

Ashley Lynn Miller

Department of Psychology, University of California, Los Angeles

1285 Franz Hall, 502 Portola Plaza, Los Angeles, CA 90095

ashleymiller@psych.ucla.edu | [Google Scholar](#) | [ResearchGate](#) | [LinkedIn](#) | [GitHub](#) | [OSF](#)

Employment//

Postdoctoral Researcher, July 2025 -

PURDUE UNIVERSITY: DEPARTMENT OF PSYCHOLOGICAL SCIENCES (WEST LAFAYETTE, IN)

Skill, Learning, and Performance Laboratory

Supervisor: Dr. Brooke N. Macnamara

Postdoctoral Researcher, July 2022 – June 2025

UNIVERSITY OF CALIFORNIA, LOS ANGELES: DEPARTMENT OF PSYCHOLOGY (LOS ANGELES, CA)

Memory and Lifespan Cognition Lab

Supervisor: Dr. Alan D. Castel

Education//

Ph.D., Cognition & Cognitive Neuroscience, June 2022

UNIVERSITY OF OREGON: DEPARTMENT OF PSYCHOLOGY (EUGENE, OR)

Memory, Attention, and Individual Differences Lab

Advisor: Dr. Nash Unsworth

M.S., Cognition & Cognitive Neuroscience, Sept 2015 – Dec 2016

UNIVERSITY OF OREGON: DEPARTMENT OF PSYCHOLOGY (EUGENE, OR)

Memory, Attention, and Individual Differences Lab

Advisor: Dr. Nash Unsworth

B.S., Psychology, Aug 2011 – Dec 2014

IDAHO STATE UNIVERSITY (POCATELLO, ID)

Publications//

Peer-Reviewed Publications (in order of recency)

1. **Miller, A. L.**, & Unsworth, N. (in press). Individual differences in learning and memory abilities: The influence of self-efficacy. *Memory & Cognition*.
2. Unsworth, N., Robison, M. K., & **Miller, A. L.** (in press). Mobilizing effort to reduce lapses of sustained attention: Examining the effects of content-free cues, feedback, and points. *Cognitive, Affective, & Behavioral Neuroscience*.
3. **Miller, A. L.**, & Castel, A. D. (2025). Memory selectivity in younger and older adults: The role of conative factors in value-directed remembering. *Psychology and Aging*, 40, 371–390.
4. Unsworth, N., & **Miller, A. L.** (2025). Individual differences in the dynamics of attention control. *Journal of Experimental Psychology: General*, 154, 829–851.

5. **Miller, A. L.**, & Unsworth, N. (2025). Variation in the intensity and consistency of attention at encoding: The role of conative factors. *Journal of Memory and Language*, 142, 104601.
6. Unsworth, N., **Miller, A. L.**, & Strayer, D. L. (2025). Does deep processing protect against mind wandering and other lapses of attention during learning? *Memory*, 33, 157-165.
7. **Miller, A. L.**, & Castel, A. D. (2025). Mind-wandering when studying valuable information: The roles of age, dispositional traits, and contextual factors. *Journal of Experimental Psychology: General*, 154, 190-227.
8. Unsworth, N., **Miller, A. L.**, & Strayer, D. (2024). Individual differences in attention control: A meta-analysis and reanalysis of latent variable studies. *Psychonomic Bulletin & Review*, 31, 2487-2533.
9. Unsworth, N., & **Miller, A. L.** (2024). The importance of conative factors for individual differences in attention control. *Journal of Experimental Psychology: Learning, Memory, & Cognition*, 50, 1361-1384.
10. Robison, M. K., **Miller, A. L.**, Wiemers, E., Ellis, D. M., Unsworth, N., Redick, T. R., & Brewer, G. A. (2024). What makes working memory work? A multifaceted account of individual differences in working memory capacity and its relations with higher-order cognition. *Journal of Experimental Psychology: General*, 153, 2193-2215. [Editor's Choice]
11. Unsworth, N., & **Miller, A. L.** (2024). An examination of individual differences in levels of processing. *Memory*, 32, 615-626.
12. Unsworth, N., & **Miller, A. L.** (2023). Pupillary correlates of preparatory control in the Stroop task. *Attention, Perception, & Psychophysics*, 85, 2277-2295.
13. Unsworth, N., **Miller, A. L.**, & Robison, M. K. (2023). Oculometric indicators of individual differences in preparatory control during the antisaccade task. *Journal of Experimental Psychology: Human Perception and Performance*, 49, 159-176.
14. Unsworth, N., **Miller, A. L.**, & Aghel, S. (2022). Effort mobilization and lapses of sustained attention. *Cognitive, Affective, & Behavioral Neuroscience*, 22, 42-56.
15. Unsworth, N., **Miller, A. L.**, & Robison, M. K. (2022). The influence of working memory capacity and lapses of attention for variation in error monitoring. *Cognitive, Affective, & Behavioral Neuroscience*, 22, 450-466.
16. Unsworth, N., Robison, M. K., & **Miller, A. L.** (2022). On the relation between working memory capacity and the antisaccade task. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 48, 1420-1447.
17. Xu, X., Tupy, S., Sharp, J. L., **Miller, A. L.**, Correll, D., & Nigg, C. R. (2022). Self-expansion is positively associated with Fitbit-measured daily steps across 4-weeks. *Scientific Reports*.
18. **Miller, A. L.**, & Unsworth, N. (2021). Attending to encode: The role of consistency and intensity of attention in learning ability. *Journal of Memory and Language*, 121, 104276.
19. Unsworth, N., **Miller, A. L.**, & Robison, M. K. (2021). No consistent correlation between baseline pupil diameter and cognitive abilities after controlling for confounds—A comment on Tsukahara and Engle (2021). *Cognition*, 215, 104825.
20. Unsworth, N., & **Miller, A. L.** (2021). Individual differences in the intensity and consistency of attention. *Current Directions in Psychological Science*, 30, 391-400.
21. Unsworth, N., **Miller, A. L.**, & Robison, M. K. (2021). Are individual differences in attention control related to working memory capacity? A latent variable mega-analysis. *Journal of Experimental Psychology: General*, 150, 1332-1357.

22. Unsworth, N., **Miller, A. L.**, & Robison, M. K. (2021). Is working memory capacity related to baseline pupil diameter? *Psychonomic Bulletin & Review*, 28, 228-237.
23. Unsworth, N., & **Miller, A. L.** (2021). Encoding dynamics in free recall: Examining attention allocation with pupillometry. *Memory & Cognition*, 49, 90-111.
24. Unsworth, N., Robison, M. K., & **Miller, A. L.** (2021). Individual differences in lapses of attention: A latent variable analysis. *Journal of Experimental Psychology: General*, 150, 1303-1331.
25. **Miller, A. L.**, & Unsworth, N. (2020). Variation in attention at encoding: Insights from pupillometry and eye gaze fixations. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 46, 2277-2294.
26. Robison, M. K., **Miller, A. L.**, & Unsworth, N. (2020). A multi-faceted approach to understanding individual differences in mind-wandering. *Cognition*, 198, 104078.
27. Unsworth, N., **Miller, A. L.**, & Robison, M. K. (2020). Individual differences in lapses of sustained attention: Oculometric indicators of intrinsic alertness and preparatory control. *Journal of Experimental Psychology: Human Perception and Performance*, 46, 569-592.
28. **Miller, A. L.**, Gross, M. P., & Unsworth, N. (2019). Individual differences in working memory capacity and long-term memory: The influence of intensity of attention at encoding as measured by pupil dilation. *Journal of Memory and Language*, 104, 25-42.
29. Unsworth, N., **Miller, A. L.**, & Robison, M. K. (2019). Individual differences in encoding strategies and free recall dynamics. *Quarterly Journal of Experimental Psychology*, 72, 2495-2508.
30. Robison, M. K., **Miller, A. L.**, & Unsworth, N. (2019). Examining the effects of probe frequency, response options, and framing within the thought-probe method. *Behavior Research Methods*, 51, 398-408.
31. Unsworth, N., Robison, M. K., & **Miller, A. L.** (2019). Individual differences in baseline oculometrics: Examining variation in baseline pupil diameter, spontaneous eye blink rate, and fixation stability. *Cognitive, Affective, & Behavioral Neuroscience*, 19, 1074-1093.
32. **Miller, A. L.**, & Unsworth, N. (2018). Individual differences in working memory capacity and search efficiency. *Memory & Cognition*, 46, 1149-1163.
33. Robison, M. K., **Miller, A. L.**, & Unsworth, N. (2018). Individual differences in working memory capacity and filtering. *Journal of Experimental Psychology: Human Perception and Performance*, 44, 1038-1053.
34. Unsworth, N., Robison, M. K., & **Miller, A. L.** (2018). Pupillary correlates of fluctuations in sustained attention. *Journal of Cognitive Neuroscience*, 30, 1241-1253.
35. Xu, X., Tupy, S., Robertson, S., **Miller, A. L.**, Correll, D., Nigg, C. R., & Tivis, R. (2018). Successful adherence and retention to daily monitoring of physical activity: Lessons learned. *PLOS ONE*, 13, e0199839.

Manuscripts Under Review

1. Unsworth, N., **Miller, A. L.**, Strayer, D. L., & Grudzien, A. M. (under review). Individual differences in attention and learning: A latent variable analysis.
2. Unsworth, N., Strayer, D. L., & **Miller, A. L.** (under review). Goal setting and attention control.
3. Unsworth, N., & **Miller, A. L.** (under review). The importance of attention for variation in learning to learn.

Manuscripts in Preparation

1. **Miller, A. L.**, & Unsworth, N. (in prep). Effects of goal setting and feedback on effort mobilization and lapses of attention during associative learning.
2. **Miller, A. L.**, Unsworth, N. (in prep). Effects of list length and presentation duration on lapses of attention during associative learning.
3. **Miller, A. L.**, & Castel, A. D. (in prep). The influence of semantic relatedness on lapses of attention during associative learning.
4. **Miller, A. L.**, Whatley, M. C., Chen, A., & Castel, A. D. (in prep). Curiosity as a cognitive shield: Reducing mind-wandering's harmful effects on learning and memory.
5. **Miller, A. L.**, & Castel, A. D. (in prep). Age-related differences in task-related interference: The roles of motivation, self-regulatory focus, and concerns about cognitive decline.
6. **Miller, A. L.**, Tanberg, P., & MacLeod, C. M. (in prep). The (ironic or not so ironic?) effect of post-cue duration in item-based directed forgetting: The roles of presentation duration, self-initiated processing, and strategy use.

Invited Colloquia & Seminars//

1. **Miller, A. L.** (2025, March). *Pathways to learning success: An examination of attentional and motivational factors*. Department of Psychological Sciences, Purdue University, West Lafayette, IN, United States.
2. **Miller, A. L.** (2025, February). *Pathways to learning success: An examination of attentional and motivational factors in younger and older adults*. Department of Psychology, The Pennsylvania State University, State College, PA, United States.
3. **Miller, A. L.** (2025, January). *Pathways to learning success: An examination of attentional and motivational factors in younger and older adults*. Department of Psychology, University of California – Riverside, Riverside, CA, United States.
4. **Miller, A. L.** (2024, December). *Pathways to learning success: An examination of attentional and conative factors in younger and older adults*. Department of Psychology, University of Texas - Arlington, Arlington, TX, United States.
5. **Miller, A. L.** (2022, April). *Intensity and consistency of attention during learning: The importance of cognitive and conative factors*. Department of Psychological & Brain Sciences, Washington University in St. Louis, St. Louis, MO, United States.
6. **Miller, A. L.** (2022, March). *Intensity and consistency of attention during learning: The importance of cognitive and conative factors*. Department of Psychology, University of California – Los Angeles, Los Angeles, CA, United States.
7. **Miller, A. L.** (2021, December). *Intensity and consistency of attention during learning: The importance of cognitive and conative factors*. Department of Psychology, University of Waterloo, Waterloo, Ontario, Canada.

Conference Presentations//

1. **Miller, A. L.**, Whatley, M. C., Chen, A., & Castel, A. D. (Submitted). *Curiosity as a cognitive shield: Reducing mind-wandering's harmful effects on learning and memory*. Submitted as talk or poster presentation at the Psychonomic Society 66th Annual Meeting, Denver, CO, United States.

2. **Miller, A. L.**, & Castel, A.D. (2023, November). *The influence of information importance on the consistency of attention during learning among younger and older adults*. Poster presentation at the Psychonomic Society 64th Annual Meeting, San Francisco, CA, United States.
3. **Miller, A. L.**, & Unsworth, N. (2021, November). *Variation in the intensity and consistency of attention at encoding: The role of conative factors*. Virtual poster presentation at the Psychonomic Society 62nd Annual Meeting.
4. Chen, A., **Miller, A. L.**, & Unsworth, N. (2020, October). *Individual differences in memory self-efficacy and learning ability*. Poster presentation at the 100th Annual Western Psychological Association Convention, San Francisco, CA, United States.
5. Chen, A., **Miller, A. L.**, & Unsworth, N. (2020, May). *Individual differences in memory self-efficacy and learning ability*. Virtual poster presentation at the University of Oregon's Tenth Annual Undergraduate Research Symposium, Eugene, OR, United States.
6. **Miller, A. L.**, & Unsworth, N. (2019, November). *Variation in the consistency of attention at encoding and learning ability*. Poster presentation at the Psychonomic Society 60th Annual Meeting, Montréal, Québec, Canada.
7. Binion, G., Lewis, J., O'Brien, J., **Miller, A. L.**, & Zalewski, M. (2019, March). *Maternal emotion dysregulation and HRV during stress: The role of child externalizing behavior*. Poster presentation at the SRCD Biennial Meeting, Baltimore, MD, United States.
8. **Miller, A. L.**, Lewis, J. K., & Zalewski, M. (2018, May). *Examining the links between maternal emotion dysregulation and variation in trajectories of heart rate variability*. Poster presentation at the 30th Association for Psychological Science Annual Convention, San Francisco, CA, United States.
9. Murphy, D., Unsworth, N., Robison, M., & **Miller, A. L.** (2018, April). *The relation of fluency, originality, working memory capacity, and crystallized intelligence*. Poster presentation at the 98th Annual Western Psychological Association Convention, Portland, OR, United States.
10. **Miller, A. L.**, & Unsworth, N. (2017, November). *Working memory capacity and recall from long term memory: The influence of intensity of attention at encoding*. Poster presentation at the Psychonomic Society 58th Annual Meeting, Vancouver, British Columbia, Canada.
11. Tart-Zelvin, A., Korell, A. M., Echon, R., **Miller, A. L.**, Correll, D., Voorheis, D., Osipowicz, K., Turley-Ames, K. J., & Xu, X. (2017, February). *An fMRI study: Neural mechanisms associated with rehearsal strategy and a working memory task*. Poster presentation at the International Neuropsychological Society Conference, New Orleans, LA, United States.
12. Parker, C., Turley-Ames, K. J., **Miller, A. L.**, Echon, E., Korell, A. M., & Miyake, T. M. (2015, November). *Working memory and reading strategies*. Poster presentation at the Psychonomic Society 56th Annual Meeting, Chicago, Illinois, United States.
13. Xu, X., Tupy, S. J., **Miller, A. L.**, Correll, D., Nigg, C. R., Tivis, R., & Graham, J. M. (2015, June). *Successful adherence and lessons learned when using the Fitbit: A 4-week daily diary study of physical activity among community adults*. Poster presentation at the Mountain West Clinical Translational Research - Infrastructure Network Conference, Las Vegas, NV, United States.
14. Xu, X., Tupy, S. J., **Miller, A. L.**, Nigg, C. R., Tivis, R., & Graham, J. M. (2015, April). *Strategies that enhanced adherence during a pilot 4-week daily diary study utilizing physical activity monitors*. Poster presentation at the Society of Behavioral Medicine Conference, San Antonio, TX, United States.

15. Korell, A. M., **Miller, A. L.**, Osborn, K., Miyake, T. M., & Turley-Ames, K. J. (2015, April). *Individual differences in working memory (WM) and counterfactual generation*. Poster presentation at the 95th Annual Western Psychological Association Convention, Las Vegas, NV, United States.
16. **Miller, A. L.**, Korell, A. M., Turley-Ames, K. J., Miyake, T. M., & Lale, R. (2015, April). *Working memory and reading strategies*. Poster presentation at the 95th Annual Western Psychological Association Convention, Las Vegas, NV, United States.
17. Richelieu, J., **Miller, A. L.**, & Miyake, T. M. (2015, April). *The effect of cognitive load on pre-factual thinking*. Poster presentation at the 95th Annual Western Psychological Association Convention, Las Vegas, NV, United States.
18. Tart-Zelvin, A., Patrick, K. E., **Miller, A. L.**, Libon, D. J., & Williams, J. M. (2014, June). *Executive errors predict recognition discriminability on visual serial list learning task in epilepsy*. Poster presentation at the American Academy of Clinical Neuropsychology Conference, New York City, NY, United States.
19. Korell, A. M., **Miller, A. L.**, Turley-Ames, K. J., Echon, R., Lale, R., & Miyake, T. M. (2014, April). *Assessments of working memory: Strategy training and presentation format*. Poster presentation at 94th Annual Western Psychological Association Convention, Portland, OR, United States.

Professional Service

Ad Hoc Reviewer

Journal of Memory and Language; Journal of Experimental Psychology: Learning, Memory, and Cognition; Cognition; Cognitive Research: Principles and Implications; Psychonomic Bulletin & Review; Behavior Research Methods; Journal of Intelligence; Consciousness and Cognition; Attention, Perception, and Psychophysics; Journal of Cognitive Psychology; Memory & Cognition; Memory; Visual Cognition

Grant Reviewer

National Science Foundation (collaborative review with Dr. Nash Unsworth)

Invited Speaker – Psychology Peer Tutor Seminar, University of Oregon Winter 2020
Discussed journey to and experience in graduate school as part of a graduate student panel.

Graduate Admissions Committee – Department of Psychology, University of Oregon Winter 2019
Coordinated all lodging, transportation, and social activities for 45 applicants to the psychology doctoral program at the University of Oregon.

Outreach//

Summer Academy to Inspire Learning – University of Oregon Summer 2021
An outreach event with the goal of spreading enthusiasm for psychology (and higher education in general) among school age children in the community from low socioeconomic, first-generation, and underrepresented backgrounds.

Mentoring //

* Individual identifies with groups that are underrepresented or historically disadvantaged in STEM

Honors Thesis Students:

- Shadee Aghel* (2018 - 2020): Research assistant and human physiology major in the Clark Honors College at the University of Oregon (UO); Recipient of the UO Presidential Scholarship, Summit Scholarship, Intel Scholarship, and the 2018 Foundation for Surgical Innovation and Education Research Award; Admitted into Creighton University's medical school AY 2022-23.
- Dillon Murphy (2018 - 2019): Research assistant and honors in psychology student; Obtained Ph.D. in Cognitive Psychology from the University of California, Los Angeles (UCLA); Current postdoctoral researcher at University of California, Riverside.
- Dylan Vas* (2016 - 2017): Research assistant and honors in psychology student; Obtained MA in Sport and Performance Psychology at the University of Denver in Colorado.

Undergraduate Research Assistants:

- Destiny Small* (2021 - 2022): Admitted into the Law Enforcement Intelligence Analysis MS program at Michigan State University.
- Amy Chen* (2019 - 2021): Recipient of a 2020 Grand Prize Psychology Poster Award at the UO Undergraduate Research Symposium; Obtained Master of Arts in Urban Education with a concentration in Administration & Policy from Loyola Marymount University, where she earned the Edmundo E.F. Litton Research Award for her Research Capstone Project.

Teaching //

Role	Course	Term
Instructor	PSY 303 : Research Methods Cognitive Psychology	Summer 2021
Teaching Assist.	PSY 201: Mind and Brain	Fall 2020
Co-instructor	PSY 305 : Cognitive Psychology	Summer 2020
Instructor*	Introduction to R, <i>invited workshop at the Cascadia R Conference held at UO</i>	Spring 2020
Instructor	PSY 303 : Research Methods Cognitive Psychology	Winter 2020
Teaching Assist.	PSY 433: Learning and Memory	Fall 2019
Teaching Assist.	PSY 305: Cognitive Psychology	Summer 2019
Teaching Assist.	PSY 305: Cognitive Psychology	Spring 2019
Teaching Assist.	PSY 433: Learning and Memory	Spring 2016
Teaching Assist.	PSY 201: Mind and Brain	Winter 2016
Teaching Assist.	PSY 201: Mind and Brain	Fall 2015

* Cancelled due to Coronavirus outbreak

Typical duties for teaching assistant positions included creating the Canvas course site, organizing alternative research credit assignments, proctoring exams, grading online discussion posts/mid-terms/term papers/final exams, and uploading grades to Canvas.

Honors & Awards//

Graduate Education Committee Research Award (\$500.00)	Spring 2021
Graduate Education Committee Travel Award (\$500.00)	Fall 2015, 2017, 2019
Outstanding Student Achievement Award—College of Arts & Letters	Spring 2015
Outstanding Psychology Major Award	Spring 2015
Student Presentation Travel Funding Grant (\$800.00)	Fall 2014
Eleanor Loscalzo Arts & Letters Scholarship (\$1,588.00)	Fall 2014
Jayson C. & Ruth R. Holladay Scholarship (\$343.00)	Fall 2014
Idaho Promise Scholarship (\$200.00)	Fall 2014
Eleanor Loscalzo Arts & Letters Scholarship (\$3,161.00)	Fall 2013 - Spring 2014
Idaho Promise Scholarship (\$400.00)	Fall 2013 - Spring 2014
Idaho Promise Scholarship (\$450.00)	Fall 2012 - Spring 2013
ASISU Scholarship (\$350.00)	Fall 2012
Jon M. Huntsman Scholarship (\$5,000.00)	Fall 2011 - Spring 2012
Wheatley Annual Scholarship (\$1,000.00)	Fall 2011 - Spring 2012
Idaho Promise Scholarship (\$495.00)	Fall 2011 - Spring 2012

Graduate Coursework//

Graduate GPA: 4.06

*Course passed with A+

Statistics Courses

PSY 607 (Multilevel Modeling Seminar)	Spring 2019
PSY 610 (Structural Equation Modeling)*	Fall 2017
PSY 613 (Data Analysis III)	Spring 2016
PSY 612 (Data Analysis II)	Winter 2016
PSY 611 (Data Analysis I)	Fall 2015

Data Science Courses

EDLD 654 (Applied Machine Learning for Ed. Data Science)*	Fall 2020
EDLD 610 (Functional Programming w/ R)*	Spring 2019
EDLD 610 (Communicating & Transforming Data)*	Winter 2019
EDLD 610 (Intro Data Science w/ R)*	Fall 2018
PSY 607 (Data Science)	Spring 2018

Elective Courses

PSY 607 (Methods in Neuroendocrinology)	Spring 2017
PSY 605 (Directed Reading: Heart Rate Variability)	Winter 2017
PSY 607 (Mind Wandering)	Fall 2016
PSY 607 (Pupillometry)	Spring 2016
PSY 607 (First-Year Research & Ethics)	Fall 2015 - Spring 2016

Core Courses

PSY 610 (Developmental Psychology)	Spring 2017
PSY 610 (Advanced Cognitive Neuroscience)	Winter 2016
PSY 620 (Psychopathology)	Fall 2015

Programming & Software Skills//

High proficiency: SPSS, R & R-Studio, E-Prime, Microsoft Office Suite, and Adobe Suite

I typically use R & R-Studio for advanced statistical techniques (e.g., structural equation modeling and multilevel modeling) and data visualization. But [here](#) is an example of other things I can accomplish in R & R-Studio. I was responsible for creating the Home and Data webpages.

Moderate proficiency: HTML, CSS, Qualtrics, Jamovi, JASP, PsychoPy, Pavlovia, and Git/GitHub

Basic proficiency: PHP, Python, and Tobii Pro Studio (software extension with E-Prime)

Professional Affiliations//

Women in Cognitive Science	2018 – Present
Psychonomic Society	2015 – Present
University of Oregon Women in Graduate Science	2018 – 2022
Association for Psychological Science	2018 – 2019
Psi Chi, The International Honor Society in Psychology	2012 – 2015

References//

Nash Unsworth, Ph.D. Professor, <i>University of Oregon</i>	nashu@uoregon.edu Graduate Advisor, 2015 – 2022
Alan D. Castel, Ph.D. Professor, <i>University of California, Los Angeles</i>	castel@psych.ucla.edu Postdoctoral Supervisor, 2022 – 2025
Gene Brewer, Ph.D. Professor, <i>University of California, Riverside</i>	gene.brewer@ucr.edu Mentor & Collaborator
Matthew K. Robison, Ph.D. Assistant Professor, <i>University of Notre Dame</i>	mrobison@nd.edu Mentor & Collaborator