Jiuheng He

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Education

Sept. 2018 - present	Ph.D. (2025 expected), Science and Technology Studies, Cornell University.
Sept. 2016 – July 2018	M.A., Science and Technology Studies, Tsinghua University.
Sept. 2014 - Jan. 2015	Exchange student, School of Communication, Simon Fraser University.
Sept. 2012 – Jan 2016	B.A., Journalism and Communication, Tsinghua University.

Working Paper

2024

"Is Move 37 a 'brilliant' or 'poor' move: Human Players' Discursive Moves facing the challenge from AlphaGo"

Abstract: On March 9th of 2016, AlphaGo defeated Lee Sedol, a legendary Go player who had won the world Go championship 14 times. This paper focuses on a specific moment in the second game when AlphaGo played a very unconventional move (move 37) that shocked almost all commentators and audiences in the Go community. Along with the confusion, shock, and mockery from human Go experts, move 37 in the second game marked a significant challenge by AlphaGo to human expertise and signaled the beginning of a revolution in the Go community. This article explores how human players reconstructed AlphaGo's 37th move, shifting from a 'poor move' to a 'brilliant move', and make sense of the challenge AlphaGo presented to the expertise of human players.

2024

"A Reverse Turing Test: The Blurring Boundary Between Human and AI in Go community"

Abstract: Since the appearance of Go AI, the Go community has encountered the dilemma of how to differentiate between Go games created by AI and those played by humans. This challenge is especially urgent when some players cheat with the assistance of AI in tournaments and online games. Human players select Go moves using a cognitive process based on heuristics and calculation. However, Go AI evaluates the 'win rate' for each possible move. Humans and AI will often choose the same move in a given position, so it is impossible to identify specific moves as representing either a "human" or "AI" style. This study investigates the practices the Go community uses in efforts to distinguish between human participants and AI, which will shed lights on the governance of generative AI in other realms.

Publication

He, Jiuheng." The Go Community under the Wave of Artificial Intelligence: An Interview with Go World Champion Gu Li 9-Dan." *Journal of Intelligent Society* 1.01(2022):208-216. doi:CNKI:SUN:ZNSH.0.2022-01-024. (In Chinese)

He, Jiuheng." The premise of machines acquiring human knowledge: having a body or mastering language?" *Tsinghua Sociological Review*.02(2020):46-62. doi:CNKI:SUN:QHSP.0.2020-02-004. (In Chinese)

Conferences

Nov. 2023 — Presentation entitled "*Understanding Knowledge Produced by Al: The Go Community After the Revolution of AlphaGo*", Society for Social Studies of Science 2023, Honolulu, Hawaii.

Oct. 2023 — Presentation entitled "*Blurring the Boundary Between Human and Machine: Cheating with AI in Go Community*", Science Studies Research Group in Cornell STS department, Ithaca, United States.

Dec. 2022 — Presentation entitled "*Knowledge production under the 'oracle' of AI: an empirical study on AlphaGo and Go community*", Society for Social Studies of Science 2022, Mexico.

July. 2022 — Presentation entitled " *Interpretability Issue of machine learning and ANNs in practice: A Case Study on Go AI (机器学习与人工神经网络在实践中的可解释性问题——围棋人工智能的案例研究)*", Annual Conference of Chinese Sociological Association 2022, online.

Apr. 2022 — Presentation entitled "*How to Understand Machine Learning Algorithms: A Case Study on Go AI (如何理解基于机器学习的人工智能——围棋人工智能的案例研究)*", 2022 AI Philosophy Frontier Forum, Beijing, China.

Apr. 2021 — Presentation entitled "*Unveiling the Black Box of AlphaGo: Interpretability and Transparency of machine Learning*", Science Studies Research Group in Cornell STS department, Ithaca, United States.

Apr. 2020 — Presentation entitled "*'Move 37': Discursive Moves in AlphaGo challenge match*", Science Studies Research Group in Cornell STS department, Ithaca, United States.

Nov. 2019 — Presentation entitled *"God of Go: Discursive Moves in Understanding AlphaGo"*, Cornell East Asia Program Lunch Dialogue Series, Ithaca, United States.

Sept. 2017 — Presentation entitled "*Mundane reason in scientific community: a study on Han Chunyu's controversy over genetic editing and its solution*", Society for Social Studies of Science 2017, Boston, United States.

Aug. 2016 — Presentation entitled "*Interaction between Reviewers, Editors and Authors during Production of Scientific Knowledge*", Annual Conference of Chinese Sociological Association 2016, Lanzhou, China.

Research and Teaching Experiences

Jan. 2019 – Present	Dissertational Project, *"The Go Community and AlphaGo: An Ethnographic Study of an Encounter with AI"*, supervised by Prof. Stephen Hilgartner, Cornell University.
Aug. 2023- Dec. 2023	Instructor, "*STS 1123 Technology and Society: History of Artificial Intelligence*", Cornell University.
2021 - Present	Research Assistant, *"Ethics-in-the-Making: Changing Practices in Data Science"* (NSF grant)*,* directed by Prof. Stephen Hilgartner, Cornell University.
2019-2020	Independent Study *"History of Artificial Intelligence"*, directed by Prof. Ronald Kline, Cornell University "*Social construction of Technology*", directed by Prof. Trevor Pinch, Cornell University
2019 - 2023	Teaching Assistant for following courses at Cornell University: *"Ethical Issues in Health and Medicine",* instructed by Prof. Kim Overby *"Computing Cultures"*, instructed by Prof. Malte Ziewitz *"What is Science?"*, instructed by Prof. Stephen Hilgartner *"Designing Technology for Social Impact"*, instructed by Prof. Chris Csíkszentmihályi
Jan. 2017 – July. 2018	Research Assistant, "*Social Construction of Air Pollution in China*", directed by Prof. Wei Hong, Tsinghua University, Beijing (Funding from National Foundation for Social Sciences)

Workshops and Summer Schools

Dec, 2016	3rd Tsinghua STS Workshop: *The Asthma Files(TFA)*, lectured by Prof. Kim Fortun and Prof. Mike Fortun, Tsinghua University, Beijing
Sept. 2016	Summer course: *Introduction to Sociology of Science*, lectured by Prof. Joseph W. Dauben, Tsinghua University, Beijing
Sept. 2016	2nd Tsinghua STS Workshop: *Harry Collins and Science & Technology Studies*, lectured by Prof. Robert Evans, Tsinghua University, Beijing (Teaching assistant)
Sept. 2015	1st Tsinghua STS Workshop: *Life Science and Society*, lectured by Prof. Michael Lynch, Tsinghua University, Beijing (Teaching assistant)

Media Coverage

April. 2023	Interview by CNN. *How AI turned the ancient sport of Go upside down.* https://www.cnn.com/2023/03/24/asia/ai-disruption-go-sport-hnk-intl-dst/index.html

Language Competence

Chinese (Mandarin) – Native Speaker
English – Fluent (TOEFL 109)