# Kevin G. O'Neill

**August 2021**
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## Education

**Duke University** — Fall 2018 - Present
*Ph.D.,* Psychology & Neuroscience (anticipated 2023) — GPA: 3.96
*M.A.,* Psychology & Neuroscience — GPA: 3.96
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**
*Psychology of Imagination* — Dr. Tamar Kushnir — Fall 2021
*Research Methods & Statistics* — Dr. Angela Vieth — Spring 2021
*Cognitive Psychology* — Dr. Ruth Day — Fall 2020
*Neuromatch Academy* — pod-089-solid-firefly — Summer 2020

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

## Manuscripts Under Review/ In Preparation

**O'Neill, K.**, Henne, P., Pearson, J., & De Brigard, F. (In preparation). A unified model of confidence in causal judgment.

Krasich, K., **O'Neill, K.**, Murray, S., Nuthmann, A., & De Brigard, F. (In preparation). A mind lively and at ease: What fixation durations say about the extent of visual processing.

Khoudary, M., Hanna, E., **O'Neill, K.**, Iyengar, V., Clifford, S., De Brigard, F., Cabeza, R., & Sinnott-Armstrong, W. (Under review). A functional neuroimaging investigation of moral foundations theory.

Henne, P., & **O'Neill, K.** (Under review). Double Prevention and Counterfactual Thinking.

Murray, S., Henne, P., **O'Neill, K.**, Wang, J., & De Brigard, F. (Under review).

What you foresee isn't what you forget: No evidence for the influence of epistemic states on causal judgments for abnormal negligent behavior.

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). Confidence and Gradation in Causal Judgments.

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**Journal Papers**

**O'Neill, Kevin**, Liu, A., Yin, S., Brady, T., & De Brigard, F. (2021). Effects of category learning strategies on recognition memory. *Memory & cognition*, 1–15.

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). Springer.

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

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**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. *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. *AAAI Spring Symposium: Towards Conscious AI Systems*.

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

*Science Society.*

**Talks**

**O'Neill, K.**, Henne, P., Bello, P., Pearson, J., De Brigard, F. (2021). "Degrading Causation". *Invited talk at Causal Cognition Lab, UCL.*

**O'Neill, K.**, Henne, P., Bello, P., Pearson, J., De Brigard, F. (2021). "Degrading Causation". *XPhi Europe.*

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". *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.*

**Poster Presentations**

**O'Neill, K.**, Henne, P., Bello, P., Pearson, J., De Brigard, F. (2021). "Confidence Effects on Causal Judgment". *Psychonomics.*

**O'Neill, K.**, Henne, P., Bello, P., Pearson, J., De Brigard, F. (2021). "Degrading Causation". *Society for Philosophy and Psychology Annual Meeting.*

Khoudary, M., Hanna, E., **O'Neill, K.**, Iyengar, V., Clifford, S., Cabeza, R., De Brigard, F., Sinnott-Armstrong, W. (2021). "A Functional Neuroimaging Investigation of Moral Foundations Theory". *Society for Philosophy and Psychology Annual Meeting.*

Khoudary, M., Hanna, E., **O'Neill, K.**, 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.*

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.

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.*

**Awards/ Honors**

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| NSF GRFP Honorable Mention | Spring 2019 |
| Duke Chancellors Scholars Fellowship | Fall 2018 |
| Undergraduate Research Fellowship | Spring 2015 - Spring 2017 |
| Rensselaer Leadership Award | Fall 2014 - Spring 2017 |

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| | 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

**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
**Software 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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**John Pearson, Ph.D.**
*Assistant Professor*
Biostatistics & Bioinformatics
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**Paul Bello, Ph.D.**
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