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

Teaching

Teaching Assistant — Spring 2021
Research Methods & Statistics — Dr. Angela Vieth

Teaching Assistant — Fall 2020
Cognitive Psychology — Dr. Ruth Day

Teaching Assistant — Summer 2020
Neuromatch Academy — pod-089-solid-firefly

Guest Lecturer — Fall 2016 - Spring 2017
Are Humans Rational?, *Intro To Logic* — Dr. Selmer Bringsjord

Under Review/ In Preparation

Krasich, K., **O'Neill, K.**, & De Brigard, F. (Under review). Eye tracking mental simulations during retrospective causal reasoning.

O'Neill, K., Henne, P., Bello, P., & De Brigard, F. (Under review). Degrading Causation.

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

Journal Papers

Henne, P., **O'Neill, K.**, Bello, P., Khemlani, S., & De Brigard, F. (2020). Norms Affect Prospective Causal Judgments. *Cognitive Science.*

O'Neill, K., Smith, A. P., Smilek, D., & Seli, P. (2020). Dissociating the Freely-Moving Thought Dimension of Mind-Wandering from the Intentionality and Task-

Unrelated Thought Dimensions. *Psychological Research.*

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* (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 ARCADIA". *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	Spring 2019
Duke Chancellors Scholars Fellowship	Fall 2018
Undergraduate Research Program	Spring 2015 - Spring 2017
Rensselaer Leadership Award	Fall 2014 - Spring 2017
Mona & Edward Zander '68 Scholarship	Fall 2014 - Spring 2017
Dean's List/Dean's Honor List	Fall 2014 - Spring 2017

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

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Skills

Programming
Python, R, C/C++, Java/Javascript, Clojure/Scheme/Lisp, Julia, MATLAB, HTML/CSS, Prolog, Unix, Git, LaTeX
Data Collection/Analysis
Behavioral, fMRI, eye tracking data
Mixed-effect modeling, Bayesian statistics, multivariate statistics
Artificial Intelligence
Cognitive modeling, ML, Symbolic AI, NLP, Parallel/High-Performance Computing
Engineering
Software development, verification, and visualization
Languages
German (intermediate)

Service

Duke Neuro Methods Meetings Fall 2020 - Present
Founder
Duke Philosophy of Neuroscience Journal Club Spring 2020 - Present
Co-Founder
Duke University Neuroscience Experience (DUNE) Spring 2020 - Present
Volunteer

References

Felipe De Brigard, Ph.D.
Associate Professor
Philosophy
Psychology & Neuroscience
Center for Cognitive Neuroscience
Duke University
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Paul Bello, Ph.D.
Section Head
Intelligent Systems
Naval Center for Applied Research in Artificial Intelligence
Information Technology Division
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John Pearson, Ph.D.
Assistant Professor
Biostatistics & Bioinformatics
Psychology & Neuroscience
Electrical and Computer Engineering
Center for Cognitive Neuroscience
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