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Current Position

Assistant Faculty, Rutgers University – Newark (2013 –)

Education

B.S. *magna cum laude* in Cognitive Psychology, Northeastern University (2002)

Ph.D. Brain and Cognitive Sciences. Massachusetts Institute of Technology (2009)

Post-Doctoral Associate, University of California, Berkeley (2009-2013)

Fellowships, Grants, and Honors

Fellowships, Grants - Active

- 2016-2018 National Science Foundation. EAGER: MAKER: The origins of making: A Data Science approach to investigating cognitive and affective basis of learning through constructing.
Role: PI. (Co-PIs: Vanessa LoBue, Patrick Shafto)
Total Award: \$297,772
- 2016-2018 Rutgers University – Newark, Chancellor’s SEED grant. A Data Science approach to investigating cognitive and affective basis of learning through constructing in the Newark Community.
Role: PI. (Co-PIs: Vanessa LoBue, Patrick Shafto)
Total Award: \$75,000
- 2016-2019 National Science Foundation. Choosing to learn: Investigating the factors that drive preschooler’s exploration.
Role: PI.
Total Award: \$645,168
- 2016-2019 National Science Foundation. Guiding guided learning: Developmental, educational and computational perspectives.
Role: Co-PI. (PI: Patrick Shafto).
Total Award: \$750,000
- 2017-2019 Jacobs Foundation Early Career Research Fellowship; Science of Learning.
Role: PI
Total Award: \$165,000

- 2017-2020 Rutgers University – Newark, Chancellor's Seed Grant Program. Creation of the Rutgers Cognitive Science Center (RCSC).
Role: Co-PI. (Multiple Co-PIs)
Total Award: \$50,000
- 2017-2020 National Science Foundation. Why Questions? Investigating the social basis of questioning for learning.
Role: PI. (Co-PI: Patrick Shafto)
Total Award: \$499,984

Fellowships, Grants – Pending

- 2018-2024 James S. McDonnell Foundation Scholar Awards in Understanding Human Cognition. Learning in Early Childhood: A Computational Cognitive Developmental Approach. Invited application (one of 20 invitees for 10 awards)
Role: PI
Total Award: \$600,000
- 2018-2020 National Science Foundation. MRI: Acquisition of a GPU cluster to support interdisciplinary research in human learning, machine learning, and data science.
Role: Co-PI. (PI: Patrick Shafto).
Total Award: \$142,856 (requesting 99,999 from NSF)

Fellowships, Grants - Completed

- 2015-2016 Rutgers University – Newark, Chancellor's Seed Grant. Computational models of language learning, Towards the Creation of the Rutgers Cognitive Science Center.
Role: PI. (Co-PIs: William Graves, Jennifer Austin, & Patrick Shafto)
Total Award: \$20,000 (PI of \$12,480)
- 2008-2009 Dissertation Fellowship from the American Psychological Foundation. Elizabeth Munsterberg Koppitz Child Psychology Graduate Fellowships.
Role: PI.
Total Award: \$25,000

Honors

- ICDL-EpiRob 2012 for Best Paper: Experiment Combined with Computational Model (2012)
First author: “Sticking to the evidence? A computational and behavioral case study of micro-theory change in the domain of magnetism”
- Walle Nauta Award for Continuing Dedication to Teaching (2007)
MIT Department of Brain and Cognitive Sciences
- Marr Prize for Best Student Paper, Cognitive Science Society (2006)
“Modeling Cross-Domain Causal Learning in Preschoolers as Bayesian Inference”
- Angus MacDonald Award for Excellence in Undergraduate Teaching (2006)
MIT Department of Brain and Cognitive Sciences
- Marr Prize for Best Student Paper Honorable Mention, Cognitive Science Society (2005)
Second author, “Using Physical Theories to Infer Hidden Causal Structure”

National Science Foundation Research Fellowship: Honorable Mention (2005, 2004)
 Faculty Undergraduate Research Institute Fellowship, Northeastern University (2002)
 Sullivan Scholarship: Multidisciplinary Research Award (2002) Northeastern University
 Provost Research Grant, Northeastern University (2001)
 Faculty Scholar Senior Award (2002) Northeastern University
 National Society of Collegiate Scholars
 University of Delaware Scholarship Winner (1999)
 Chapter Founder at Northeastern University (2000)
 Chapter President at Northeastern University (2001)

Travel Awards

Cognitive Science Society Travel Award as invited speaker at the Cognitive Science Society Conference, Philadelphia PA (2016)
 Rutgers University, Faculty of Arts and Sciences Travel Award to attend the Cognitive Science Conference, Quebec Canada (2014)
 Cambridge University Machine Learning Summer School Grant (2009)
 Cognitive Science Society Student Travel Award (2007, 2009)
 Association for the Advancement of Artificial Intelligence Student Travel Award (2007)

Publications

(^a Trainees)

Journal Articles – Submitted (8)

Yu^a, Y., Shafto, P., & **Bonawitz**, E. (*in review*) Inconvenient samples: Modeling the effects of non-consent by coupling observational and experimental results.

Bass^a, L., **Bonawitz**, E., Hanson^a, M., Ramarajan^a, D., Shafto, P., Wellman, H., Gopnik, A. (*in revision, invited resubmission*) Pedagogy and Theory of Mind: The relationship between children's teaching and their reasoning about others. *Child Development*.

Bonawitz, E.B., Shafto, P., Yu^a, Y., Bridgers^a, S., & Gonzalez^a, A. (*in revision, invited resubmission*) Children rationally change their beliefs in response to neutral follow-up questions. *Cognitive Science*.

Bonawitz, E.B., Ullman, T., Bridgers^a, S., Gopnik, A., & Tenenbaum, J.B. (*in revision, invited resubmission*) Chicken-and-egg: A computational, historical, and behavioral case study of micro-theory change in the domain of magnetism. *Cognitive Science*.

^a When collaborating with trainees who collect the majority of the data, first authorship is given to students, and I take last authorship position. If the majority of data are collected with another lab (either by me or a collaborator), but a trainee is still involved in the project, I take a middle author position.

Bonawitz, E., Walker, C., Abbot, J., Griffiths, T., & Gopnik, A. (*in revision*) Variability in preschoolers' cognitive search.

Doen^a, T., Castro^a, A., **Bonawitz**, E., & Denison, S. (*in revision*) "Wow, I did it!": Unexpected success increases preschoolers' exploratory play on a later task.

Colantonio^a, J., Durkin, K., **Bonawitz**, E., & Shafto, P. (*in revision*) Individual choice behavior: Theoretical analysis in cooperative context.

Bonawitz, E.B. & Griffiths, T.L. (*in revision*) Considering psychological mechanisms can change the interpretation of Bayesian models.

Journal Articles – Published (22)

Yu^a, Y., Cheng, S., Shafto, P., **Bonawitz**, E., Corriveau, K., Xu, F., Golinkoff, R., & Hirsh-Pasek, K. (*in press*) Guided play: What, Why and How. *Frontiers*.

Yu^a, Y., Landrum, A., **Bonawitz**, E., & Shafto, P. (*in press*) Questioning supports effective transmission of knowledge and increased exploratory learning in pre-kindergarten children. *Developmental Science*. doi: 10.1111/cdev.12850

Lombrozo, T., **Bonawitz**, E., Scalise^a, N.R. (2018) Young children's learning and generalization of teleological and mechanistic explanations. *Journal of Cognition and Development*. 19(2), P.1-13. <https://doi.org/10.1080/15248372.2018.1427099>

Yu^a, Y., **Bonawitz**, E., & Shafto, P. (2017) Pedagogical Questions in Mother-Child Conversations. *Child Development*. doi: 10.1111/cdev.12850

Walker, C., **Bonawitz**, E., & Lombrozo, T. (2017) Effects of explaining on children's preference for simpler hypotheses. *Psychonomic Bulletin and Review*, 24(5), 1538–1547. doi:10.3758/s13423-016-1144-0

Bonawitz, E.B. & Shafto, P. (2016) Computational models of learning during development, social influences. *Current Opinions in Behavioral Science*, 7, 95-100. doi: 10.1016/j.cobeha.2015.12.008

Gopnik, A., & **Bonawitz**, E., (2015) Bayesian models of child development. *Wiley Interdisciplinary Review: Cognitive Science Vol. 6*(2), p.75-86. doi: 10.1002/wcs.1330

Rhodes, M., **Bonawitz**, E., Shafto, P., Chen^a, A., & Caglar^a, L. (2015) Controlling the message: Preschoolers' use of information to teach and deceive others. *Frontiers in Psychology*, 6, 867. doi: 10.3389/fpsyg.2015.00867

Shafto, P., & **Bonawitz**, E. (2015) Choice from among intentionally selected options. In Brian Ross (Ed). *Psychology of Learning and Motivation, Vol 63*. San Diego: Elsevier, 153-169. doi: 10.1016/bs.plm.2015.03.006

Bonawitz, E., Denison, S., Griffiths, T., & Gopnik, A. (2014) Probabilistic Models, Learning Algorithms, Response Variability: Sampling in Cognitive Development. *Trends in Cognitive Science*, 18, 497-500. doi: 10.1016/j.tics.2014.06.006

Bonawitz, E., Denison, S., Gopnik, G., & Griffiths, T.L. (2014) Win-stay, lose-shift: A simple sampling algorithm for approximating Bayesian inference. *Cognitive Psychology*, 74, 35-65. doi: 10.1016/j.cogpsych.2014.06.003

Denison, S., **Bonawitz**, E., Gopnik, A., & Griffiths, T. (2013) Rational variability in children's causal inferences: The Sampling Hypothesis. *Cognition*, 126, 285-300. doi: 10.1016/j.cognition.2012.10.010

Muentener, P., **Bonawitz**, E.B., Horowitz^a, A., & Schulz, L.E. (2012) Mind the gap: Investigating toddlers' sensitivity to contact relations in predictive events. *PLoS ONE* 7(4): e34061. doi:10.1371/journal.pone.0034061.

Bonawitz, E.B., van Schijndel, T., Friel^a, D., & Schulz, L. (2012) Children balance theories and evidence in exploration, explanation, and learning. *Cognitive Psychology*, 64(4), 215-234. doi: 10.1016/j.cogpsych.2011.12.002

Bonawitz, E.B., & Lombrozo, T. (2012) Occam's Rattle: Children's use of simplicity and probability to constrain inference. *Developmental Psychology*, 48, 1156-1164. doi: 10.1037/a0026471

Bonawitz, E.B., Fischer^a, A., & Schulz, L. (2012) Teaching 3.5-Year-Olds to Revise Their Beliefs Given Ambiguous Evidence. *Journal of Cognition and Development*, 13(2), 266-280. doi:10.1080/15248372.2011.577701

Bonawitz*, E.B., Shafto*, P., Gweon, H., Goodman, N.D., Spelke, E., & Schulz, L.E. (2011) The double-edged sword of pedagogy: Teaching limits children's spontaneous exploration and discovery. *Cognition*, 120(3), 322-330. doi: 10.1016/j.cognition.2010.10.001 (*joint 1st author)

Bonawitz, E.B., Ferranti^a, D., Saxe, R., Gopnik, A., Meltzoff, A., Woodward, J., & Schulz, L. (2010) Just do it? Toddlers ability to integrate prediction and action. *Cognition*, 115, 104-117. doi: 10.1016/j.cognition.2009.12.001

Schulz, L., **Bonawitz**, E.B., & Standing^a, H. (2008) Word, thought, and deed: The role of object labels in children's inductive inferences and exploratory play. *Developmental Psychology*, 44(5), 1266-1276. doi: 10.1037/0012-1649.44.5.1266

Shafto, P., Kemp, C., **Bonawitz**, E.B., Coley, J.D., & Tenenbaum, J.B. (2008) Inductive reasoning about causally transmitted properties. *Cognition*, 109(2), 175-192. doi: 10.1016/j.cognition.2008.07.006

Schulz, L., **Bonawitz**, E.B., & Griffiths, T.L. (2007) Can being scared cause tummy aches? Naive theories, ambiguous evidence and preschoolers' causal inferences. *Developmental Psychology*, Sep Vol 43(5), 1124-1139. doi: 10.1037/0012-1649.43.5.1124

Schulz, L., & **Bonawitz**, E.B. (2007) Serious fun: Preschoolers play more when evidence is confounded. *Developmental Psychology*, Jul Vol 43(4), 1045-1050. doi: 10.1037/0012-1649.43.4.1045

Refereed Paper Proceedings (28)

(Peer reviewed, ~5000 word papers, published in conference proceedings)

Bass^a, I., Shafto, P., & **Bonawitz**, E. (*in press*) That'll Teach 'em: How Expectations about Teaching Styles may Constrain Inferences. In Kalish, C., Rau, M., Zhu, J., & Rogers, T.T. (Eds.) *Proceedings of the 40th Annual Conference of the Cognitive Science Society*. Madison, WI: Cognitive Science Society.

Choi^a, K., Lapidow^a, E., Austin, J., Shafto, P. & **Bonawitz**, E. (*in press*) Preschoolers are more likely to direct questions to adults than to other children (or selves) during spontaneous conversational act. In Kalish, C., Rau, M., Zhu, J., & Rogers, T.T. (Eds.) *Proceedings of the 40th Annual Conference of the Cognitive Science Society*. Madison, WI: Cognitive Science Society.

Colantonio^a, J., & **Bonawitz**, E. (*in press*) Awesome play: Awe increases preschoolers exploration and discovery. In Kalish, C., Rau, M., Zhu, J., & Rogers, T.T. (Eds.) *Proceedings of the 40th Annual Conference of the Cognitive Science Society*. Madison, WI: Cognitive Science Society.

Yu^a, Y., **Bonawitz**, E., & Shafto, P. (2017) Inconvenient samples: Modeling the effects of non-consent by coupling observational and experimental results. In Gunzelmann, G., Howes, A., Tenbrink, T., & Davelaar, E. (Eds.) *Proceedings of the 39th Annual Conference of the Cognitive Science Society*. London, UK: Cognitive Science, Society, 1406-1411.

Bass^a, L., **Bonawitz**, E., Shafto, P., Ramarajan^a, D., Gopnik, A., & Wellman, H. (2017) I know what you need to know: Children's developing theory of mind and pedagogical evidence selection. In Gunzelmann, G., Howes, A., Tenbrink, T., & Davelaar, E. (Eds.) *Proceedings of the 39th Annual Conference of the Cognitive Science Society*. London, UK: Cognitive Science, Society, 99-104.

Bass^a, L., **Bonawitz**, E., & Gweon, H. (2017) Didn't know, or didn't show? Preschoolers consider epistemic state and degree of omission when evaluating teachers. In Gunzelmann, G., Howes, A., Tenbrink, T., & Davelaar, E. (Eds.) *Proceedings of the 39th Annual Conference of the Cognitive Science Society*. London, UK: Cognitive Science, Society, 105-110.

Baker^a, L.J., Lobue, V., **Bonawitz**, E., & Shafto, P. (2017) Towards Automated Classification of Emotion Facial Expressions. In Gunzelmann, G., Howes, A., Tenbrink, T., & Davelaar, E. (Eds.) *Proceedings of the 39th Annual Conference of the Cognitive Science Society*. London, UK: Cognitive Science, Society, 1574-1579.

Yu^a, Y., **Bonawitz**, E., & Shafto, P. (2016) Questions in informal teaching: A study of mother-child conversations. In Grodner, D., Mirman, D., Papafragou, A., & Trueswell, J. (Eds.) *Proceedings of the 38th Annual Conference of the Cognitive Science Society*. Philadelphia, PA: Cognitive Science Society, 1086-1091.

Durkin, K., Caglar^a, L., **Bonawitz**, E., & Shafto, P. (2015). Explaining Choice Behavior: The Intentional Selection Assumption. In Dale, R., Jennings, C., Maglio, P., Matlock, T., Noelle, D., Warlaumont, A., Yoshimi, J. (Eds.) *Proceedings of the 37th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society, 708-713.

Rhodes, M., **Bonawitz, E.**, Shafto, P., & Chen^a, A. (2014) Controlling the message: Preschoolers' use of evidence to teach and deceive others. In Bello, P., Cuarini, M., McShane, M., & Scassellati, B. (Eds.) *Proceedings of the Thirty-sixth Cognitive Science Society*. Austin, TX: Cognitive Science Society, 213-218.

Bonawitz, E.B., Ullman^a, T., Gopnik, A., & Tenenbaum, J.B. (2012) Sticking to the evidence? A computational and behavioral case study of micro-theory change in the domain of magnetism. In *Development and Learning and Epigenetic Robotics (ICDL), 2012 IEEE International Conference*, San Diego, CA: IEEE, 1-6.

Pham^a, K., **Bonawitz, E.B.**, & Gopnik, A. (2012). Seeing who sees: Contrastive access helps children reason about other minds. In Miyake, N., Peebles, D., & Cooper, R. (Eds.) *Proceedings of the Thirty-fourth Cognitive Science Society*, Sapporo, Japan: Cognitive Science Society, 2180-2185.

Gonzalez^a, A. Shafto, P., **Bonawitz, E.B.**, & Gopnik, A. (2012) Is that your final answer? The effects of neutral queries on children's choices. In Miyake, N., Peebles, D., & Cooper, R. (Eds.) *Proceedings of the Thirty-fourth Cognitive Science Society*, Sapporo, Japan: Cognitive Science Society, 1614-1619.

Bonawitz, E.B., Denison^a, S., Chen^a, A., Gopnik, G., & Griffiths, T.L. (2011) A simple sequential algorithm for approximating Bayesian inference. In Carlson, L., Holscher, C., & Shipley, T. (Eds.) *Proceedings of the Thirty-third Cognitive Science Society*, Boston, MA: Cognitive Science Society, 2463-2469.

Muentener, P., **Bonawitz, E.B.**, Horowitz^a, A., & Schulz, L.E. (2011) Mind the Gap: Dispositional Agency Facilitates Toddlers' Causal Representations. In Carlson, L., Holscher, C., & Shipley, T. (Eds.) *Proceedings of the Thirty-third Cognitive Science Society*, Boston, MA: Cognitive Science Society, 1801-1806.

Bonawitz, E.B., & Griffiths, T. (2010) Deconfounding Hypothesis Generation and Evaluation in Bayesian Models. In Camtrabone, T., & Ohlsson, S. (Eds.) *Proceedings of the Thirty-second Cognitive Science Society*, Portland, OR: Cognitive Science Society, 2260 -2265.

Denison^a, S., **Bonawitz, E.B.**, Gopnik, A., & Griffiths, T. (2010) Preschoolers sample from probability distributions. In Camtrabone, T., & Ohlsson, S. (Eds.) *Proceedings of the Thirty-second Cognitive Science Society*, Portland, OR: Cognitive Science Society, 2272-2277.

Bonawitz, E.B., Horowitz^a, A., Ferranti^a, D., Schulz, L. (2009) The Block Makes It Go: Causal Language Helps Toddlers Integrate Prediction, Action, and Expectations about Contact Relations. In Taatgen, N., van Rijn, H., Schomaker, L., & Nerbonne, J., (Eds.) *Proceedings of the Thirty-first Cognitive Science Society*, Amsterdam, Netherlands: Cognitive Science Society, 81-86.

Bonawitz, E.B.*., Shafto, P*, Gweon, H., Chang^a, I. , Katz^a, S., & Schulz, L. (2009) The Double-Edged Sword of Pedagogy: Modeling the Effect of Pedagogical Contexts on Preschoolers Exploratory Play. In Taatgen, N., van Rijn, H., Schomaker, L., & Nerbonne, J., (Eds.) *Proceedings of the Thirty-first Cognitive Science Society*, Amsterdam, Netherlands: Cognitive Science Society, 1575-1580. *Equal author contribution.

Bonawitz, E.B. & Schulz, L.E. (2008) Why Learning is Hard. In Beal, J., Bellow, P., Cassimatis, N., Coen, M., & Winston, P. (Eds.) *AAAI Fall Symposium: Naturally-Inspired Artificial Intelligence*. Menlo Park, CA: AAAI, 27-34.

Bonawitz, E.B., Chang^a, I., Clark^a, C., & Lombrozo, T. (2008) Ockham's razor as inductive bias in preschoolers causal explanations. In *Development and Learning, 2008. ICDL 2008. 7th IEEE International Conference on Development and Learning*, IEEE, 7-12.

Bonawitz, E.B., Fischer^a, A., Schulz, L.E. (2008) Training a Bayesian: Three-and-a-half-year-olds' reasoning about Ambiguous Evidence. In Sloutsky, V., Love, B., & McRae, K. (Eds.) *Proceedings of the Thirtieth Annual Conference of the Cognitive Science Society*, 837-842.

Bonawitz, E.B., Lim^a, S., & Schulz, L.E. (2007) Weighing the Evidence: Children's theories of Balance affect play. In McNamara, D., & Trafton, G. (Eds.) *Proceedings of the Twenty-Ninth Annual Conference of the Cognitive Science Society*, 113-118.

Bonawitz, E.B., & Schulz, L. (2007) Children's Rational Exploration. In Morrison, C., & Oates, T. (Eds.) *Computational Approaches to Representation Change During Learning and Development: Papers from the AAAI Fall Symposium*, 1-8.

Bonawitz, E.B., Griffiths, T.L., & Schulz, L. (2006) Modeling Cross-Domain Causal Learning in Preschoolers as Bayesian Inference. In Sun, R., & Miyake, N. (Eds.) *Proceedings of the Twenty-Eighth Annual Conference of the Cognitive Science Society*, 89-94. **Marr Prize for Best Student Paper.**

Goodman, N.D., Baker, C.L, **Bonawitz, E.B.**, Mansinghka, V.K., Gopnik, A., Wellman, H., Schulz, L.E., & Tenenbaum, J.B. (2006) Intuitive Theories of Mind: A Rational Approach to False Belief. In Sun, R., & Miyake, N. (Eds.) *Proceedings of the Twenty-Eighth Annual Conference of the Cognitive Science Society*, 1382-1387.

Shafto, P., Kemp, C., **Baraff, E.**, Tenenbaum, J.B., and Coley, J. (2005) Context sensitive induction. In Bara, B., Barsalou, L., & Bucciarelli, M. (Eds.) *Proceedings of the Twenty-Seventh Annual Conference of the Cognitive Science Society*, 2003-2008.

Griffiths, T.L., **Baraff, E.**, & Tenenbaum, J.B. (2004) Using Physical Theories to Infer Hidden Causal Structure. In Forbus, K., Gentner, D., & Regier, T. (Eds.) *Proceedings of the Twenty-Sixth Annual Conference of the Cognitive Science Society*, 500-505. **Marr Prize for Best Student Paper Honorable Mention.**

Chapters and Theses (5)

Bonawitz, E., Bass^a, L., & Lapidow^a, E. (2018) Choosing to Learn: Evidence Evaluation for Active Learning and Teaching in Early Childhood. In: Saylor M., Ganea P. (eds) *Active Learning from Infancy to Childhood*. Springer, Cham, 213-231. doi: 10.1007/978-3-319-77182-3_12

Muentner, P., & **Bonawitz, E.** (2017) The development of causal reasoning. In Waldman, M. (Ed.) *Oxford Handbook of Causal Reasoning*. Oxford, United Kingdom: Elsevier Limited. doi: 10.1093/oxfordhb/9780199399550.001.0001

Bonawitz, E.B., Gopnik, A., Denison, S., & Griffiths, T. (2012) Rational Randomness: The role of sampling in an algorithmic account of preschooler's causal learning. In Xu, F., &

Kushnir, T. (Eds.) *Rational Constructivism in Cognitive Development*. Oxford, United Kingdom: Elsevier Limited, 161-192.

Bonawitz, E.B. (2009) *The Rational Child: Theories and Evidence in Prediction, Exploration, and Explanation*. MIT PhD Thesis in Brain and Cognitive Sciences.

Coley, J.D., Shafto, P., Stepanova, O., & **Baraff, E.** (2005) Knowledge and Category-Based Induction. In Ahn, W., Goldstone, R. L., Love, B. C., Markman, A. B., & Wolff, P. (Eds.) *Categorization inside and outside the laboratory: Essays in honor of Douglas L. Medin*. Washington, DC: American Psychological Association, 69-85.

Web Publishing (3)

Bonawitz, E. (*in prep*). Curiosity and creativity as uncertainty and search. Replay to: Curiosity as Driver of Extreme Specialization in Humans. In *IEEE CDS NewsLetter*. Vol 14(3), ed. Oudeyer, Pierre-Yves.

Bonawitz, E., (*forthcoming*) When children read minds to change their own. *Blog on Learning and Development*. <http://bold.expert>

Bonawitz, E. (2017, video interview) *Play in childhood supports the same skills that underlie scientific reasoning*. BOLD – Blog on Learning and Development: <http://bold.expert/play-in-childhood-supports-same-skills-that-underlie-scientific-reasoning/>

Journal Articles - In Preparation (7)

Bass^a, I., Hawthorne-Madell, D., Goodman, N., **Bonawitz, E.**, & Gweon, H. (*in prep*) The effects of information quality and teachers' knowledge on evaluations of under-informative pedagogy.

Lapidow^a, E., & **Bonawitz, E** (*in prep*) Explore-Exploit: Ambiguity, Expectation, and Information Gain Influence Preschooler's Choices in Exploration.

Choi^a, K., Lapidow, E., Austin, J., Shafto, P., & **Bonawitz, E.** (*in prep*) Preschoolers are more likely to direct questions to adults than to other children (or selves) during spontaneous conversational acts.

Macias^a, C., Persuad^a, K., Hemmer, P., & **Bonawitz, E.** (*in prep*) Strategic memory: Preschoolers' encoding of color categories.

Lapidow^a, E., & **Bonawitz, E** (*in prep*) Heuristics in exploration: Distributional information is selectively used for active learning

Bonawitz, E., Goodman, N.D., Pham^a, K., Baker, C.L, Gopnik, A., Wellman, H., Schulz, L.E., Saxe, R., & Tenenbaum, J.B. (*in prep*) Ideal Observers in Theory of Mind.

Bonawitz, E. & Lapidow, E. (*in prep*). Preschooler's Causal Hypothesis Testing Reveals Developmental Shifts in the use of Temporal and Pedagogical Information.

Talks and Presentations

Invited Talks (36)

Bonawitz, E.B. (2018) *Pedagogical Questions in early childhood interactions*. Columbia University Teachers College. (Fall)

Bonawitz, E.B. (2018) Exploration and exploitation in preschooler's play. *Understanding Exploration-Exploitation Trade-offs. Workshop for the 30th Annual Conference of the Cognitive Science Society*. Madison, WI. (July)

Bonawitz, E.B. (2018) Guiding Guided Play: Questions, Curiosity, and Learning. Guided Play Workshop. Newark, NJ. (June)

Bonawitz, E.B., & Shafto, P. (2017) *The data science of human and machine learning*. Office of the President, Rutgers University. New Brunswick, NJ. (November)

Bonawitz, E.B. (2017) *Curiosity in Early Childhood*. Meeting sponsored by the Jacobs Foundation and the LEGO Foundation at the Marbach Castle, Switzerland. (November)

Bonawitz, E.B. (2017) *Computational models of development*. Harvard University Computational Models of Social-Cognition Summer School (July)

Bonawitz, E.B. (2017) *Principles underlying guided learning*. Pre-Conference on Key Principles of Playful Learning. Philadelphia, PA (June)

Bonawitz, E.B. (2017) Panelist: "What is Playful Learning". Conference on Playful Learning: *Defining & Designing Playful Learning for Children, Families, and Communities*. Temple University and William Penn Foundation. Philadelphia, PA. (June)

Bonawitz, E.B. (2017) *Children's reasoning about evidence: Social inferences and sampling*. Rutgers New Brunswick, RuCCS talk series. (April)

Bonawitz, E.B. (2017) *Learning in Early Childhood: Evidence an exploration*. Jacobs Fellowship SRCD Pre-conference Austin, TX (April).

Bonawitz, E.B. (2017) *Science of Learning: Exploration and Social factors*. Science of Learning Conference with Philadelphia *Playscape* opening (June)

Bonawitz, E.B. (2016) *The Sampling Hypothesis*. New York University, Psychology Department – ConCats. NY, NY.

Bonawitz, E.B., (2016) *Development of Causal Reasoning*. Talk as part of the invited symposium, Causal reasoning: Origins and Development. *Cognitive Science Society 38th Annual Meeting*. Philadelphia, PA

Lapidow^a, E., & Bonawitz, E.B. (2016) *Rational action: Ambiguity, expectation, and information gain influence preschooler's choices in exploration*. Talk as part of a refereed Cognitive Science Society Conference Workshop: *Active learning: Cognitive development, education, and computational models*. Philadelphia, PA.

Bonawitz, E.B., (2016) *Beyond the data: how social inferences shape preschooler's explanatory reasoning*. Talk as part of the invited symposium, Biological and cognitive

constraints on the development of explanatory reasoning. *Budapest Conference on Cognitive Development*. Budapest, Hungary.

Bonawitz, E.B., (2016) Discussant as part of the refereed symposium, "Are children effective active learners?" *Budapest Conference on Cognitive Development*. Budapest, Hungary.

Bonawitz, E.B. (2015) Children's reasoning about probability to guide exploration-exploitation trade-offs. Discussant at the "More on Development" Conference, Columbus, OH.

Bonawitz, E.B. (2015) Children's reasoning about evidence: social inferences and sampling. University of Maryland, Department of Human Development.

Bonawitz, E.B. (2014) Children's reasoning about evidence: social inferences and sampling. Yale University Psychology Department.

Bonawitz, E.B. (2014) Social inferences and sampling. Drexel University Psychology Department.

Bonawitz, E.B. (2014) Children's reasoning about evidence. University of Pennsylvania Psychology Department.

Bonawitz, E.B. (2013) Bayesian Models of Cognitive Development. *Budapest Conference on Cognitive Development*. Budapest, Hungary.

Bonawitz, E.B., (2012) How children change their minds. *University of California, Merced Psychology Department Colloquium*.

Bonawitz, E.B. (2012) Exploring the Sampling Hypothesis in Preschooler's causal inferences. *Bay area cognitive science conference*.

Bonawitz, E.B. (2012) What kids know about causality: Limitations of predictive relations Dispositional agency and causal language facilitate toddlers' causal representations. *Berkeley Cognitive Science Society Causality Seminar Series*.

Bonawitz, E.B. (2010) When preschooler's are taught, and when they teach others. *Workshop on Social Cognition and Statistical and Causal Learning*. Stanford, CA.

Bonawitz, E.B. (2010) Algorithms of Children's Causal Learning: Sampling. *McDonnell Consortium Workshop*

Bonawitz, E.B., (2009) The Rational Child: Theories and Evidence in Prediction, Explanation, and Exploration. Change, Plasticity and Development Colloquium. Berkeley, CA.

Bonawitz, E.B. (2009) "The block makes it go!": Toddlers' ability to integrate prediction, action, and expectations about contact relations. *Probabilistic Models of Cognitive Development*. Banff International Research Station.

Bonawitz, E.B. (2009) Rational Explanation: Modeling the Role of Beliefs and Evidence. Mechanism & Explanation Workshop. Berkeley, CA.

Bonawitz, E.B. (2009) Beyond Bachelors: Pursuing Psychology in graduate school and beyond. Northeastern University Psychology Department Graduation.

Bonawitz, E.B., (2008) Children's Causal theories affect exploration, explanation, and visual attention. *McDonnell Workshop on Problems of Variable Definition*. Carnegie Mellon University.

Bonawitz, E.B. (2008) The Rational Child: Reasons behind kids quirky behaviors. Lecturer at Museum of Science Life Cycle Adult Workshop, special session on The science of kids, February, 2007. Boston, MA.

Bonawitz, E.B. (2006) Bunnies, Boxes, and Balances: The role of theories, evidence, and free play in children's causal learning. *Brown Conference on Causal Reasoning*. Providence, RI.

Bonawitz, E.B. (2006) Science of Cognitive Development; *Boston Museum of Science Innovators Day Discovery Center Exhibit*

Bonawitz, E.B. (2005) Evidence, Theories, and Spontaneous Play in Preschoolers: How Little Scientists Become Smart Scientists. Northeastern University.

Refereed Abstract Conference Presentations (50)

Bonawitz, E.B. (2018). Ambiguity, Expectation, and Information Gain in Early Childhood Exploration. In Symposium on Children's Exploration and Early Scientific Thinking. *APA Annual Convention*. San Francisco, CA.

Colantonio, J., & **Bonawitz**, E. (2018) Affecting play: Awe increasing preschooler's exploration and discovery. *Society for Philosophy and Psychology*. Ann Arbor, MI.

Lapidow^a, E. **Bonawitz**, E., Shafto, P., Austin, J., Choi^a, K., Tariq^a, S., & Bell^a, C. (2017) Preschooler's are more likely to direct questions to adults than to other children (or selves) during spontaneous conversational acts. *Cognitive Development Society* Preconference workshop on "Question-Asking in Childhood: Development, Continuity and Constraints", Portland, OR.

Yu^a, Y., **Bonawitz**, E., & Shafto, P. (2017) Pedagogical questions. *Cognitive Development Society* Preconference workshop on "Question-Asking in Childhood: Development, Continuity and Constraints", Portland, OR.

Lapdiow^a, E., & **Bonawitz**, E. (2017) Preschooler's Causal Hypothesis Testing Reveals Developmental Shifts in the use of Temporal and Pedagogical Information. *Child Development Society*, Portland, OR.

Macias^a, C., Persaud, K., Hemmer, P., & **Bonawitz**, E. (2017) Strategic memory: Preschoolers' encoding of color categories. *Child Development Society*, Portland, OR.

Bass^a, L., **Bonawitz**, E., & Gweon, H. (2017) Didn't know, or didn't show? Preschoolers consider knowledge state and degree of omission when evaluating teachers. *Child Development Society*, Portland, OR.

Yu^a, Y., **Bonawitz**, E., & Shafto, P. (2017) Effects of adults' scaffolding on young children's strategic use of questions to solve a causal inference task. *Child Development Society*, Portland, OR.

Yu^a, Y., Landrum, A., **Bonawitz**, E. & Shafto, P. (2017, August). Questioning supports effective transmission of knowledge and increased exploratory learning. *The Annual Convention of American Psychological Association*. Washington, DC.

Lapidow^a, E., & **Bonawitz**, E., (2017) Rational Action: Ambiguity, Expectation, and Information Gain Influence Preschooler's Choices in Exploration. *Society for Philosophy and Psychology (SPP)*, Baltimore, MD.

Bass^a, L., **Bonawitz**, E., & Gweon, H. (2017) Didn't know, or didn't show? Preschoolers consider epistemic state and degree of omission when evaluating teachers*. *Society for Philosophy and Psychology (SPP)*, Baltimore, MD. ***Honorable mention for best SPP poster prize.**

Bonawitz, E., Bass*, L., Shafto, P., Ramarajan^a, D., Gopnik, A., & Wellman, H. (2017) I know what you need to know: Children's developing theory of mind and pedagogical evidence selection. *Society for Philosophy and Psychology (SPP)*, Baltimore, MD. **Presenter and first author*

Yu^a, Y., Landrum, A., **Bonawitz**, E., & Shafto, P. (2017) Questioning supports effective transmission of knowledge and increased exploratory learning in pre-kindergarten children. *Society for Philosophy and Psychology (SPP)*, Baltimore, MD.

Colantonio^a, J., Durkin^a, K., **Bonawitz**, E., & Shafto, P. (2017). Explaining Choice Behavior: The Intentional Selection Assumption. *Society for Philosophy and Psychology (SPP)*, Baltimore, MD.

Lapidow^a, E., & **Bonawitz**, E., (2017) Models of rational decision-making: Ambiguity, expectation, and information gain influence preschooler's choices in exploration-exploitation tasks. . Symposium on "Formal models of the development of learning and decision-making." *Society for Research in Child Development Biennial Meeting*. Austin, TX.

Doan^a, T., Castro^a, A., **Bonawitz**, E., & Denison, S. (2017) *This puzzle is hard! Difficulty of one task affects children's exploration on a second task.* Symposium on "The answer is out there: How do children find solutions to difficult problems?" *Society for Research in Child Development Biennial Meeting*. Austin, TX.

Blacker^a, K.A., Colantonio^a, J., LoBue, V. & **Bonawitz**, E. (2017) *Reasoning about the process of illness transmission improves preschooler's later avoidance of sick individuals.* Symposium on "The answer is out there: How do children find solutions to difficult problems?" *Society for Research in Child Development Biennial Meeting*. Austin, TX.

Shafto, P., **Bonawitz**, E., Landrum, A., & Yu^a, Y. (2016) Questioning supports effective transmission of knowledge and increased exploratory learning in pre-kindergarten children. *International Conference on Thinking*. Providence, RI.

Lapidow^a E., & **Bonawitz**, E. (2016) Heuristics in Exploration: Distributional information is selectively used for active learning. *49th Annual Meeting of the Society for Mathematical Psychology*. New Brunswick, NJ.

Lapidow^a E., & **Bonawitz**, E. (2016) Preschoolers evaluate risk and reward in exploration-exploitation tasks. *Proceedings of the 28th Annual Conference of the Cognitive Science Society*. Philadelphia, PA: Cognitive Science Society.

- Lapidow^a, E., & **Bonawitz**, E. (2016) Heuristics in exploration: Distributional information is selectively used for active learning. *Proceedings of the 28th Annual Conference of the Cognitive Science Society*. Philadelphia, PA: Cognitive Science Society.
- Walker, C., **Bonawitz**, E., & Lombrozo, T. (2016) Explaining promotes a preference for simplicity in young children. *Society for Philosophy and Psychology*.
- Lapidow^a, E. & **Bonawitz**, E. (2016) Heuristics in exploration: Distributional information is selectively used for active learning. *Cognitive Science Society*.
- Lapidow^a, E., & **Bonawitz**, E. (2015) Preschooler's reasoning about probability to guide exploration-exploitation. *Cognitive Development Society*
- Castro^a, A., & **Bonawitz**, E. (2015) Puzzling Question of Curiosity: Information about the difficulty of one task influences preschoolers' exploratory play with a novel toy. *Cognitive Development Society*
- Blacker^a, K., **Bonawitz**, E., & LoBue, V. (2015) Why is she sick? Prompting preschoolers to provide explanations during storybook reading increases causal learning about illness. Cognitive Development Society
- Gualtieri, S., **Bonawitz**, E., & Denison, S. (2015). Do infants compare ratios or use simpler heuristics in probabilistic inference? *37th Meeting of the Cognitive Science Society*. Pasadena CA.
- Castro^a, A. & **Bonawitz**, E. (2015) A puzzle for your thoughts: Information about the difficulty of one task influences preschoolers' exploratory play with a novel toy. *37th Meeting of the Cognitive Science Society*. Pasadena CA.
- Bonawitz**, E. (2015) Variability in Preschoolers' Cognitive Search. Symposium, Knowledge From Nowhere: How Thinking Leads to Learning in Childhood. Society for Research in Child Development. Philadelphia, PA.
- Bonawitz**, E., (2015) Algorithms of statistical learning: The win-stay, lose-sample strategy and preschooler's causal inferences. Symposium, Understanding the mix: Clear cases and noisy data in word-referent learning. Society for Research in Child Development. Philadelphia, PA.
- Bonawitz**, E., Ullman, T., Bridgers^a, S., Gopnik, A., & Tenenbaum, J. (2014) A computational case study of theory change in the domain of magnetism. Symposium on "Theory Change". *Eastern Psychological Association*.
- Bonawitz**, E., Ullman, T., Bridgers^a, S., Gopnik, A., & Tenenbaum, J. (2013) Sticking to the evidence? A behavioral and computational case study of micro-theory change in the domain of magnetism. *Cognitive Development Society*.
- Bonawitz**, E., Hanson^a, M., & Gopnik, A., (2013) "Show and Tell": Preschoolers' sensitivity to others' knowledge when selecting evidence in service of teaching. *Society for Research in Child Development*.
- Bonawitz**, E.B., Denison, S., Gopnik, A., & Griffiths, T. (2011) Exploring the "Sampling Hypothesis" in preschooler s causal inferences. *Cognitive Development Society*.

Bonawitz, E.B., Ramarajan^a, D., Wellman, H., Griffiths, T., & Gopnik, A. (2011) The ability to teach others is linked to Theory of Mind. *Society for Research in Child Development*

Bonawitz, E.B., Ullman, T., & Tenenbaum, J. (2011) Sticking to the evidence? A case study of preschoolers' micro-theory change in the domain of magnetism. *Society for Research in Child Development*

Bonawitz, E.B., & Griffiths, T. (2010) Deconfounding Hypothesis Generation and Evaluation in Bayesian Models. *Cognitive Science Society*.

Bonawitz, E.B., (2009) The Importance of Priming Sampling: Distinguishing hypothesis generation from hypothesis evaluation. NIPS Workshop "Bounded-rational analysis of human cognition".

Bonawitz, E.B., Brenman^a, S., & Schulz, L. (2009) Believing is Seeing: Children's Causal Beliefs Affect Visual Exploration and Prediction. Thirty-first Cognitive Society Conference

Bonawitz, E.B., & Schulz, L. (2009) Language Influences Toddlers' Causal Reasoning: From Correlation to Intervention. *Society for Research in Child Development*. Symposium: Linguistic Contexts of Causal Cognition: How Children use Language to Learn, Represent and Reason About Cause

Bonawitz, E.B., & Schulz, L. (2009) Balancing Theories and Evidence in Children's Exploration, Explanations, and Learning. *Society for Research in Child Development*.

Bonawitz, E.B. (2007) Can Being Scared Cause Tummy Aches? Naive Theories, Ambiguous Evidence and Preschoolers Causal Inferences. *Society for Research in Child Development*.

Bonawitz, E.B., & Lombrozo, T. (2007) Simplicity and Probability in Children's Causal Explanations. *Cognitive Science Society*.

Standing^a, H., **Bonawitz**^{*}, E.B., & Schulz, L. (2007) The Role of Word Labels in Children's Causal Inductions and Exploratory Play. *Cognitive Science Society*. ^{*}Presenting Role

Bonawitz, E.B., Griffiths, T.L., & Schulz, L. (2005) Theories, Evidence, and Preschoolers Causal Judgments. *Cognitive Development Society*, San Diego, CA.

Baraff, E.R., Cheries, E., and Carey, S. (2005) The Role of Spatiotemporal Relations in Infants Encoding of Individuals. *Society for Research in Child Development*. Atlanta, GA.

Baraff, E. & Tenenbaum, J.B. (2004). The Role of Theory of Mind Inferences in Bayesian Word Learning. *First Joint Conference of the Society for Philosophy & Psychology and The European Society for Philosophy & Psychology*. Barcelona, Spain.

Baraff, E., & Coley, J.D. (2003) Thinking About Music: Novice and Expert Inductive Reasoning. *25th Annual Conference of the Cognitive Science Society*. Boston, MA.

Baraff, L. & Coley, J.D. (2002). Expert and Novice Inductive Reasoning in Fast and Slow Conditions. *Northeastern University College of Arts & Sciences Experiential Education Expo*, May 2002.

Baraff, L., & Jacobson, J. (2002). Revisiting Jewish Musicality in America. *Northeastern University College of Arts & Science Experiential Education Expo*, May 2002.

Teaching

Lecturer

Rutgers Honor Living Learning Community Course, “Uncertainty and Learning: Drawing Inferences from Ambiguous Data” (Rutgers, SP2018)

Psychology Seminar Select Topics in Human Learning, “Computational Models of Development and Learning” (Rutgers, FA2017)

Psychology Special Topics, Writing Intensive, “Human Intelligence Enterprise” (Rutgers, SP2016)

Cognitive Processes, Graduate level (Rutgers, FA2015)

Cognitive Processes, “Introduction to Cognitive Science” (Rutgers, SP2015; Hybrid Course: SP2017)

Seminar organizer

Cognitive Processes Seminar (“CBB”) (Rutgers, SP2015; FA2015; SP2016; FA2016; SP2017 – co-occurring with Research Seminar; FA2017)

Research Seminar, Graduate level (Rutgers, SP2017 – co-occurring with CBB)

Bits & Bytes: Machine Learning Seminar (Rutgers, FA2015-SP2017; SU2018)

Lab PI

Research In Psychology (Rutgers, All semesters 2014-current)

Senior Thesis (Rutgers, All semesters 2014-current)

Teaching Assistant

Infant and Childhood Cognition (MIT, FA2005); *Angus MacDonald Award for Excellence in Undergraduate Teaching*

Infant and Childhood Cognition (MIT, FA2006); *Walle Nauta Award for Continuing Dedication to Teaching*

Brain and Cognitive Sciences II for Graduate Students (MIT, SP2008)

Invited Guest Lecturer

University students:

Honor College Freshman Colloquium (Rutgers – Newark, FA2017)

Cognition, Emotion, and Personality. Doctoral course in clinical psychology at the Wright Institute. (SP2012)

BROCA, Berkeley Review of Cognitive Science Articles (Berkeley, FA2010)

Topical Seminar in Developmental Psychology (Berkeley, FA2009)

Basic Issues in Cognition (Berkeley, FA2009)

Cognitive Development (MIT, F2007; FA2008)

Introduction to Child Psychology (MIT Freshman Pre-orientation Program; FA2008)

Community based educational talks:

Preschool Night at the Museum (06/18) Newark Museum, Newark NJ.

North Star Academy lab tour and STEM presentation (04/17) RU-N, Newark, NJ.

The child as a scientist: How children change their minds. (04/12) Menlo-Atherton Coop Nursery School speaker series. Menlo Park, CA.

Life Cycle Adult Workshop: Science of Kids (02/08) *The Rational Child: Reasons behind Kids' Quirky Behaviors*, Museum of Science, Boston MA.

Science Staff Training, Early Childhood Cognition Lab & Discovery Center Collaborative (05/06; 12/06; 05/07, 11/07, 05/18, 12/08, 04/09) Boston Science Museum. Boston MA.

Trainees Mentored

Post-doctoral fellows (7):

Yue Yu 06/15-present	Co-mentored with Patrick Shafto. Starting TT R1 Faculty position at National Institute of Education of Singapore Fall 2018
Lewis Baker 06/16-06/17	Co-mentored with Patrick Shafto and Vanessa LoBue . Hired into Data Science tech industry position.
Yang Yang 06/17-present	Sole Mentor. Starting TT R1 Faculty position at National Institute of Education of Singapore Fall 2018
Koeun Choi 07/17-present	Sole Mentor. Starting TT R1 Faculty position at Virginia Tech Fall 2018
Kimele Persaud Beginning 09/18	Sole Mentor.
Emily Doubert Beginning 09/18	Co-mentored with Patrick Shafto.
Jenny Wang Beginning 09/18	Sole Mentor.

Graduate students (3):

Carla Macias 08/16-present	Awarded the NSF GRF 2018-current. MBRS program (2016-2018)
Ilona Bass 08/16-present	Received NSF GRF Honorable mention 2018
Joseph Colantonio 06/18-present	MBRS program (2018-2020)

Dissertation committee (5):

Katy-Ann Blacker (Defended 2016). Jessica Benson (Defended 2017). Catherine Cho (Defended 2017). Shahram Peyvandi (Defended 2017). Brynne Dimenichi (Defended 2018).

MBRS UG Students (3):

Amanda Castro (2014-2015), Joseph Colantonio (2015-2016 Undergrad; 2016-2018 post-bac); Anishka Jean (2017 – present)

Lab Technicians mentored at Rutgers (7):

Zachary Walden (09/16–Present); Jack Fredricks (02/17–Present); Milagros Grados (06/18 – present). Elizabeth Lapidow (01/15-08/17); Leyla Caglar, (09/13–08/15); Samantha Kinsley (06/14-06/15); Sophie Bridgers, Rutgers University & University of California – Berkeley (06/12 – 08/14)

Undergraduate Research Assistants at Rutgers University

2014-present (49); **Honors Thesis (11)**; ¹Supervised primarily by graduate students, post-docs

Raquel Damaghi	Janet Sayilik	Kristina Roose
Samantha Kinsley	Tahani Chaudhri	Samantha Smith
Amanda Castro	Richard Ortegon	Itzel Santana-Miranda
Sadie Logozio	Christopher Sakariasen	Jack Fredricks
Renu Mahagaonkar	Patricia Palanca	Joseph Colantonio
Trisha Dehrone	Adam Yen	Victoria Golinski ¹
Hira Abbacy ¹	Iqra Azam ¹	Sara Tariq ¹
Reham Bader ¹	Natasha Patel ¹	Ethan Motschmann ¹
Naa Adei Kote ¹	Leeza Camilo ¹	Rosa Lasso ¹
Yossy Montecinos ¹	Milagros Grados ¹	Merna Seddik ¹
Courtney Bell ¹	Anishka Jean	Parthenia Bogdady ¹
Shirley Abbleard ¹	Fatima Shaban ¹	Bassem Rezkalla ¹
Prubjot Kaur ¹	Kassandra Rodriguez ¹	Jillian Brandmier ¹
Anmol Champaneria ¹	Priscilla Mejia ¹	Kiabeth Guazhco ¹
Cierra Clark ¹	Mary Manansala ¹	Humza Alvi ¹
Jazmin Carchi ¹	Akshana Sridharan ¹	Vanessa Obregon ¹
Andrea Antunes ¹	Jesse Hilario ¹	Laura Torres ¹
Sydney Dockery ¹		

*High school Outreach mentees*¹:

2015-2016	North Star Academy: Viannis Almonte, Mariyam Kayjay
2016-2017	North Star Academy: Angeline Logan, Mercy Olajobi
2017	Summer Lab Interns: La'v'al Davis, Abhirami Elayidom

Professional Activities & Service**Grant Advisory Boards**

STEM in the PlayScape: Building Knowledge for Educational Practice. PIs: Vicki Carr & Heidi Kloos. NSF (2015-2018)

Reviewing

Associate Editor: *Cognitive Science* (Beginning Spring 2018)

Journals (ad hoc): *Cognition*, *Cognitive Science*, *Child Development*, *Cognitive Psychology*, *Developmental Science*, *British Journal of Development*, *Journal of Experimental*

Psychology: Learning, Memory and Cognition, Quarterly Journal of Experimental Psychology, PLoS ONE, Open Mind

Professional Societies (ad hoc): *Cognitive Science Society Program Committee Member, Society for Research in Child Development, Annual Conference of the Cognitive Science Society, Society for Philosophy and Psychology, International Conference of Development and Learning,*

Granting organizations (ad hoc): *NSF, NIH, NWO*

Membership in Scientific and Professional Societies

Cognitive Science Society, Cognitive Development Society, Society for Research in Child Development, Eastern Psychological Association, Society for Philosophy and Psychology, American Psychological Society, American Association for the Advancement of Science, Society for the Improvement of Psychological Science, Women in Cognitive Science

Organizing Conferences, Symposia, & Workshops

Workshop Co-organizer: *Understanding Exploration-Exploitation Trade-offs*. (2018) 30th Annual Cognitive Science Society Workshop. Co-organized with Alison Gopnik and Celeste Kidd. Madison, WI. July, 2018.

Workshop Co-organizer: *Guiding Guided Play*. (2018) Workshop on the NSF Science of Learning Guided Play initiative. Newark, NJ. Co-organized with Patrick Shafto. June, 2018.

Workshop Organizer: *Active Learning: Cognitive Development, education, and computational models*. (2016). *Cognitive Science Society Workshop*. Philadelphia, PA.

Workshop Co-organizer: *More on Development, CDS Post-conference*. Full day post-conference session with 7 mini-symposia, 17 speakers and ~100 attendees following the Cognitive Development Society Annual Conference. Co-organized with Tomer Ullman. October 2015.

Pre-conference Workshop Organizer: *Computational Models of Cognitive Development*. Full day pre-conference session with 16 speakers and over 100 attendees at the Cognitive Development Society Annual Conference. Co-organized with Tomer Ullman and Josh Tenenbaum. (10/13).

Symposium Chair/Organizer: *The Problem of Probabilistic Inference: How Children Learn from and Search through Probabilistic Worlds*. Cognitive Development Society. October, 2011. Philadelphia, PA.

Symposium Chair/Organizer: *Learning by Doing: The Role of Exploratory Play in Cognitive Development*. Cognitive Development Society. October, 2007. Santa Fe, NM.

Symposium Chair/Organizer: *What Makes us Sick? Naïve Theories and Biological Reasoning*. March, 2007. Society for Research in Child Development. Boston, MA.

Campus-Based Service

University Service

Henry Rutgers Term Chair proposal working group & **search committee co-chair** (Spring 2014 – Spring 2015). Offer was made to and accepted by Dr. Patrick Shafto.

Committee member for formation of the Center for Data Science, Learning, and Applications (C-DSLAs), (Spring 2014 – Spring 2015)

Master of Science in Data Science Program Committee (Fall 2015 – Fall 2016)

Participation in North Star Academy Mentorship Program (2015-2016; 2016-2017)

Lab participation in Rutgers Day (SP2014, SP2015, SP2016, SP2017, SP2018)

Departmental Service

Psychology BA-MA Program Committee Chair (Fall 2015- present)

Travel Award Committee (Chair), (Spring 2017-present)

MA development committee (SP2015)

Rutgers Psychology Website Committee, (2014–2017)

Distinguished Teaching Award committee (Summer 2014, Spring 2016)

Qualifying Exam Committee (2014, 2017)

Additional service: Co-wrote Psychology Department Strategic Initiatives Activities Report (SP2015); Faculty Departmental Commencement Attendance (SP2015)

Community outreach & collaboration

Fostered a research collaborative with the Newark Museum, to house an onsite Mobile Maker Center as part of a lab outreach and testing initiative (Co-PIs Vanessa LoBue, Patrick Shafto)

Teacher and parent outreach at 23 area daycares. Includes routine parent newsletters, information sessions at pick-up and drop-off, and meetings with directors and teachers.

Additional outreach sites include: Newark Public Library (5 Washington St, Newark, NJ 07102); KidzVillage Children's Center (131 S 31st St, Kenilworth, NJ 07033); Turtle Back Zoo (560 Northfield Ave, West Orange, NJ 07052)

Media Coverage

Television & Film:

National Geographic - *Ape Genius* (Aired NOVA, PBCS, Spring 2008) Research Consultant, Technical Assistant, Child Studies Coordinator

In the news:

Rutgers University News – *Faculty Trio Explores Children's Learning With Mobile Maker Center* (April 2018)

NPR.Org -- *When Children Begin To Lie, There's Actually A Positive Takeaway* (Sep 2017)

Scientific American – *Artificial Intelligence Helps in Learning How Children Learn*. (June 2017)

Rutgers University News – *RU-N Professors Awarded \$750K NSF Grant to Study How Kids Learn*. (April, 2017)

Nature – *Child development: A cognitive case for un-parenting*. (August 2016)

Lab Equipment Magazine – *Scientist in the Spotlight: Mobile Maker Center Examines Learning through Play*. (August, 2016)

Engadget – *Science fund lets kids learn 3D printing, gene modification. The National Science Foundation goes way beyond Mindstorms*. (June, 2016)

Tech Crunch - *National Science Foundation allots \$1.5M to kid-focused maker projects* (June, 2016)

3ders – *National Science Foundation funds 3D printing center for Baltimore’s inner city youth*. (June, 2016)

NSF Press Release 16-075 – *Enabling the Future of Making* (June, 2016)

KQED News – *8 Ways to Prioritize Learning When Using Technology in the Classroom*. (September, 2014)

Ideas.TED.com – *There’s no App for Good Teaching*. (September, 2014)

Huffington Post – *Texting, TV and Tech Trashing Children’s Attention Spans*. (Jan. 2014)

Psychology Today – *Does Curiosity Guide Children's Learning? Explaining "explaining away" and the process of revising beliefs*. (April, 2012)

UC Berkeley New Center - *Scientists tap the genius of babies and youngsters to make computers smarter* (March, 2012)

Psychology Today - *Choosing the Best Explanation Is Elementary, My Dear Watson Sherlock Holmes or Occam's Razor? Let the kids decide*. (January, 2012)

The Christian Science Monitor – *Toddlers to tweens: relearning how to play*. (Jan, 2012)

Huffington Post - *Give the Gift of Curiosity for the Holidays -- Lessons From Laura Schulz* (December, 2011)

Scientific American – *The educational value of creative disobedience*. (July, 2011)

MIT news – *Don’t show, don’t tell? Featured MIT front page*. (June, 2011)

The Economist – *Now you know: When should you teach children, and when should you let them explore?* (May, 2011)

Slate – *Why Preschool Shouldn’t Be Like School* (March, 2011)

Boston Globe – *A squeeze, a squeak, a glimpse of learning* (March, 2011)

Discover Magazine – *When teaching restrains discovery* (January, 2011)

Scientific American – *How Babies Think* (July, 2010)

Slate Magazine – *Why do kids crave magic* (October, 2009)

New York Times – *Your Baby Is Smarter Than You Think* (August, 2009)

National Public Radio, KPW Utah (May, 2006)