

Taylor B. Wise

Ph.D. Candidate
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EDUCATION

PhD Candidate	Psychology - Behavioral Neuroscience	Brown University Department of Cognitive, Linguistic, & Psychological Sciences (CLPS)	2018 - Present
MSc	Psychology – Behavioral Neuroscience	Brown University Department of CLPS	2018 - 2020
BA	Animal Behavior; Sociology	Bucknell University Department of Animal Behavior; Department of Sociology	2011 - 2015

PUBLICATIONS

PEER-REVIEWED:

- Heimer-McGinn, V.R., **Wise, T.B.**, Hemmer, B.M., Dayaw, J.N., & Templer, V.L. (2020). Social housing enhances acquisition of task set independently of environmental enrichment: A longitudinal study in the Barnes maze. *Learning & Behavior*, 1-13.
- Hemmer, B.M., Parrish, A.E., **Wise, T.B.**, Davis, M., Branham, M., Martin, D.E., & Templer, V.L. (2019). Social vs. nonsocial housing differentially affects perseverative behavior in rats (*Ratus norvegicus*). *Animal Behavior and Cognition*, 6(3), 168-178.
- Templer, V.L., **Wise, T.B.**, & Heimer-McGinn, V. (2018). Social enrichment protects against age-related working memory decline. *Neurobiology of Aging*, 75, 117-125.
- Templer, V.L., **Wise, T.B.**, Dayaw, K., & Dayaw, J. (2018). Non-socially housed rats seek social interactions and social novelty more than socially housed counterparts. *Journal of Comparative Psychology*, 132(3), 240-252.
- Lee, K.A., Preston, A.J., **Wise, T. B.**, Templer, V.L. (2018). Testing for metacognitive responding using an odor-based delayed match-to-sample test in rats. *Journal of Visualized Experiments: JoVE*. (136), e57489.
- Wise, T.B.** & Stayton, C.T. (2017). Side-necked versus hidden-necked: A comparison of shell morphology between pleurodiran and cryptodiran turtles. *Herpetologica*, 73(1), 18-29.

PREPRINT:

- Wise, T.B.**, Burwell, R.D., Templer, V.L. (2021). Social Preference in rats not impacted by posterior parietal activity despite overall changes in familiarity-based social behavior. bioRxiv doi: <https://doi.org/10.1101/2021.11.24.469924>

IN PREPARATION:

- Wise, T.B.** & Burwell, R.D. (In prep). Modeling evolutionary mechanisms in behavioral neuroscience.
- Wise, T.B.**, Heimer-McGinn, V.R., Dankert, A.M., Alessandro, C.R., Martin, D.E., Burwell, R.D., Templer, V.L. (In prep). Comparing the role of the dorsal posterior parietal cortex across multiple spatial recognition tasks in rats.
- Heimer-McGinn, V.R., **Wise, T.B.**, Halter, E., Templer, V.L. (In prep). Attentional Processing in the Dorsal Posterior Parietal Cortex.
- Dankert, A.M, Dayaw, K.I., Dayaw, J.N., **Wise, T.B.**, Truckenbrod, L.M., Burke, S.N., Hernandez, A.R., Templer, V.L. (In prep). The impact of long-term social housing on biconditional association task performance and neuron ensembles in the anterior cingulate cortex and the hippocampal CA3 region.

INVITED TALKS & GUEST LECTURES

- Wise, T.B.** The role of behavioral neuroscience in understanding spatial-social cognitive overlaps. Invited address for the Computational Cognitive Development Lab at Brown University. (June 2021)
- Wise, T.B.** Cognitive evolution of sociality: cortical multipurposing? Guest lecture for course 'Experimental Biopsychology' at Providence College. (April 2021).
- Wise, T.B.** Operant conditioning and reinforcement learning. Guest lecture for course 'Making Decisions' at Brown University. (March 2021)
- Wise, T.B.,** Templer, V.L., & Burwell, R.D. Does the dPPC affect spatial behavior in a complex object task? Winter Conference on the Neurobiology of Learning and Memory. (January 2021).
- Wise, T.B.** & Burwell, R.D. Task design for measuring spatial-social cognitive overlap in rats. Neuro In-House Seminar Series at Brown University. (January 2020).
- Wise, T.B.,** Burwell, R.D. Investigating the link between the rodent posterior parietal cortex and sociality. CLPS First-Year Project Series at Brown University. (October 2019).
- Wise, T.B.,** Heimer-McGinn, V. R., & Templer, V.L. Effects of social housing on cognitive decline due to aging: reference and working memory. International Comparative Conference on Cognition (Co3), Melbourne, FL. (April 2019).
- Templer, V.L., **Wise, T.B.,** & Heimer-McGinn, V.R. Cognitive effects of social housing: dissociating acquisition of task-set and spatial memory. International Comparative Conference on Cognition (Co3), Melbourne, FL. (April 2019).
- Wise, T.B.** Social enrichment and its impact on working memory in old age. CLPS Cognition Seminar Series at Brown University. (October 2018).

POSTER PRESENTATIONS

- Wise, T.B.,** D.L. Poeta, J.G. Lee, M.M. Mazumder, R.D. Burwell. A comparison of DREADDs agonists using fear conditioning in a rodent model. Society for Neuroscience, Chicago, IL (November 2021).
- Wise, T.B.,** Templer, V.L., Burwell, R.D. A matter of complexity? The role of the rodent posterior parietal cortex in processing spatial layouts. Society for Neuroscience, Global Connectome. (January 2021).
- Dankert, A.M., Dayaw, K.I., Dayaw, J.N., Truckenbrod, L., **Wise, T.B.,** Hernandez, A., Burke, S.N., Templer, V.L. The impact of long-term social housing on biconditional association task performance and neuron ensembles in the anterior cingulate cortex and CA3. Society for Neuroscience, Global Connectome. (January 2021).
- Wise, T.B.,** Templer, V.L., Burwell, R.D. A novel approach to evaluating social distance processing in rats: Implications for understanding the posterior parietal cortex. Society for Neuroscience, Chicago, IL. (November 2019)
- Wise, T.B.,** Burwell, R.D. Investigating the effects of neurotoxic lesions to rats' posterior parietal cortex on social cognition. International Behavioral Neuroscience Society, Cairns, Australia. (June 2019).
- Wise, T.B.,** Dayaw, J.N., Dayaw, K.I., Templer, V.L. Neurotoxic lesions to rats' posterior parietal cortex lead to social recognition deficits. International Comparative Conference on Cognition (Co3), Melbourne, FL. (April 2019).
- Templer, V.L., **Wise, T. B.,** Palframan, K. 2016. Learning and memory differences in socially vs. non-socially housed rats. Society for Neuroscience, San Diego, CA. (November 2016).
- Wise, T. B.,** McLaughlin, C., Stayton, C.T. 2015. Morphological Evolution of the Turtle Shell and its Mechanical Implications, Part I: Empirical. Society for Integrative & Comparative Biology, West Palm Beach, FL. (January 2015).

GRANTS & FELLOWSHIPS

Neuroscience Scholar Program	Society for Neuroscience (Associate)	2021-2023
International Travel Award	Brown Travel for Research Communication	2019
Kalman Research Award	Bucknell Program for Undergraduate Research	2013-2015

RESEARCH

Doctoral	Brown University PI: Rebecca Burwell	Neural bases of spatial and social cognition via novel behavioral tasks and transient lesion techniques (DREADDs). Emphasis on mechanisms of the PPC.	2018-Present
Pre-doctoral	Providence College PI: Victoria Templer	1) Effects of social enrichment on age related cognitive decline. 2) PPC function in spatial and attentional processing.	2016-2018
Undergraduate	Bucknell University PI: Charles Stayton	Functional morphology of turtle shells. Emphasis on phylogenetic analyses of 300+ species.	2013-2015

CERTIFICATES

Reflective Teaching <i>Brown Sheridan Center for Teaching & Learning</i>	Year-long seminar on the core principles of teaching including course design, grading & evaluation, and inclusivity	2019-2020
Course Design <i>Brown Sheridan Center for Teaching & Learning</i>	Semester-long seminar on course design i.e. syllabus development, learning outcomes, assignments and digital tools, and enhancing student engagement	2022

TEACHING

Instructor	<u>Animal Cognition & Behavior</u> : Independent instructor for summer precollege course through the Summer@Brown program. Fully responsible for course design, teaching, assignments, and grading (~20 students)	(planned) 2022
Teaching Assistant	<u>Making Decisions</u> : Undergraduate course that required holding recitations and guest lecturing; navigated best practices for virtual classrooms (212 students)	2021
Workshop	<u>Teaching in Anxious Times</u> : Participated in teaching workshop to improve skills surrounding educating students through remote learning during a pandemic, political conflict, and financial instability.	2020
Teaching Assistant	<u>Learning & Conditioning</u> : Undergraduate course that required grading, mentoring, & teaching group sessions; transitioned classroom to virtual learning during Covid-19 (146 students)	2020
Teaching Assistant	<u>Statistical Inference</u> : Undergraduate course that required creating quizzes/exams & teaching in a flipped classroom (61 students)	2019
Teaching Assistant	<u>Memory & the Brain</u> : Undergrad/graduate course that required grading, lecturing, & teaching in a flipped classroom (38 students)	2018

MENTORING

Research Mentor <i>Burwell Lab</i>	Mentor to undergraduate students in the Templer and Burwell labs. Mentorship includes technical training and professional development i.e. applying to graduate programs and fellowships, job interviews, and presenting research effectively (15+ students)	2017-Present
Graduate Mentor <i>CLPS Peer Program</i>	Mentor for junior graduate students through their first years of training (3 students)	2019-Present

Graduate Mentee <i>Animal Behavior Collective</i>	Mentee for professional development and research practices. Advised by Dr. Amanda Seed of St Andrews University.	2021-Present
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SERVICE

Department Liaison <i>Brown Sheridan Center for Teaching & Learning</i>	Maintained connection between CLPS and Sheridan Center to enhance departmental teaching practices and share opportunities to faculty and graduate students to improve individual pedagogy	2021-Present
Committee Member <i>Diversity & Inclusion Action Plan (DIAP) – Hiring & Recruitment subcommittee</i>	Focused on increasing equity and diversity in departmental faculty and postdoctoral hires and graduate student recruitment – increasing recruitment on accessible platforms such as Twitter, providing online resources for overcoming barriers to academic entry, and inviting late-stage postdocs for lectures and chalk talks.	2021-Present
Committee Member <i>Diversity & Inclusion Action Plan (DIAP) – Culture subcommittee</i>	Focused on improving departmental culture including surveying CLPS’ cultural climate, hosting annual townhalls, and establishing DIAP training for faculty and graduate students.	2020-Present
Community Member <i>Learning to Engage with K-12 Education – Swearer Center for Public Service</i>	Fostered engagement between Brown and RI school system. This included monthly meetings with community partners to identify positive impacts on K-12 education, improve STEM efforts, and offer campus resources to local students.	2020-2021
Seminar Coordinator <i>CLPS Social & Cognitive Sci Series</i>	Coordinated weekly departmental seminar series on social psychology and cognitive science including gathering speaker nominations, budgeting, and inviting and organizing campus visits for external guest lecturers.	2019-2020
Media Assistant <i>Brain Week Rhode Island</i>	Maintained web design, content, and announcements for the Brain Week Rhode Island chapter	2018
Student Director <i>Women’s Resource Center at Bucknell University</i>	Managed events, blogs, and other resources offered to students to promote intersectional feminism and equity on Bucknell’s campus.	2012-2015

PRESS

New Scientist – [Rats can tell when they’ve forgotten something](#)
Nature, Lab Animal’s Research Highlight – [Go long\(itudinal\)! Social housing protects working memory in rats](#)
Carney Institute of Brain Science – [Teaching Assistants go the extra mile to enable remote learning](#)
Psychonomic Society – [No rat \(or human\) is an island](#)