









Kevin G. O'Neill


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kevin.oneill@duke.edu



kevingoneill.github.io

 0000-0001-7401-9802





Education	Duke University <i>Ph.D.</i> , Psychology & Neuroscience (anticipated 2024) <i>M.A.</i> , Psychology & Neuroscience Imagination and Modal Cognition Laboratory — Dr. Felipe De Brigard Pearson Laboratory — Dr. John Pearson	Fall 2018 - Present GPA: 3.96 GPA: 3.96
	Rensselaer Polytechnic Institute <i>Bachelor of Science</i> , Cognitive Science and Computer Science	Class of 2017 GPA: 3.97
Work Experience	Computer Scientist ARCADIA Project — Paul Bello U.S. Naval Research Laboratory	2017–2018
	Undergraduate Researcher Rensselaer Artificial Intelligence and Reasoning (RAIR) Laboratory — Dr. Selmer Bringsjord	2015–2017
	Federal Work Study Rensselaer Department of Cognitive Science	2014–2017
Manuscripts Under Review/ In Preparation	O'Neill, K., Henne, P., Quillien, T., Icard, T., & De Brigard, F. (In preparation). Disentangling double prevention.  	
	O'Neill, K., Henne, P., Pearson, J., & De Brigard, F. (Under review). Modeling confidence in causal judgments. 	
	Krasich, K. *, O'Neill, K. *, & De Brigard, F. (Under review). Eye-tracking mental simulation during retrospective causal reasoning.   	
	Murray, S., O'Neill, K., Bridges, J., Sytsma, J., & Irving, Z. (Under review). The role of character information in judgments of blame.	
	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.	
	Bringsjord, S., & O'Neill, K. (In Press). Third-millennium computational logic. <i>Minds and Machines</i> .	
Journal Papers	Krasich, K. *, O'Neill, K. *, Murray, S., De Brigard, F., & Nuthmann, A. (2023). A computational modeling approach to investigating mind wandering-related adjustments to gaze behavior during scene viewing. <i>Cognition</i> .  	
	Krasich, K., Simmons, C., O'Neill, K., Giattino, C. M., De Brigard, F., Sinnott-Armstrong, W., Mudrik, L., & Woldorff, M. G. (2022). Prestimulus oscillatory brain	




activity interacts with evoked recurrent processing to facilitate conscious visual perception. *Scientific Reports*, 12(1), 22126. 



Khoudary, A., Hanna, E., **O'Neill, K.**, Iyengar, V., Clifford, S., Cabeza, R., De Brigard, F., & Sinnott-Armstrong, W. (2022). A functional neuroimaging investigation of moral foundations theory. *Social Neuroscience*, 1–17.  



Khoudary, A., **O'Neill, K.**, Faul, L., Murray, S., Smallman, R., & De Brigard, F. (2022). Neural differences between internal and external episodic counterfactual thoughts. *Philosophical Transactions of the Royal Society B*, 377(1866), 20210337.  



Henne, P., & **O'Neill, K.** (2022). Double Prevention, Causal Judgments, and Counterfactuals. *Cognitive Science*.  


O'Neill, K., Henne, P., Bello, P., Pearson, J., & De Brigard, F. (2022). Confidence and gradation in causal judgment. *Cognition*, 223, 105036.    


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., Bringsjord, S., Sen, A., Paquin, J. C., & **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. 

Conference Papers




O'Neill, K., Quillien, T., & Henne, P. (2022). A counterfactual model of causal judgments in double prevention. *Conference on Cognitive Computational Neuroscience*. 



O'Neill, K., Krasich, K., Murray, S., Brockmole, J., Nuthmann, A., & De Brigard, F. (2022). Fixation duration variability increases with mind wandering during scene viewing. *Conference on Cognitive Computational Neuroscience*. 


Krasich, K., **O'Neill, K.**, & De Brigard, F. (2022). Eye-tracking mental simulation during retrospective causal reasoning. *Proceedings of the Annual Meeting of the*


Cognitive Science Society, 44.   


O'Neill, K., Henne, P., Pearson, J., & De Brigard, F. (2022). Measuring and modeling confidence in human causal judgment. *Proceedings of the Annual Meeting of the Cognitive Science Society*, 44.   

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*. 

Talks

O'Neill, K., Henne, P., Icard, T., Quillien, T., & De Brigard, F. (2023) “Disentangling Double Prevention”. *Society for Philosophy and Psychology*.

O'Neill, K., Krasich, K., Murray, S., Brockmole, J., Nuthmann, A., De Brigard, F. (2023). “Fixation duration variability increases with mind wandering during scene viewing”. *Current Issues in Mind-Wandering Research*.

O'Neill, K., Stern, R., & Eva, B. (2023). “Colliding intuitions about causeless correlations: an investigation of human reasoning errors in collider causal structures.” *Southern Society for Philosophy and Psychology*.

Henne, P. & **O'Neill, K.** (2022-2023). “Double Prevention, Causal Judgments, and Counterfactuals.” *Invited talk for the Causality in Cognition Lab, Stanford; Southern Society for Philosophy and Psychology*.

O'Neill, K., Henne, P., Pearson, J., De Brigard, F. (2022). “Measuring and modeling confidence in human causal judgment”. *Cognitive Science Society; Society for Philosophy and Psychology; Southern Society for Philosophy and Psychology*.

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

O'Neill, K. (2022). “Disentangling Confidence and Causal Judgment”. *Invited talk for the Consciousness Club, Meta Lab, University College London*.

O'Neill, K. (2022). "Confidence & Singular Causal Judgment". *Invited talk for the Cognitive and Neural Computation Lab, University of California Irvine.*

Khoudary, A., **O'Neill, K.**, Faul, L., Murray, S., Smallman, R., De Brigard, F. (2021-2022). Neural differences between internal and external episodic counterfactual thoughts. *Neuromatch Conference 4.0.*

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

**Poster
Presentations**

Murray, S., **O'Neill, K.**, Bridges, J., Sytsma, J., & Irving, Z. (2023). "The role of character information in judgments of blame." *Society for Philosophy and Psychology*

Fernández-Miranda, G., **O'Neill, K.**, Stanley, M., Kushnir, T., & De Brigard, F. (2023). "The influence of perceived control on forgiveness". *Preconference on Justice and Morality, Society for Personality and Social Psychology.*

Krasich, K., Simmons, C., **O'Neill, K.**, Giattino, C.M., Sinnott-Armstrong, W., De Brigard, F., Mudrik, L., & Woldorff, M.G. (2022). "Prestimulus alpha oscillatory activity interacts with evoked recurrent processing to facilitate conscious visual perception." *Society for Neuroscience.*

O'Neill, K., Quillien, T., Henne, P. (2022). "A Counterfactual Model of Causal Judgments in Double Prevention". *Conference on Cognitive Computational Neuroscience.*

O'Neill, K., Krasich, K., Murray, S., Brockmole, J., Nuthmann, A., De Brigard, F. (2022). "Fixation duration variability increases with mind wandering during scene viewing". *Conference on Cognitive Computational Neuroscience.*

Khoudary, A., **O'Neill, K.**, Faul, L., Murray, S., Smallman, R., De Brigard, F. (2022). Neural differences between internal and external episodic counterfactual thoughts. *Cognitive Neuroscience Society Annual Meeting.*

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, A., 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; 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*.

Teaching

Coursework

Entering Mentoring Series 2022
Certificate in College Teaching 2018-2021

Teaching Assistant

PSY482S: Psychology of Imagination — Dr. Tamar Kushnir, Duke Fall 2021
PSY204L: Research Methods & Statistics — Dr. Angela Vieth, Duke Spring 2021
PSY102: Cognitive Psychology — Dr. Ruth Day, Duke Fall 2020
Neuromatch Academy — pod-089-solid-firefly Summer 2020

Guest Lecturer

Computational Modeling, Spring 2023
Moral Judgment — Cognitive Neuroscience Research Internship, Duke Fall 2022
Are Humans Rational? — Dr. Selmer Bringsjord, RPI Fall 2016 - Spring 2017
Intro To Logic — Dr. Selmer Bringsjord, RPI Fall 2016 - Spring 2017

Mentorship

Morgan Biele 2022

Mental Images Guide Counterfactual and Causal Thinking across Development
Duke University

Sara Rose Shannon 2022

Assessing the Plausibility of Unconscious Arithmetic
Duke University

Mya Harris, Anthony Salgado 2022

The Memory Basis of Norm Effects on Causal Judgment
Duke University

Yuleika Martinez Castillo 2022

R for Data Science
Duke University

Gabriela Fernández Miranda <i>Memory, Forgiveness, and Future Thinking</i> Duke University	2021-2022
Ari Khoudary <i>A Functional Neuroimaging Investigation of Moral Foundations Theory</i> Duke University	2020-2021
Jason Chen, Corey Elowski, Ari Khoudary, Cambria Revsine <i>Predicting fMRI Responses: a Machine Learning Approach</i> Neuromatch Academy	2020
Georgia Hadjis, Anna Dorokhova, Alex Vargas, Wen Jian, Sarah Hanson <i>Predicting Social Task Performance and Brain Activities Based on Emotional Task and Relational Task: an Analysis of the HCP Dataset</i> Neuromatch Academy	2020

Awards/ Honors	Duke IBRC Research Mini-Grant	2022
	Cognitive Science Society Student Travel Grant	2022
	Southern Society for Philosophy & Psychology Travel Award	2022
	NSF GRFP Honorable Mention	2019
	Duke Chancellors Scholars Fellowship	2018
	Undergraduate Research Fellowship	2015–2017
	Rensselaer Leadership Award	2014–2017
	Mona & Edward Zander '68 Scholarship	2014–2017
	Dean's List/Dean's Honor List	2014–2017

Projects	SpikingNeuralNets.jl: A system for simulating systems of spiking neural networks ARCADIA: A computational framework for attention-centered cognitive modeling MetaProver: Automated logical and meta-logical reasoning via analytic tableaux OSCAR: A restoration of John Pollock's natural deduction theorem prover	
Skills	Programming Python, R, C/C++, Java/Javascript, Clojure/Scheme/Lisp, Julia, MATLAB, HTML/CSS, Prolog, Unix, Git, L ^A T _E X 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	Cognitive Neuroscience Research Internship 2022 Lecturer, Research Mentor Duke Center for Cognitive Neuroscience 2022 Graduate Representative Duke Institute for Brain Sciences Methods Meetings 2020–Present Founder Duke Philosophy of Neuroscience Journal Club 2020–Present Co-Founder Duke University Neuroscience Experience (DUNE) 2020 Volunteer Cognitive Science, Duke Psychology & Neuroscience 2021-2022 Panelist, Graduate School Information Session Duke Cognitive Neuroscience Admitting Program 2019-2022 Recruitment Cognitive Science, Cognitive Systems Research, International Conference on Machine Learning, Journal of Experimental Psychology: General, Memory & Cognition Ad-Hoc Reviewing	
Affiliations Past & Present	Association for the Advancement of Artificial Intelligence (AAAI) Cognitive Science Society (CSS) International Association of Computing and Philosophy (IACAP) Psychonomic Society (PS) Society for Philosophy and Psychology (SPP) Southern Society for Philosophy and Psychology (SSPP)	

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

Duke University

john.pearson@duke.edu

(919) 613-8338

Paul Bello, Ph.D.*Section Head*

Intelligent Systems

Naval Center for Applied Research in

Artificial Intelligence

Information Technology Division

U.S. Naval Research Laboratory

paul.bello@nrl.navy.mil