

Han Hao

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EDUCATIONAL BACKGROUND

Ph. D. in Applied Cognitive Psychology, 2022

Department of Psychology, Claremont Graduate University, Claremont, CA

M. A. in Positive Organizational Psychology and Evaluation, 2017 Spring

Department of Psychology, Claremont Graduate University, Claremont, CA

B.Sc. in Psychology, 2013

Department of Psychology and Behavioral Science, Zhejiang University, Hangzhou, China

RESEARCH EXPERIENCE

Graduate Researcher at the CALIBER Research Lab, Claremont Graduate University, 06/2017 – 2022

Advisor: Dr. Andrew Conway

M. A. Researcher in Positive Organizational Psychology Program, 09/2015 – 05/2017

Advisor: Dr. Becky Reichard

Project 1. Organizational Evaluation and Case Study of Claremont Colleges Library

Project 2. “IT works”, A Business Challenge Project of Positive Organizational Psychology

Student Research Training Program, Zhejiang University, China, 10/2012 - 05/2013

Advisor: Dr. Qiong Zhang

Project: Preschoolers' Comprehension of Laughter Sounds as Social Signals

Student Research Training Program, Zhejiang University, China, 07/2011 - 05/2012

Advisor: Dr. Qiong Zhang

Project: Children's Oral and Gesticulating Expression towards Causal Chain Events

TEACHING EXPERIENCE

Teaching Assistant, Claremont Graduate University

PSYCH 315 E Multilevel Modeling, 2020..... Instructor: Dr. Seong-Hyeon Kim

PSYCH 315 F Factor Analysis, 2019..... Instructor: Dr. Andrew Conway

PSYCH 315 H Structural Equation Modeling, 2019..... Instructor: Dr. Andrew Conway

PSYCH 315 F Factor Analysis, 2017..... Instructor: Dr. Andrew Conway

PSYCH 315 H Structural Equation Modeling, 2017 Instructor: Dr. Andrew Conway
 PSYCH 308 A Intermediate Statistics, 2016..... Instructor: Dr. Kathy Pezdek
 PSYCH 308 B ANOVA, 2016..... Instructor: Dr. Andrew Conway
 PSYCH 308 C Applied Regression, 2016..... Instructor: Dr. Andrew Conway
 PSYCH 308 D Categorical Data Analysis, 2016..... Instructor: Dr. Andrew Conway

WORK EXPERIENCE

Research and Statistics Consultant, The Findings Group, 2019 - 2021

Supervisor: Tom McKlin

- Data analysis and visualization for program evaluation and research projects.

Data Analyzing Intern, The Real-Time Eating Activity and Children's Health Lab, University of Southern California, 2016

Supervisor: Lissette Ramirez, Karen Ra

- Data cleaning on longitudinal data of accelerate meter records and cortisol level in saliva.
- Survey Data Entry and Cleaning.

PUBLICATIONS/MANUSCRIPTS

- Hao, H.** (2023, January 21). The Conceptual Representation of Latent Variables from Variational Autoencoders: A Psychometric Investigation of Cognitive Data Using Interpretable Variational Autoencoder. <https://doi.org/10.31219/osf.io/c38hn>
- Hao, H., & Conway, A. R.** (2022). The impact of auditory distraction on reading comprehension: An individual differences investigation. *Memory & Cognition*, 50(4), 852-863.
- Conway, A. R., Kovacs, K., **Hao, H.**, Rosales, K. P., & Snijder, J. P. (2021). Individual differences in attention and intelligence: A united cognitive/psychometric approach. *Journal of Intelligence*, 9(3), 34.
- Ni, L., McKlin, T., **Hao, H.**, Baskin, J., Bohrer, J., & Martin, A. (2021, March). Assessing Professional Identity of Computer Science Teachers: Design and Validation of the CS Teacher Identity Survey. In *Proceedings of the 52nd ACM Technical Symposium on Computer Science Education* (pp. 1332-1332).
- Ni, L., McKlin, T., **Hao, H.**, Baskin, J., Bohrer, J., & Tian, Y. (2021, August). Understanding Professional Identity of Computer Science Teachers: Design of the Computer Science Teacher Identity Survey. In *Proceedings of the 17th ACM Conference on International Computing Education Research* (pp. 281-293).
- Navarro, E., **Hao, H.**, Rosales, K., & Conway, A. R. (2022). *An Examination of Domain-Specificity Differences in Complex Span Tasks through Item Response Theory*.

Manuscript under review.

Wanzer, D. L., **Hao, H.**, McKlin, T. (2022). *Response or recall bias? Choosing between the traditional and retrospective pretest using measurement invariance techniques.*

Manuscript under review.

Conway, A. R., Kovacs, K., **Hao, H.**, Goring, S. A., & Schmank, C. (2020). The Struggle Is Real: Challenges and Solutions in Theory Building. *Psychological Inquiry*, 31(4), 302-309.

Conway, A. R., & **Hao, H.** (2020). The Role of Non-Cognitive Factors in the SAT Remains Unclear: A Commentary on Hannon (2019). *Journal of Intelligence*, 8(2), 15.

Conway, A. R., Kovacs, K., **Hao, H.**, & Snijder, J. (2019). *General Intelligence Explained (Away)*. Unpublished manuscript.

CONFERENCE PRESENTATION

Hao, H., Rosales, K. P., Snijder, J., Kovacs, K., Kane, M. J., & Conway, A. R. A. (2021 November). *The Generality of Working Memory and Reasoning: Rethinking the Relationship*. Poster session of Psychonomic Society Annual Meeting, Virtual Conference.

Hao, H., Rosales, K. P., Snijder, J., Kovacs, K., Kane, M. J., & Conway, A. R. A. (2021 September). *Rethinking the Relationship of Working Memory and Intelligence: A Perspective Based on Process Overlap Theory*. Poster session of International Society for Intelligence Research Annual Conference, Virtual Conference.

Hao, H., Navarro, E., Rosales, K. P., & Conway, A. R. A. (2020 November). *Measurement of Working Memory Capacity: An Item Response Theory Examination of Complex Span Tasks*. Poster session of Psychonomic Society Annual Meeting, Austin, TX.

Hao, H. & Conway, A. R. A. (2019, November). *The Impact of Auditory Distraction on Reading Comprehension: An Individual Differences Investigation*. Poster session presented at the Psychonomic Society Annual Meeting, Montreal, Canada.

Kovacs, K., Conway, A. R. A., Snijder, J., & **Hao, H.** (2018, November). *General Intelligence Explained (Away)*. Poster session presented at Psychonomic Society Annual Meeting, New Orleans, LA.

PROJECTS IN PROGRESS

Hao, H., Navarro, E., Rosales, K., & Conway, A.R. *Domain Specificity Varies across Different Complex Span Tasks: A Multidimensional Item Response Model of Complex Span Tasks*. Manuscript planning.

Hao, H., Rosales, K., Conway, A.R., Kovacs, K., & Kane, M. J. *What are Complex Span Tasks Measuring? A Network Analysis of Fluid Reasoning, Working Memory, and Short-term*

Memory. Manuscript in preparation.

Hao, H., & Conway, A.R. *How and Why Could “General Intelligence” not General: A Two-tier Item Response Latent Network of Intelligence*. Manuscript in preparation.

Hao, H. *The Latent Traits Underlie Working Memory Tasks: A Machine Learning Investigation with Interpretable Variational Autoencoder*. Manuscript in preparation

AWARDS & SCHOLARSHIPS

CGU Fellowships (2016, 2017, & 2018) in Division of Behavioral & Organizational Sciences

Outstanding Research Awards of the 15th (2012) & 14th (2011) Student Research Training Program

PROFESSIONAL SKILLS

Statistical Skills:

General/Generalized regression Modeling, Multilevel Modeling, Exploratory and Confirmatory Factor Analysis, Structural Equation Modeling, Item Response Theory, Psychometric Network Analysis, Data Simulation, Artificial Neural Network.

Software Skills:

R, SPSS, AMOS, Mplus, C, Python, Markdown, HTML.