

Holly C. Gagnon

Department of Psychology, University of Utah
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Education

Ph.D. Student 08/2018 – Present

Cognitive Neuroscience, University of Utah. Degree expected 2023.

Advisors: Sarah Creem-Regehr, Ph.D., Jeanine Stefanucci, Ph.D.

Research interests are in spatial perception and cognition. Current research includes investigating the impacts of impaired vision on navigation and how presentation modes influence mental rotation ability.

Bachelor of Science in Psychology and Neuroscience with Honors Program distinction

Central Michigan University, Mount Pleasant, MI

Honors Program Senior Thesis: *Phonological and Orthographic Processes in Silent Reading*
08/2012 – 05/2016

Research Experience

Research Technician Associate 08/2016 – 07/2018

Computational & Cognitive Neuroscience Laboratory, University of Michigan

Advisor: Thad A. Polk, Ph.D.

Research Assistant in Spatial Memory 01/2016 – 05/2016

Department of Psychology, Central Michigan University

Advisor: Christopher Davoli, Ph.D.

Lab Manager 08/2015 – 05/2016

Eye-tracking Lab, Central Michigan University

Advisor: Jane Ashby, Ph.D.

Research Assistant in Mindfulness 03/2015 – 05/2015

Department of Psychology, Central Michigan University

Advisor: Reid Skeel, Ph.D.; Niloufar Assar, Ph.D.

Research Assistant in Criticism and Working Memory 02/2015 – 04/2015

Department of Psychology, Central Michigan University

Advisor: Reid Skeel, Ph.D.; Niloufar Assar, Ph.D.

Research Assistant 09/2012 – 01/2013

CMU Field Neurosciences Institute (FNI) Laboratory, Central Michigan University

Advisor: Gary Dunbar, Ph.D.; Jessica Matyas, Ph.D.

Manuscripts in Preparation

Gagnon, H., Simmonite, M., Cassady, K., Chamberlain, J., Freiburger, E., Lalwani, P., ... Polk, T. A. (Submitted 2018). *Michigan Neural Distinctiveness (MiND) project: Investigating the scope, causes, and consequences of age-related neural dedifferentiation*. BioRxiv 466516 [Preprint]. Available from: <https://doi.org/10.1101/466516>

Lalwani, P., **Gagnon, H.**, Cassady, K., Simmonite, M., Peltier, S., Seidler, R. D., ... Polk, T. A. (Submitted 2018). *Neural distinctiveness declines with age in auditory cortex and is associated with auditory GABA levels*.

Cassady, K., **Gagnon, H.**, Lalwani, P., Simmonite, M., Foerster, B., Park, D., ... Polk, T. A. (Submitted 2018). *Sensorimotor network segregation declines with age and is linked to GABA and sensorimotor performance.*

Talks & Poster Presentations

- Cassady, K., **Gagnon, H.**, Chamberlain, J., Lalwani, P., Simmonite, M., Foerster, B., ... Polk, T.A. (2018, November). *Sensorimotor network segregation declines with age, is linked to neural distinctiveness, and predicts sensorimotor performance.* Presented at the 48th Annual Meeting of the Society for Neuroscience, San Diego, CA.
- Simmonite, M., Cassady, K., **Gagnon, H.**, Lalwani, P., Taylor, S., Weissman, D., ... Polk, T.A. (2018, November). *Age-related neural dedifferentiation extends beyond visual cortex and is driven by less reliable neural activation.* Presented at the 48th Annual Meeting of the Society for Neuroscience, San Diego, CA.
- Lalwani, P., **Gagnon, H.**, Cassady, K., Simmonite, M., Petrou, M., Foerster, B., ... Polk, T. A. (2018, March). *Age-related declines in GABA levels in auditory cortex are associated with neural distinctiveness and auditory perception.* Presented at the 25th Annual Meeting of the Cognitive Neuroscience Society, Boston, MA.
- Cassady, K., **Gagnon, H.**, Lalwani, P., Simmonite, M., Foerster, B., Park, D., ... Polk, T. A. (2018, March). *Aging in the sensorimotor system: Lower GABA levels are associated with decreased network segregation and impaired behavior.* Presented at the 25th Annual Meeting of the Cognitive Neuroscience Society, Boston, MA.
- Cassady, K., **Gagnon, H.**, Chamberlain, J., Lalwani, P., Simmonite, M., Foerster, B., ... Polk, T. A. (2017, November). *Aging in the somatosensory system: Neural distinctiveness, GABA concentration and tactile function.* Presented at the 47th Annual Meeting of the Society for Neuroscience, Washington, D.C.
- Chamberlain, J., **Gagnon, H.**, Lalwani, P., Cassady, K., Simmonite, M., Foerster, B., ... Polk, T. A. (2017, November). *Neural distinctiveness and GABA concentrations in the aging ventral visual cortex.* Presented at the 47th Annual Meeting of the Society for Neuroscience, Washington, D.C.
- Lalwani, P., **Gagnon, H.**, Cassady, K., Chamberlain, J., Simmonite, M., Petrou, M., ... Polk, T. A. (2017, November). *Age-related declines in neural distinctiveness and GABA concentrations in auditory cortex.* Presented at the 47th Annual Meeting of the Society for Neuroscience, Washington, D.C.
- Gagnon, H.** & Davoli, C. (2016, November). *Thinking about acting: How action-related thought shapes environmental representations in spatial memory.* Presented at Psychonomic Society's 57th Annual Meeting in Boston, MA.
- Ashby, J., Shlanta, P., Pagan, A., Agauas, S., & **Gagnon, H.** (2016, November). *Additive effects of predictability and parafoveal information: Evidence from eye movements.* Presented at Psychonomic Society's 57th Annual Meeting in Boston, MA.
- Gagnon, H.** (2016, October). *Thinking about acting: How action-related thought shapes environmental representations in spatial memory.* Talk presented at the Experimental Psychology Program Seminar, Central Michigan University, Mount Pleasant, MI.
- Ashby, J., Pagan, A., **Gagnon, H.**, & Agauas, S. (2016, April). *Phonological congruency mediates orthographic preview benefits: Evidence from eye movements.* Presented at Central Michigan University's Student Research & Creative Endeavors Exhibit (SCREE) in Mount Pleasant, MI.

- Assar, N., Leeseberg, A., Weaver, A., Sergent, A., Becker, A., **Gagnon, H.**, & Skeel, R. (2016, February). *The effect of self-criticism on working memory performance following success and failure*. Presented at the International Neuropsychological Society's 44th Annual Meeting in Boston, MA.
- Ashby, J., Pagan, A., **Gagnon, H.**, & Agauas, S. (2015, November). *Phonological congruency mediates orthographic preview benefits: Evidence from eye movements*. Presented at Psychonomic Society's 56th Annual Meeting in Chicago, IL.

Technical Skills

Methodologies: Eye tracking, fMRI, Cognitive/Behavioral test administration

Programming/Software:

Proficient in R, SPSS, Matlab, E-Prime, Excel

Experience with Visual Studio, Freesurfer, EyeDoctor, Python, Unity

Academic Awards

Michigan Competitive Scholarship 08/2014 – 05/2016

Outstanding High School Student Scholarship 08/2012 – 05/2016

Undergraduate Summer Scholars Award 06/2015 – 08/2016

Honors Program International Student Award 01/2014 – 05/2014

Distinguished Student Award 08/2012 – 05/2013

Miscellaneous Experience

Sona Subject Pool Coordinator 05/2015 – 06/2016

Department of Psychology, Central Michigan University

Shelter Volunteer 09/2015 – 12/2015

Women's Aid Service, Inc., Mount Pleasant, MI