

Jessica L. Montag

Assistant Professor
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Education

- 2013 University of Wisconsin-Madison
Ph.D., Psychology
Dissertation: Production of complex sentences: Studies across languages and development
Supervisor: Dr. Maryellen C. MacDonald
- 2008 University of Wisconsin-Madison
M.S., Psychology
- 2006 University of California-Berkeley
B.A., Psychology, Linguistics; Minor: Japanese Language

Professional Experience

- 2018-present Assistant Professor. Department of Psychology, University of Illinois, Urbana-Champaign
- 2015-2018 Assistant Research Psychologist. Department of Psychology, University of California, Riverside
- 2014-2015 Post-Doctoral Trainee. Department of Psychological and Brain Sciences, Indiana University
Supervisor: Dr. Linda B. Smith
- 2013-2014 Post-Doctoral Trainee. Department of Psychological and Brain Sciences, Indiana University
Supervisors: Dr. David B. Pisoni; Dr. Michael N. Jones
- 2011-2013 Ph.D. Student. Department of Psychology, University of Wisconsin-Madison
Supervisor: Dr. Maryellen C. MacDonald
- 2007-2011 Graduate Trainee. Department of Psychology, University of Wisconsin-Madison
Supervisor: Dr. Maryellen C. MacDonald
- 2004-2007 Research Assistant. Olfactory Neuroscience Lab. Department of Psychology, University of California, Berkeley
Supervisor: Dr. Noam Sobel

Research Support

Active Support

Understanding eye movements in skilled readers and novice readers: A behavioral and computational approach

National Science Foundation, 2141268

PI: Jessica L. Montag; Co-PIs Anastasia A. Stoops, Jon A. Willits

09/2022 – 08/2025

Total Costs: \$500,000

Understanding early language environments: Analytic techniques and outcome predictions

James S. McDonnell Foundation, Scholar Award; **PI: Jessica L. Montag**

09/2018 – 08/2024

Annual Total Costs: \$100,000

Concluded Support (Federal)

Picture book reading: Investigating a key source of linguistic input for language development

National Science Foundation, 1749594 **PI: Jessica L. Montag**

09/2018 - 08/2022

Total Costs: \$405,421

Measurement and analysis of early language environments

National Institutes of Health (R03), 12505876; **PI: Jessica L. Montag**

09/2018 - 08/2021

Total Costs: \$154,980

Concluded Support (Internal)

Using Machine Learning to Predict Eye Movements in Skilled and Unskilled Readers

University of Illinois, Urbana-Champaign, National Center for Supercomputing Applications (NCSA) Fellowship Program

PI: Jon A. Willits; Co-PIs: Jessica L. Montag, Anastasia A. Stoops

07/2021-06/2022

Total Costs: \$25,000

Funding for Students & Post-Docs

Marion Morse Wood Fellowship

University of Illinois, Urbana-Champaign, Graduate College

Graduate Student: Jacqueline A. Erens

08/2021-07/2022

Total Costs: \$12,000

The consequences of early language experience and literacy for adult learning and brain structure

National Science Foundation SBE Postdoctoral Research Fellowship, 1714925

Fellow: Natsuki Atagi; **Co-mentors: Judith Kroll, Christine Chiarello and Jessica L. Montag**

2017-2019

Total Costs: \$138,000

Peer-Reviewed Publications

*Student or Post-doc author

- *Patel, T. N., *Marasli, Z. B., *Choi, A. & **Montag, J. L.** (in review). An online survey of picture book reading practices with children between the ages of 0 and 30 months.
- *Stoops, A., *Wu, M., *Jung, I., & **Montag, J. L.** (in review). A novel corpus of naturalistic picture book reading with 2-3 year old children.
- *Stoops, A. & **Montag, J. L.** (accepted). Effects of individual differences in text exposure on sentence comprehension. *Scientific Reports*.
- *Flores, A. Z., **Montag, J. L.**, & Willits, J. A. (2023). Using known words to learn more words: A distributional analysis of child vocabulary development. *Journal of Memory and Language*, 132, 104446.
- *Marasli, Z & **Montag, J. L.** (2023). Optimizing random time sampling of daylong audio. *Proceedings of the 42nd Annual Conference of the Cognitive Science Society* (pp. 87-94). Sydney, NSW, Australia: Cognitive Science Society.
- *Macbeth, A., *Atagi, N., **Montag, J. L.**, *Bruni, M., & Chiarello, C. (2022). Assessing language background and experience among heritage bilinguals. *Frontiers in Psychology*, 13:993669.
- *Macbeth, A., *Bruni, M., *De La Cruz, B., *Erens, J. A., *Atagi, N., Robbins, M. L., Chiarello, C., **Montag, J. L.** (2022). Using the Electronically Activated Recorder (EAR) to capture the day-to-day linguistic experiences of young adults. *Collabra: Psychology*, 8(1).
- Montag, J. L.** (2021). Limited evidence for probability matching as a strategy in probability learning tasks. *Psychology of Learning and Motivation*, 74, 233-273.
- *Sarkis, J. T. & **Montag, J. L.** (2021). The effect of lexical accessibility on Spanish-English intra-sentential codeswitching, *Memory & Cognition*, 49, 163-180.
- Montag, J. L.** (2020). New insights from daylong audio transcripts of children's language environments. In S. Denison, M. Mack, Y. Xu & B. Armstrong (Eds.), *Proceedings of the 42nd Annual Conference of the Cognitive Science Society* (pp. 3005-3011). Toronto, ON, Canada: Cognitive Science Society.
- Montag, J. L.** (2019). Differences in sentence complexity in the text of children's picture books and child-directed speech. *First Language*, 39, 527-546.
- Montag, J. L.**, Jones, M. N., & Smith, L. B. (2018). Quantity and diversity: Simulating early word learning environments. *Cognitive Science*, 42, 1-38.
- Montag, J. L.**, Matsuki, K., Kim, J. & MacDonald, M. C. (2017). The effects of word order on sentence structure choice in language production: A multi-clause and multi-language investigation. *Collabra: Psychology*, 3, 20.
- MacDonald, M. C., **Montag, J. L.**, & Gennari, S. P. (2016). Are there really syntactic complexity effects in sentence production?: A reply to Scontras et al. *Cognitive Science*, 40, 513-518.
- Montag, J. L.**, Jones, M. N., & Smith, L. B. (2015). The words children hear: Picture books and the statistics of language learning. *Psychological Science*, 26, 1489-1496.

- Montag, J. L.** & MacDonald, M. C. (2015). Text exposure predicts spoken production of complex sentences in 8- and 12-year old children and adults. *Journal of Experimental Psychology: General*, 144, 447-468.
- Montag, J. L.**, AuBuchon, A. M., Pisoni, D. B. & Kronenberger, W. G. (2014). Speech intelligibility in early-implanted deaf children after long-term cochlear implant use. *Journal of Speech, Language and Hearing Research*, 57, 2332-2343.
- Montag, J. L.** & MacDonald, M. C. (2014). Visual salience modulates structure choice in relative clause production. *Language and Speech*, 57, 163-180.
- Montag, J. L.** & MacDonald, M. C. (2014). Effects of text exposure on spoken sentence production. In P. Bello, M. Guarini, M. McShane, & B. Scassellati (Eds.), *Proceedings of the 36th Annual Conference of the Cognitive Science Society* (pp. 1030-1035). Austin, TX: Cognitive Science Society.
- Montag, J. L.** & MacDonald, M. C. (2013). Choice of referring expression subject to visual context, linguistic context and competition. In A. Gatt, R. van Gompel, E. G. Bard, E. Krahmer, & D. van Deemter (Eds.) *Proceedings of PRE-Cogsci 2013: Production of Referring Expressions: Bridging the gap between cognitive and computational approaches to reference* (online). Berlin, Germany.
- Montag, J. L.** & MacDonald, M. C. (2009). Word order doesn't matter: Relative clause production in English and Japanese. In N.A. Taatgen & H. van Rijn (Eds.), *Proceedings of the 31th Annual Meeting of the Cognitive Science Society* (pp. 2594-2599). Austin, TX: Cognitive Science Society.
- Zelano, C., **Montag, J.**, Khan, R., & Sobel, N. (2009). A specialized odor memory buffer in primary olfactory cortex. *PloS one*, 4, e4965.
- Zelano, C., **Montag, J.**, Johnson, B., Khan, R., & Sobel, N. (2007). Dissociated representations of irritation and valence in human primary olfactory cortex. *Journal of Neurophysiology*, 97, 1969-1976.

Professional Presentations

- Stoops, A. A. & Montag, J. L. (2023). Assessing effects of individual differences in text exposure on language comprehension. Talk presented at the 36th Annual Conference on Human Sentence Processing, Pittsburgh, PA.
- Stoops, A. A. & Montag, J. L. (2022). The role of text exposure on language comprehension. Poster presented at the 63rd Psychonomic Society Annual Meeting, Boston, Massachusetts and Virtual.
- Montag, J. L. (2021). Temporal dynamics of words in daylong audio recordings. In symposium: Reorienting the study of language learning using naturalistic data. Talk presented at the Society for Research in Child Development 2021 Virtual Biennial Meeting (Online).
- Erens, J. A. & Montag, J. L. (2021). The Role of Relatedness on Sentence Production. Poster presented at the 34th Annual CUNY Conference on Human Sentence Processing, Philadelphia, PA (Online).

- Stoops, A. A. & Montag, J. L. (2021). Complex syntax and conversational turn-taking during toddler-adult picture book reading. Poster presented at the 34th Annual CUNY Conference on Human Sentence Processing, Philadelphia, PA (Online).
- Stoops, A. A. & Montag, J. L. (2020). The effect of book syntactic complexity on caregiver and child language profile during shared book reading. Poster presented at the 42nd Annual Meeting of the Cognitive Science Society, Toronto, Canada (Online).
- Macbeth, A., De La Cruz, B., Bruni, M., Atagi, N., Montag, J., & Chiarello, C. Predicting real-world language use from language history questionnaires and laboratory assessments of vocabulary and proficiency. (October 2020). Poster presented at the Society for the Neurobiology of Language 2020 Annual Meeting (Online).
- Flores, A. Z., Montag, J. L., & Willits, J. A. (2019). Using known words to learn more words: A distributional analysis of child vocabulary development. Poster presented at the 11th Biennial Meeting of the Cognitive Development Society, Louisville, KY.
- Flores, A. Z., Montag, J. L., & Willits, J. A. (2019). Using known words to learn more words: A distributional analysis of child vocabulary development. Poster presented at the 41th Annual Cognitive Science Society Meeting, Montreal, Canada.
- Chiarello, C., Macbeth, A., Bruni, M., Atagi, N., Mech, E. N., Sarkis, J., Montag, J., Karan, A., & Robbins, M. Lend me your EAR: An experience sampling method to investigate natural speech. (November 2018). Spoken talk given at the 59th Annual Meeting of the *Psychonomic Society*. New Orleans, LA.
- Atagi, N., Mech, E. N., Macbeth, A., Bruni, M., Sarkis, J., Montag, J. L., Karan, A., Robbins, M., & Chiarello, C. (2018). The effects of literacy experiences on bilinguals' everyday speech. Poster presented at the 59th Annual Meeting of the Psychonomic Society, New Orleans, LA.
- Bruni, M., MacBeth, A., Atagi, N., Mech, E. N., Sarkis, J., Montag, J. L., Karan, A., Robbins, M., & Chiarello, C. (2018). Does self-report predict bilingual language use? Poster presented at the 59th Psychonomic Society Annual Meeting, New Orleans, LA.
- Montag, J. L. (2018). Assessing reading experience in heritage Spanish-speaking undergraduates. Talk presented at the 3rd International Conference on Heritage/Community Languages, Los Angeles, CA.
- Mech, E. N., Montag, J.L., Kroll, J. F. (2018). The consequences of bilingualism for category learning. Poster presented at the 2018 International Conference on Learning and Memory, Huntington Beach, California.
- Sarkis, J. T., Montag, J. L., & Kroll, J. F. (2018). The effect of lexical accessibility on Spanish-English codeswitching. Poster presented at the 30th Annual CUNY Conference on Human Sentence Processing, Davis, CA.
- Mech, E. N., Montag, J. L., & Kroll, J. F. (2017). The consequences of second language experience for new category learning. Poster presented at the 58h Annual Meeting of the Psychonomic Society, Vancouver, Canada.
- Sarkis, J. T., Montag, J. L., & Kroll, J. F. (2017). The effect of lexical accessibility on Spanish-English codeswitching. Poster presented at the 58h Annual Meeting of the Psychonomic Society, Vancouver, Canada.

- Willits, J. A., Montag, J. L., & Yang, S. (2017). What words do children learn first? Using known words to bootstrap the acquisition of new words. Talk presented at the 42th Annual Boston University Conference on Language Development, Boston, MA.
- Montag, J. L., Jones, M. N., & Smith, L. B. (2017). Simulations of early word learning language environments: Insights into sampling, analysis and sources of individual differences. Poster presented at the 10th Biennial Meeting of the Cognitive Development Society, Portland, OR.
- Montag, J. L. & Smith, L. B. (2017). Picture book reading in the lives of 18-30 month old children: A diary study. Poster presented at the 39th Annual Cognitive Science Society Meeting, London, UK.
- Montag, J. L., Jones, M. N. & Smith, L. B. (2017). Simulations of early word learning environments: Implications for sampling methodology and data interpretation. Poster presented at the Psychonomic Society's Leading Edge Workshop, Beyond the Lab: Using Big Data to Discover Principles of Cognition, Madison, WI.
- Mech, E. N., Montag, J. L., & Kroll, J. F. (2017). The consequences of second language experience for language learning. Poster presented at the 11th Annual International Symposium on Bilingualism, Limerick, Ireland.
- Montag, J. L. (2016). How differences between child-directed spoken and written language may have consequences for early language production. Poster presented at the 7th Annual International Workshop on Language Production, San Diego, CA.
- Montag, J. L. & MacDonald, M. C. (2016). Semantic interference in sentence production in three languages. Poster presented at the 28th Annual CUNY Conference on Human Sentence Processing, Gainesville, FL.
- Montag, J. L., Jones, M. N. & Smith, L. B. (2015). Important differences between child-directed speech and children's picture books. Poster presented at the 9th Biennial Meeting of the Cognitive Development Society, Columbus, OH.
- Montag, J. L., Jones, M. N. & Smith, L. B. (2015). Language input from child-directed speech and children's picture books are different. Poster presented at the 37th Annual Cognitive Science Society Meeting, Pasadena, CA.
- Montag, J. L. & MacDonald, M. C. (2014). Effects of text exposure on spoken sentence production. Talk presented at the 36th Annual Cognitive Science Society Meeting, Quebec City, Canada.
- Montag, J. L. & MacDonald, M. C. (2014). Text exposure may affect relative clause use in children and adults. Poster presented at the 27th Annual CUNY Conference on Human Sentence Processing, Columbus, OH.
- Montag, J. L. & MacDonald, M. C. (2013). Emergence of literacy predicts children's productions of relative clauses. Poster presented at the 38th Annual Boston University Conference on Language Development, Boston, MA.
- Montag, J. L. & MacDonald, M. C. (2013). Choice of referring expression subject to visual context, linguistic context and competition. Talk presented at PRE-CogSci 2013 – Bridging the gap between cognitive and computational approaches to reference, Berlin, Germany.

- Montag, J. L. & MacDonald, M. C. (2013). Production of complex sentences across development: A possible role for emerging literacy. Talk presented at the 20th Annual Summer Interdisciplinary Conference, Cortina d'Ampezzo, Italy.
- Montag, J. L. & MacDonald, M. C. (2012). Long-term learning and immediate demands affect sentence production. Poster presented at the 7th Annual International Workshop on Language Production, New York, NY.
- Montag, J. L. & MacDonald, M. C. (2011). How visual salience affects structure choice: Implications for audience design. Poster presented at the 24th Annual CUNY Conference on Human Sentence Processing, Stanford, CA.
- Montag, J. L. & MacDonald, M. C. (2010). Grammatical role assignment, not word order, drives structure choice in English, Japanese and Korean. Talk presented at Conference on Mental Architecture for Processing and Learning of Language 2010, Tokyo, Japan.
- Montag, J. L. & MacDonald, M. C. (2010). The role of grammatical role assignment in production in three languages. Poster presented at the 23rd Annual CUNY Conference on Human Sentence Processing, New York, New York.
- Montag, J. L. & MacDonald, M. C. (2010). The interaction of structure and plausibility in comprehension in two languages. Poster presented at the 23rd Annual CUNY Conference on Human Sentence Processing, New York, New York.
- Montag, J. L. & MacDonald, M. C. (2009). Word order doesn't matter: Relative clause production in English and Japanese. Talk presented at the 31st Annual Cognitive Science Society Meeting, Amsterdam, Netherlands.
- Montag, J. L. & MacDonald, M. C. (2009). Measuring production difficulty in object relative clauses. Poster presented at the 22nd Annual CUNY Conference on Human Sentence Processing, Davis, California.

Awards and Honors

2020	Montag (2019) was included in <i>First Language's</i> 40 th Anniversary Virtual Special issue in which one paper from each of the last 40 years was selected for an open-access online special issue.
2014 - 2015	Postdoctoral Trainee, NICHD T32 HD-07475—Developmental Training Grant
2013 - 2014	Postdoctoral Trainee, NIDCD T32 HD-000012—Training Grant in Speech, Hearing and Sensory Communication
2011- 2012	Marian Schwartz Fellowship, University of Wisconsin-Madison
2007-2010	Predoctoral Trainee, NICHD T32 HD-049899 – Training in Language: Acquisition and Adult Performance
2010	NSF East Asian and Pacific Summer Institutes fellowship
2002-2006	Regents' and Chancellor's Scholar, University of California, Berkeley

Invited Talks

2022

Things you can do with transcribed daylong audio. DARCLE (Daylong Audio Recordings of Children's Language Environments). Virtual.

2021

How studying word distributions helps us understand language learning environments. Purdue University, Mathematical & Computational Colloquium. Virtual.

Child-directed text corpora: A great start. Oxford University, Talk Together Project, Virtual Round Table. Virtual.

2019

How language production constraints affect language structure. Northwestern University, Cognitive Science Program, Workshop on Learning Construction Grammar. Chicago, IL

2018

Reading's impact on spoken language development. University of Chicago, Psychology Department, Development Brown Bag. Chicago, IL.

Why people say what they say. University of Illinois, Linguistics Department, Linguistics Series Seminar Talk. Champaign-Urbana, IL.

The consequences of reading for language development. University California, Riverside, Psychology Department Colloquium. Riverside, CA.

2017

The consequences of reading for language development. University of Nevada, Las Vegas, Psychology Department Colloquium. Las Vegas, NV.

Reading's impact on spoken language. Florida State University, Psychology Department Colloquium. Tallahassee, FL.

Reading's impact on spoken language. Georgia State University Language and Literacy Institute Colloquium. Atlanta, GA.

2016

How reading (and being read to) affects spoken language development. University of Iowa Psychology Department Colloquium. Iowa City, IA.

Why people say what they say. UCR Comparative Literature Talk Series. Riverside, CA.

Reading as a distinct source of linguistic input. UCLA Developmental Forum. Los Angeles, CA.

The science behind reading to children. Opening Minds USA. Chicago, IL.

2014

Effects of literacy on children's productions of complex sentences. Indiana University Speech and Hearing Sciences Colloquium Series. Bloomington, IN.

Effects of literacy on children's productions of complex sentences. UIUC Language Processing Brownbag. Champaign-Urbana, IL.

Effects of literacy on children's productions of complex sentences. UCSD Center for Research in Language Brownbag. San Diego, CA.

2011

Probability learning in humans and animals. UW-Madison Human Animal and Machine Learning: Experiment and Theory talk series. Madison, WI.

A Cross-linguistic Investigation of the Production-Distribution-Comprehension Account of Language Comprehension Difficulty. Haskins Laboratories, New Haven, CT.

2010

Linking Production and Comprehension. 68th Kagamiyama Linguistics Colloquium, Hiroshima, Japan.

Teaching Experience

Psycholinguistics (Psychology 525), University of Illinois, Urbana-Champaign

Psychology of Language (Psychology 425), University of Illinois, Urbana-Champaign

Cognitive Lab (Psychology 331), University of Illinois, Urbana-Champaign

Language Production, Graduate Seminar, University of Illinois, Urbana-Champaign

Reading, Language & Cognition, Graduate Seminar, University of Illinois, Urbana-Champaign

Psycholinguistics (Psychology 135), University of California, Riverside

Psychological Methods: Statistical Procedures (Psychology 11), University of California, Riverside

Graduate Students Advised

2023-present Maily Galindo

2020-present Zeynep Marasli

2019-present Jacqueline Erens

2016-2018 Emily Mech (co-advised with Dr. Judith Kroll)

2016-2018 Justin Sarkis (co-advised with Dr. Judith Kroll)

Selected Media Attention

Washington Parent (5/20) *Learning That Sticks: How to Use a Post-it to Build Language Skills*

Times Educational Supplement (3/9/18) *What Teachers Need to Know about Shared Reading*

The Confident Teacher (1/27/18) *The Early Vocabulary Advantage*

Nautilus Magazine (11/16/17) *The Rise and Fall of the English Sentence*

NPR Science Friday (9/11/15) *The Science of Story Time*

Yahoo Parenting (8/24/15) *The Science of How Bedtime Stories Help Kids*

The New York Times (8/17/15) Well Blog: *Bedtime Stories for Young Brains*

Professional Service and Membership

2023 - 2025: *Vice President*, DARCLE (Daylong Audio Recordings of Child Language Environments)

Panelist, NSF Developmental Sciences

Ad-hoc reviewer for funding agencies: NSF (Developmental Sciences, Perception, Action & Cognition, and Linguistics), UIUC Research board

Ad-hoc reviewer for journals: Advances in Methods and Practices in Psychological Science, Behavioral Research Methods, Child Development, Cognition, Cognitive Psychology, Cognitive Science, Early Childhood Research Quarterly, Current Directions in Psychological Science, Developmental Science, Frontiers in Psychology, Journal of Child Language, Journal of Experimental Child Psychology, Journal of Experimental Psychology: Learning, Memory and Cognition, Journal of Experimental Psychology: General, Journal of Memory and Language, Language Learning and Development, Memory & Cognition, Topics in Cognitive Science, PLOS one, Proceedings of the National Academy of Sciences, Psychological Science, The Volta Review

Memberships: Cognitive Science Society, Cognitive Development Society, Psychonomic Society, Women in Cognitive Science