Haoran (Matt) Wan

Reed College | Portland, OR | (+1) (503)853-3929, | haoranw@reed.edu

Education

B.A. Psychology/Economics, Reed College, May 2021
Major GPA: Psychology – 3.97, Economics – 3.82

Research Interests   Behavioral Analysis, Token Economy, Judgment & Decision Making, Behavioral Economics, Quantitative Research

Research Experience

Senior Thesis Researcher
Reed College Economics & Psychology Depts,   August 2020 – May 2021
PI: Dr. Denise Hare and Dr. Timothy Hackenberg
Project: Econometric Analysis of Consumer Saving Using a Laboratory-based Token Economy

- Examined the effect of price, wealth, wage, interest rate, and wealth tax on consumer saving behavior using pigeons as model species.
- Developed an independent project on saving behavior in pigeons; conducted and annotated literature review on token economy, affective forecasting, wealth tax policy, and experimental and behavioral economics using animal models.
- Trimmed experimental dataset with more than 5,000 observations with Stata and R; conducted data analysis and visualization in R and Stata; constructed Bayesian multilevel statistical model, and modeled experimental data with Markov chain Monte Carlo (MCMC) methods in Stan.
- Presented thesis in Psychology Senior Thesis Poster Session; presented research updates at weekly thesis meeting.
- Thesis was completed and defended in May 2021.

Research Assistant
Psychology Dept., Reed College,   October 2017 – May 2021
PI: Dr. Timothy Hackenberg, Learning and Adaptive Behavior Lab
Projects: Token-based Animal Model of Gambling; Experimental Analysis of Social Behavior

- Developed an independent research project on altruistic behavior in rats; conducted literature review on altruistic sharing and social interaction in rat.
- Collected, modeled, analyzed, and visualized experimental data with R, Excel, Demand Curve Analyzer, and Discount Model Selector; construct Bayesian multilevel statistical models in R and Stan.
- Collaborated on the manuscript (under review) as first author; present experimental updates at weekly lab meetings.

- Wrote two successful grant applications for independent summer research projects; resulted in poster presentation at the 45th Annual Convention of Association for Behavior Analysis International.
- Worked as a Research Assistant on an NIH grant on a laboratory model for examining slot-machine gambling behavior in a token economy with pigeons to quantify the relationships between risky choices and reward variables, economic variables, contextual variables, and social enrichment. Ran daily experimental sessions and wrote daily experiment reports.

Research Assistant
Economics Dept, Reed College,   March 2020 – August 2020
PI: Dr. Denise Hare
Project: The Econometric Analysis of China's Secondary Vocational Educational System
- Examined the effects of a vocational education secondary degree relative to various alternatives on employment, occupation, and wage/income; searched for good instruments to separately identify the educational choice in a first stage equation, given that individual's selection of the vocational track might be endogenous to the observed job market outcome.
- Conducted and annotated literature review on the economic returns of vocational education and compared the returns of vocational education across countries; translated government documents from Chinese to English.
- Wrote a successful grant application for a summer research project; presented data analysis progress at twice daily lab meetings.
- Trimmed three survey data sets with more than 100 variables and 20,000 individual observations with Stata and Excel to identify variables, build models, and conduct estimations; replicated and verified previous data analysis; collected, modeled, analyzed, and visualized data with Stata and Excel; performed inferential regression analyses using national survey dataset.

Research Intern
Shenzhen Stock Exchange Legal and Fixed Income Depts,   May 2019 – August 2019
PI: Dr. Zhang Wu and Dr. Chang Zhang
- Trimmed dataset of government debts and corporate bonds; conducted summary data analysis of monthly and yearly government debts and corporate bonds using Excel; replicated and verified previous data analysis; wrote monthly and yearly reports on local government debts and corporate bonds; presented findings to management.
- Conducted and annotated comparative studies on capital market law and policy in the Greater Bay Area of Guangdong, Hong Kong, and Macau; modified the Shenzhen Stock Exchange guidelines of the Standardized Operation of Companies Listed on the Main Board and SME Board; summarized the provisions of Independent Director.

Publications

Wan, H., Kirkman, C. F., Jensen, G., Hackenberg, T. D. (*In review*). Failure to Find Altruistic Sharing in Rats.

Conference Presentations

Wan, H., Kirkman, C. F., Franceschini, C., Hackenberg, T. D. (2018). Failure to Find Altruistic Behavior in Rats. Poster presented at annual Research Poster Session, Reed College, Portland, Oregon.

Wan, H., Kirkman, C. F., Franceschini, C., Hackenberg, T. D. (2019). Failure to Find Altruistic Behavior in Rats. Poster presented at Association for Behavior Analysis International, Illinois.

Wan, H., Tan, Lavinia, Hackenberg, T. D. (2021). Economic Analysis of Pigeons' Token Production, Exchange, and Accumulation in a Laboratory-Based Token Economy. Poster presented at the Society for the Quantitative Analyses of Behavior.

Hackenberg, T. D., **Wan, H.,** Kirkman, C. F. (2019). Do Rats Share Food?: Tests with the Social-Release Paradigm. Paper presented at annual symposium, Association for Behavior Analysis International Convention, Illinois.

Kirkman, C. F., **Wan, H.,** C. F., Franceschini, C., Hackenberg, T. D. (2019). Assessing Cross-Price Interactions Between Food and Social Reinforcement. Poster presented at the 45th Annual Convention at Association for Behavior Analysis International, Illinois.

Hackenberg, T. D., Kirkman, C. F., **Wan, H.,** Franceschini, C. (2019). Behavioral Economics of Food and Social Reinforcement. Paper presented at annual symposium, Association for Behavior Analysis International Convention, Stockholm.

Teaching Experience

Teaching Assistant

Psychology Dept., Reed College,   January 2019 – May 2021

Courses: PSY 203 Learning and Comparative, PSY 373 Learning

- Develop experimental procedures for students' in-class experiments; give instructions on lab assignments; supervise and guide students' in-class experiments.
- Teach data analysis using EXCEL and MED-PC programing language.
- Help write MED-PC codes for the class; provide daily care for lab animals.

Teaching Assistant

Economics Dept., Reed College,   September 2019 – May 2021

Course: EC 201 Introduction to Economic Analysis

- Grade approximately thirty economics problem sets weekly and provided detailed feedback

- Host weekly drop-in help sessions after class hours, helping students with class reading material, projects, and problem sets.
- In person tutor for the course material.

Awards & Grants

Gerald M. Meier Award for Distinction in Economics, Reed College,   May 2021
- Competitive award by Reed College Economics Department recognizing outstanding achievement by senior economics majors.

Student Summer Research Fellowship, Reed College,   May 2020
- Competitive grant by Reed College 2020 Economics Summer Research Program.

Opportunity Grants, Reed College,   May 2017, May 2018
- Competitive grant by Reed College supporting undergraduate students in pursuit of academically valuable and pertinent opportunities.

Career Advancement Fund, Reed College,   September 2020
- Competitive award by Reed College Center for Life Beyond Reed supporting professional development.

Commendation for Excellence, Reed College,   2018 – 2019, 2019 – 2020
- Awarded to students maintaining 3.5 GPA or above each academic year.

*Most Likely to Succeed, Dr. Mark Bedau,   May 2021
- Awarded to students who Dr. Mark Bedau expected to be successful in the future.

Professional Affiliations

Association for Behavioral Analysis
Society of Quantitative Behavioral Analysis

Professional Development

The Empirical Research Workshop Series, Reed College,   June 2020
- Data handling, data analyzing, spatial analysis, and visualization using R; studied and employed ggplot2, xaringan, and blogdown packages in R.
- Created GitHub account to keep track of research work; utilized Docker to deliver software in packages.
- Searching strategies for finding scholarly empirical literature and data.

Attendee, Society of Quantitative Behavioral Analysis 43rd Annual Conference (2019), Chicago, IL.

Attendee, Association for Behavior Analysis International 45th Annual Convention (2019), Chicago, IL.

Attendee, Society of Quantitative Behavioral Analysis 41st Annual Conference (2019), Chicago, IL.

Skills

Language – English, Chinese

Programing language – R, Stata, LaTeX, Stan, MED-PC

Statistics – Bayesian Statistics, Econometrics, Multilevel modeling