Kevin G. O'Neill

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Education

Duke University

Fall 2018 - Present

Ph.D., Cognitive Neuroscience

GPA: 3.95

Imagination and Modal Cognition Laboratory — Dr. Felipe De Brigard

Pearson Laboratory — Dr. John Pearson

Rensselaer Polytechnic Institute

Class of 2017

Bachelor of Science, Cognitive Science and Computer Science

GPA: 3.97

Work Experience Computer Scientist

Summer 2017 - Present

ARCADIA Project — Paul Bello U.S. Naval Research Laboratory

Undergraduate Researcher

Spring 2015 - Spring 2017

Rensselaer Artificial Intelligence and Reasoning (RAIR) Laboratory — Dr. Selmer Bringsjord

Federal Work Study

Fall 2014 - Spring 2017

Rensselaer Cognitive Science Department

Manuscripts Under Review/ In Preparation O'Neill, K., Henne, P., Bello, P., & De Brigard, F. (In preparation). Degrading Causal Judgments.

Henne, P., **O'Neill, K.**, Bello, P., Khemlani, S., & De Brigard, F. (In preparation). Causal Selection and Norms.

O'Neill, K., Liu, A., Yin, S., Brady, T., & De Brigard, F. (Under review). Category Learning Effects on Memory.

O'Neill, K., Smith, A. P., Smilek, D., & Seli, P. (Under review). Dissociating the Freely-Moving Thought Dimension of Mind-Wandering from the Intentionality and Task-Unrelated Thought Dimensions.

Journal Papers Seli, P., O'Neill, K., Carriere, J. S., Smilek, D., Beaty, R. E., & Schacter, D. L. (2020). Mind-wandering across the age gap: Age-related differences in mind-wandering are partially attributable to age-related differences in motivation. *The Journals of Gerontology: Series B.*

O'Neill, K., & De Brigard, F. (2019). Two challenges for a dual system approach to temporal cognition [Commentary on "Thinking in and about Time: A Dual Systems Perspective on Temporal Cognition" by Hoerl, C. and McCormack, T.]. *Brain and Behavioral Sciences*, 1–77.

Govindarajulu, N. S. and Bringsjord, S. and Sen, A. and Paquin, J. C. and O'Neill, K. (2018). Ethical Operating Systems. In De Mol, Liesbeth and Primiero,

Giuseppe (Ed.), Reflections on Programming Systems: Historical and Philosophical Aspects (Vol. 133, pp. 235–260). Cham: Springer.

Bringsjord, S., & **O'Neill, K.** (In Press). Third-millenium computational logic. *Minds and Machines*.

Conference Papers

Yin, S., O'Neill, K., Brady, T., & De Brigard, F. (2019). The Effect of Category Learning on Recognition Memory: A Signal Detection Theory Analysis. In *Proceedings of the 41st Annual Meeting of the Cognitive Science Society*.

Bello, P., **O'Neill, K**., & Bridewell, W. (2019). Artificial Agency Requires Attention: The Case of Intentional Action. In *AAAI Spring Symposium: Towards Conscious AI Systems*.

O'Neill, K., Bridewell, W., & Bello, P. (2018). Time-Based Resource Sharing in ARCADIA. In *Proceedings of the 40th Annual Meeting of the Cognitive Science Society*.

Bello, P., Lovett, A., Briggs, G., & O'Neill, K. (2018). An Attention-Driven Model of Human Causal Reasoning. In *Proceedings of the 40th Annual Meeting of the Cognitive Science Society*.

Presentations

Khoudary, M., Hanna, E.K., O'Neill, K.G., Iyengar, V., Clifford, S., Cabeza, R., De Brigard, F., Sinnott-Armstrong, W. (2020). "A Functional Neuroimaging Investigation of Moral Foundations Theory". 2020 meeting of the Cognitive Neuroscience Society.

Smith, A., O'Neill, K., Smilek, D., Seli, P. (2019) "On the Utility of the Dynamic Framework of Mind Wandering". *Psychonomics*.

Yin, S., O'Neill, K., Brady, T., De Brigard, F. (2019) "The Effect of Category Learning on Recognition Memory: A Signal Detection Theory Analysis". 41st Annual Meeting of the Cognitive Science Society.

Bello, P., **O'Neill, K.**, Bridewell, W. (2019). "Artificial Agency Requires Attention: The Case of Intentional Action". In *AAAI Spring Symposium: Towards Conscious AI Systems*.

Lovett, A., Briggs, G., **O'Neill, K.**, Bello, P. (2018). "Strategic Deployment of Attention in Online Causal Judgment: A Computational Model". *Journal of Vision*, 18(10), 741-741.

O'Neill, K., Bridewell, W., Bello, P. (2018) "Time-Based Resource Sharing in AR-CADIA". 40th Annual Meeting of the Cognitive Science Society.

Bello, P., Lovett, A., Briggs, G., O'Neill, K. (2018) "An Attention-Driven Model of Human Causal Reasoning". 40th Annual Meeting of the Cognitive Science Society.

O'Neill, K., Bringsjord, S. "Solving the Lottery Paradox in a Cognitive Calculus". (2016) International Association for Computing and Philosophy.

Awards/ Honors

NSF GRFP Honorable Mention

Duke Chancellors Scholars Fellowship

Rensselaer Leadership Award

Mona & Edward Zander '68 Scholarship

Dean's List/Dean's Honor List

Spring 2019

Fall 2014 - Spring 2017

Fall 2014 - Spring 2017

Teaching Experience

Teaching Assistant

Summer 2020

Experience Neuromatch Academy

Guest Lecturer

Fall 2016 - Spring 2017

Are Humans Rational?, Intro To Logic

Dr. Selmer Bringsjord

Projects

SpikingNeuralNets.jl

A flexible system for simulating arbitrary systems of spiking neural networks.

ARCADIA

A computational framework for attention-centered cognitive modeling. **MetaProver** A framework for automated logical and meta-logical reasoning via analytic tableaux **OSCAR**

A restoration of John Pollock's nonmonotonic natural deduction theorem prover

Technical Skills

- Python, R, C/C++, Java/Javascript, Clojure/Scheme/Lisp, Julia, MATLAB, HTML/CSS, Prolog, Unix, Git
- Software development, verification, and visualization
- Mixed-effect modeling and Bayesian statistics
- Artificial Intelligence (Cognitive modeling, ML, Symbolic AI, NLP)
- Parallel/High-Performance Computing

References

Felipe De Brigard, Ph.D.

Associate Professor Philosophy Psychology & Neuroscience Center for Cognitive Neuroscience Duke University felipe.debrigard@duke.edu (919) 660-3028

John Pearson, Ph.D.

Assistant Professor
Biostatistics & Bioinformatics
Psychology & Neuroscience
Electrical and Computer Engineering
Center for Cognitive Neuroscience
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Paul Bello, Ph.D.

Section Head

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Information Technology Division
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