JORDAN I. BARNES

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Education

- 2022 ABD, PhD (Experimental Psychology) Simon Fraser University.
- 2012 Master of Arts (Experimental Psychology) Simon Fraser University.
- 2008 Bachelor of Arts (Honours, Cognitive Science) Simon Fraser University.
- 2003 Associate of Arts (Criminology) Kwantlen University College.

Academic Positions

- 2009 2021. Research Assistant (Cognitive Science Laboratory) Simon Fraser University.
- 2016 2017. Teaching Assistant (Learning to Learn) Simon Fraser University.
- 2016 2016. Teaching Assistant (Perception) Simon Fraser University.
- 2013 2013. Teaching Assistant (Evolutionary Psychology) Simon Fraser University.
- 2010 2012. Teaching Assistant (Introductory Psychology) Simon Fraser University.
- 2008 2011. Teaching Assistant (Introductory Cognitive Science) Simon Fraser University.

Peer-Reviewed Publications

Barnes, J.I., Blair, M.R., Tupper, P. & Walshe, R.C. (2022). LAG-1: A dynamic, integrative model of learning, attention, and gaze. *PLoS One*. 17(3): e0259511. 10.1371/journal.pone.0259511 (link to corrected pdf).

McColeman, C., Thompson, J., Anvari, N., Azmand, J., Barnes, J., Barrett, R., Byliris, R., Chen, Y., Dolguikh, K., Fischler, K., Harrison, S., Hayre, R., Poe, R., Swanson, L., Tracey, T., Volkanov, A., Woodruff, C., Zhang, R., Blair, M.R. (2020). Digit-Eyes: Learning-related Changes in Information Access in a Computer Game Parallel those of Oculomotor Attention in Laboratory Studies. *Attention, Perception, & Psychophysics*. 10.3758/s13414-020-02019-w

Dolguikh, K., Barnes, J.I., Tracey, T., Woodruff, C., & Blair, M. (2019). How time spent on feedback influences learning and gaze in categorization training. In Noelle, D. C., Dale, R., Warlaumont, A. S., Yoshimi, J., Matlock, T., Jennings, C. D., & Maglio, P. P. (Eds.), Proceedings of the 41st Annual Meeting of the Cognitive Science Society (pp. 1661-1666). Austin, TX: Cognitive Science Society. *Poster*.

Jenkins, G., Barnes, J.I., Tupper, P. & Blair, M.R. (2017). A modeling link between cognitive and biological homeostasis. In Noelle, D. C., Dale, R., Warlaumont, A. S., Yoshimi, J., Matlock, T., Jennings, C. D., & Maglio, P. P. (Eds.), *Proceedings of the 39th Annual Meeting of the Cognitive Science Society (pp. 588-593)*. *Austin, TX: Cognitive Science Society. doi.org/10.31234/osf.io/8tkah*.

Barnes, J.I., Blair, M.R., Tupper, P. & Walshe, R.C. (2015). A dynamic neural field model of self-regulated eye movements during category learning. In Noelle, D. C., Dale, R., Warlaumont, A. S., Yoshimi, J., Matlock, T., Jennings, C. D., & Maglio, P. P. (Eds.), *Proceedings of the 37th Annual Meeting of the Cognitive Science Society (pp. 148-153)*. *Austin, TX: Cognitive Science Society. Paper*.

Barnes, J.I., McColeman, C.M., Stepanova, E., Blair, M.R. & Walshe, R.C. (2014). RLAttn: An actor-critic model of eye movements during category learning. In M. Knauff, M. Pauen, N. Sebanz, & I. Wachsmuth (Eds.), *Proceedings of the 35th Annual Conference of the Cognitive Science Society (pp. 1892-1897)*. Austin, TX: Cognitive Science Society. Paper.

McColeman, C.M., Barnes, J.I., Chen, L., Meier, K.M., Walshe, R.C., & Blair, M.R. (2014). Learning-induced changes in attentional allocation during categorization: A sizable catalog of attention change as measured by eye movements. *PLoS One.* 9(1). 10.1371/journal.pone.0083302

Barnes, J. (2012). Measuring the Hebbian components of selective attention using eye-tracking and dynamic field theory. [Master's thesis, Simon Fraser University]. SFU Repository. https://summit.sfu.ca/_flysystem/fedora/sfu_migrate/12393/etd7373_JBarnes.pdf

Slaney, K. L., Storey, J. E., & Barnes, J. (2011). When "Good Enough" Is Just Not Good Enough: Response to Holden and Marjanovic. *International Journal of Forensic Mental Health*, 10(4), 290–294. 10.1080/14999013.2011.629716

Slaney, K. L., Storey, J. E., & Barnes, J. (2011). Is My Test Valid? Guidelines for the Practicing Psychologist for Evaluating the Psychometric Properties of Measures. *International Journal of Forensic Mental Health*, 10(4), 261–283. 10.1080/14999013.2011.627086

Blair, M.R., Walshe, C., Barnes, J.I., & Chen, L. (2011). Rethinking the role of error in attentional learning. In L. Carlson, C. Hölscher, & T. Shipley (Eds.), *Proceedings of the 33rd Annual Meeting of the Cognitive Science Society* (pp. 1649-1655). Austin, TX: Cognitive Science Society. *Talk*.

*Barnes, J.I. (2009). Fluid Learning. Indiana Undergraduate Journal of Cognitive Science, 4, 42 - 53. Paper.

Conferences

Dolguikh, K., Barnes, J. I., Tracey, T., & Blair, M. R. (2019). Time spent on feedback influences learning and gaze. *Northwest Conference on Cognition and Memory at the University of Victoria*. Poster.

Dolguikh, K., Barnes, J. I., McColeman, C. M., Chen, Y., Boorman, N., & Blair, M. R. (2018). Time on feedback during learning. *Northwest Conference on Cognition and Memory at the Kwantlen Polytechnic University*. Poster.

Blair, M.R., Barnes, J.I., Walshe, R.C., & Tupper, P. (2016). *Tempus, a New Model of Learning and Attention in Categorization that Is Active, Neural and Temporal.* The 57th Meeting of the Psychonomic Society. Boston, MA. Talk.

McIntyre, D.L., Harrison, S.M., Wang H., Barnes J.I. & Blair, M.R. (2016). How are covert attention and learning related? *Northwest Conference on Cognition and Memory at the University of British Columbia*. Poster.

Barnes, J.I., Blair, M.R., Tupper, P. & Walshe, R.C. (2015). A dynamic neural field model of self-regulated eye movements during category learning. In Noelle, D. C., Dale, R., Warlaumont, A. S., Yoshimi, J., Matlock, T., Jennings, C. D., & Maglio, P. P. (Eds.), *Proceedings of the 37th Annual Meeting of the Cognitive Science Society (pp. 148-153). Austin, TX: Cognitive Science Society. Poster.*

Barnes, J.I., McColeman, C.M., Stepanova, E., Blair, M.R. & Walshe, R.C. (2014). RLAttn: An actor-critic model of eye movements during category learning. In M. Knauff, M. Pauen, N. Sebanz, & I. Wachsmuth (Eds.), *Proceedings of the 35th Annual Conference of the Cognitive Science Society (pp. 1892-1897)*. Austin, TX: Cognitive Science Society. Poster. Updated location.

Barnes, J.I. (2014). Associations Between Population Coded Information Open Up The Possibility Of Category Fields. Paper presented at the 75th Annual Canadian Psychological Association Conference. Vancouver, Canada. *Talk*.

Barnes, J.I., & Blair, M.R. (2014). The Influence of Space and Relevance on Eye Movement Distributions. Poster presented at the *Northwest Conference on Cognition and Memory*. University of Victoria, Canada. *Poster*.

Barnes, J.I., Walshe, R.C., Tupper, P.F., & Blair, M.R. (2013) A dynamic neural field model of eye movements during category learning tasks. Poster presented at *Learning to Attend, Attending to Learn: Neurological, Behavioral, and Computational Perspectives.* San Diego, USA. *Poster*.

Barnes, J.I., Blair, M.R., Tupper, P.F., & Walshe, R.C. (2013) Adult Category Learning Differences Predicted by a Dynamic Neural Field Theory Account of Information Sampled from the Fovea. *Proceedings of the 34th Annual Meeting of the Cognitive Science Society. Member abstract/poster*.

Barnes, J.I., Blair, M.R., Walshe, R.C., Chen, L., & McColeman, C. (2011). Modeling the relationship between error and attention. *Northwest Conference on Cognition and Memory* at the University of British Columbia. Talk.

*Barnes, J.I. Fluid Learning. (2009). *Northwest Conference on Cognition and Memory* at the University of Victoria. Poster.

Contributions

2018. Journal reviewer for *Theory & Psychology*. 2023. Journal reviewer for *Attention, Perception, & Psychophysics*.

Awards

2019 - 2020. National Science and Engineering Research Council - Engage. \$10,000.

2019 - 2019. Simon Fraser University Graduate Fellowship. \$6,500.

2018 - 2018. Simon Fraser University Graduate Fellowship. \$6,500.

2017 - 2017. Simon Fraser University Graduate Fellowship. \$6,500.

- 2016 2016. Simon Fraser University Graduate Fellowship. \$3,250.
- 2013 2015. National Science and Engineering Research Council PGSD. \$63,000.
- 2012 2013. Simon Fraser University Graduate Fellowship. \$6,250.
- 2010 2011. Mathematics of Information Technology and Complex Systems (MITACS) Accelerate BC internship. \$12,000.

Affiliations

2013 - 2018. Cognitive Science Society.

Professional experience

- 2021 Presented Psychology department area (History, Quantitative, Theory) seminar: *Designing and modeling experiments using the principles of Dynamic Field Theory*. Simon Fraser University, Canada.
- 2019 Presented Psychology department area (History, Quantitative, Theory) seminar: *The Dawning of the age of COMPROP*. Simon Fraser University, Canada.
- 2014 Presented Psychology department area (History, Quantitative, Theory) seminar: *Modeling Neural Population Codes Using Dynamic Neural Field Theory*. Simon Fraser University, Canada.
- 2014 Attended *Neuronal Dynamics Approaches to Cognitive Robotics* Summer school. Institut für Neuroinformatik, Ruhr-Universität. Bochum, Germany.
- 2013 Graduate mentor for *Robots and neuronal systems* workshop based on the IQR framework for neural robotics. Simon Fraser University, Canada.

^{*} work presented as an undergraduate.