

Madison S. Barker | CV

☎ 314.920.9179 • ✉ msbarker@ucdavis.edu

Education

University of California, Davis

Ph.D., Psychology

2024

University of California, Davis

M.A., Psychology

2021

University of Wisconsin, Madison

B.A., Journalism, Psychology

2018

Research Interests

- **Multi-Utterance Language Production**
To what extent are planning and articulation interleaved & how do speakers prioritize elements of a message when planning multiple utterances
- **Open Science**
Interest in transparency for reproducibility and accountability for scientific advancement

Research Training

2019 - 2024

Graduate Student Researcher

Ferreira Lab, University of California, Davis
PI: Dr. Fernanda Ferreira

2019 - 2024

Graduate Teaching Assistant

See Teaching Experience

2018

Post-Baccalaureate Researcher

Language and Cognitive Neuroscience Lab,
University of Wisconsin, Madison
PI: Dr. Mark Seidenberg

2016-2018

Undergraduate Research Assistant

Language and Cognitive Neuroscience Lab,
University of Wisconsin, Madison
PI: Dr. Mark Seidenberg

Publications

Barker, M., Graf Estes, K., & Ferreira, F. (in prep). Learning to linearize: Scene descriptions in 5- to 7-year olds.

Barker, M., Cotter, B., Tachihara, K., Zhou, A., & Ferreira, F. (in prep). Incrementalism in multi-utterance event descriptions of real-world scenes.

Tachihara, K., **Barker, M.**, Cotter, B., Hayes, T., Zhou, A., Henderson., J., & Ferreira, F. (under review). Planning to be incremental: Scene descriptions reveal meaningful clustering in language production.

Barker, M., Huang, Y., & Ferreira, F. (under review). Production strategies for multi-utterance descriptions.

Ferreira, F., & **Barker, M.** (2024) Perceptual clauses as units of production in visual descriptions. *Topics in Cognitive Science*.

Barker, M., Rehrig, & Ferreira, F. (2023). Speakers prioritise affordance-based object semantics in scene descriptions. *Language, Cognition and Neuroscience*, 1-23.

Rehrig, G., **Barker, M.**, Peacock, C., Hayes, T. R., Henderson, J. M., & Ferreira, F. (2022). Look at what I can do: Object affordances guide visual attention while speakers describe potential actions. *Attention, Perception, & Psychophysics*

Wang, T., Borkenhagen, M. C., **Barker, M.**, & Seidenberg, M. S. (2022). Meanings within meanings: Skilled readers activate irrelevant meanings of radicals in Chinese. *Reading and Writing*, 1-19.

Presentations

Barker, M., Cotter, B., Tachihara, K., Zhou, A., & Ferreira, F. (2024). Eye movements and multi-utterance event descriptions. Presentation on May 18th, 2024 at the 37th Annual Conference on Human Sentence Processing. Hosted by the University of Michigan, Ann Arbor.

Tachihara, K., **Barker, M.**, Cotter, B., Hayes, T., Henderson J., Zhou, A., & Ferreira, F. (2023) Scene descriptions reveal meaningful clustering in language production. Presentation on May 18th, 2024 at the 37th Annual Conference on Human Sentence Processing. Hosted by the University of Michigan, Ann Arbor.

Barker, M., Cotter, B., Tachihara, K., Zhou, A., & Ferreira, F. (2023). Multi-utterance event descriptions. Presentation on November 18th, 2023 at the 64th Annual Psychonomic Society Annual Meeting. San Francisco, CA.

Tachihara, K., **Barker, M.**, Cotter, B., Hayes, T., Henderson J., Zhou, A., & Ferreira, F. (2023) Come Together in Time, Space, and Meaning: Linearization in Scene Description. Presentation on November 18th, 2023 at the 64th Annual Psychonomic Society Annual Meeting.

Barker, M., Huang, Y., & Ferreira, F. (2022). Linearization strategies: Revisiting the network description task. Presentation on November 17th, 2022 at the 63rd Annual Psychonomic Society Annual Meeting. Hosted by Boston University.

Rehrig, G., **Barker, M.**, Cotter, B., Liu, Z., Qiu, H., & Ferreira, F. (2022) Trade-offs between memory retrieval and planning in language production. Virtual presentation on March 25th, 2022 at the 35rd Annual CUNY Human Sentence Processing Conference. Hosted virtually by the University of California, Santa Cruz

Barker, M., Rehrig, G., & Ferreira, F. (2021). But what can I do with it?: Speakers name interactable objects earlier in scene descriptions. Virtual presentation on November 6th, 2021 at the 62nd Annual Psychonomic Society Annual Meeting. Hosted virtually by Tulane University.

Barker, M., Rehrig, G., & Ferreira, F. (2021). But what can I do with it?: Speakers name interactable objects earlier in scene descriptions. Virtual presentation on March 5th, 2021 at the 34rd Annual CUNY Human Sentence Processing Conference. Hosted virtually by the University of Pennsylvania

Ferreira, F., Rehrig, G., **Barker, M.**, Beier, E., Chantavarin, S., Cotter, B., Qiu, Z., Lowder, M., Karimi, H. (2021). Back to the Future: Do Influential Results from 1980s Psycholinguistics Replicate? Virtual presentation on March 5th, 2021 at the 34rd Annual CUNY Human Sentence Processing Conference. Hosted virtually by the University of Pennsylvania

Barker, M., Rehrig, G., & Ferreira, F. (2021). But what can I do with it?: Speakers name interactable objects earlier in scene descriptions. Virtual presentation on November 4th, 2021 at the 62nd Psychonomic Society Meeting. Hosted virtually by Tulane University

Borkenhagen, M. C., Wang, T., **Barker, M.,** & Seidenberg, M. (2018). Meanings within meanings: Skilled readers activate irrelevant meanings of radicals and phonetics in Chinese. 26th Meeting of the Society for the Scientific Study of Reading, Brighton, England. July, 2018.

Barker, M., Wang, T., Borkenhagen, M. C., & Seidenberg, M. (2018). Is dislike female in written Chinese? Computing sublexical semantics in Mandarin character reading. 2018 Undergraduate Research Symposium at UW Madison. Madison, WI. May, 2018

Invited Presentations

Barker, M., Cotter, B., Tachihara, K., Zhou, A., & Ferreira, F. (2024). What the eyes say about (discourse) speaking: Investigating multi-utterance event descriptions. Presentation on February 23, 2024. Language Group at UC Davis. Davis, CA.

Barker, M., Huang, Y., & Ferreira, F. (2023). Revisiting the Network Description Task. Presentation on May 5, 2023. Language Group at UC Davis. Davis, CA.

Barker, M., Tachihara, K., Zhou, A., & Ferreira, F. (2022). Linearization in scene descriptions. Presentation on May 1, 2023 at Visual Cognition Group at the Center for Mind and Brain at UC Davis. Davis, CA.

Barker, M., Rehrig, G., & Ferreira, F. (2021). The object, the whole object, and nothing but the object: Speakers prioritize whole-object semantics in scene descriptions. Presentation on November 16, 2021 Language Group at UC Davis. Davis, CA.

Barker, M., Rehrig, G., & Ferreira, F. (2021). The object, the whole object, and nothing but the object: Speakers prioritize whole-object semantics in scene descriptions. Presentation on November 16, 2021 Language Group at UC Davis. Davis, CA.

Barker, M., Wang, T., Borkenhagen, M. C., & Seidenberg, M. (2018). Is dislike female in written Chinese? Computing sublexical semantics in Mandarin character reading. Presentation on October 25, 2019 Language Group at UC Davis. Davis, CA.

Teaching Experience

2024 Fall	Cognitive Psychology Dr. Fernanda Ferreira
2024 Spring	Research Methods Dr. Priscilla San Souci
2024 Winter	History of Psychology Dr. Priscilla San Souci
2023 Fall	Cognitive Psychology Dr. Fernanda Ferreira
2023 Spring	Language and Cognition Dr. Tamara Swaab
2022 Fall	Cognitive Psychology Dr. Fernanda Ferreira
2022 Spring	Cognitive Development Dr. Priscilla San Souci
2021 Fall	Cognitive Development Dr. Priscilla San Souci
2021 Spring	Language and Cognition Dr. Matthew Traxler
2020 Winter	Language and Cognition Dr. Tamara Swaab
2019 Fall	Cognitive Psychology Dr. Fernanda Ferreira

Academic Service

2021 – 2023	Diverse Mentoring Initiative Mentor (3x)
2020 – 2023	Vice President, Graduate Student Association, UC Davis
2019 – 2020	Event Coordinator & Representative, Graduate Student Association, UC Davis

2018 – 2019
Peer Review

Open Access Study Guide for Seidenberg (2017), UW Madison
Cognitive Science Society; Journal of Memory and Language

Honors

2022	Summer Research Fellowship Award (\$8,560)
2022	Graduate Student Association Travel Award (\$250)
2022-2024	Duke's Travel Award (\$500, 3x)
2021-2023	Diverse Mentoring Initiative (\$500, 3x)
2018	Psychology Undergraduate Research Scholar Award (\$1,000)
2016 – Present	Psi Chi Psychology Honor Society

Mentorship Roles

Kiran Bajwa (Undergraduate Research Assistant, UC Davis)
Ani Murugesan (Undergraduate Research Assistant, UC Davis)
Susannah Rudd (Graduate Student, Minot State University, Speech Therapy; former RA)
Elaina Jahanfard (Graduate Peer Mentor Program, UC Davis)
Isaias Ceballos III (Graduate Student, University of Michigan, Ann Arbor, Linguistics; former RA)
Casey Felton (Graduate Student, UC Davis, Linguistics; former RA)

Programming / Technical Experience

Audio & Visual

Adobe Audition, Illustrator, InDesign, Photoshop; Computer Vision Annotation Tool (CVAT); LabelMe; Praat, WordPress

Laboratory

E-Prime; EyeLink 1000 eyetracker, EyeLink Toolbox, Experiment Builder, Data Viewer

Programming

R, Python, MATLAB, LaTeX

Writing

Microsoft Word, Excel, Powerpoint; Overleaf (LaTeX)