Garrett Honke

PhD Cognitive Neuroscientist
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Education

Binghamton University (SUNY)

PhD Cognitive and Brain Sciences 2012 - 2017

MSc Cognitive and Brain Sciences 2012 - 2015

Northwestern University

Graduate-level coursework (audited) 2010 - 2012

University of Texas at Austin

BA Psychology 2004 - 2008

Research Positions

Machine Learning Research Scientist, New Knowledge 2018 -

Postdoctoral Research Associate, Binghamton University 2017 - 2018
Co-appointed to the Watson School of Engineering and Applied Science and the Department of Psychology

Graduate Student, Learning and Representation in Cognition Laboratory 2012 - 2017
Director: Dr. Kenneth J. Kurtz; Binghamton University (SUNY)

Graduate Student, Brain and Machine Laboratory 2016 - 2017
Director: Dr. Sarah Laszlo; Binghamton University (SUNY)

Adult Lab Coordinator, Cognition and Language Laboratory 2010 - 2012
Director: Dr. Dedre Gentner; Northwestern University

Research Assistant, Similarity and Cognition Laboratory 2005 - 2007
Director: Dr. Arthur B. Markman; University of Texas at Austin

Refereed Publications and Presentations

Honke, G. & Kurtz, K. J., (Submitted, preprint). Similarity is as Similarity Does? A Critical Inquiry into the Effect of Thematic Association on Similarity. PsyArXiv, 13 June 2018.

Kurtz, K. J., & Honke, G. (Submitted, preprint). Sorting out the problem of inert knowledge: Category construction to promote spontaneous transfer. PsyArXiv, 18 Sept. 2017.

Gentner, D., Simms, N., Kurtz, K. J., Honke, G., Snoddy, S., Forbus, K. D., Richland, L. E., Matlen, B. J., Lyons, E. M., & Klostermann, E. (In Press). Relatioanl Categories: Why they're Important

and How they're Learned. To appear in the *Proceedings of the 40th annual conference of the Cognitive Science Society.*

Premo, J., Cavagnetto, A. R., Honke, G., & Kurtz, K. J. (In Press). Categories in Conflict: Combating the application of an intuitive conception of inheritance with category construction. To appear in *the Journal of Research in Science Teaching.*

Azunre, P., Corcoran, C., Sullivan, D., Honke, G., Ruppel, R., Verma, S., & Morgan, J. (2018). Abstractive Tabular Dataset Summarization via Knowledge Base Semantic Embeddings. arXiv:1804.01503 [cs.AI].

Honke, G. R., Conaway, N. B., & Kurtz, K. J. (2016). Switch it up: Learning categories via feature switching. In A. Papafragou, D. Grodner, D. Mirman, & J. Trueswell (Eds.), *Proceedings of the 38th annual conference of the Cognitive Science Society* (pp. 2693-2698). Austin, TX: Cognitive Science Society.

Gentner, D., Levine, S. C., Ping, R., Isaia, A., Dhillon, S., Bradley, C., & Honke, G. (2016). Rapid learning in a children's museum via analogical comparison. *Cognitive science, 40*(1), 224-240.

Honke, G., Cavagnetto, A. R., Kurtz, K. J., Patterson, J. D., Conaway, N. B., Tao, Y., & Marr, J. C. (2015). Promoting Transfer and Mastery of Evolution Concepts with Category Construction. Paper presented at the American Educational Research Association annual meeting, Chicago, IL.

Gentner, D., Goldwater, M. B., Levine, S. C., Ping, R. M., Isiah, A., Honke, G., & Bradley, C. (2015). Spatial language and spatial comparison combine to support children's learning. *Cognitive Processing*, *16*, S38-S38.

Non-refereed Posters and Presentations

Kurtz, K. J., Cavagnetto, A. R., Honke, G., Conaway, N. B., Patterson, J. D., Marr, J. C. & Tao, Y. (2014). Optimizing the category construction task to promote learning and transfer of knowledge in classroom instruction. In P. Bello, M. Guarini, M. McShane, & B. Scassellati (Eds.), *Proceedings of the 36th Annual Conference of the Cognitive Science Society.* Austin, TX: Cognitive Science Society.

Kurtz, K. J., & Honke, G. (2013). Self-generated analogies promote spontaneous transfer. Poster presented at the 54th annual meeting of the Psychonomic Society, Toronto, ON.

Honke, G., Gentner, D., Forbus, K., Cohen, C., Chang, M., Lovett, A., & Usher, J. (2012). Using CogSketch to support learning cross-sectional reasoning. Poster presented at the National Science Foundation site visit for the Spatial Intelligence and Learning Center (SILC). Philadelphia, PA.

Software

CatLearn DIVA: the DIVergent Autoencoder implemented in R (2016). Available as a module in the `catlearn` R Package for computational modelling of formal psychological theories. Catlearn is a framework and archive for distributed collaboration in formal modeling in psychology. catlearn.r-forge.r-project.org

Wills, A. J., Edmunds, C. E., Kurtz, K. J., & Honke, G. A Practical Introduction to Distributed Collaboration for Formal Modeling: A Half-day Tutorial. Tutorial at the 50th Annual Meeting of the Society for Mathematical Psychology, University of Warwick, UK.

Catlearn Supplementals. `catlearn.suppls` is an R package that provides a suite of helper functions for cognitive modeling under the `catlearn` framework. github.com/ghonk/catlearn.suppls

Teaching

Course	Role	Semester
Research Methods	Discussion Instructor	Fall 2017
Statistical Analysis and Design	Instructor	Summer 2017
Experiment Psychology: Perception	Teaching Assistant	Spring 2017
Cognition Lab	Instructor	Fall 2016
Experimental Psychology: Cognition	Instructor	Summer 2016
General Psychology	Teaching Assistant	Spring 2016
Perception Lab	Instructor	Fall 2015
Experimental Psychology: Cognition	Teaching Assistant	Fall 2012

Ad Hoc Reviewing

Acta Psychologica

AutoML

Behavorial Research Methods

Cognitive Science Society

Cognitive Processing

Cognitive Psychology

Journal of Experimental Psychology: Learning, Memory, and Cognition

Psychological Science