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Tianwei Gong

Education & Professional Experience

Since 2023 **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. (under review). Rational causal induction from time. *Under review 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

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 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 and Scholarships

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: Dr. 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: Dr. 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)
Since 2023	Cognitive Psychology (1)
	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)