

# GUILLERMO ANTONIO PUEBLA RAMÍREZ

PERSONAL INFORMATION	Email: <a href="mailto:pueblaramirezg@gmail.com">pueblaramirezg@gmail.com</a> Website: <a href="http://www.guillermopuebla.com">www.guillermopuebla.com</a> ORCID: <a href="https://orcid.org/0000-0001-7002-7776">0000-0001-7002-7776</a>	
PROFESSIONAL EXPERIENCE	<b>Assistant Professor</b> Economics and Administration School, Universidad de Tarapacá	Santiago, Chile 2024-Present
	<b>Research Associate</b> National Center for Artificial Intelligence	Santiago, Chile 2024-Present
	<b>Postdoctoral Researcher</b> National Center for Artificial Intelligence	Santiago, Chile 2023
	<b>Postdoctoral Researcher</b> School of Psychological Science, University of Bristol	Bristol, United Kingdom 2021-2022
EDUCATION	<b>PhD in Psychology</b> University of Edinburgh	Edinburgh, United Kingdom 2022
	<b>MPhil in Psychology</b> University of Queensland	Brisbane, Australia 2015
	<b>BSc in Psychology</b> Universidad de Tarapacá	Arica, Chile 2008
PUBLICATIONS	<b>JOURNAL ARTICLES</b>  Puebla, G., & Bowers, J. S. (2025). Visual reasoning in object-centric deep neural networks: A comparative cognition approach. <i>Neural Networks</i> , 189, 107582. doi: <a href="https://doi.org/10.1016/j.neunet.2025.107582">10.1016/j.neunet.2025.107582</a>  Marchant, N., Puebla, G., & Chaigneau, S. E. (2025). Rules in the mist: Emerging probabilistic rules in uncertain categorization. <i>Cognition</i> , 264, 106264. doi: <a href="https://doi.org/10.1016/j.cognition.2025.106264">10.1016/j.cognition.2025.106264</a>  Fong, F. T., Puebla, G., & Nielsen, M. (2024). The role of conventionality and design in children's function judgments about malfunctioning artifacts. <i>Journal of Experimental Child Psychology</i> , 240, 105835. doi: <a href="https://doi.org/10.1016/j.jecp.2023.105835">10.1016/j.jecp.2023.105835</a>  Bowers, J. S., Malhotra, G., Adolphi, F. G., Dujmović, M., Montero, M. L., Biscione, V., Puebla, G., Hummel, J., & Heaton, R. F. (2023). On the importance of severely testing deep learning models of cognition. <i>Cognitive Systems Research</i> , 82, 101158. doi: <a href="https://doi.org/10.1016/j.cogsys.2023.101158">10.1016/j.cogsys.2023.101158</a>  Bowers, J. S., Malhotra, G., Dujmović, M., Montero, M. L., Tsvetkov, C., Biscione, V., Puebla, G., Adolphi, F., Hummel, J. E., Heaton, R. F., & et al. (2023). Clarifying status of dnns as models of human vision. <i>Behavioral and Brain Sciences</i> , 46, e415. doi: <a href="https://doi.org/10.1017/S0140525X23002777">10.1017/S0140525X23002777</a>	

Bowers, J. S., Malhotra, G., Dujmović, M., Llera Montero, M., Tsvetkov, C., Biscione, V., Puebla, G., Adolphi, F., Hummel, J. E., Heaton, R. F., & et al. (2023). Deep problems with neural network models of human vision. *Behavioral and Brain Sciences*, 46, e385. doi: [10.1017/S0140525X22002813](https://doi.org/10.1017/S0140525X22002813)

Puebla, G., & Bowers, J. S. (2022). Can deep convolutional neural networks support relational reasoning in the same-different task? *Journal of Vision*, 22(11), 1–18. doi: [10.1167/jov.22.10.11](https://doi.org/10.1167/jov.22.10.11)

Doumas, L. A., Puebla, G., Martin, A. E., & Hummel, J. E. (2022). A theory of relation learning and cross-domain generalization. *Psychological Review*, 129(5), 999. doi: [10.1037/rev0000346](https://doi.org/10.1037/rev0000346)

Puebla, G., Martin, A. E., & Doumas, L. A. (2021). The relational processing limits of classic and contemporary neural network models of language processing. *Language, Cognition and Neuroscience*, 36(2), 240–254. doi: [10.1080/23273798.2020.1821906](https://doi.org/10.1080/23273798.2020.1821906)

Chaigneau, S. E., Puebla, G., & Canessa, E. C. (2016). Why the designer's intended function is central for proper function assignment and artifact conceptualization: Essentialist and normative accounts. *Developmental Review*, 41, 38–50. doi: [10.1016/j.dr.2016.06.002](https://doi.org/10.1016/j.dr.2016.06.002)

Puebla, G., & Chaigneau, S. E. (2014). Inference and coherence in causal-based artifact categorization. *Cognition*, 130(1), 50–65. doi: [10.1016/j.cognition.2013.10.001](https://doi.org/10.1016/j.cognition.2013.10.001)

Chaigneau, S. E., & Puebla, G. (2013). The proper function of artifacts: Intentions, conventions and causal inferences. *Review of Philosophy and Psychology*, 4(3), 391–406. doi: [10.1007/s13164-013-0146-3](https://doi.org/10.1007/s13164-013-0146-3)

#### CONFERENCE PROCEEDINGS

Marchant, N., Puebla, G., Quillien, T., & Chaigneau, S. E. (2024). Rationally uncertain: Investigating deviations from explaining away and screening off in causal reasoning. *Proceedings of the Annual Meeting of the Cognitive Science Society*, 46. <https://escholarship.org/uc/item/31r8z1h8>

Biscione, V., Yin, D., Malhotra, G., Dujmović, M., Montero, M. L., Puebla, G., Adolphi, F. G., Tsvetkov, C., Heaton, R. F., Hummel, J., Evans, B. D., & Bowers, J. S. (2023). Introducing the mindset benchmark for comparing DNNs to human vision. *2023 Conference on Cognitive Computational Neuroscience*. [https://2023.ccneuro.org/view\\_paper35ce.html?PaperNum=1127](https://2023.ccneuro.org/view_paper35ce.html?PaperNum=1127)

Puebla, G., & Bowers, J. S. (2023). The role of object-centric representations, guided attention, and external memory on generalizing visual relations. *2023 Conference on Cognitive Computational Neuroscience*. [https://2023.ccneuro.org/view\\_paperc93f.html?PaperNum=1499](https://2023.ccneuro.org/view_paperc93f.html?PaperNum=1499)

Puebla, G., & Bowers, J. (2021). Can deep convolutional neural networks learn same-different relations? *Proceedings of the Annual Meeting of the Cognitive Science Society*, 43. <https://escholarship.org/uc/item/4d13996b>

Doumas, L. A., Puebla, G., Martin, A. E., & Hummel, J. E. (2020). Relation learning in a neurocomputational architecture supports cross-domain transfer. *Proceedings of the Annual Meeting of the Cognitive Science Society*, 42. <https://escholarship.org/uc/item/35v29557>

Doumas, L. A., Puebla, G., Hummel, J. E., & Martin, A. E. (2019). Predicate learning via neural oscillations supports one-shot generalization between video games. *2019 Conference on Cognitive Computational Neuroscience*. <https://2019.ccneuro.org/Papers/ViewPaperscecd.html?PaperNum=1112>

	<p>Doumas, L. A., Hamer, A., Puebla, G., &amp; Martin, A. E. (2017). A theory of the detection and learning of structured representations of similarity and relative magnitude. <i>Proceedings of the Annual Meeting of the Cognitive Science Society</i>, 39. <a href="https://escholarship.org/uc/item/9z189ocr">https://escholarship.org/uc/item/9z189ocr</a></p> <p>Puebla-Ramírez, G., &amp; Chaigneau, S. (2011). Is the centrality of design history function an effect of causal knowledge? <i>Proceedings of the Annual Meeting of the Cognitive Science Society</i>, 33. <a href="https://escholarship.org/uc/item/1dk748w1">https://escholarship.org/uc/item/1dk748w1</a></p>		
MEDIA COVERAGE	<p>Glickman, K. (2025, December 30). Computers are getting much better at learning to “see”. <a href="https://knowablemagazine.org/content/article/technology/2025/how-computers-are-getting-better-recognizing-images">https://knowablemagazine.org/content/article/technology/2025/how-computers-are-getting-better-recognizing-images</a></p> <p>O’Grady, C. (2025, July 2). Researchers claim their ai model simulates the human mind. others are skeptical. <a href="https://www.science.org/content/article/researchers-claim-their-ai-model-simulates-human-mind-others-are-skeptical">https://www.science.org/content/article/researchers-claim-their-ai-model-simulates-human-mind-others-are-skeptical</a></p> <p>Pavlus, J. (2021, June 23). Same or different? the question flummoxes neural networks. <a href="https://www.quantamagazine.org/same-or-different-ai-cant-tell-20210623/">https://www.quantamagazine.org/same-or-different-ai-cant-tell-20210623/</a></p>		
GRANTS	<p><b>A new look at human innovation: decoding the brainwaves and behaviors behind breakthroughs</b> Chile Co-Investigator (PI Felipe Munoz-Rubke) 2025-2029 National Agency for Research and Development</p>		
	<p><b>3D symmetry perception and shape constancy in infants and deep neural networks</b> Chile Principal Investigator 2024-2027 National Agency for Research and Development</p>		
	<p><b>El rol de procesamiento heurístico y deliberativo de la información, la receptividad y el escepticismo ingenuo, en la susceptibilidad a la desinformación en el ámbito de la salud</b> Chile Co-Investigator (PI Rodrigo Ferrer-Urbina) 2022-2024 National Agency for Research and Development</p>		
	<p><b>A descriptive model of causal-based categorization</b> Chile Co-Investigator (PI Sergio Chaigneau) 2019-2022 National Agency for Research and Development</p>		
SCHOLARSHIPS	<p><b>International PhD scholarship</b> Chile National Agency for Research and Development 2018-2022</p>		
	<p><b>International Master’s scholarship</b> Chile National Agency for Research and Development 2013-2015</p>		
TEACHING	<p><b>Introduction to Artificial Intelligence</b> 2025 Undergraduate, Universidad de Tarapacá</p>		
	<p><b>Introduction to Deep Learning</b> 2025 Undergraduate, Universidad de Tarapacá</p>		

	<b>Generative Artificial Intelligence and Language Models</b> Postgraduate diploma, National Center for Artificial Intelligence	2024
	<b>Quantitative Methods for Psychology II</b> Undergraduate, Universidad de Tarapacá	2009
	<b>Quantitative Methods for Psychology I</b> Undergraduate, Universidad de Tarapacá	2009
PROFESSIONAL SERVICE	AD HOC REVIEWER  <i>Psychological Review, Cognition, Philosophical Transactions of the Royal Society B, Journal of Experimental Psychology: Learning, Memory, and Cognition, PLOS Computational Biology, Artificial Intelligence Review, Cognitive Science, Cognitive Systems Research, PLOS ONE, Vision Research, Transactions on Machine Learning Research, Machine Vision and Applications</i>	2017-present
	SEMINAR SERIES ORGANIZER  <b>Generalization in Mind &amp; Machine</b> , University of Bristol <a href="https://mindandmachine.blogs.bristol.ac.uk/seminars">https://mindandmachine.blogs.bristol.ac.uk/seminars</a>	2022
	<b>Ciencias Cognitivas en Chile: Desarrollos Actuales</b> , Online <a href="https://sites.google.com/view/cienciascognitivaschile">https://sites.google.com/view/cienciascognitivaschile</a>	2021
LANGUAGES	<b>Spanish</b>	Native
	<b>English</b>	Advanced