Jeffrey C. Zemla

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Education

2015	**PhD in Psychology, Rice University, Houston, TX**
2011	**MA in Psychology, Rice University, Houston, TX**
2007	**BA in Psychology/Linguistics, Rutgers University, New Brunswick, NJ**

Professional Experience

2020-present
Syracuse University, Psychology Department, Syracuse NY
Assistant Professor

2017-2020
University of Wisconsin-Madison, Psychology Department, Madison, WI
Assistant Scientist

2014-2016
Brown University
Department of Cognitive, Linguistic, and Psychological Sciences, Providence, RI
Post-doctoral Research Associate

2011-2012
Virginia Tech Carilion Research Institute, Roanoke, VA
Research Associate

2008-2009
Princeton University, Psychology Department, Princeton, NJ
Research Assistant

Grants and Awards

- Syracuse University SOURCE Fellowship (2023)

- Syracuse University SOURCE Undergraduate Student Research Assistant Grant (2021)

- Syracuse University Aging Studies Institute Summer Graduate Assistantship Award (2021)

- Computation and Information in Biology and Medicine Postdoctoral Fellowship (2019–2020)

- National Institutes of Health – NIA 1 R21 AG053467 (2016–2019)
  Computational modeling of semantic decline in Alzheimer's disease ($406,250 over two years)
  Role: PI (with Joseph Austerweil)

- UW-Madison Alzheimer's Disease and Related Disorders Research Day Best Abstract (2018)

- MathPsych/ICCM Post-doc Travel Award (2017)

- Gertrude Maurin Travel Award (2014)

- Rice University Social Science Research Initiative Pre-Dissertation Research Grant (2012)

- Runner-up, Hillel Einhorn New Investigator Award, Society of Judgment and Decision Making (2010)

- Rice University Graduate Student Fellowship (2009–2014)

Journal Publications

2023	Zemla, J. C., Sloman, S., Bechlivanidis, C., & Lagnado, D. A. (2023). Not so simple! causal mechanisms increase preference for complex explanations. *Cognition*.
2022	Zemla, J. C. (2022). Knowledge representations derived from semantic fluency data. *Frontiers in Psychology*.
2021	Gronchi, G., & Zemla, J. C. (2021). Cognitive style predicts how people explain mental magic trick. *Acta Psychologica*, *218*(103347).
2020	Zemla, J. C., Cao, K., Mueller, K. D., & Austerweil, J. L. (2020). SNAFU: The semantic network and fluency utility. *Behavior Research Methods*, *52*, 1681–1699.
	Lange, K. V., Hopman, E. W., Zemla, J. C., & Austerweil, J. L. (2020). Evidence against a relation between bilingualism and creativity. *PLoS One*, *15*(6), e0234928.
2019	Zemla, J. C., & Austerweil, J. L. (2019). Analyzing knowledge retrieval impairments associated with Alzheimer's disease using network analyses. *Complexity*, *2019*, 1–12.
2018	Zemla, J. C., & Austerweil, J. L. (2018b). Estimating semantic networks of groups and individuals from fluency data. *Computational Brain & Behavior*, *1*(1), 36–58.
2017	Zemla, J. C., Sloman, S., Bechlivanidis, C., & Lagnado, D. A. (2017). Evaluating everyday explanations. *Psychonomic Bulletin & Review*, *24*(5), 1488–1500.
	Bechlivanidis, C., Lagnado, D., Zemla, J. C., & Sloman, S. A. (2017). Concreteness and abstraction in everyday explanation. *Psychonomic Bulletin & Review*, *24*(5), 1451–1464.
2015	Zemla, J. C., Tossell, C. C., Kortum, P., & Byrne, M. D. (2015). A Bayesian approach to predicting website revisitation on mobile phones. *International Journal of Human-Computer Interaction*, *83*, 43–50.
2010	Alter, A. L., Oppenheimer, D. M., & Zemla, J. C. (2010). Missing the trees for the forest: A construal level account of the illusion of explanatory depth. *Journal of Personality and Social Psychology*, *99*(3), 436–451.

Unpublished Manuscripts

Manuscripts are available upon request

Under review	Zemla, J. C. (submitted). *Increased reliance on heuristic thinking in Mild Cognitive Impairment.*
	Zemla, J. C., Gooding, D. C., & Austerweil, J. L. (submitted). *Evidence for optimal semantic search throughout adulthood.*
In prep	Mueller, K. D., Allison, S. L., Koscik, R. L., Jonaitis, E., Christian, B. T., Betthauser, T. J., . . . Johnson, S. C. (in prep). *Verbal fluency measures are associated with Alzheimer's disease biomarkers in late-middle-aged cognitively unimpaired adults.*
	Zemla, J. C., & Davis, H. (in prep). *Healthy and impaired aging affects performance in the Iowa Gambling Task.*

Refereed Conference Proceedings

2019   Payton, M., Zemla, J. C., & Austerweil, J. L. (2019). Subjective randomness in a non-cooperative game. In *Proceedings of the 41st Annual Conference of the Cognitive Science Society* (pp. 2544–2549). Austin, TX: Cognitive Science Society.

2017   Gronchi, G., Zemla, J. C., & Brondi, M. (2017). Cognitive style predicts magical beliefs. In *Proceedings of the 39th Annual Conference of the Cognitive Science Society* (pp. 2138–2143). Austin, TX: Cognitive Science Society.

Zemla, J. C., & Austerweil, J. L. (2017c). Modeling semantic fluency data as search on a semantic network. In *Proceedings of the 39th Annual Conference of the Cognitive Science Society* (pp. 3646–3651). Austin, TX: Cognitive Science Society.

2016   Zemla, J. C., Kenett, Y. N., Jun, K.-S., & Austerweil, J. L. (2016). U-INVITE: Estimating individual semantic networks from fluency data. In *Proceedings of the 38th Annual Conference of the Cognitive Science Society* (pp. 1907–1912). Austin, TX: Cognitive Science Society.

Zemla, J. C., Steiner, S. M., & Sloman, S. (2016). Analytical thinking predicts less teleological reasoning and religious belief. In *Proceedings of the 38th Annual Conference of the Cognitive Science Society* (pp. 1217–1222). Austin, TX: Cognitive Science Society.

2011   Zemla, J. C., Ustun, V., Byrne, M. D., Kirlik, A., Riddle, K., & Alexander, A. L. (2011). An ACT-R model of commercial jetliner taxiing. In *Proceedings of the 55th Annual Human Factors and Ergonomics Society* (pp. 831–835). Santa Monica, CA: Human Factors and Ergonomics Society.

Book Chapters

2019   Sloman, S., Zemla, J. C., Lagnado, D., Bechlivanidis, C., & Hemmatian, B. (2019). Are humans intuitive philosophers? In S. R. Grimm (Ed.), *Varieties of understanding: New perspectives from philosophy, psychology, and theology* (pp. 231–250). New York, NY: Oxford University Press.

Invited talks

2023   Zemla, J. C. (2023, June). *Modeling the mind.* Invited talk presented to the National Computer Science Honor Society Expo, The American School, London, UK.

2021   Zemla, J. C. (2021b, January). *A model of semantic network and retrieval impairments in Alzheimer's disease.* Invited talk presented to the Transcontinental Computational Psychiatry Workgroup (online). Retrieved from `https://www.quentinhuys.com/tcpw/events/jeffrey-zemla-tbc/`

Zemla, J. C. (2021a, February). *A model of semantic network and retrieval impairments in Alzheimer's disease.* Invited talk presented to the Systems Neuroscience Group (online).

2020   Zemla, J. C. (2020b, February). *Understanding semantic decline in healthy and abnormal aging.* Invited talk presented to the Department of Psychology at Syracuse University, Syracuse, NY.

Zemla, J. C. (2020a, June). *Causal mechanisms increase preference for complex explanations.* Invited talk presented to The Reasoning Lab, U.S. Naval Research Laboratory (online).

2018	Zemla, J. C. (2018, November). *Comparison of semantic networks in Alzheimer's patients and controls.* Invited talk presented at the Society for Mathematical Psychology satellite meeting at Psychonomics, New Orleans, LA.
	Zemla, J. C., & Austerweil, J. L. (2018c, March). *Modeling semantic fluency data in Alzheimer's patients.* Invited talk presented at the 2018 Alzheimer's Disease and Related Disorders Research Day, Madison, WI. Retrieved from `https://www.youtube.com/watch?v=G7IJ538rnF0`

Talk and Poster Presentations

2022	Zemla, J. (2022, July). *Individuals with mild cognitive impairment are impaired in a gambling task.* Poster presented at the 44th Annual Conference of the Cognitive Science Society.
2021	Zemla, J. C., Chambers, B. H., Austerweil, J. L., & Cimpian, A. (2021a, July). *Inherence bias in explanation increases with age and cognitive impairment.* Poster presented at the 43rd Annual Conference of the Cognitive Science Society.
	Zemla, J. C., Chambers, B. H., Austerweil, J. L., & Cimpian, A. (2021b, November). *Inherence bias in explanation increases with age and cognitive impairment.* Poster presented at the 62nd Annual Psychonomic Society.
2019	Zemla, J. C. (2019, June). *Alzheimer's disease biomarkers associated with semantic fluency performance.* Talk presented at the National Library of Medicine Informatics Training Conference, Indianapolis, IN.
	Castro, N., & Zemla, J. C. (2019, March). *The stability (and instability) of semantic category networks across adulthood.* Poster presented at the International Convention of Psychological Science (ICPS), Paris, France.
2018	Zemla, J. C., & Austerweil, J. L. (2018a, November). *Comparison of semantic networks in Alzheimer's patients and controls.* Poster presented at the Annual 59th Psychonomic Society, New Orleans, LA.
	Zemla, J. C., & Austerweil, J. L. (2018e, October). *Modeling semantic fluency data in Alzheimer's patients.* Poster presented at the 17th CIBM Training Program Annual Retreat, Madison, WI.
	Zemla, J. C., & Austerweil, J. L. (2018d, March). *Modeling semantic fluency data in Alzheimer's patients.* Poster presented at the 2018 Alzheimer's Disease and Related Disorders Research Day, Madison, WI.
	Zemla, J. C., & Austerweil, J. L. (2018f, July). *A model of Alzheimer's patients perseverating perseverating in semantic fluency data.* Talk presented at the 51st Annual Meeting of the Society for Mathematical Psychology.
2017	Zemla, J. C., & Austerweil, J. L. (2017e, April). *SNAFU: A tool for analyzing semantic networks and fluency data.* Poster presented at the 1st Annual Science of Successful Aging Summit, Madison, WI.
	Zemla, J. C., & Austerweil, J. L. (2017a, June). *Estimating networks from censored random walk data.* Poster presented at the 2017 International Conference on Network Science.
	Zemla, J. C., & Austerweil, J. L. (2017b, July). *Estimating semantic networks from fluency data.* Talk presented at the 50th Annual Meeting of the Society for Mathematical Psychology.

	Zemla, J. C., & Austerweil, J. L. (2017d, November). *Modeling semantic fluency data in Alzheimer's patients.* Poster presented at the Annual 58th Psychonomic Society, Vancouver, BC, Canada.
2016	Zemla, J. C., & Sloman, S. (2016b, August). *The role of mechanistic information in explanatory preference.* Talk presented at the 16th International Conference on Thinking, Providence, RI.
	Zemla, J. C., & Sloman, S. (2016a, November). *Mechanisms affect preference for simple explanations.* Poster presented at the Annual 57th Psychonomic Society, Boston, MA.
2015	Zemla, J. C., Sloman, S. A., Lagnado, D., & Bechlivanidis, C. (2015a, June). *Evaluating explanations.* Talk presented at the Varieties of Understanding Midpoint Conference, New York, NY.
	Zemla, J. C., Sloman, S. A., Lagnado, D., & Bechlivanidis, C. (2015b, November). *Evaluating explanations: What makes a good explanation?* Talk presented at the Annual 56th Psychonomic Society, Chicago, IL.
2014	Zemla, J. C., & Wang, S. (2014, June). *Assessing CAPTCHA usability with signal detection theory.* Talk presented at the Southwest Regional Human Factors and Ergonomics Society, College Station, TX.
	Zemla, J. C., & Byrne, M. D. (2014, November). *Feedback and block length facilitate adoption of a more optimal speed-accuracy tradeoff policy.* Poster presented at the 33rd Society for Judgement and Decision Making, Long Beach, CA.
2012	Zemla, J. C., Lisinski, J., & LaConte, S. (2012, June). *Performance feedback engages attention, boosts task SNR, and enhances pattern classification.* Poster presented at the Organization for Human Brain Mapping, Beijing, China.
2011	Byrne, M. D., Zemla, J. C., Kirlik, A., Riddle, K., & Alexander, A. L. (2011). A human performance model of commercial jetliner taxiing. In *Proceedings of the 16th International Symposium on Aviation Psychology* (pp. 209–214). Dayton, OH.

Teaching

- Cognition and Aging (Fall 2020, Spring 2021, Spring 2022, Fall 2022)

- Proseminar Methods and Topics in Cognitive Psychology (Fall 2022, Spring 2023)

- Experimental Design and Statistical Methods II (Spring 2021, Spring 2022, Spring 2023)

Service

- Ad-hoc reviewer (journals): Acta Psychologica, Behavior Research Methods, Cognition, Complexity, Computational Brain and Behavior, Current Directions in Psychological Science, Current Psychology, Frontiers in Psychology, Journal of Experimental Psychology: General, Journal of Experimental Psychology: Learning, Memory, & Cognition, Journal of Gerontology: Psychological Sciences, Journal of Learning and Instruction, Journal of Personality and Social Psychology, Nature Communications, PeerJ, Proceedings of the National Academy of Sciences, Psychological Science, Psychonomic Bulletin & Review, Topics in Cognitive Science (topiCS)

- Ad-hoc reviewer (conferences): CogSci, CHI, SJDM

- Doctoral students: Rebecca Wilder (2021-current), Kimberly Arjune (2022-current)

- Masters committee member: Alec Goldstein (2021), Sepideh Namvarrad (2022), Samantha Maguire (2022)

- Doctoral committee member: Ashley Douglass (2022)

- Advisor to undergraduate and post-bac research assistants (selected co-authors): Samantha Steiner, Kesong Cao, Blake Chambers

- National Science Foundation, Reviewer (2019)

- External reviewer for the Swiss National Science Foundation

- University of Wisconsin-Madison Committee on Disability, Access, and Inclusion (Postdoctoral Representative; 2019–2020)

- Syracuse University Department of Psychology internal committees (rotating membership): Diversity, Equity, and Inclusion, Psych News, Research & Faculty Engagement

Open Science

Software	**SNAFU (Semantic Network and Fluency Utility)** SNAFU is a Python library and stand-alone tool designed to help researchers analyze their verbal fluency data using traditional measures (e.g., cluster switches), and to estimate networks from their data (Zemla, Cao, Mueller, & Austerweil, 2020). http://alab.psych.wisc.edu/snafu https://github.com/AusterweilLab/snafu-py **Jarjar** Jarjar is a Python library and command-line tool that allows you to programmatically send your team Slack notifications when your scripts are done running. For example if you have a model that takes hours to run, you can use Jarjar to send yourself updates and catch any errors as they occur. https://github.com/AusterweilLab/jarjar
Data	**OSF.io** I use OSF.io to host both raw data (when permitted) and analysis code for all first-author publications. Profile: https://osf.io/s2r5w/

Technical Skills

Web	JavaScript, HTML, CSS, PHP, SQL
Programming	Python, R, MATLAB, Bash, Lisp, C++
Software tools	git, LaTeX, NW.js, SPSS, AFNI, HTCondor