Tianwei Gong

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EDUCATION

School of Philosophy, Psychology and Language Sciences, University of Edinburgh

MSc. by Research Psychology *Sept 2019 - Aug 2020 (expected)*

- Supervisor: Dr. Neil R. Bramley **[Bramley Lab]**

Faculty of Psychology, Beijing Normal University

BSc. in Psychology *Aug 2014 - Jun 2018*

- GPA: 90.5/100
- Relevant Coursework: General Psychology, Experimental Psychology, Psychological Statistics, Psychological Measurement, Cognitive Psychology, Developmental Psychology, Social Psychology, Physiologic Psychology, Psychology of Personality, Children's Emotion and Cognition, Calculus and Linear Algebra, Advanced Technology in Experimentation, Sociology, Introduction to Philosophy, Pedagogy.

GRE: Verbal 161, Quantitative 169, Writing 4.0.

TOEFL: Reading 27, Listening 29, Speaking 22, Writing 27.

MOOC: Coursera - Statistics with R; HTML, CSS, and JavaScript for Web Developers. MIT OpenCourseWare - Brains, Minds and Machines Summer Course (2015). National Taiwan University - Machine Learning (2018).

PUBLICATIONS

- **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. **[pdf]**
- 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. **[pdf]**
- **Gong, T.**, & Shtulman, A. (submitted). The plausible impossible: Chinese adults hold graded notions of impossibility.
- **Gong, T.**, Young, A., & Shtulman, A. (submitted). The development of cognitive reflection in China.
- Yu, S., Li, B., Zhang, M., **Gong, T.**, Li, X., Li, Z., …, & Chen, C. (submitted). Automaticity in processing spatial-numerical associations: Evidence from a perceptual orientation judgment task of Arabic digits in frames.
- **Gong, T.**, Gao, X., Chen, J, & Jiang, T. (in prep). FAB: A dummy's program for self-paced forward and backward learning.
- **Gong, T.**, & Li, J. (in prep). Course selection and scheduling predict academic performance.
- Gao, X., **Gong, T.**, Wei, C., & Jiang, T. (in prep). Similarity-induced interference in sentence processing: The role of pragmatics.
- Gao, X., Janse, E., & **Gong, T.** (in prep). Sensory limitations on perceptual simulation in language understanding across the lifespan.

CONFERENCE PRESENTATIONS

- *"Similarity-induced interference in sentence processing: the (missing) role of pragmatics."* Poster presented at the 30th Association for Psychological Science (APS) Annual Convention, San Francisco, CA, USA. **[poster]**
- *"The Association Between Number Magnitude and Space Is Dependent on Notation."* Talk presented at Jing-Stevenson-Zhang research symposium, Department of Psychology, University of Michigan, Ann Arbor, MI, USA. **[slides]**

RESEARCH EXPERIENCES

Cognitive Reflection, Magic Thinking, Cross-cultural Cognition

- *Supervisors: Prof. Andrew Shtulman (Occidental College, USA)*
- **Question:** Do cognitive reflection, rational thinking and thinking disposition convergence in Chinese children' cognitive development? **Method:** Validated the child-friendly cognitive reflection test in Chinese and administrated relevant cognitive tests to Chinese adults and children. **Result:** All three abilities increased with age. Cognitive reflection still predicted other two abilities under the control for age, replicating previous results in Western culture.
- **Question:** How Chinese people represent unexplainable magic events? **Method:** Recruited Chinese college students to evaluate the difficulty of magic spells or generate magic spells. **Result:** Chinese honored implicit causal constraints when rating impossible events as Westerners, but they also credited more difficulties to psychological spells.

Language Processing, Perceptual Simulation, Situation Integration

- *Supervisors: Dr. Xuefei Gao (Queensland University of Technology, Australia)*
- **Question:** Whether the similarity of thematic pragmatic information will interfere sentence processing? **Method:** Generated eighty sets of sentences differentiated in gender bias (same gender vs. different genders) and syntax complicacy. Used self-paced reading paradigm to record the reading time. **Result:** Pragmatic gender similarity increased the reading duration and rereading times, especially when the syntax was complicate.
- **Question:** Whether perceptual simulation in linguistical inference will be impacted by aging or sensory decline? **Method:** Adapted previous sentence-picture verification paradigm with easy and hard fonts and administrated them to a lifespan sample. **Result:** Younger and older adults revealed a similar delay effect in sentence-picture mismatching condition, regardless of the font difficulty, which indicated the resilience of perceptual simulation.

Data Mining, Informetrics, Game-based Assessment

- *Supervisors: Prof. Jian Li (Beijing Normal University, China)*
- **Question:** Could college students' course selection reflect their overall academic performance? **Method:** Used course numbers and choices to predict general GPA, under linear and non-linear machine learning algorithms. **Result:** Course selection can explain 3% of their GPA. Students with higher GPA preferred to take more classes in early university.
- **Question:** Could players' behavior in games reflect their learned helplessness inclination? **Method:** Recruited people to play a touch-screen whac-a-mole game and finish learned helplessness scales. Investigated the relation between the two. **Result:** Scale scores were negatively related to players' frequency of exploratory actions in the game.

Numerical Cognition, Mental Number Line, Automatic Processing

- *Supervisors: Dr. Ting Jiang (Beijing Normal University, China)*
- **Question:** Could spatial-numerical association of response codes (SNARC) effect appear when in a number-unrelated task? **Method:** designed an adaptive perceptual task on Arabic digits or number words. **Result:** SNARC effect showed up, but only in Arabic digits, suggesting the role of familiarity in automatic processing.
- **Question:** Could word stimuli generate SNARC-like effect? **Method:** Asked people to judge whether the color word was before or after green in color spectrum. **Result:** The reaction time pattern was similar to SNARC effect.

Open Science, Psychological Toolkit Development

- *Supervisors: Dr. Xuefei Gao & Dr. Ting Jiang*
- **Goal:** A dummy's web-based toolkit for researchers to conduct self-paced back-and-forth leaning experiments.
- **Goal:** A MATLAB-based toolkit for researchers to transforming words stimuli to pictures instantly. **[link]**

SKILLS

- Modeling/Data Analysis: Python (pandas, numpy, scikit-learn, keras), R, MATLAB, SPSS, JASP, Jamovi
- Experimentation: JavaScript, HTML, CSS, Psychtoolbox, Eye-link 1000, Qualtrics, Mturk, Psiturk
- Document Preparation: Jupyter, Markdown/ R Markdown, LaTeX
- Languages: Chinese Mandarin (native), English (fluent)