

# Nicholas A. Holt, Ph.D.

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## Professional Positions

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2016-Present    Head Instructor, Institute for Advanced Analytics, Bellarmine University  
2016             Associate Research Scientist, Pacific Institute for Research and Evaluation

## Education

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2016             Ph.D. in Experimental Psychology, University of Louisville, Louisville, KY, 2016  
                    Advisor: Cara H. Cashon, Ph.D.  
                    Dissertation: Mechanisms Responsible for the Development of Causal Perception in Infancy (doi: [10.18297/etd/2498](https://doi.org/10.18297/etd/2498))  
2013             M.S. in Experimental Psychology, University of Louisville, Louisville, KY, 2013  
                    Concentration: Cognitive and Developmental Sciences  
2011             B.S. in Psychology, Morehead State University, Morehead, KY, 2011

## Teaching Experience

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### Courses Taught

ANLY 531 – Analytics Tools and Methods I (6 credits, Bellarmine University, Spring 2017)  
                    Topics: Introduction to Data Analysis, R Programming, Computational Probability  
ANLY 532 – Analytics Tools and Methods II (3 credits, Bellarmine University, Summer 2017)  
                    Topic: Computational Statistics Using R  
ANLY 522 – Professional Skills for Analytics II (2 credits, Bellarmine University, Summer 2017)  
ANLY 533 – Analytics Tools and Methods III (5 credits, Bellarmine University, Fall 2017)  
                    Topic: Data Mining  
ANLY 542 – Analytics Applications II (3 credits, Bellarmine University, Fall 2017)  
                    Topic: Regression

### Teaching Assistant and Lab Instructor

PSYC 302 - Experimental Psychology, (UofL, Fall 2011; 2012)  
PSYC 610 - Advanced Statistics I (PhD Level), (UofL, Fall 2013; 2014; 2015)  
PSYC 611 - Advanced Statistics II (PhD Level), (UofL, Spring 2014; 2015; 2016)

### Teaching Assistant

PSYC 201 - Introduction to Psychology, (UofL, Spring 2012; 2013)  
PSYC 363 - Life-span Developmental Psychology (UofL, Spring 2013; Summer 2013)

### Relevant Guest Lectures

October 2014, University of Louisville, Louisville, KY  
Course: PSYC-610, Advanced Statistics I, PhD Level  
Topic: Matched-sample T-tests & Effect Size (Cohen's d)

February 2014, University of Louisville, Louisville, KY  
Course: PSYC-611, Advanced Statistics II, PhD Level  
Topic: Linear Contrasts & Multiple Comparisons

### **Honors, Awards, & Research Funding** \_\_\_\_\_

Runner-up, University of Louisville Three Minute Thesis (3MT) Competition (2016)  
Graduate Entrepreneurship Academy (2016)  
University of Louisville College of Arts & Sciences Graduate Student Grant for Research and Creative Activities (\$500, 2015-2016)  
University of Louisville GSU Research Fund Award (\$100, 2015)  
University of Louisville Graduate Student Council Research Fund Award (\$300, 2014-2015)  
Graduate Grant Writing Academy (2015)  
Graduate Teaching Assistant (GTA) Academy (2013-2014)  
Conference Travel Award, University of Louisville GSC, (\$350 per year; 2012-2014)  
Runner-up, Kentucky Academy of Science Undergraduate Oral Presentation Competition (2010)

### **Technical Skills** \_\_\_\_\_

Data Wrangling, Statistical Modeling, Experimental Design, Probability, Inferential Statistics, Nonparametrics, Surveys, Research Methods, Data Mining, Machine Learning, R, Python, SQL, SPSS, VBA, Tableau

### **Research Interests** \_\_\_\_\_

*Data Science*: applications of simulation, web scraping, data mining, and machine learning methods, government data for social good, face processing, open science, developing open source R packages to improve statistical computing

### **Publications** \_\_\_\_\_

Cashon, C. H., & Holt, N. A. (2015). Developmental Origins of the Face Inversion Effect. In Benson, J. B. (Ed.). *Advances in Child Development and Behavior*. 48, 117-150. San Diego, CA: Elsevier. doi: [10.1016/bs.acdb.2014.11.008](https://doi.org/10.1016/bs.acdb.2014.11.008)

DeNicola, C. A., Holt, N. A., Lambert, A. J., & Cashon, C. H. (2013). Attention-orienting and attention-holding effects of faces on 4- to 8-Month-Old Infants. *International Journal of Behavioral Development*, 37, 143-147. doi: [10.1177/0165025412474751](https://doi.org/10.1177/0165025412474751)

### Manuscripts in Progress

Ware, L. J., Collins, D., Raffle, H., Holt, N. A., Wandersman, A. & Haines, M. Y. (submitted). A Developmental Community Capacity and Readiness Assessment Process: Rural and Appalachian County Readiness to Engage in the Strategic Prevention Framework (SPF). *Journal of Community Practice*.

Ha, O., Cashon, C. H., Holt, N. A., & Mervis, C. B. (in prep). Rapid Word-Object Association is Related to Expressive Vocabulary Size in Infants and Toddlers with and without Williams Syndrome.

Cashon, C. H., Holt, N. A., Dixon, K. C., & Woodruff-Borden, J. (in prep). Maternal Negative Affect is related to 5-month-old Infants' Discrimination of Facial Expressions in a Non-clinical Sample.

Holt, N. A., Olesen, N. M., Dixon, K. C., Dale, L. E., & Cashon, C. H. (in prep). Do infants experience face pareidolia? An investigation of infants' preference for upright faces and face-like images.

Holt, N. A. & Cashon, C. H. (in prep). Parent Interaction Disrupts 4-month-old Infants' Learning about Causality during Sticky Mittens Training.

### **Presentations**

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#### Peer-reviewed Conference Presentations

Olesen, N. M., Dixon, K. C., Holt, N. A., Dale, L. E., & Cashon, C. H. (2017, October). Do Babies See Faces in Face, Face-like, and Ambiguous Stimuli? Pareidolia in Infancy. Poster presented at the biennial meeting of the *Cognitive Development Society*, Portland, OR.

Holt, N. A., Pal, P\*, Olesen, N. M., Dixon, K. C., & Cashon, C. H. (2017, April). Parent Interaction Disrupts 4-month-old Infants' Learning about Causality during Sticky Mittens Training. Talk presented to the biennial meeting of the *Society for Research in Child Development*, Austin, TX.

Holt, N. A., Cashon, C. H. (2016, May). Are differences in the effects of sticky mittens experience on 4-month-olds' perception of causality related to motor development?. Poster presented at the biennial meeting of the *International Congress on Infant Studies*, New Orleans, LA.

Holt, N. A., Cashon, C. H. (2015, October). Causal perception in 4-month-olds: contributions of self-produced action and parental interaction. Poster presented at the biennial meeting of the *Cognitive Development Society*, Columbus, OH.

Dixon, K. C., Holt, N. A., Woodruff-Borden, J., & Cashon, C. H. (2015, October). Same visual input, different cognitive outcome: Differences in 5-month-olds' emotion discrimination, but not visual scanning behavior. Poster presented at the biennial meeting of the *Cognitive Development Society*, Columbus, OH.

Cashon, C. H., Holt, N. A., & Woodruff-Borden, J. (2015, March). Emotional environment is related to infants' scanning and discrimination of neutral and happy faces. Talk presented at the biennial meeting of the *Society for Research in Child Development*, Philadelphia, PA.

Holt, N. A., Cashon, C. H., Woodruff-Borden, J., & Smith, S. G. (2014, July). Parental symptoms of depression and anxiety are related to 5-month-olds' face scanning and discrimination of facial expressions. Poster presented at the biennial meeting of the *International Conference on Infant Studies*, Berlin, DE.

Ha, O., Cashon, C. H., Holt, N. A., Helton, L. E., & Mervis, C. B. (2014, July). Rapid word-object association is related to expressive vocabulary size in infants and toddlers with and without Williams syndrome. Poster presented at the biennial meeting of the *International Conference on Infant Studies*, Berlin, DE.

Holt, N. A., Patane, R. R., & White, W. (2010, November). Two hours of amphetamine exposure is sufficient to produce longer-term withdrawal-related hypophagia. Paper presented at the *96<sup>th</sup> Annual Meeting of the Kentucky Academy of Science*, Bowling Green, KY.

Gibbs, D., Patane, R. R., Addison, A. A., Holt, N. A., Dillow, J., & White, W. (2010, November). A novel procedure for investigating amphetamine-induced withdrawal-related hypophagia. Paper presented at the *96<sup>th</sup> Annual Meeting of the Kentucky Academy of Science*, Bowling Green, KY.

Patane, R. R., Addison, A. A., Holt, N. A., Dillow, J., Gibbs, D., & White, W. (2010, November). The role of selective dopamine receptor agonists in amphetamine-induced withdrawal-related hypophagia. Paper presented at the *96<sup>th</sup> Annual Meeting of the Kentucky Academy of Science*, Bowling Green, KY.

Osborne, S., Book, D., Holt, N. A., May, L., & White, I. M. (2009, November). Repeated exposure to psychostimulants on appetitive behavior. Paper presented at the *95<sup>th</sup> Annual Meeting of the Kentucky Academy of Science*, Highland Heights, KY.

#### Invited Talks

Holt, N. A. (2017, August). Function iterations using R. Talk presented to the Louisville R Users Group, Louisville, KY.

Holt, N. A. (2016, November). Using R and VBA to Automate Data Workflows. Talk presented to the Institute for Advanced Analytics, Bellarmine University, Louisville, KY.

Holt, N. A. (2015, November). Relations between infants' emerging perceptual, cognitive, and motor abilities. Talk presented at the *Morehead State University Department of Psychology Colloquium Series*, Morehead, KY.

Holt, N. A., DeNicola, C. A., Ha, O., Helton, L. E., & Cashon, C. H. (2013, April). Infants' processing and scanning of faces. Talk presented at the biennial meeting of the *Society for Research in Child Development - Face Processing Pre-Conference*, Seattle, WA.

#### Other Presentations

Crenshaw, R., Dixon, K. C., Olesen, N. M., Holt, N. A., & Cashon, C. H. (2017, August). The Effects of Parent Interactions in Infant Learning. Poster presented at the *University of Louisville Poster Session of Summer Undergraduate Research*, Louisville, KY.

Holt, N. A., & Cashon, C. H. (2016, April). Does motor development predict what infants learn about objects from manual exploration experience?. Poster presented at the *University of Louisville Graduate Regional Research Conference*, Louisville, KY.

Holt, N. A. (2016, April). Optimizing experience to promote causal learning in infancy. Talk presented at the *University of Louisville Graduate Regional Research Conference – Three Minute Thesis Competition (3MT)*, Louisville, KY. \*\*This talk placed runner-up in the competition\*\*

Holt, N. A., & Cashon, C. H. (2015, October). Causal perception in 4-month-olds: Contributions of self-produced action and parental interaction. Poster presented at *Research!Louisville*, Louisville, KY.

Dixon, K. C., Holt, N. A., Woodruff-Borden, J., & Cashon, C. H. (2015, October). Same visual input, different cognitive outcome: Differences in 5-month-olds' emotion discrimination, but not visual scanning behavior. Poster presented at *Research!Louisville*, Louisville, KY.

Holt, N. A. (2015, March). The development of the face inversion effect during infancy. Talk presented at the *University of Louisville Experimental Psychology Brown-bag Seminar Series*, Louisville, KY.

Holt, N. A. (2014, January). Rethinking the origin of causal perception. Talk presented at the *University of Louisville Experimental Psychology Seminar Series*, Louisville, KY.

Smith, S. G., Holt, N. A., Woodruff-Borden, J., & Cashon, C. H. (2013, July). 5-month-old infants' face scanning patterns differentiate emotion discrimination ability. Poster presented at the *University of Louisville Poster Session of Summer Undergraduate Research*, Louisville, KY.

Arrowood, A., Holt, N. A., Williams, S., Woodruff-Borden, J., & Cashon, C. H. (2012, May). Five-month-old infants' discrimination of emotion in faces. Poster presented at the *University of Louisville Undergraduate Research Symposium*, Louisville, KY.

Addison, A. A., Maione, G., Holt, N. A., & White, W. (2011, April). Impact of amphetamine and dopamine agonists on acute- and withdrawal-phase feeding in rats. Paper presented at the *Morehead State University Celebration of Student Scholarship*, Morehead, KY.

## **Service and Leadership**

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### Undergraduate Students Mentored

Payal Pal (2016; currently attending the MSW program at University of Pennsylvania)

### Campus Service

Graduate Education Affairs Committee, Bellarmine University (2016-Present)

Graduate Student Dean's Reception, Invited Speaker (2015; UofL)

Graduate Student Council, Elected Representative for the Department of Psychological and Brain Sciences (2014-2015; UofL)

School of Interdisciplinary and Graduate Studies - Graduate Student Orientation, New Student Q&A Session Panelist (2014; UofL)

Psi Chi Honors Society (Morehead State University Chapter), VP of Public Relations (2011)

### Community Outreach

Data 4 Democracy Louisville Hackathon: Data Science Mentor/Volunteer (2017)

Louisville R Users Group: Meetup Co-planner (2017-present)

DuPont Manual High School Regional Science Fair:

Judge in Computational Biology and Bioinformatics (2016; 2017)

Judge in Social & Behavioral Sciences (2015)

Head Judge in Social & Behavioral Sciences (2013; 2014)

### Editorial Service

*Frontiers in Cognitive Science* (guest reviewer for special issue on Embodied Cognition)

*Frontiers in Developmental Psychology* (ad-hoc reviewer)

*British Journal of Developmental Psychology* (ad-hoc reviewer)

## **Professional Societies**

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American Association for the Advancement of Science (AAAS)

Society for Research in Child Development (SRCD)

International Congress on Infant Studies (ICIS)  
Cognitive Development Society (CDS)  
Kentucky Academy of Science (KAS)  
Society for Neuroscience – Louisville Chapter (SfN)