboe, H., **Wagner, R. L.**, & AuBuchon, A. M. (2024, March 22). *The effect of list length and stimuli type on young adults' utilization of mnemonic strategies* [Conference presentation]. University of Nebraska at Omaha Research and Creative Activities Fair, Omaha, NE.

### Posters

**Wagner, R. L.**, Broderick, M., & Dennis, N. A. (2026, March 7). *On the contributions of frontoparietal regions to false memory production irrespective of age and memory domain* [Conference presentation]. Cognitive Neuroscience Society Annual Meeting, Vancouver, British Columbia, Canada.

**Wagner, R. L.**, Bowman, C., & Dennis, N. A. (2025, March 30). *"Recall-to-reject": A behavioral and neural investigation into age differences in the strategic use of recollection to promote lure detection* [Conference presentation]. Cognitive Neuroscience Society Annual Meeting, Boston, MA.

Dubec, L.\*, **Wagner, R. L.\***, West, J. T., & Dennis, N. A. (2025, March 30). *Examining neural representations of perceptual and semantic false memories in younger adults* [Conference presentation]. Cognitive Neuroscience Society Annual Meeting, Boston, MA.

West, J. T., **Wagner, R. L.**, Steinkrauss, A., & Dennis, N. A. (2025, February 21). *Investigating the cognitive correlates of semantic and perceptual false memory in older and younger adults: A multi-group latent variable approach* [Conference presentation]. Dallas Aging and Cognition Conference Meeting, Dallas, Texas.

Dubec, L.\*, **Wagner, R. L.\***, West, J. T., & Dennis, N. A. (2024, November 23). *Exploration into the neural underpinnings of semantic and perceptual false memory formation in younger adults* [Conference presentation]. Psychonomic Society's 65th Annual Meeting, New York City, NY.

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AuBuchon, A. M., **Wagner, R. L.**, & Sackinsky, M. (2024, June 26). *Lexical retrieval as an early predictor of children's ability to engage cumulative rehearsal* [Conference presentation]. The 4<sup>th</sup> International Conference on Working Memory, Leeds, United Kingdom.

Skogerboe, H., **Wagner, R. L.**, AuBuchon, A. (2024, April 24). *The effect of stimuli type on young adults' self-generated mnemonic strategies* [Symposium presentation]. 2024 BTNRH Post-Doctoral Research Symposium, Omaha, NE.

**Wagner, R. L.**, Dubec, L., West, J. T., Chamberlain, J. D., & Dennis, N. A. (2024, April 15). *A high-resolution investigation into the influence of interference on memory: Examining the role of the visual cortex and subregions of the hippocampus* [Conference presentation]. Cognitive Neuroscience Society Annual Meeting, Toronto, Ontario, Canada.

West, J. T., **Wagner, R. L.**, Steinkrauss, A., & Dennis, N. A. (2024, April 15). *Investigating the cognitive correlates of semantic and perceptual false memory in older and younger adults: A multi-group latent variable approach* [Conference presentation]. Cognitive Neuroscience Society Annual Meeting, Toronto, Canada.

Sackinsky, M., AuBuchon, A. M., & **Wagner, R. L.** (2024, April 19). *Children's control over and awareness of their own rehearsal* [Conference presentation]. 96th Annual Meeting of the Midwestern Psychological Association, Chicago, IL.

**Wagner, R. L.** & AuBuchon, A. M. (2022, November 18) *Children's spontaneous recruitment of phonological memory strategies as a function of age and capacity* [Conference presentation]. Psychonomic Society's 63rd Annual Meeting, Boston, MA.

AuBuchon, A. M., **Wagner, R. L.**, & Sackinsky, M. (2022, September 27) *The impacts of self-generated and instructed rehearsal on children's recall* [Conference presentation]. 2022 EAC Annual Meeting: Center for Perception and Communication in Children, Omaha, NE.

**Wagner, R. L.** (2022, April 4) *Asking the right questions: Differences in adult strategy reports during online experiments* [Conference presentation]. 2022 One Boys Town Research Conference, Omaha, NE.

**Wagner, R. L.** & AuBuchon, A. M. (2021, May 26). *Self-reported strategy use with phonologically similar and dissimilar word lists* [Conference presentation]. 2021 EAC Annual Meeting: Center for Perception and Communication in Children, Omaha, NE.

**Wagner, R. L.**, Meidinger, R., Bhatti, D., Bertoni, J., & Marmelat, V. (2021, May 21). *Brain activation during single and dual task walking in people with Parkinson's Disease* [Conference presentation]. 2021 Human Movement Variability & Great Plains Biomechanics Joint Virtual Conference, Omaha, NE.

**Wagner, R. L.**, AuBuchon, A. M., & Lyon, B. (2021, April 30). *Adult memory performance on the DRM task: A look at individual differences in self-conceived cognitive abilities* [Conference presentation]. 2021 Boys Town National Research Hospital Student Research Conference, Boys Town, NE.

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**Wagner, R. L.,** AuBuchon, A. M., & Lyon, B. (2021, April 22). *Irrelevant sound effects on false memory in the DRM paradigm* [Conference presentation]. Psi Chi Program of the 93rd Annual Meeting of the Midwestern Psychological Association, Chicago, IL.

**Wagner, R. L.,** Meidinger, R., Bhatti, D., Bertoni, J., & Marmelat, V. (2021, March 26). *Brain activation during single and dual task walking in people with Parkinson's Disease* [Conference presentation]. University of Nebraska at Omaha Research and Creative Activities Fair, Omaha, NE.

**Wagner, R. L.,** Meidinger, R., Bhatti, D., Bertoni, J., & Marmelat, V. (2020, September 4). *Longitudinal analysis of walking patterns and brain activity while dual tasking in people with Parkinson's Disease as predictors of falls* [Conference presentation]. 2020 Human Movement Variability & Great Plains Biomechanics Joint Virtual Conference, Omaha, NE.

### **Funding**

#### ***Personal Funding***

**National Science Foundation – Graduate Research Fellowship** **2024 – present**  
*Total Award: \$111,000.00*

**Pennsylvania State University – Graduate Fellowship** **2022 – present**  
*Total Award: \$157,500.00*

#### ***Direct Research Funding***

**Psi Chi Undergraduate Research Grant** **2020 – 2021**  
*Irrelevant sound and age effects on false memory in the Deese-Roediger-McDermott paradigm*  
Role: Primary Investigator  
*Total Award: \$661.00*

**Fund for Undergraduate Scholarly Experiences (FUSE) Grant** **2020 – 2021**  
*Irrelevant sound and age effects on false memory in the Deese-Roediger-McDermott paradigm*  
Role: Primary Investigator  
*Total Award: \$2,500.00*

### **Research Experience**

**Graduate Research Fellow** **2022 – present**

Cognitive Aging & Neuroimaging Lab, University Park, PA

Primary Investigator: Nancy Dennis, PhD

- Stimulus and study design for multi-million dollar, federally-funded MRI research projects
- Programming tasks in Psychopy and E-Prime 3.0
- Using online interfaces (Prolific and Pavlovvia) to collect data remotely with younger and older adults
- Collection of fMRI data from younger and older adults
- fMRI data preprocessing in fMRIPrep
- Univariate and multivariate (ML Classification, RSA, ERS) fMRI data analysis in MATLAB and SPM12
- Built behavioral data management and analysis pipelines in R and Python
- Trained and managed a team of 10+ entry-level research assistants

# Rebecca L. Wagner

## Protocol Coordinator

2022 – 2022

Multi-Lab Pediatric Cochlear Implant Subject Recruitment, Omaha, NE

Primary Investigators: Ellen Peng, PhD & Angela AuBuchon, PhD

- Co-founder of a research initiative to maximize data collection at Boys Town
- Coordinated IRB protocols across 7 federally-funded research laboratories
- Create documentation for cross-laboratory methodologies
- Worked with the IRB
- Programming and survey-building in REDCap

## Laboratory Coordinator, Data Scientist I

2021 – 2022

Working Memory & Language Lab, Omaha, NE

Primary Investigator: Angela AuBuchon, PhD

- Administration of behavioral tests to children and adolescents
- Online administration of behavioral tests to young adults
- Behavioral data cleaning and analysis in R
- Programming with E-Prime 3.0 and REDCap
- Worked with the IRB
- Study design for multiple projects under NIH COBRE grant
- Trained and managed a team of 6 research assistants

## Primary Investigator

2021 – 2022

Department of Psychology, Omaha, NE

Advisors: Bethany Lyon, PhD & Angela AuBuchon, PhD

*Primary Project:* Irrelevant sound effects on adult false memory in the DRM paradigm

- Secured intra and extramural grant funding
- Project development and design
- Stimulus design
- Programming with Gorilla
- Used Prolific to recruit online participants from across the U.S.
- Behavioral data cleaning and analysis using R
- Manuscript writing

## Data Scientist II

2019 – 2021

Working Memory & Language Lab, Omaha, NE

Primary Investigator: Angela AuBuchon, PhD

- Administration of behavioral tests to children and young adults
- Application of EMG electrodes
- Collection of EMG data in young adults
- Behavioral data wrangling and analysis using Excel and R
- Programming with Gorilla and REDCap
- Stimulus design
- Recruitment of children and young adults
- Management of recruitment and scheduling portal
- Trained and managed 3 research assistants

# Rebecca L. Wagner

## Undergraduate Research Assistant

2019 – 2021

Center for Research in Human Movement Variability, Omaha, NE

Primary Investigator: Vivien Marmelat, PhD

- Administration of behavioral and neuroimaging tests to older adults
- Collection of fNIRS data to older adults
- Preprocessing and modeling of fNIRS data implemented in MATLAB
- Behavioral data analysis in Excel
- Behavioral test design

## Undergraduate Research Assistant

2018 – 2021

Department of Psychology, Omaha, NE

Primary Investigator: Michael Cortese, PhD

- Administration of behavioral tests to young adults
- Behavioral data coding and cleaning in Excel
- Management of SONA participant portal
- Trained undergraduate research assistants on testing and lab protocols

## Skills

**Research:** Planning, literature review, operations, management, analysis, dissemination

**Data:** Visualization, wrangling, modeling, statistics, version control

**Statistics:** Descriptive, hypothesis testing, predictive analytics, regression models, pattern similarity and discriminability analyses, multi-level modeling

**Machine Learning:** Supervised classification and regression models, unsupervised clustering models, Scikit-Learn

**Data Engineering:** Pandas / Numpy, Linux, Windows, GIT

**Software & Programming Languages:** R/ RStudio, SQL, Python, Linux Shell, MATLAB, Office 365

## Research Mentorship Experience

### *The Pennsylvania State University*

Kim, M., Kousa, M., **Wagner, R. L.**, & Dennis, N. A. (2026, April 22). TITLE [Undergraduate exhibition poster]. 2026 Undergraduate Research Exhibition & 2026 Psi Chi Psychology Research Exhibition, University Park, PA.

Spangle, K., **Wagner, R. L.**, & Dennis, N. A. (2026, April 22). TITLE [Undergraduate exhibition poster]. 2026 Undergraduate Research Exhibition & 2026 Psi Chi Psychology Research Exhibition, University Park, PA.

Boyogueno, C. M. (2025). *Retrieving what never was: Neural Mechanisms of false memory in aging and perceptual similarity* [Thesis submission]. Pennsylvania State University McNair Scholar, University Park, PA.

Pranesan, V., **Wagner, R. L.**, & Dennis, N. A. (2025, April 18). *Effect of labeling on memory accuracy for identifying perceptually and thematically related images* [Undergraduate exhibition poster]. 2025 Undergraduate Research Exhibition, University Park, PA.

Peters, S., **Wagner, R. L.**, & Dennis, N. A. (2024, April 17). *The effects of image proximity and individual differences in picture labeling on item-specific false memories* [Undergraduate exhibition poster]. 2024 Undergraduate Research Exhibition, University Park, PA.

# Rebecca L. Wagner

## **Teaching Experience**

### ***The Pennsylvania State University***

Psychology 542: Learning & Memory Fall 2023  
Guest Lecture Title: Cognitive Training and Aging  
Teaching Assistant 2023 – 2024

### ***University of Nebraska at Omaha***

Psychology 4070: Cognitive Psychology Fall 2021  
Guest Lecture Title: Working Memory

## **Awards and Honors**

### ***The Pennsylvania State University***

National Science Foundation Graduate Research Fellowship 2024 – 2027  
University Graduate Fellowship Award 2022 – 2027

### ***University of Nebraska at Omaha***

Magna Cum Laude 2021  
Psychology B.S. Outstanding Major Award 2020 – 2021  
Chancellor's List Recognition Spring 2021, Fall 2020  
Dean's List Recognition Spring 2021, Fall 2020, Fall 2019, Spring 2019

## **Leadership and Involvement**

### ***The Pennsylvania State University***

Graduate Representative – SSRI Quantitative/Computational Psychology Faculty Search Spring 2026  
Psi Chi Undergraduate Poster Symposium Judge Spring 2023  
Graduate School Psychology Information Session Panelist Fall 2022

### ***University of Nebraska at Omaha***

Graduate School Psychology Information Session Panelist Spring 2022  
Psi Chi International Honors Society in Psychology Chapter President 2020 – 2021  
Psychology Undergraduate Program Student Committee Chair 2020 – 2021  
Psychology Undergraduate Program Committee Member 2019 – 2020  
Psychology Department Undergraduate Liaison 2019 – 2020  
Psychology Department Undergraduate Representative 2019 – 2020  
Psi Chi International Honors Society in Psychology Chapter Treasurer 2019 – 2020

## **Professional Memberships**

Cognitive Neuroscience Society 2023 – *present*  
Psychonomic Society 2022 – *present*  
Psi Chi International Honors Society in Psychology 2019 – *present*