

# Qiankun Zhong, PhD

Postdoc Researcher,  
Max Planck Institute for Human Development

Cultural Evolution, Organizational Communication,  
Machine/AI Behaviors, Computational Social Science

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## Education

**Ph.D. in Communication**  
Oct 2023

**University of California, Davis**

Advisor: Martin Hilbert

Dissertation: *Institutions and Culture in the current Communication Landscape*

**M.A. in Emerging Media Studies**  
Sep 2015 - June 2017

**Boston University**

Advisor: James Cummings

Thesis: *The Effects of Presence on Responses to Argument Quality in a VR environment*

**B.A in Journalism**  
Sep 2010 – Sept 2014

**Shandong University**

*Additional training:*  
**Graduate Workshop of  
Computational Social Science**  
June 2022

**Santa Fe Institute**

*Computational Modeling*

*Additional training:*  
**Summer Institute in Survey  
Research Techniques**  
July 2019

**University of Michigan**

*Multi-level Analysis of Survey Data*

## Employment

**Post-doctoral Researcher**, Nov 2023 –  
**Center for Humans and Machines, Max Planck Institute for Human Development**  
**Supervisor:** Iyad Rahwan

## Publications

**Zhong, Q.**, Jacoby, N., Tchernichovski, O., & Frey, S. (Under Review). Institutional Preferences in the Laboratory. *arXiv preprint arXiv:2502.06748*.

Chakraborti, M\*, **Zhong, Q.\***, Bulat, B., Sen, A., & Frey, S. (Under Review). Deconstructing written rules and hierarchy in peer produced software communities. *arXiv preprint arXiv:2206.07992*.

Smaldino, P. E., Russell, A., Zefferman, M., Donath, J., Foster, J., Guilbeault, D., Hilbert, M., Hobson, E. A., Lerman, K., Miton, H., Moser, C., Lasser, J., Schmer-Galunder, S., Shapiro, J., **Zhong, Q.**, & Patt, D. (In Print). Information Architectures: A Framework for Understanding Socio-Technical Systems. *NPJ Complexity*. doi: 10.31219/osf.io/c7vrw

Rao, A., Chang, R. C., **Zhong, Q.**, Wojcieszak, M., & Lerman, K. (In Print) Tracking a Year of Polarized Twitter Discourse on Abortion. *International AAAI Conference on Web and Social Media*. <https://arxiv.org/abs/2311.16831>

Chang, R. C., Rao, A., **Zhong, Q.**, Wojcieszak, M., & Lerman, K.(2023) #RoeOverturned: Twitter Dataset on the Abortion Rights Controversy. *International AAAI Conference on Web and Social Media*

**Zhong, Q.**, Hilbert, M., & Frey, S. (2023). Breaking the Structural Reinforcement: An Agent-based Model on Cultural Consumption and Social Relations. *Social Science Computer Review*. <https://doi.org/10.1177/08944393211056501>

Cummings. J, Cahill, T. J., Wertz, B., **Zhong, Q.** (2022). Psychological Predictors of Virtual Reality Technology Adoption and Usage. *Virtual Reality*, 1-23. <https://doi.org/10.1007/s10055-022-00736-1>

**Zhong, Q.**, Frey, S. (2022). Institutional similarity drives cultural similarity among online communities. *Scientific Reports* 12, 18982. <https://doi.org/10.1038/s41598-022-23223-8>

**Zhong, Q.**, Frey, S., & Hilbert, M. (2022). Quantifying the Selective, Stochastic, and Complementary Drivers of Institutional Evolution in Online Communities. *Entropy*, 24(9), 1185. <https://doi.org/10.3390/e24091185>

Frey, S., **Zhong, Q.**, Bulat, B., Weisman, W., Liu, C., Fujimoto, F., & Wang, H. (2022). Governing online goods: An Institutional Comparison of Minecraft, Reddit, and World of Warcraft. *In Proceedings of The 25th ACM Conference On Computer-Supported Cooperative Work And Social Computing*. <https://doi.org/10.1145/3555191>

Cahill, T. J., Wertz, B., **Zhong, Q.**, Parlato, A., Donegan, J., Forman, R., ... & Cunningham, T. N. (2019). The Search for Consumers of Web-Based Raw DNA Interpretation Services: Using Social Media to Target Hard-to-Reach Populations. *Journal of medical Internet research*, 21(7), e12980. <https://doi.org/10.2196/12980>

Groshek, J., Katz, J. E., Andersen, B., Cutino, C., & **Zhong, Q.** (2018). Media use and antimicrobial resistance misinformation and misuse: Survey evidence of information channels and fatalism in augmenting a global health threat. *Cogent Medicine*, 5(1), 1460898. <https://doi.org/10.1080/2331205X.2018.1460898>

Wang, C., Cahill, T. J., Parlato, A., Wertz, B., **Zhong, Q.**, Cunningham, T. N., & Cummings, J. J. (2017). Consumer use and response to online third-party raw DNA interpretation services. *Molecular Genetics & Genomic Medicine*. <https://doi.org/10.1002/mgg3.340>

\*equal contribution

## Research Appointment

<b>Research Assistant</b> <b>PI: Seth Frey</b> 2020 – Present	<b>University of California, Davis</b> <b>Department of Communication</b> <b>Project: Designing Smart Environments to Augment Collective Learning &amp; Creativity (NSF Award 2421385)</b> <ul style="list-style-type: none"> <li>• Implement online large-scale asynchronous economic games</li> <li>• Analyze experiment data using Bayesian Structural Models</li> </ul>
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**Research Assistance**  
**PI: Jim Cummings**  
2015-2016

**Project: Jumpstarting Successful Open-Source Software Projects with Evidence-Based Rules and Structures (NSF Award 2020751)**

- Conducted text analysis using multiple natural language processing models
- Conducted data analysis using multi-level regression
- Data visualization the results using R and Python
- Wrote multiple preprints and published papers on CSCW and Scientific Reports

**Boston University**  
**School of Communication, Emerging Media Studies**  
**Project Perception of Presence in a Virtual Environment**

- Conducted meta-analysis on objective measurement of presence
- Designed survey for VR usage and adoption
- Prepared clean dataset for statistical modeling

## Skills

**Programming** Python, R, Java, SQL, Stata, NetLogo, HTML, Javascript

**Research** Agent-based modeling, Natural Language Processing, Econometrics, Experiment Design

## Fellowships, Awards, and Honors

**Dean's Graduate Summer Fellowship, 2023**

School of Letters and Science, University of California, Davis

**Dean's Graduate Summer Fellowship, 2022**

School of Letters and Science, University of California, Davis

**Graduate Student Travel Award, 2020**

Graduate Student Association, University of California, Davis

**Top paper award, 2020**

Zhong, Q. & Frey, S. (May, 2020) "Institutional similarities drive cultural similarity among online communities", 70th International Communication Association Annual Meeting (ICA), Online.  
Computational Method, International Communication Association

**Provost's Fellowship in the Arts, Humanities, and Social Science, 2018**

School of letters and Science, University of California, Davis

**Top poster award, 2018**

Wertz, B. & Zhong, Q. (May, 2018) "Learning, Doing, Flow, and Fun: Understanding Relationships Between Difficulty, Enjoyment and Skill Development in Games" 68th International Communication Association Annual Meeting (ICA), Prague, Czech.  
Game Studies, International Communication Association

## Courses Taught

## **Introduction to Mass Communication**

2021- 2022, Spring Semester

Teaching Assistant (lecture section) and Full Lecturer (lab section)

## **Data Visualization**

2020- 2021, Fall Semester

Teaching Assistant (lecture section) and Full Lecturer (lab section)

## **Introduction to Computational Social Science**

2018-2021

Head Teaching Assistant and course design assistant

## **Digital Technology and Social Change**

2018-2021

Head Teaching Assistant

## **Invited Talks and Guest Lectures**

“Cultural Evolution of Online Communities” presented to USC-SJTU Institute of Cultural and Creative Industry. Shanghai Jiao Tong University. Dec, 2024. Shanghai, China.

“Comparing Python and Java in writing Agent-based Modeling” will be presented to Schank ABM Lab, UC Davis, Online.

“Group Selection of AI Behaviors” Computational Auditory Perception Group, Max Planck Institute for Empirical Aesthetics. June, 2024. Frankfurt, Germany.

“Agent-based Models in Communication Research”, Nov, 2023, Department of Communication, Clemson University

“Polarization of Beliefs and Identity Signals: comparing origins and maintenance” Information Architecture workshop, Santa Fe Institute. May, 2023. Santa Fe, USA.

“Comparing social learning strategies: Evidence in Patent Data” Knowledge Lab, University of Chicago. May, 2023.

## **Presentations**

**Zhong, Q.** (May, 2023) “Polarization of Beliefs and Identity Signals: comparing origins and maintenance” Presented to the Information Architecture, Santa Fe.

**Zhong, Q.** (May, 2023) “Polarization of Beliefs and Identity Signals: comparing origins and maintenance” Presented to the California Workshop of Evolutionary Social Science, Merced.

**Zhong, Q.** (May, 2022) “Breaking Down the Panopticon: an ABM on Self-censorship Reduction” Presented to the 8<sup>th</sup> IC2S2, Chicago.

**Zhong, Q.** (May, 2022) “Breaking Down the Panopticon: an ABM on Self-censorship Reduction” Presented to the 72th International Communication Association Annual Meeting (ICA), Paris, France.

**Zhong, Q. & Huskey, R.** (May, 2021) “Cheaper but Better? A Modeling approach to Costless Signaling theories in Communication” Presented to the 71th International Communication Association Annual Meeting (ICA), Online.

**Zhong, Q.** & Frey, S. (May, 2021) “Detecting the Selective and Stochastic Forces in the Evolution of Online Communities” Presented to the 71th International Communication Association Annual Meeting (ICA), Online.

**Zhong, Q.,** Hilbert,M., & Frey, S. (September, 2020) “Breaking structural reinforcement: an agent-based model on cultural choice and social relations” Presented to Network Science 2020 (NetSci), Online.

**Zhong, Q.,** Hilbert,M., Frey, S. & Wertz, B. (July, 2020) “A dynamical system approach to psychological flow” Presented to International Conference of Computational Social Science (IC2S2), Online.

**Zhong, Q.** & Frey, S. (May, 2020) “Institutional similarities drive cultural similarity among online communities” Presented to the 70th International Communication Association Annual Meeting (ICA), Online.

#### · Top Paper Award

**Zhong, Q.** & Frey, S. (July, 2019) “Institutional isomorphism and homophily effects of self-governing online communities” Presented to International Conference of Computational Social Science (IC2S2), Amsterdam, Netherland.

**Zhong, Q.** & Cummings, J. (August, 2018) ”The Effects of Presence on Argument Quality in a Virtual Environment” Presented to the Annual Conference of the Association of Education in Journalism and Mass Communication (AEJMC), Washington D.C.

Wertz, B. & **Zhong, Q.** (May, 2018) “Learning, Doing, Flow, and Fun: Understanding Relationships Between Difficulty, Enjoyment and Skill Development in Games” Presented to the 68th International Communication Association Annual Meeting (ICA), Prague, Czech.

#### · Top Poster Award

Tiernan, C., Wertz, B., **Zhong, Q.**, Donegan,J., Forman,R, Manot,S., Parlato,A, Wu,T, Xu,Y, Cummings,J & Wang, C. (December, 2016)“Using Social Media to Target Niche Populations: The Search for Consumers of Online DNA Interpretation Services.” Presented to the 38th Annual Meeting & Scientific Sessions of the Society of Behavioral Medicine, San Diego, CA.

Groshek, J., Katz, J., Cutino, C., & **Zhong, Q.** “Media Use and Antimicrobial Resistance Misinformation and Misuse: (August, 2016) Survey Evidence of Information Channels and Fatalism in Augmenting a Global Health Threat.” Presented to the Association for Education in Journalism and Mass Communication, MN.

## Professional Affiliations

- International Communication Association (ICA)
- Cultural Evolution Society

## Review

- Digital Journalism
- ACM CSCW
- Cognitive Science
- Adaptive Behavior
- Computational Communication Research
- International Communication Association Annual Conference