

# Psyche | Wanqing He

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## RESEARCH INTERESTS

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**Keywords:** Computer-mediated communication, Fluency and effectiveness of communication & collaboration in virtual meetings, Minimize linguistic and cultural barriers, Individual differences in personality and background

**CCS Concepts:** Human-centered computing → HCI design and evaluation methods; HCI theory, concepts and models; Interaction design → Interaction design process and methods; Empirical studies in interaction design.

## EDUCATION

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**Information Science & Minor in Cognitive Science, Cornell University** *Aug. 2023 - Now*  
Ph.D. in the area of Human-Computer Interaction; Communication and Collaborative Technologies Lab (PI: Susan Fussell)

**Psychology, Cornell University** *Aug. 2021 - Aug. 2023*  
Ph.D. in the area of Perception, Cognition, and Development; Cognitive Science of Language Lab (PI: Morten Christiansen)

**University of California, Berkeley** *Aug. 2016 - Dec. 2019*  
Linguistics B.A.; Dean's List  
Relevant Coursework: Language Acquisition and Cognition / Laboratory and Experimental Phonetics and Phonology / Computational Modeling of Linguistic Data / Social and Developmental Psychology / Multilingualism and Multiculturalism

## RECENT RESEARCH EXPERIENCE

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**XPLAIN - GEN AI Agent** *Aug. 2024 - Now*

- Proactive agent with culturally-tailored clarifications, suggestions & summaries to promote efficiency in virtual meetings
- Developed UX prototype in Figma and conducted user experience testing via WoZ with surveys and user interviews
- Collaborated and managed a team of 13 UX designers, data scientists & engineers to build UX in React, constructed pipeline of multiple models and API services, fine-tuned model & prompt engineering, & integrated into an interactive prototype
- Evaluated user interaction with prototype to optimize UX and synthesized interview codes through thematic analysis
- Pitched at Cornell Eclectic Entrepreneurship Conference as student start-up with tabling & showcased to ventures

**Content predictability in Computer-mediated Communication** *Aug. 2023 - June 2024*

- A comparison study between native & non-native speakers to gauge cognitive mechanism of prediction in communication
- Designed & conducted in-lab and online behavioral studies plus surveys with JsPsych on Pavlovia with 300+ participants
- Analyzed behavioral & survey data in python, built statistical models in R, published results written with Overleaf & Zotero

## PUBLICATIONS

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(To be appeared in CSCW 2025) **He, W.,** Fussell, S. R. XPLAIN: A Proactive Conversation Explainer and Supporter - A Qualitative User Interview Study on Assistive Agent Using Wizard-of-Oz Method

(To be appeared in CogSci 2025) **He, W.,** Fussell, S. R. Difference in the Cognitive Mechanism of Predictive Processing in Computer-Mediated Communication: a Comparison Study Between Native and Non-Native Speakers.

**He, W., ...,** Fussell, S. R. (2025). Exploring Content Predictability in Turn-taking Through Different Computer-Mediated Communications. In *Proceedings of the 31st International Conference on Computational Linguistics*, pages 7949–7962, Abu Dhabi, UAE. Association for Computational Linguistics.

## POSTERS & PRESENTATIONS

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**He, W.,** Christiansen, M. H. (2024). Statistical Chunking in Reading: The Modulating Effect of High-Frequency Multi-Word Chunks on Reading Performance. *Poster presented at the International Conference on Interdisciplinary Advances in Statistical Learning, Don-Sebastian, Spain.*

**He, W.,** Christiansen, M. H. (2022). To Chunk or Not to Chunk: Statistical Learning of High-Frequency Word-Marker Pairs. *Poster presented at the International Conference on Interdisciplinary Advances in Statistical Learning, Don-Sebastian, Spain.*

**He, W.** (2021). Verbal tone interactions in Iquito: an Optimality-theoretic analysis. *Talk presented at the 28<sup>th</sup> Manchester Phonology Meeting, online.*

He, W. (2020). Modeling Tone System: The Role Of Dispersion Theory in Optimization. *Talk presented at the 56th Linguistics Colloquium, online.*

He, W., Zhang, E., He, M. (2020). Infant walking, social communicative abilities, and vocabulary increases. *Poster presented at the 22nd Biennial International Conference of Infant Studies, online.*

Zhang, E., He, W., He, M. (2020). Does object exploration mediate infant walking and vocabulary increases? *Poster presented at the 22nd Biennial International Conference of Infant Studies, online.*

## GRANTS & AWARDS

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Entrepreneurship Lab (eLab) Start-Up Fund, Cornell University	2025
Travel Grant - <i>Cognitive Science Program, Cornell University</i>	2024, 2022
Research Fund - <i>Cognitive Science Program, Cornell University</i>	2023
Graduate Student Travel Grant - <i>Cornell University</i>	2022
Sage Fellowship - <i>Cornell University</i>	2021 - 2023
Summer Grant for Linguistics Society of America - <i>Department of Linguistics, UC Berkeley</i>	2019
International PASCH Junior Scholarship (cultural & language immersion program) - <i>Goethe-Institut, Germany</i>	2015

## WORK EXPERIENCE

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<b>Content Strategist - Trust and Safety</b> <i>ByteDance Inc.</i>	Beijing, China Dec. 2020 - Jun. 2021
<ul style="list-style-type: none"><li>• Designed a new framework of sensitive word detection for models across features of online platforms (Tiktok, Fictum, Helo)</li><li>• Collaborated with R&amp;D, QA, and Product teams to enhance the accuracy of retrieval and annotation of sensitive words</li><li>• Fine-tuned the policy playbook and community guidelines for markets in SE Asian, Europe, North America &amp; China</li></ul>	
<b>Linguist Intern - Ontology in Natural Language Understanding</b> <i>Facebook (via Pro Unlimited)</i>	Menlo Park, CA, U.S. July 2019 - Aug. 2019
<ul style="list-style-type: none"><li>• Developed a brand-new Mandarin NLU model for chatbot with cultural-specific adaption in syntactic and semantic features</li><li>• Improved tooling performance for i18n with pilot work on the first non-Indo-European language supported on FB Assistant</li></ul>	
<b>Volunteer - Product Management</b> <i>Singsound Co., Ltd</i>	Suzhou, Zhejiang, China Aug. 2020 - May 2021
<ul style="list-style-type: none"><li>• Worked with Speech and NLP teams to provide AI service of oral and written English assessment for Chinese K12 education</li><li>• Designed a new function that allows users to choose between British and American accent to improve learning experience</li><li>• Proposed adaption of basic phonetics and phonology, from alphabets to complex syllable structures to facilitate teaching</li></ul>	

## PREVIOUS RESEARCH APPRENTICE

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<b>Cognitive Science of Language Lab, Graduate student member</b> <i>Cross-linguistic difference in language learning and processing (PI: Morten Christiansen)</i>	Ithaca, NY, U.S. Aug. 2021 - May 2023
<b>Experimental Phonology Group, Co-researcher</b> <i>Rule Generalization at Different Boundary Levels (Advisor: Jesse Zymet)</i>	Berkeley, CA, U.S. Aug. 2019 - May 2020
<b>International Computer Science Institute, Research Assistant</b> <i>Multilingual FrameNet Project (PI: Terry Regier, Collin Baker)</i>	Berkeley, CA, U.S. Aug. 2019 - Dec. 2019
<b>Indigenous Language Revitalization Group</b> <i>Acoustic Analyses of Iquito and Social Background Research (Advisor: Christine Beier)</i>	Berkeley, CA, U.S. Aug. 2018 - May. 2021
<b>Infant Study Center, Research Assistant</b> <i>Locomotion and Early Language Acquisition in Chinese American infants (PI: Joseph Campos)</i>	Berkeley, CA, U.S. Jan. 2018 - Dec. 2019
<b>Berkeley PhonLab, Research Assistant</b> <i>Cost of Phonetic Cues in Mandarin-English code-switching (PI: Susan Lin, Alice Shen)</i>	Berkeley, CA, U.S. Aug. 2017 - Dec. 2017

## UNIVERSITY SERVICE

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<b>Vice President</b> <i>GPWomeN</i>	Ithaca, NY, U.S. Aug. 2023 - Now
<ul style="list-style-type: none"><li>• Foster university-wide collaborations among organizations to promote leadership and diversity, equity, and inclusion</li></ul>	

## Event Planning Chair

### *GPWomeN*

- Organized social events, panels, and speaker series on to promote bonding and recognition of women in science

Ithaca, NY, U.S.

*Aug. 2022 - May 2023*

## Senior Graduate Researcher

### *Department of Psychology (P.I. Amy Krosch)*

- Identified Community Engagement Opportunities for Research Fellows for Psychology summer research program
- Surveyed local organizations to identify overlaps between community needs and resources/expertise in psychology
- Formed community partnerships to promote underrepresented minorities in participating psychology research

Ithaca, NY, U.S.

*May 2022 - Dec. 2022*

## TEACHING & MENTORING EXPERIENCE

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### Teaching assistant -

INFO 2951 Introduction to Data Science	<i>Spr 2025</i>
INFO 6310 Behavior and Information Technology	<i>Fall 2024</i>
INFO 4450 Computer-mediated Communication	<i>Spr 2024</i>
INFO 4430 Teams and Technology	<i>Fall 2023</i>
PSYCH 2250 Psychology of Language	<i>Spr 2023</i>
PSYCH 1101 Introduction of Psychology	<i>Fall 2022</i>
Human Development 4380 Language and Thought	<i>Spr &amp; Fall 2022</i>

### Undergraduate Research Program

INFO 4900 Independent Study - 2 undergraduate students	<i>Fall 2023</i>
INFO 4900 Independent Study - 2 undergraduate students	<i>Spr 2024</i>
INFO 4900 Independent Study - 3 undergraduates & 5 Master of Engineering students	<i>Fall 2024</i>
INFO 4900 Independent Study - 6 undergraduate & 3 Master of Engineering students	<i>Spr 2025</i>

### Guest lectures

INFO 4450 - Content Prediction in the Fluency of Computer-Mediated Communication	<i>Spr 2024</i>
INFO 6310 - Mechanisms of Content Prediction in Computer-Mediated Communication	<i>Fall 2024</i>

## SKILLS

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Language:	English (fully proficient) / Mandarin & Wu Chinese (native) / German (B2 Certificate) / French, Arabic, Akkadian (reading) / Iquito, Lunyole, Kifuliiru (research)
Data & Statistics:	Python / R / MySQL
Acoustics:	Praat / Audacity / Adobe Audition / ELAN
Other Softwares:	PsychoPy / JsPsych / Interact / OpenSesame / WebProtégé / Zotero / Overleaf