Klinton Bicknell

Duolingo
85 Broad St Fl 8
New York, NY 10004

`klinton@duolingo.com`
https://www.klintonbicknell.com

Professional positions:

Head of AI (Senior AI Research Manager), Duolingo	*2022–*
Staff research scientist, Duolingo	*2022–2022*
Senior research scientist, Duolingo	*2020–2022*
Research scientist, Duolingo	*2018–2020*
Adjunct assistant professor, Department of Linguistics, Northwestern University	*2018–2021*
Assistant professor, Department of Linguistics, Northwestern University	*2014–2018*
Affiliated with the Interdepartmental Neuroscience, Cognitive Science, and Analytics programs	
Postdoctoral fellow, Department of Brain & Cognitive Sciences, University of Rochester	*2013–2014*
Postdoctoral fellow, Department of Psychology, University of California, San Diego	*2011–2013*

Education:

University of California, San Diego: Ph.D. in Linguistics and Cognitive Science	*2011*
University of California, San Diego: M.A. in Linguistics	*2009*
Linguistic Society of America (LSA) Summer Institute, Stanford University	*2007*
University of California, Berkeley: B.A. in Linguistics with Honors	*2005*

Honors and awards:

Fellowships:

University of Rochester Center for Language Sciences (CLS) Postdoctoral Fellowship	*2013–2014*
UC San Diego Pre-Doctoral Humanities Fellowship	*2005–2006, 2009–2010*
UC San Diego Dean of Social Science Jacobs Fellowship	*2009–2010*
UC San Diego Center for Research in Language Pre-Doctoral Fellowship	*2007–2008, 2008–2009*
Linguistic Society of America Summer Institute Fellowship	*2007*
Sponsored by the North American Chapter of the Association for Computational Linguistics (NAACL)	

Honors:

Association for Computational Linguistics (ACL) Student Author Travel Grant (NSF-funded)	*2010*
CUNY Conference on Human Sentence Processing 2010 Student Travel Award	*2010*
Cognitive Science Society NSF Student Travel Award	*2009*
UC San Diego Dean of Social Sciences Travel Fund Award	*2009, 2010*

Funding:

Papers:

Portnoff, L., Gustafson, E., Rollinson, J., & **Bicknell, K.**. (2021.) Methods for language learning assessment at scale: Duolingo case study. In *Proceedings of The 14th International Conference on Educational Data Mining (EDM 2021)*. (pp. 865–871).

Ritter, S., Heffernan, N., Williams, J. J., Lomas, D., & **Bicknell, K.**. (2021.) Second workshop on educational A/B testing at scale. In *Proceedings of the Eighth ACM Conference on Learning at Scale*. (pp. 1–3).

Goodkind, A., & **Bicknell, K.**. (2021.) Local word statistics affect reading times independently of surprisal. arXiv preprint. Available at `https://arxiv.org/abs/2103.04469`.

Mayhew, S., **Bicknell, K.**, Brust, C., McDowell, B., Monroe, W., & Settles, B. (2020.) Simultaneous translation and paraphrase for language education. In *Proceedings of the ACL workshop on neural generation and translation (WNGT)*. (pp. 232–243).

Bicknell, K., Levy, R., & Rayner, K. (2020.) Ongoing cognitive processing influences precise eye-movement targets in reading. *Psychological Science 31*, 351–362.

Duan, Y., & **Bicknell, K.**. (2020.) A rational model of word skipping in reading: ideal integration of visual and linguistic information. *Topics in Cognitive Science 12*, 387–401.

Mirea, N., & **Bicknell, K.**. (2019.) Using LSTMs to assess the obligatoriness of phonological distinctive features for phonotactic learning. In *Proceedings of the 57th annual meeting of the Association for Computational Linguistics (ACL)*. (pp. 1595–1605).

Duan, Y., & **Bicknell, K.**. (2019.) A rational model of word skipping in reading: ideal integration of visual and linguistic information. In A.K. Goel, C.M. Seifert, & C. Freksa (Eds.), *Proceedings of the 41st annual meeting of the Cognitive Science Society*. (pp. 275–281). ***Winner of computational modeling prize in perception & action.***

Hosier, J., Pajak, B., Bradlow, A., & **Bicknell, K.**. (2018.) Generalization in foreign accent adaptation is predicted by similarity of segmental errors across talkers. *Journal of the Acoustical Society of America 143*, 1950.

Simeon, K. M., **Bicknell, K.**, & Grieco-Calub, T. M. (2018.) Belief shift or only facilitation: how semantic expectancy affects processing of speech degraded by background noise. *Frontiers in Psychology 9*, 116.

Goodkind, A., & **Bicknell, K.** (2018). Predictive power of word surprisal for reading times is a linear function of language model quality. In *Proceedings of the 8th Workshop on Cognitive Modeling and Computational Linguistics (CMCL 2018)*. (pp. 10–18). ***Winner of best paper.***

Goodkind, A., Lee, M., Martin, G. E., Losh, M., & **Bicknell, K.** (2018). Detecting language impairments in autism: A computational analysis of semi-structured conversations with vector semantics. In *Proceedings of the Society for Computation in Linguistics (SCiL) 2018*. (pp. 12–22).

Simeon, K. M., **Bicknell, K.**, & Grieco-Calub, T. M. (2017.) The effect of hearing acuity on using semantic expectancy in degraded speech. *Journal of the Acoustical Society of America 141*, 3841.

Duan, Y., & **Bicknell, K.** (2017). Refixations gather new visual information rationally. In G. Gunzelmann, A. Howes, T. Tenbrink, & E. J. Davelaar (Eds.), *Proceedings of the 39th Annual Conference of the Cognitive Science Society*. (pp. 301–306). Austin, TX: Cognitive Science Society.

Bicknell, K., Jaeger, T. F., & Tanenhaus, M. K. (2016). Now or . . . later: Perceptual data is not immediately forgotten during language processing. *Behavioral and Brain Sciences 39*, 23–24.

Farmer, T. A., Yan, S., **Bicknell, K.**, & Tanenhaus, M. K. (2015). Form-to-expectation matching effects on first-pass eye movement measures during reading. *Journal of Experimental Psychology: Human Perception and Performance 41*, 958–976.

Angele, B., Schotter, E. R., Slattery, T. J., Tenenbaum, T. L., **Bicknell, K.**, & Rayner, K. (2015). Do successor effects in reading reflect lexical parafoveal processing? Evidence from corpus-based and experimental eye movement data. *Journal of Memory and Language 79–80*, 76–96.

Doyle, G., **Bicknell, K.**, & Levy, R. (2014). Nonparametric learning of phonological constraints in Optimality Theory. In K. Toutanova & H. Wu (Eds.), *Proceedings of the 52nd Annual Meeting of the Association for Computational Linguistics*. (pp. 1094–1103). Baltimore, MD: Association for Computational Linguistics.

*Li, X., ***Bicknell, K.**, Liu, P., Wei, W., & Rayner, K. (2014). Reading is fundamentally similar across disparate writing systems: A systematic characterization of how words and characters influence eye movements in Chinese reading. *Journal of Experimental Psychology: General 143*(2), 895–913. (***** indicates equal contributions.)

Schotter, E. R., **Bicknell, K.**, Howard, I., Levy, R., & Rayner, K. (2014). Task effects reveal cognitive flexibility responding to frequency and predictability: Evidence from eye movements in reading and proofreading. *Cognition 131*, 1–27.

Pajak, B., **Bicknell, K.**, & Levy, R. (2013). A model of generalization in distributional learning of phonetic categories. In V. Demberg & R. Levy (Eds.), *Proceedings of the 4th Workshop on Cognitive Modeling and Computational Linguistics (CMCL 2013)*. (pp. 11–20). Sofia, Bulgaria: Association for Computational Linguistics.

Bicknell, K., Higgins, E., Levy, R., & Rayner, K. (2013). Evidence for cognitively controlled saccade targeting in reading. In M. Knauff, M. Pauen, N. Sebanz, & I. Wachsmuth (Eds.), *Proceedings of the 35th Annual Conference of the Cognitive Science Society*. (pp. 197–202). Austin, TX: Cognitive Science Society.

Rayner, K., Angele, B., Schotter, E. R., & **Bicknell, K.** (2013). On the processing of canonical word order during eye fixations in reading: Do readers process transposed word previews? *Visual Cognition 21*(3), 353–381.

Bicknell, K., & Levy, R. (2012). Word predictability and frequency effects in a rational model of reading. In N. Miyake, D. Peebles, & R. P. Cooper (Eds.), *Proceedings of the 34th Annual Conference of the Cognitive Science Society*. (pp. 126–131). Austin, TX: Cognitive Science Society.

Bicknell, K., & Levy, R. (2012). Why long words take longer to read: The role of uncertainty about word length. In D. Reitter & R. Levy (Eds.), *Proceedings of the 3rd Workshop on Cognitive Modeling and Computational Linguistics (CMCL 2012)*. (pp. 21–30). Montréal, Canada: Association for Computational Linguistics.

Bicknell, K., & Levy, R. (2012). The utility of modelling word identification from visual input within models of eye movements in reading. *Visual Cognition, 20*(4–5), 422–456.

Bicknell, K., & Levy, R. (2011). Why readers regress to previous words: A statistical analysis. In L. Carlson, C. Hölscher, & T. Shipley (Eds.), *Proceedings of the 33rd Annual Conference of the Cognitive Science Society*. (pp. 931–936). Austin, TX: Cognitive Science Society.

Bicknell, K., Elman, J. L., Hare, M., McRae, K., & Kutas, M. (2010). Effects of event knowledge in processing verbal arguments. *Journal of Memory and Language, 63*(4), 489–505.

Bicknell, K., & Levy, R. (2010). Rational eye movements in reading combining uncertainty about previous words with contextual probability. In S. Ohlsson & R. Catrambone (Eds.), *Proceedings of the 32nd Annual Conference of the Cognitive Science Society*. (pp. 1142–1147). Austin, TX: Cognitive Science Society.

Bicknell, K., & Levy, R. (2010). A rational model of eye movement control in reading. In J. Hajič, S. Carberry, S. Clark, & J. Nivre (Eds.), *Proceedings of the 48th Annual Meeting of the Association for Computational Linguistics (ACL)* (pp. 1168–1178). Uppsala, Sweden: Association for Computational Linguistics.

Bicknell, K., Levy, R., & Demberg, V. (2010). Correcting the incorrect: Local coherence effects modeled with prior belief update. *Proceedings of the 35th Annual Meeting of the Berkeley Linguistics Society (BLS)* (pp. 13–24). Berkeley, CA: Berkeley Linguistics Society.

Levy, R., **Bicknell, K.**, Slattery, T., & Rayner, K. (2009). Eye movement evidence that readers maintain and act on uncertainty about past linguistic input. *Proceedings of the National Academy of Sciences of the United States of America, 106*(50), 21086–21090.

Bicknell, K., & Rohde, H. (2009). Dynamic integration of pragmatic expectations and real-world event knowledge in syntactic ambiguity resolution. In N. A. Taatgen & H. van Rijn (Eds.), *Proceedings of the 31st Annual Conference of the Cognitive Science Society* (pp. 1216–1221). Austin, TX: Cognitive Science Society.

Bicknell, K., & Levy, R. (2009). A model of local coherence effects in human sentence processing as consequences of updates from bottom-up prior to posterior beliefs. *Proceedings of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL HLT) 2009 conference* (pp. 665–673). Boulder, CO: Association for Computational Linguistics.

Bicknell, K., Elman, J. L., Hare, M., McRae, K., & Kutas, M. (2008). Online expectations for verbal arguments conditional on event knowledge. In B. C. Love, K. McRae, & V. M. Sloutsky (Eds.), *Proceedings of the 30th Annual Conference of the Cognitive Science Society* (pp. 2220–2225). Austin, TX: Cognitive Science Society.

Theses:

Bicknell, K. (2011). Eye movements in reading as rational behavior. Doctoral dissertation. University of California, San Diego, Department of Linguistics.

Bicknell, K. (2005). Aspectual meaning: A usage-based cognitive treatment of English aspect. Undergraduate honors thesis. University of California, Berkeley, Department of Linguistics.

Invited presentations:

ML and NLP for Language Learning at Scale. Building Educational Applications (BEA) workshop at the 2022 annual conference of the North American Chapter of the Association for Computational Linguistics (NAACL 2022), Seattle, WA, 15 July 2022.

AI for Language Learning at Scale, NLP Zurich, 24 August 2021.

Cognitive modeling and computational linguistics at Duolingo. Cognitive Modeling and Computational Linguistics (CMCL) 2019, workshop at the 2019 annual conference of the North American Chapter of the Association for Computational Linguistics (NAACL-HLT 2019), Minneapolis, MN, 7 June 2019.

Predicting student knowledge at scale at Duolingo. Workshop on Learning Analytic Services to Support Personalized Learning & Assessment at Scale (LASSPLAS) at the 9th International Learning Analytics and Knowledge (LAK) conference, Tempe, AZ, 4 March 2019.

Language comprehension as rational probabilistic inference on perceptual input. Department of Linguistics, University of Wisconsin, Milwaukee, WI, 7 April 2017.

Reading as a rational process of visual information gathering. Reading and Language Group at the Learning Research and Development Center (LRDC), University of Pittsburgh, Pittsburgh, PA, 17 March 2017.

Language comprehension as rational probabilistic inference on perceptual input. Workshop on Language, Cognition, and Computation, University of Chicago, Chicago, IL, 27 May 2016.

Eye movements in reading as rational behavior. Cognitive science seminar series, UC San Diego, La Jolla, CA, 22 April 2016.

A rational model of reading. Tech talk series, Duolingo, Pittsburgh, PA, 20 August 2015.

Language comprehension as rational probabilistic inference on perceptual input. Distinguished speakers in language science colloquium series, Saarland University, Saarbrücken, Germany, 11 December 2014.

Cognitively controlled within-word saccade targeting in reading. 6th Chinese International Conference on Eye Movements (CICEM), Institute for Psychology, Beijing, China, 6–9 May 2014.

Language comprehension as rational probabilistic inference on perceptual input. Cognition & Language workshop, organized by the Stanford Humanities Center and the Center for the Study of Language and Information (CSLI). Stanford University, Stanford, CA, 1 May 2014.

Understanding reading without words. Cognitive Science dinner talk, Department of Brain & Cognitive Sciences, University of Rochester, Rochester, NY, 21 November 2013.

A rational model of probabilistic comprehension and eye movements in reading. Department of Linguistics, Northwestern University, Evanston, IL, 13 Feb 2013.

A rational model of eye movements in reading. Center for Language Sciences (CLS), University of Rochester, Rochester, NY, 9 April 2012.

Rational reading. Reading and Language Group at the Learning Research and Development Center (LRDC), University of Pittsburgh, Pittsburgh, PA, 7 January 2011.

Scaling up local coherences. Neural Theory of Language (NTL) group at the International Computer Science Institute (ICSI), Berkeley, CA, 18 April 2008.

Presentations (excluding those with proceedings):

Duan, Y., Berzak, Y., **Bicknell, K.**, & Levy, R. Inferring sentence comprehension from eye movements in reading. Poster presentation at the 32nd annual CUNY Conference on Human Sentence Processing, University of Colorado, Boulder, Colorado, 29–31 March 2019

Duan, Y., & **Bicknell, K.** (2019). A rational model of word skipping in reading: ideal integration of visual and linguistic information. Poster presentation at the 32nd annual CUNY Conference on Human Sentence Processing, University of Colorado, Boulder, Colorado, 29–31 March 2019.

Goodkind, A., & **Bicknell, K.** (2018). Low-level language statistics affect reading times independently of surprisal. Poster presentation at the 31st annual CUNY Conference on Human Sentence Processing, UC Davis, Davis, California, 15–17 March 2018.

Murray, C., & **Bicknell, K.** (2017). Gabor-based letter recognition. Poster presentation at the 12th Women in Machine Learning Workshop, Long Beach, California, 4–7 December 2017.

Bicknell, K., & Demberg, V. (2017). Comprehension questions change beliefs under uncertainty. Poster presentation at the 30th annual CUNY Conference on Human Sentence Processing, MIT, Cambridge, Massachusetts, 30 March–1 April 2017.

Bushong, W., **Bicknell, K.**, & Jaeger, T. F. (2017). Listeners maintain uncertainty about acoustic input. Poster presentation at the 30th annual CUNY Conference on Human Sentence Processing, MIT, Cambridge, Massachusetts, 30 March–1 April 2017.

Simeon, K. M., **Bicknell, K.**, & Grieco-Calub, T. M. (2017). Great expectations: weighting expectancy when processing degraded speech. Oral presentation at the 2017 annual meeting of the Linguistic Society of America, Austin, Texas, 5–8 January 2017.

Duan, Y., & **Bicknell, K.** (2016). Word identification in reading is constructive: Refixations seek new visual information. Poster presentation at the 22nd annual conference on Architecture and Mechanisms for Language Processing (AMLaP), Bilbao, Spain, 1–3 September 2016.

Tucker, D. M., & **Bicknell, K.** (2016). Forward perceptual spans as informationally equivalent across languages. Poster presentation at the 29th annual CUNY Conference on Human Sentence Processing, University of Florida, Gainesville, FL, 3–5 March 2016.

Angele, B., Schotter, E. R., Slattery, T. J., Tenenbaum, T. L., **Bicknell, K.**, & Rayner, K. (2014). Do successor effects in reading reflect parafoveal processing? Evidence from corpus-based and experimental eye movement data. Poster presentation at the 55th annual meeting of the Psychonomic Society, Long Beach, CA, 20–23 November 2014.

Doyle, G., **Bicknell, K.**, & Levy, R. (2014). Learning constraint violations directly from data: An emergentist model of phonology. Poster presentation at the 39th Boston University Conference on Language Development, Boston, MA, 7–9 November, 2014.

Bicknell, K., & Levy, R. (2014). The mind leads the eyes: ungrammaticality detection from two words back in reading. Oral presentation at the 27th Annual CUNY Conference on Human Sentence Processing, The Ohio State University, Columbus, OH, 13–15 March 2014.

Bicknell, K., Tanenhaus, M. K., & Jaeger, T. F. (2014). Listeners maintain and rationally update uncertainty about prior words in spoken comprehension. Poster presentation at the 27th Annual CUNY Conference on Human Sentence Processing, The Ohio State University, Columbus, OH, 13–15 March 2014.

Pajak, B., **Bicknell, K.**, & Levy, R. (2013). A computational model of generalization in phonetic category learning. Oral presentation at the 38th Boston University Conference on Language Development, Boston, MA, 1–3 November, 2013.

Farmer, T., **Bicknell, K.**, & Tanenhaus, M. K. (2013). Perceptual word-form typicality effects are modulated by strength of expectation during reading. Poster presentation at the 35th Annual Meeting of the Cognitive Science Society, Berlin, Germany, 31 July – 3 August 2013.

Pajak, B.., **Bicknell, K.**, & Levy, R. (2013). A computational model of generalization in distributional learning: the role of phonetic variability across segment classes. Poster presentation at the LSA Workshop on Variation in the Acquisition of Sound Systems, Ann Arbor, MI, 28 June 2013.

Bicknell, K., & Levy, R. (2013). A rational account of regressions in syntactically complex sentences. Poster presentation at the 26th Annual CUNY Conference on Human Sentence Processing, Columbia, SC, 21–23 March 2013.

Farmer, T., **Bicknell, K.**, & Tanenhaus, M. K. (2013). Form-based syntactic expectations affect the duration of early fixations in readings. Poster presentation at the 26th Annual CUNY Conference on Human Sentence Processing, Columbia, SC, 21–23 March 2013.

Bicknell, K., Higgins, E., & Rayner, K. (2012). Cognitively controlled saccade targeting in reading: Evidence from a sentence shift experiment. Poster presentation at the 53rd Annual Meeting of the Psychonomic Society, Minneapolis, MN, 15–18 November 2012.

Angele, B., Rayner, K., Schotter, E. R., & **Bicknell, K.** (2012). Do readers obtain preview benefit from transposed words in English? Poster presentation at the 53rd Annual Meeting of the Psychonomic Society, Minneapolis, MN, 15–18 November 2012.

Schotter, E. R., **Bicknell, K.**, Levy, R., & Rayner, K. (2012). Eye movements in reading and proofreading: modulating frequency but not predictability effects. Poster presentation at the 53rd Annual Meeting of the Psychonomic Society, Minneapolis, MN, 15–18 November 2012.

Bicknell, K., & Levy, R. (2012). Effects of frequency, predictability, & length in a rational model of eye movements in reading. Poster presentation at the 25th Annual CUNY Conference on Human Sentence Processing, New York, NY, 14–16 March 2012.

Schotter, E. R., **Bicknell, K.**, Levy, R., & Rayner, K. (2012). The effects of task on frequency and predictability effects. Poster presentation at the 25th Annual CUNY Conference on Human Sentence Processing, New York, NY, 14–16 March 2012.

Angele, B., Rayner, K., Schotter, E. R., & **Bicknell, K.** (2012). Do readers obtain preview benefit from transposed words in English? Poster presentation at the 25th Annual CUNY Conference on Human Sentence Processing, New York, NY, 14–16 March 2012.

Bicknell, K., & Levy, R. (2011). A rational model of eye movement control in reading. Poster presentation at the 52nd Annual Meeting of the Psychonomic Society, Seattle, WA, 3–6 November 2011.

Bicknell, K., & Levy, R. (2011). Between-word regressive saccades to and from words of low predictability. Symposium in honor of Alan Kennedy: 'Spatial coding and eye movement control in reading and other visuomotor tasks', European Conference on Eye Movements (ECEM), Marseille, France, 21–25 August 2011. Abstract in *Journal of Eye Movement Research*, 4, 41.

Levy, R., & **Bicknell, K.** (2011). A rational model of eye movement control in reading. Symposium: 'Models of eye movements in reading', European Conference on Eye Movements (ECEM), Marseille, France, 21–25 August 2011. Abstract in *Journal of Eye Movement Research*, 4, 107.

Bicknell, K., & Levy, R. (2011). Empirical benchmarks for a rational model of eye movement control in reading. Oral presentation at the 44th Annual Meeting of the Society for Mathematical Psychology (SMP), Medford, MA, 16–18 July 2011.

Bicknell, K., & Levy, R. (2011). Between-word regressions from words of low predictability and frequency. Poster presentation at the 24th Annual CUNY Conference on Human Sentence Processing, Stanford, CA, 24–26 March 2011.

Farmer, T., Dikker, S., **Bicknell, K.**, Fine, A., & Tanenhaus, M. K. (2011). Word-form typicality effects on eye-movements during reading. Poster presentation at the 24th Annual CUNY Conference on Human Sentence Processing, Stanford, CA, 24–26 March 2011.

Hofmeister, P., & **Bicknell, K.** (2011). Discourse incongruence facilitates memory retrieval during sentence comprehension. Poster presentation at the 24th Annual CUNY Conference on Human Sentence Processing, Stanford, CA, 24–26 March 2011.

Morgan, E., Levy, R., **Bicknell, K.**, Slattery, T., & Rayner, K. (2011). Word re-recognition occurs during second pass reading: Evidence from eye-movements. Poster presentation at the 24th Annual CUNY Conference on Human Sentence Processing, Stanford, CA, 24–26 March 2011.

Bicknell, K., & Levy, R. (2010). Between-word regressions as part of rational reading. Oral presentation at the 23rd Annual CUNY Conference on Human Sentence Processing, New York, NY, 18–20 March 2010. **[acceptance rate < 8%]**

Bicknell, K., & Levy, R. (2010). Eye movements in reading as optimal responses to the contextualized structure of language. Oral presentation at the 84th Annual Meeting of the Linguistic Society of America, Baltimore, MD, 7–10 January 2010.

Bicknell, K., & Levy, R. (2009). A new model of local coherences as resulting from Bayesian belief update. Poster presentation at the 22nd Annual CUNY Conference on Human Sentence Processing, Davis, CA, 26–29 March 2009.

Levy, R., **Bicknell, K.**, Slattery, T., & Rayner, K. (2009). Readers maintain and act on uncertainty about past linguistic input: Evidence from eye movements. Oral presentation at the 22nd Annual CUNY Conference on Human Sentence Processing, Davis, CA, 26–29 March 2009. **[acceptance rate < 10%]**

Bicknell, K., Levy, R., & Demberg, V. (2009). An empirical investigation and new model of local coherences. Oral presentation at the 83rd Annual Meeting of the Linguistic Society of America, San Francisco, CA, 8–11 January 2009.

Bicknell, K., Demberg, V., & Levy, R. (2008). Local coherences in the wild: An eye-tracking corpus study. Poster presentation at the 21st Annual CUNY Conference on Human Sentence Processing, Chapel Hill, NC, 13–15 March 2008.

Bicknell, K., Elman, J. L., Hare, M., McRae, K., & Kutas, M. (2008). Situation-specific expectations for verbal arguments: Evidence from self-paced reading and ERPs. Poster presentation at the 21st Annual CUNY Conference on Human Sentence Processing, Chapel Hill, NC, 13–15 March 2008.

Bicknell, K., Elman, J. L., Hare, M., & McRae, K. (2008). When a participant tells us about an event: Evidence for the use of event knowledge. Oral presentation at the 82nd Annual Meeting of the Linguistic Society of America, Chicago, IL, 3–6 January 2008.

Advising:

Ph.D. committees:

Yunyan Duan (chair), Linguistics	*2021*
Matthew Heston, Technology & Social Behavior	*2018*
Jeremy Needle, Linguistics	*2018*
Thanapon Noraset, Electrical Engineering & Computer Science	*2018*
Michelle Lee, Clinical Psychology	*2017*
Erin Gustafson, Linguistics	*2016*

Qualifying paper committees:

Nicole Mirea (chair), Linguistics	*2018*
Adam Goodkind (chair), Linguistics	*2018*
Yunyan Duan (chair), Linguistics	*2017*
Jordan Hosier (chair), Linguistics	*2017*
Katherine Simeon, Communication Sciences & Disorders	*2017*
Daniel Tucker (chair), Linguistics	*2015*

Other professional experience:

Adobe Systems, Intern	*Summer 2006*
FrameNet II Lexicographic Project, International Computer Science Institute, Intern	*Summer 2004*

Professional activities:

Conference area chairs:

COLING	*2018*
ACL	*2014*

Program committees:

2nd annual Learning@Scale Workshop on Educational A/B Testing at Scale	*2021*
AAAI-2021 Workshop on AI Education: "Imagining Post-COVID Education with AI" (AAAI-TIPCE)	*2021*
Annual meeting of the Association for Computational Linguistics (ACL)	*2010, 2013–2016, 2020*
Conference on Empirical Methods in Natural Language Processing (EMNLP)	*2014–2015, 2019*
Society for Computation in Linguistics	*2018*
Workshop on information-theoretic models of linguistic variation, Annual Conference of the German Linguistic Society, Saarbrücken, Germany	*2017*
Annual meeting of the European Chapter of the Association for Computational Linguistics (EACL)	*2014*
Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL-HLT)	*2015–2016*
Cognitive Modeling and Computational Linguistics workshop (CMCL) at NAACL-HLT & ACL	*2012–2018*
International Conference on Computational Linguistics (COLING)	*2010, 2014*
NAACL Student Research Workshop and Doctoral Consortium	*2012*

Reviewing:

Ad hoc grant reviewer for NSF.

Ad hoc journal article reviewer for *Attention, Perception, & Psychophysics*; *Behavior Research Methods*; *Cognition*; *Cognitive Computation*; *Cognitive Psychology*; *Cognitive Science*; *Current Biology*; *Frontiers in Psychology*; *International Journal of Human-Computer Studies*; *Journal of Cognitive Science*; *Journal of Experimental Psychology: Learning, Memory, & Cognition*; *Journal of Memory and Language*; *Language*; *Language & Cognition*; *Language, Cognition and Neuroscience*; *Language and Speech*; *Language Learning*; *Linguistic Approaches to Bilingualism*; *Memory & Cognition*; *Phonology*; *PLOS ONE*; *Psychological Science*; *Psychonomic Bulletin & Review*; *The R Journal*; *Topics in Cognitive Science*; and *Visual Cognition*.

Ad hoc book reviewer for CRC Press.

Conference reviewer for the annual meeting of the Cognitive Science Society (CogSci), the annual meeting of the Linguistic Society of America (LSA), Architectures and Mechanisms for Language Processing (AMLaP), the CUNY Conference on Human Sentence Processing, and the International Congress of Linguists (CIL).

Northwestern University service:

Admissions officer, Linguistics Department	*2014–2018*
Computational resources coordinator, Linguistics Department	*2015–2018*
Social media coordinator, Linguistics Department	*2017–2018*
Cognitive Science Program Committee	*2017–2018*
Admissions committee, Master of Science in Analytics Program	*2016*
Faculty search committee, Linguistics Department	*2014, 2015–2016, 2017–2018*
Faculty search committee, Department of Communication Sciences & Disorders	*2016–2017*

Other academic service:

Colloquium committee, UC San Diego Linguistics Department	*2005–2009*

Organizing committee, 20th Annual CUNY Conference on Human Sentence Processing *2007*

Copy editing, *Wondering at the Natural Fecundity of Things: Essays in Honor of Alan Prince*. *2006*
Santa Cruz, CA: UC Santa Cruz Linguistics Research Center. (2006).

Co-organizer, 2nd and 3rd Annual Symposia of the Society of Linguistics *2004, 2005*
Undergraduates, UC Berkeley

Teaching:

Short courses and tutorials:

Computational psycholinguistics. Advanced topic course at the 2015 Linguistic Institute of the Linguistic Society of America, Chicago, IL, July 2015. (Co-taught with Roger Levy.)

Computational psycholinguistics. Advanced course at the 26th European Summer School in Logic, Language, and Information (ESSLLI 2014), Tübingen, Germany, 11–22 August 2014. (Co-taught with Roger Levy.)

Computational psycholinguistics: Integrating NLP modeling and experimental psycholinguistics to investigate real-time human language use. Tutorial at the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL HLT) 2010 conference, Los Angeles, CA, 1 June 2010. (Co-taught with Roger Levy and Nathaniel Smith.)

A brief and friendly introduction to mixed-effects models in linguistics. Tutorial presented at the 'Introduction to Mixed Linear Models in R' workshop at the 2009 Linguistic Institute of the Linguistic Society of America, Berkeley, CA, 15 July 2009.

University courses:

Linguistics 334 (Northwestern): Introduction to Computational Linguistics ($\times 4$)
  Spring 2014, Spring 2015, Spring 2016, Spring 2017

Linguistics 400 / MSiA 490-20 (Northwestern): Text analytics ($\times 3$)
  Fall 2015, Fall 2016, Fall 2017

Linguistics 300 (Northwestern): Topics in linguistics: Bayesian inference for language scientists ($\times 2$)
  Winter 2015, Spring 2016

Linguistics 400 / Linguistics 300 (Northwestern): Computational psycholinguistics ($\times 2$)
  Spring 2015, Fall 2016

Cognitive Science 202 (Northwestern): Evaluating evidence *Fall 2017*

Linguistics 8 (UC San Diego): Languages and cultures of America (teaching assistant) *Spring 2007*

Linguistics 176 (UC San Diego): Language of politics and advertising (teaching assistant) *Winter 2007*

Linguistics 170 (UC San Diego): Psycholinguistics (teaching assistant) *Fall 2006*

Cognitive Science 110 / Computer Science 182 / Linguistics 109 (UC Berkeley): *Spring 2005*
The neural basis of thought and language (teaching assistant)

Memberships:

AAAS, Association for Computational Linguistics, Association for Psychological Science, Cognitive Science Society, Linguistic Society of America, Psychonomic Society