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Tianwei Gong

Education & Professional Experience

2024–present **British Academy Postdoctoral Fellow**.
Understanding the formation of false causal beliefs from a bounded rational perspective
Mentor: Prof. David A. Lagnado
University College London, UK

2023–2024 **UKRI EPSRC Postdoctoral Research Associate**.
Grant: Computational constructivism: the algorithmic basis of discovery
Supervisor: Dr. Neil R. Bramley & Dr. Christopher G. Lucas
University of Edinburgh, UK

2020–2023 **PhD in Cognitive Science**, *School of Philosophy, Psychology and Language Sciences*.
PhD thesis: Causal induction in time
Supervisor: Dr. Neil R. Bramley
University of Edinburgh, UK

2019–2020 **MRes in Psychology (w.distinction)**, *School of Philosophy, Psychology and Language Sciences*.
Supervisor: Dr. Neil R. Bramley
University of Edinburgh, UK

2014–2018 **BSc in Psychology**, *Faculty of Psychology*.
Beijing Normal University, China

2023 Jul **Barcelona Summer School for Advanced Modelling of Behavior in Neuroscience**.
Advanced techniques in model-based analysis of human and animal behavior
Centre de Recerca Matemàtica (Center for Mathematical Research), Spain

Journal Articles

2024 **Gong, T.**, & Bramley, N. R. (2024). Evidence from the future. *Journal of Experimental Psychology: General*, *153(3)*, 864–872. [Link]

Gong, T., Li, J., Yeung, J. Y., & Zhang, X. (2024). The association between course selection and academic performance: Exploring psychological interpretations. *Studies in Higher Education*. [Link]

2023 **Gong, T.**, & Bramley, N. R. (2023). Continuous time causal structure induction with prevention and generation. *Cognition*, *240*, 105530. [Link]

Gong, T., Gerstenberg, T., Mayrhofer, R., & Bramley, N. R. (2023). Active causal structure learning in continuous time. *Cognitive Psychology*, *140*(4), 101542. [Link]

Gong, T., Gao, X., & Jiang, T. (2023). FAB: A "dummy's" program for self-paced forward and backward reading. *Behavior Research Methods*, *55*, 4419–4436. [Link]

2021 **Gong, T.**, Young, G. A., & Shtulman, A. (2021). The development of cognitive reflection in China. *Cognitive Science.*,*45*(4), e12966. [Link]

Gong, T., & Shtulman, A. (2021). The plausible impossible: Chinese adults hold graded notions of impossibility. *Journal of Cognition and Culture*,*21*(1-2), 76-93. [Link]

2020 Yu, S., Li, B., Zhang, M., **Gong, T.**, Li, X., Li, Z., ... & Chen, C. (2020). Automaticity in processing spatial-numerical associations: Evidence from a perceptual orientation judgment task of Arabic digits in frames. *PloS One*, *15*(2), e0229130. [Link]

2019 **Gong, T.***, Li, B.*, Teng, L., Zhou, Z., Gao, X., & Jiang, T. (2019). The association between number magnitude and space is dependent on notation: Evidence from an adaptive perceptual orientation task. *Journal of Numerical Cognition*, *5*(1), 38-54. [Link]

2016 Zhang, M., Gao, X., Li, B., Yu, S., **Gong, T.**, Jiang, T., ... & Chen, Y. (2016). Spatial representation of ordinal information. *Frontiers in Psychology*, *7*, 505. [Link]

Submitted **Gong, T.***, Pacer, M.*, Griffiths, T., & Bramley, N. R. (In revision). Rational causal induction from time. *In revision at Psychological Review.* [Link]

Peer-reviewed Conference Proceedings Articles

2024 **Gong, T.**, Valentin, S., Lucas, C. G., & Bramley, N. R. (2024). Paradoxical parsimony: How latent complexity favors explanatory simplicity. In *Proceedings of the 46th Annual Meeting of the Cognitive Science Society*. [Link]

2023 **Gong, T.**, Zhao, B., McIntosh, R. D., & Lucas, C. G. (2023). Understanding spatial neglect: A Bayesian perspective. In *Proceedings of the Computational Cognitive Neuroscience Society Meeting 2023*. [Link]

Gong, T., Zhao, B., McIntosh, R. D., & Lucas, C. G. (2023). A rational model of spatial neglect. In *Proceedings of the 45th Annual Meeting of the Cognitive Science Society*. [Link]

2022 **Gong, T.** & Bramley, N. R. (2022). Intuitions and perceptual constraints on causal learning from dynamics. In *Proceedings of the 44th Annual Meeting of the Cognitive Science Society*. [Link]

2021 **Gong, T.** & Bramley, N. R. (2021). Learning preventative and generative causal structures from point events in continuous time. In *Causal Inference & Machine Learning workshop at 35th Neural Information Processing Systems conference*. [Link]

2020 **Gong, T.** & Bramley, N. R. (2020). What you didn't see: Prevention and generation in continuous time causal induction. In *Proceedings of the 42nd Annual Meeting of the Cognitive Science Society*. [Link]

Gong, T. & Shtulman, A. (2020). The plausible impossible: Graded notions of impossibility across cultures. In *Proceedings of the 42nd Annual Meeting of the Cognitive Science Society*. [Link]

Conference Presentations

Sept 2024 *Paradoxical parsimony: How latent complexity favors explanatory simplicity.* Poster presented at 2024 International Joint Conference on Learning and Reasoning (IJCLR), Nanjing, China.

Jul 2024 *Causal induction in time.* Talk presented at Glushko Dissertation Symposium, CogSci2024, Rotterdam, Netherlands.

Jul 2024 *Paradoxical parsimony: How latent complexity favors explanatory simplicity.* Poster presented at CogSci2024 (acceptance rate: 73%), Rotterdam, Netherlands.

Jun 2024 *Latent complexity meets explanatory parsimony.* Talk presented at International Conference on Thinking 2024, Milan, Italy.

Aug 2023 *Understanding spatial neglect: A Bayesian perspective.* Talk presented at Computational Cognitive Neuroscience Society Meeting 2023 (acceptance rate: 4.5%), Oxford, UK.

Jul 2023 *A rational model of spatial neglect.* Talk presented at CogSci2023 (acceptance rate: 17.7%), Sydney, Australia (virtual attendance).

Jul 2022 *Intuitions and perceptual constraints on causal learning from dynamics.* Poster presented at CogSci2022 (acceptance rate: 71%), Toronto, Canada (virtual attendance).

Dec 2021 *Learning preventative and generative causal structures from point events in continuous time.* Poster presented at NeurIPS2021 (WHY21 Workshop, acceptance rate: 50%), virtually.

Jul 2020 *What you didn't see: Prevention and generation in continuous time causal induction.* Poster presented at CogSci2020 (acceptance rate: 63%), virtually.

Jul 2020 *The plausible impossible: Graded notions of impossibility across cultures.* Poster presented at CogSci2020 (acceptance rate: 63%), virtually.

May 2018 *Similarity-induced interference in sentence processing: the (missing) role of pragmatics.* Poster presented at APS2018, San Francisco, USA.

Invited Seminar Talks

Nov 2024 *How to choose between simple vs. complex causal theories.* Talk presented at Centre of Behavioural Data Science Seminars, UCL, London, UK.

Nov 2023 *How do we find causal structure in time.* Talk presented at London Judgment and Decision Making seminars, UCL, London, UK.

Nov 2023 *Continuous time causal structure induction with prevention and generation.* Talk presented at Causal Cognition lab, UCL, London, UK.

Mar 2023 *How people use time information to learn and reason about causal structure.* Talk presented at Edinburgh Scientific Researchers Association, University of Edinburgh, Edinburgh, UK.

Feb 2023 *How people use time information to learn and reason about causal structure.* Talk presented at Human Cognitive Neuropsychology seminar, University of Edinburgh, Edinburgh, UK.

Jul 2022 *Active causal structure learning in continuous time.* Talk presented at Edinburgh Computational CogSci Workshop, Edinburgh, UK.

Apr 2022 *Active causal structure learning in continuous time.* Talk presented at Computational Principles of Intelligence Lab, MPI for Biological Cybernetics, Tübingen, Germany, virtually.

Nov 2021 *Active causal structure learning in continuous time.* Talk presented at Human Cognitive Neuropsychology seminar, University of Edinburgh, Edinburgh, UK.

Feb 2017 *The association between number magnitude and space is dependent on notation.* Talk presented at Jing-Stevenson-Zhang research symposium, University of Michigan, Ann Arbor, USA.

Awards, Grants & Scholarships

2024-2027 Early Career Postdoctoral Fellowship (PFSS24\240099), £408,488, The British Academy, UK.

2024 Glushko Dissertation Prize, $10,000, The Cognitive Science Society.

2020–2023 School of PPLS PhD Scholarship, £17,668 annual stipend & tuition fee waiver, University of Edinburgh, UK.

2020–2023 School of PPLS Research Support Grant, £1,000-2,000 per year, University of Edinburgh, UK.

2018 APS2018 Conference Travel Grant, $200, The Association for Psychological Science, USA.

2018 Outstanding Undergraduate Student, ¥1,000, Beijing Municipal Education Commission, China.

2015–2017 Undergraduate Research Grants, ¥1,000-2,000 per year, Beijing Normal University, China.

2014–2017 Academic Scholarship, ¥3,000-5,000 per year, Beijing Normal University, China.

Pre-doctoral Research Experiences

2018–2019 **Post-baccalaureate Researcher**, *Occidental College, USA (remotely).*
Supervisor: Prof. Andrew Shtulman
Topics: Cognitive reflection, magic thinking, cross-cultural cognition

2018–2019 **Post-baccalaureate Researcher**, *Queensland University of Technology, Australia (remotely).*
Supervisor: Dr. Xuefei Gao
Topics: Language processing, perceptual simulation, psychological toolkit development

2016–2018 **Undergraduate Research Assistant**, *Beijing Normal University, China.*
Supervisor: Prof. Jian Li
Topics: Educational psychology, ecological measurement, game-based assessment

2015–2017 **Undergraduate Research Assistant**, *Beijing Normal University, China.*
Supervisor: Dr. Ting Jiang
Topics: Numerical cognition, mental number line, automatic processing

Teaching

School of Informatics, University of Edinburgh.

2023-2024 Lecturer & Course Organizer, Seminar in Cognitive Modelling, Master.

2022-2023	Teaching Assistant & Marker, Computational Cognitive Science, Year-3 undergraduate.
2020-2021	Marker, Introduction to Cognitive Science, Year-1 undergraduate.
	Department of Psychology, University of Edinburgh.
2021-2023	Demonstrator & Marker, Univariate Statistics and Methodology using R, Master.
2021-2022	Demonstrator & Marker, Data Analysis for Psychology in R, Year-1 undergraduate.
2021-2022	Demonstrator & Marker, Introduction to Psychology, Year-2 undergraduate.
2020-2022	Teaching Assistant & Marker, Causal Cognition, Year-3 undergraduate.

Reviews

Since 2024	Cognition (2)
	Developmental Psychology (1)
	International Joint Conference on Learning and Reasoning (2)
Since 2023	Cognitive Psychology (2)
	Cognitive Computational Neuroscience Conference Proceedings (9)
Since 2022	Judgment and Decision Making (1)
	Journal of Experimental Psychology: Learning, Memory, and Cognition (1)
Since 2021	Cognitive Science Conference Proceedings (7)

Skills

Modelling/ Statistics	R, Python, MATLAB, Stan, SPSS, JASP, Jamovi
Experimentation	JavaScript, HTML, CSS, SQL, Psychtoolbox, Eye-link, Qualtrics, Mturk, Psiturk
Document Preparation	Jupyter, Markdown, RMarkdown, LaTeX
Languages	English (fluent), Chinese Mandarin (native), Japanese (basic)