

# Kevin G. O'Neill

October 2021  
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<b>Education</b>	<b>Duke University</b> <i>Ph.D.</i> , Psychology & Neuroscience (anticipated 2023) <i>M.A.</i> , Psychology & Neuroscience <a href="#">Imagination and Modal Cognition Laboratory</a> — Dr. Felipe De Brigard <a href="#">Pearson Laboratory</a> — Dr. John Pearson	Fall 2018 - Present GPA: 3.96 GPA: 3.96
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<b>Rensselaer Polytechnic Institute</b> <i>Bachelor of Science</i> , Cognitive Science and Computer Science	Class of 2017 GPA: 3.97
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<b>Work Experience</b>	<b>Computer Scientist</b> ARCADIA Project — Paul Bello U.S. Naval Research Laboratory	Summer 2017 - Present
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<b>Undergraduate Researcher</b> Rensselaer Artificial Intelligence and Reasoning ( <a href="#">RAIR</a> ) Laboratory — Dr. Selmer Bringsjord	Spring 2015 - Spring 2017
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<b>Federal Work Study</b> <a href="#">Rensselaer Department of Cognitive Science</a>	Fall 2014 - Spring 2017
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<b>Manuscripts Under Review/ In Preparation</b>	<b>O'Neill, K.</b> , Henne, P., Pearson, J., & De Brigard, F. (In preparation). Modeling confidence in human causal judgment.
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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., **O'Neill, K.**, Faul, L., Murray, S., Smallman, R., & De Brigard, F. (In preparation). Neural differences in dispositional versus situational-based counterfactual thoughts.





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.    



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



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
## Journal Papers


O'Neill, K., 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. 


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## Conference Papers

O'Neill, K., Henne, P., Pearson, J., & De Brigard, F. (2021). Measuring and modeling confidence in human causal judgment. *Workshop on Metacognition in the Age of AI: Challenges and Opportunities, 35th Conference on Neural Information Processing Systems (NeurIPS 2021), Sydney, Australia*.   

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*. 

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## Talks

O'Neill, K., Henne, P., Pearson, J., De Brigard, F. (2022). “Measuring and mod-

eling confidence in human causal judgment”. *Southern Society for Philosophy and Psychology*.

Krasich, K., **O’Neill, K.**, De Brigard, F. (2022). “Eye tracking mental simulations during retrospective causal reasoning”. *Southern Society for Philosophy and Psychology*.

**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 AR-CADIA”. *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*.

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**Poster  
Presentations**

**O’Neill, K.**, Henne, P., Bello, P., Pearson, J., De Brigard, F. (2021). “Measuring and modeling confidence in human causal judgment”. *Workshop on Metacognition in the Age of AI: Challenges and Opportunities, 35th Conference on Neural Information Processing Systems (NeurIPS 2021), Sydney, Australia*.

**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*.

<b>Teaching</b>	<b>Teaching Assistant</b>	
	<i>PSY482S: Psychology of Imagination</i> — Dr. Tamar Kushnir, Duke	Fall 2021
	<i>PSY204L: Research Methods &amp; Statistics</i> — Dr. Angela Vieth, Duke	Spring 2021
	<i>PSY102: Cognitive Psychology</i> — Dr. Ruth Day, Duke	Fall 2020
	<i>Neuromatch Academy</i> — pod-089-solid-firefly	Summer 2020
	<b>Guest Lecturer</b>	
	<i>Are Humans Rational?</i> — Dr. Selmer Bringsjord, RPI	Fall 2016 - Spring 2017
	<i>Intro To Logic</i> — Dr. Selmer Bringsjord, RPI	Fall 2016 - Spring 2017
<b>Mentorship</b>	<b>Maria Khoudary</b> 2020-2021	
	<i>A Functional Neuroimaging Investigation of Moral Foundations Theory</i>	
	Duke University	
	<b>Jason Chen, Corey Elowski, Maria Khoudary, Cambria Revsine</b> 2020	
	<i>Predicting fMRI Responses: a Machine Learning Approach</i>	
	Neuromatch Academy	
	<b>Georgia Hadjis, Anna Dorokhova,</b> 2020	
	<b>Alex Vargas, Wen Jian, Sarah Hanson</b>	
	<i>Predicting Social Task Performance and Brain Activities Based on Emotional Task and Relational Task: an Analysis of the HCP Dataset</i>	
	Neuromatch Academy	
<b>Awards/ Honors</b>	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	
	Mona & Edward Zander '68 Scholarship	
	Fall 2014 - Spring 2017	
	Dean's List/Dean's Honor List	
	Fall 2014 - Spring 2017	
<b>Projects</b>	<b><a href="#">SpikingNeuralNets.jl</a></b>	
	A flexible system for simulating arbitrary systems of spiking neural networks.	
	<b>ARCADIA</b>	
	A computational framework for attention-centered cognitive modeling.	
	<b><a href="#">MetaProver</a></b>	
	A framework for automated logical and meta-logical reasoning via analytic tableaux	
	<b><a href="#">OSCAR</a></b>	
	A restoration of John Pollock's nonmonotonic natural deduction theorem prover	
<b>Skills</b>	<b>Programming</b>	
	Python, R, C/C++, Java/Javascript, Clojure/Scheme/Lisp, Julia, MATLAB,	
	HTML/CSS, Prolog, Unix, Git, $\text{\LaTeX}$	
	<b>Data Collection/Analysis</b>	
	Behavioral, fMRI, eye tracking data	
	Mixed-effect modeling, Bayesian statistics, multivariate statistics	
	<b>Artificial Intelligence</b>	

Cognitive modeling, ML, Symbolic AI, NLP, Parallel/High-Performance Computing  
**Software Engineering**  
Software development, verification, and visualization  
**Languages**  
German (intermediate)

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Service	<a href="#">Duke Institute for Brain Sciences Methods Meetings</a>	Fall 2020 - Present
	Founder	
	<a href="#">Duke Philosophy of Neuroscience Journal Club</a>	Spring 2020 - Present
	Co-Founder	
	<a href="#">Duke University Neuroscience Experience (DUNE)</a>	Spring 2020 - Present
	Volunteer	
	<a href="#">Cognitive Science, Cognitive Systems Research</a>	
	Ad-Hoc Reviewing	
	<a href="#">Duke Psychology &amp; Neuroscience</a>	
Panelist, Graduate School Information Session		
<a href="#">Duke Cognitive Neuroscience Admitting Program</a>		
Recruitment		

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Affiliations	<a href="#">Association for the Advancement of Artificial Intelligence (AAAI)</a>
Past & Present	<a href="#">Cognitive Science Society (CSS)</a>
	<a href="#">International Association of Computing and Philosophy (IACAP)</a>
	<a href="#">Psychonomic Society</a>

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References	<b>Felipe De Brigard, Ph.D.</b> <i>Associate Professor</i> Philosophy Psychology & Neuroscience Center for Cognitive Neuroscience Duke University <a href="mailto:felipe.debrigard@duke.edu">felipe.debrigard@duke.edu</a> (919) 660-3028	<b>John Pearson, Ph.D.</b> <i>Assistant Professor</i> Biostatistics & Bioinformatics Psychology & Neuroscience Electrical and Computer Engineering Center for Cognitive Neuroscience Duke University <a href="mailto:john.pearson@duke.edu">john.pearson@duke.edu</a> (919) 613-8338
	<b>Paul Bello, Ph.D.</b> <i>Section Head</i> Intelligent Systems Naval Center for Applied Research in Artificial Intelligence Information Technology Division U.S. Naval Research Laboratory <a href="mailto:paul.bello@nrl.navy.mil">paul.bello@nrl.navy.mil</a>	