Curriculum Vitae: Edward A. F. Gibson

Personal

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Citizenship: Dual US / Canadian

Education

1991—1992	Post-doctoral fellow, Department of Brain & Cognitive Sciences MIT, Cambridge, MA
1986—1991	Ph.D. Computational Linguistics, Pittsburgh, PA Carnegie Mellon University

Thesis: A Computational Theory of Human Linguistic Processing:
         Memory Limitations and Processing Breakdown

1985—1986	M. Phil. Computer Speech and Language Processing University of Cambridge, England
1980—1985	B.Sc. Mathematics and Computer Science Queen's University, Kingston, Ontario, Canada

Positions Held

2004—present	Professor, Dept of Brain & Cognitive Sciences, MIT
1997—2004	Associate Professor with tenure, MIT
1997—2000	Associate Professor, MIT
1993—1997	Assistant Professor, MIT
1992—1993	Assistant Professor, Carnegie Mellon University (Program in Computational Linguistics, Department of Philosophy)

Awards and Fellowships

- Fellow of the Cognitive Science Society, 2018
- Department of Brain and Cognitive Sciences Award for Excellence in Undergraduate Advising, April 2017
- Business Insider: Named one of the top 12 most impressive professors at MIT, 2015 https://www.businessinsider.in/12-of-the-most-impressive-professors-at-MIT/Edward-Gibson-found-a-universal-link-between-all-languages-/slideshow/48860609.cms
- Department of Brain and Cognitive Sciences Award for Excellence in Undergraduate Advising, May 2012

- Best article in *Memory and Cognition* in 2009: Fedorenko, E., Patel, A., Casasanto, D., Winawer, J. & Gibson, E. (2009). Structural integration in language and music: Evidence for a shared system.
- Discover Magazine, top 100 Stories of 2008, #39: Amazonian Tribe Doesn't Have Words for Numbers (reporting on the article in *Cognition* by Frank, Everett, Fedorenko & Gibson, 2008).
- David Marr Prize for Best Student Paper awarded to Michael Frank in 2008 for the following paper: Frank, M. C., Fedorenko, E., & Gibson, E. (2008). Language as a cognitive technology: English speakers match like Pirahã when you don't let them count. Paper presented at the 30th Annual Meeting of the Cognitive Science Society.
- McDonnell-Pew Research Fellowship at the Center for Cognitive Neuroscience at MIT, 1991-1992.
- David Marr Prize for Best Student Paper in 1990: Gibson, E. (1990). Recency preference and garden-path effects. Paper presented at the 12th Annual Meeting of the Cognitive Science Society
- Mellon Graduate Research Fellowship, 1987-1988.

Grants

- ***Evaluating meaning-based explanations of syntactic island effects cross-linguistically.*** NSF linguistics program, $304,000, Fall 2020 – Fall 2022
- ***Determining the foundational properties of numerical development in an indigenous Amazonian group.*** NSF education, with Steve Piantadosi, UC Berkeley, PI, $1,812,000: 2018-2021
- ***Workshop on Language Processing and Language Evolution: Special Session at the 2017 CUNY Conference on Human Sentence Processing.*** NSF linguistics program, $42,499, 2016-2017
- ***The role of noise in information-theoretic models of sentence comprehension and production.*** NSF linguistics program, $361,000, Summer 2015 – Summer 2018
- ***The nature of the pragmatic impairment in autism spectrum disorders*** (PI along with Evelina Fedorenko, Nancy Kanwisher, Josh Tenenbaum, Rebecca Saxe, Laura Schulz). Simons Center for the Social Brain at MIT, December 2014 – November 2017. Gibson section: $264,426.
- ***Investigating cognitive and communicative pressures on natural language lexicons***. NSF Doctoral Dissertation Award (co-PI: Kyle Mahowald), $11,984, January 2015 – December 2016.
- ***Investigating the role of grammatical representation in language learnability***. NSF Doctoral Dissertation Award (co-PI: Leon Bergen), $11,999, July 2014 – June 2016.
- ***Causal Representations in Children's Transitive Sentences***. NSF Doctoral Dissertation Award (co-PI: Melissa Kline), $11,999, July 2012 – June 2014.
- ***Origins of numerical competence: Assessment of number sense in Piraha***. NSF, $199,400, Fall 2010 – Summer 2013.
- ***Discovering semantic primitives***. NSF Doctoral Dissertation Award (co-PI: Steven Piantadosi), $12,000, July 2010 – June 2011.
- ***Bayesian Cue Integration in Probability-Sensitive Language Processing***. NSF, $330,000,

Summer 2009 – Summer 2013.
- ***Empirical studies and probabilistic models of word segmentation and word learning***. NSF Doctoral Dissertation Award (co-PI: Michael Frank), $11,976, Feb 2008 – Jan 2010.
- ***Evaluating the understandability of automatic translations***. Lincoln Laboratories (MIT), Jan 2006 – Dec 2007.
- ***Evaluating the readability of speech-to-text transcriptions***. Lincoln Laboratories (MIT), Jan 2003 – Dec 2006.
- ***Intonational boundaries in sentence production and comprehension***. NSF, $352,130, Oct 2002 – Sept 2005.
- ***Plausibility and syntactic processing load*** (co-PI; PI: Neal Pearlmutter, Northeastern University). NIH, $125,726, July 2002 – June 2007.
- ***The relationship between intonational phrasing and syntactic dependencies***. Solomon Buschbaum AT&T Research Fund, $50,000, Sept 2000 - Aug 2002.
- ***Empirical investigations of locality effects in linguistic complexity***. NSF, $270,000, May 1998 – Apr 2001.
- ***Computational investigations of parameter-setting in language*** (co-PI; PI: Ken Wexler, MIT). NSF, $300,000. Nov 1995 – Nov 1999.
- ***Human sentence processing***. MIT Sloan grant, $54,000, Dec 1994 – Dec 1996.

Recent Press

- **2017:** News coverage of our PNAS article "Color naming across languages reflects color use": MIT News: http://news.mit.edu/2017/analyzing-language-color-0918
- Wired: https://www.wired.com/story/what-you-call-a-color-depends-on-how-you-use-it/
- The Conversation: https://theconversation.com/languages-dont-all-have-the-same-number-of-terms-for-colors-scientists-have-a-new-theory-why-84117
- Science: http://www.sciencemag.org/news/2017/09/sky-really-blue-some-hunter-gatherers-don-t-describe-colors-same-way-most-people-do
- Boston Globe: https://www.bostonglobe.com/metro/2017/09/18/mit-scientists-find-link-between-languages-color-categories/8RTxH8CcxYWJy2Ye41DQBN/story.html
- Seattle Post-Intelligencer: http://www.seattlepi.com/news/article/Languages-don-t-all-have-the-same-number-of-terms-12206873.php
- Neue Burcher Beitung, the national daily newspaper of Switzerland: https://www.nzz.ch/wissenschaft/warum-rot-die-rampensau-unter-den-farben-ist-ld.1317656
- Smithsonian: http://www.smithsonianmag.com/science-nature/why-different-languages-name-different-colors-180964945/
- Aeon article, about 2017 Psychological Science article, "The unexpected benefits of getting lost in translation", https://aeon.co/ideas/the-unexpected-benefits-of-getting-lost-in-translation
- **2016:** TedX talk at Harvard: https://www.youtube.com/watch?v=IN7IoD9udMs
- **2015**: Guest on "Numbers by Nature" a 30 minute BBC Radio 4 program on the nature of counting in humans. http://www.bbc.co.uk/programmes/b06pt0bk
- News coverage of our Developmental Science paper on fairness in Tsimane' children: "What counts as fair? Neuroscientists find that children's ability to count is key to distributing resources based on merit." http://news.mit.edu/2015/children-ability-count-fairness-1110

- News coverage of our PNAS paper on cross-linguistic dependency length minimization: MIT News: http://newsoffice.mit.edu/2015/how-language-gives-your-brain-break-0803
- Science magazine: http://news.sciencemag.org/social-sciences/2015/08/all-languages-have-evolved-have-common
- Ars Technica: http://arstechnica.co.uk/science/2015/08/mit-claims-to-have-found-a-language-universal-that-ties-all-languages-together/
- Reddit (top of Reddit August 7 2015) https://www.reddit.com/r/science/comments/3g0vpk/mit_claims_to_have_found_a_language_universal/
- Huffington Post interview: http://live.huffingtonpost.com/r/segment/top-stories-for-friday-aug-7/55bfc00e2b8c2aea50000608
- **2014**: MIT news coverage of our Developmental Science paper on number development in a remote Bolivian tribe: the Tsimane' (Piantadosi, Jara-Ettinger & Gibson, 2014): http://newsoffice.mit.edu/2014/when-it-comes-to-numbers-culture-counts-bolivian-children-0618
- **2013**: *The Current* (Canadian Broadcasting Corporation news radio program). Apostrophes, and when to use them.
- **2013**: The *Slate* website. Apostrophes, and when to use them: http://www.slate.com/articles/life/the_good_word/2013/05/apostrophes_and_when_to_use_them_punctuation_necessary_at_all_not_really.html
- **2013**: MIT news coverage of our Psychological Science paper on the origins of word order (Gibson, Piantadosi, Brink, Bergen, Lim & Saxe, 2013): http://web.mit.edu/newsoffice/2012/applying-information-theory-to-linguistics-1010.html
- **2013**: MIT news coverage of our PNAS paper on noisy-channel models (Gibson, Bergen & Piantadosi, 2013): http://web.mit.edu/newsoffice/2013/decoding-noisy-language-0429.html
- **2012**: MIT news coverage of our Cognition paper on ambiguity (Piantadosi, Tily & Gibson, 2012): http://web.mit.edu/newsoffice/2012/ambiguity-in-language-0119.html; also covered in Time magazine: http://healthland.time.com/2012/01/27/study-why-words-with-many-meanings-make-language-more-efficient/
- **2011**: MIT news coverage of our PNAS paper on Zipf's law (Piantadosi, Tily & Gibson, 2011): http://web.mit.edu/newsoffice/2011/words-count-0210.html; also covered in Nature News: http://www.nature.com/news/2011/110124/full/news.2011.40.html
- **2008**: MIT news coverage of our Cognition paper (Frank, Everett, Fedorenko & Gibson, 2008): http://web.mit.edu/newsoffice/2008/language-0624.html; also covered in Science News (among other sources): http://www.sciencenews.org/view/generic/id/33300/title/Numbers_beyond_words

Professional Activities

- CUNY Human Sentence Processing conference, MIT, organizer, March 30-April 1, 2017
- Organizer of workshop on Culture / Cognition at MIT, March 29, 2017.
- Associate editor: *Language and Cognitive Processes,* 2000-2009.
- Associate editor: *Language,* 2006-2009.

- Editorial Board member: *Cognitive Science; Syntax: Journal of Theoretical, Experimental and Interdisciplinary Research; Journal of Psychological Research; Journal of Experimental Psychology: Learning, Memory and Cognition; Bradford books, MIT Press.*
- NIH, Biobehavioral and Behavioral Processes IRG, pre- and post-doctoral training review panel member, 2007.
- NSF, Linguistics panel member, 2001-2004.
- CUNY Human Sentence Processing conference, MIT, co-organizer, 2003.
- Computational Linguistics Graduate Student Organization, Carnegie Mellon University, President, 1988-1991.
- 20th Meeting of the North Eastern Linguistics Society, Pittsburgh, PA, Organizing Committee Chairman, 1989.
- Occasional Reviewer for numerous journals, including: *Language, Computational Linguistics, Language and Speech, Cognition, Language Acquisition, Journal of Psycholinguistic Research, Journal of Cognitive Neuroscience, Linguistic Inquiry, Language and Cognitive Processes, Journal of Mathematical Psychology, Journal of Memory and Language, Perceptual and Motor Skills, Journal of Linguistics, Linguistics and Philosophy, Natural Language and Linguistic Theory, Language Variation and Change, Psychological Bulletin and Review, Trends in Cognitive Science, Cognitive Brain Research, Language Learning, Syntax, Journal of Experimental Psychology: Learning Memory and Cognition, Quarterly Journal of Experimental Psychology, Memory and Cognition, Psychological Bulletin and Review, Psychological Science, Psychological Review, Lingua, Brain and Language.*
- Occasional Reviewer for many conferences including: *North Eastern Linguistics Society (NELS), International Joint Conference on Artificial Intelligence (IJCAI), Student Conference in Linguistics (SCIL), Western Conference on Linguistics (WECOL), CUNY conference on Human Sentence Processing, Architectures and mechanisms of language processing (AMLaP), the Cognitive Science Society, Association for Computational Linguistics (ACL).*
- Grant reviewing: *National Science Foundation, the National Institutes of Health, the Israel Science Foundation, the Netherlands Organization for Scientific Research, the Swiss Science Foundation, the German Science Foundation, the Danish Science Foundation, Hungarian Science Foundation.*

Ph.D. students supervised / currently supervising:

Maria Babyonyshev (1996); Edson Miyamoto (1998); Tessa Warren (2001); Dan Grodner (2002); Duane Watson (2002); Franny Hsiao (2003); Florian Wolf (2004); Kentaro Nakatani (2004); Evelina Fedorenko (2007); Mara Breen (2007); John Kraemer (2010); Michael Frank (2010); Steven Piantadosi (2011), Melissa Kline (2015); Leon Bergen (2015); Kyle Mahowald (2016); Richard Futrell (2017); Alex Paunov (2018); Mika Braginsky (expected 2021); Yuan Bian (expected 2023); Yingtong Liu (expected 2023).

Postdoctoral students supervised / currently supervising:

Stefano Bertolo (1995-1998); Whitney Tabor (1996-1997); Edith Kaan (1997-1998); Susanne Tunstall (1998-2000); Doug Rohde (2001-2004); Michael Wagner (2005); Timothy Desmet

(2005); Harry Tily (2010-2012); Peter Graff (2012-2013); Timothy O'Donnell (2012-2016); Rachel Ryskin (2016-present).

MIT Ph.D. committees:

Colin Phillips (1996), Kevin Broihier (1996), Carson Schutze (1996), Tony Harris (1998), Rose Roberts (1998), Rajesh Kasturirangan (2004), Amy Perfors (2008), Lauren Schmidt (2009), Rebecca Woodbury (2011), Nat Twarog (2012), Peter Graff (2012).

Outside Ph.D. committees:

Alex Franz (Carnegie Mellon, 1995); Alon Lavie (Carnegie Mellon, 1995); Carole Tenny-Boster (U. Connecticut, 1997); John Hale (Johns Hopkins, 2003); Ana Gouvea (University of Maryland College Park, 2002); Eric Solomon (Northeastern University, 2004); Florian Jaeger, (Stanford University, 2006); Tali Ditman (Tufts University, 2007); Louise Stanszak (Boston University, 2008); Claire Delle Luche, (University de Lyon, France, 2008); Nina Versteeg (Utrecht University, 2009); Tomoko Ishizuka (UCLA, 2010), Vera Demberg (University of Edinburgh, 2010); Jasmeen Kanwal (Edinburgh, 2018)

M.Sc. students supervised:

James Thomas (1995), Kara Ko (1998), Melissa Troyer (2011).

Courses Taught

Introduction to computational linguistics. Graduate course, Carnegie Mellon University, fall 1992.
Natural language processing II. Graduate course, Carnegie Mellon University, spring 1993.
Human language processing. Graduate course, Carnegie Mellon University, spring 1993.
Human language processing (9.591). Graduate course, MIT, spring 1994 – present.
Psycholinguistics (9.59/24.905). Undergraduate course, MIT, fall 1993 – present. (Co-taught with Ken Wexler 1993-1997.)
Cognitive Science (9.57). Undergraduate course, MIT, fall 1994 – 1997. (Co-taught with Molly Potter.)
Cognitive Science. Independent activities period course, MIT, 1994-1996.
Formal learning theory and language acquisition. Graduate course, MIT, fall 1997. (Co-taught with Ken Wexler and Stefano Bertolo.)
Connectionist models of language. Independent Activities Period, MIT, 1999.
Language and mind. Independent Activities Period, MIT, 2002-2006.
Experiment-based psycholinguistics (9.591). Graduate course, MIT, 2008 – 2011. (Co-taught with Ev Fedorenko in 2008.)
Cognitive Science (9.012). Graduate core course, MIT, 2005 – present.
Lab in psycholinguistics (9.59). MIT, 2014-present

Other Activities

- Canadian National Rowing Team, 1981 (Bronze medal at world championships, lightweight 4-); 1983 (8th at world championships, openweight 8+); 1985 (5th at world championships, openweight 4-).
- Canadian Olympic Rowing Team, 1984 (7th, openweight 4-).
- Cambridge University Blue Boat, 1986. Winner of 1986 Cambridge-Oxford Boat Race by 7 lengths; the only victory by Cambridge in the period 1976-1992.

Papers in Refereed Journals

Google Scholar citations: 18,392; h-index 60; i10-index 230 (July 13, 2020)
See tedlab.mit.edu for most of these papers.

2015-2020

Futrell, Levy, R.P., & Gibson, E. (2020). Dependency locality as an explanatory principle for word order. *Language*.

Futrell, R. Gibson, E. & Levy, R.P. (2020). Lossy-Context Surprisal: An Information-Theoretic Model of Memory Effects in Sentence Processing. *Cognitive Science* 44, e12814, DOI: 10.1111/cogs.12814

Conway, BR., Ratnasingama, S., Jara-Ettinger, J., Futrell, R. & Gibson, E. (2020). Communication efficiency of color naming across languages provides a new framework for the evolution of color terms. *Cognition*.

Gibson, E., Futrell, R., Piantadosi, S.T., Dautriche, I., Mahowald, K., Bergen, L. & Levy, R. (2019). How Efficiency Shapes Human Language. *Trends in Cognitive Science*.

Rubio-Fernándeza, P., Mollica, F., Ali, M.O., Gibson, E. (2019). How do you know that? Automatic belief inferences in passing conversation. *Cognition*.

Everett, D.L. & Gibson, E. (2019). Review of "Recursion Across Domains". Review Article, *Language*.

Ryskin, R., Futrell, R., Kiran, S. & Gibson, E. (2018). Comprehenders Model the Nature of Noise in the Environment. *Cognition.* https://doi.org/10.1016/j.cognition.2018.08.018

Mahowald, K., Dautriche, I., Gibson, E. & Piantadosi, S.T. (2018). Word Forms are Structured for Efficient Use. *Cognitive Science.* DOI: 10.1111/cogs.12689

Gibson, E., Jara-Ettinger, J., Levy, R., & Piantadosi, S.T. (2018). The use of a computer display exaggerates the connection between exact and approximate number ability in remote populations. *Open Mind: Discoveries in Cognitive Science.*

Gibson, E., Futrell, R., Jara-Ettinger, J., Mahowald, K., Bergen, L., Ratnasigam, S., Gibson, M., Piantadosi, S.T., and Conway, B.R. (2017). Color naming across languages reflects color use. *Proceedings of the National Academy of Sciences*.

Futrell, R., Levy, R., & Gibson, E. (2017). Generalizing dependency distance: Comment on "Dependency distance: A new perspective on syntactic patterns in natural languages" by Haitao Liu et al. *Physics of life reviews*, 21, 197-199.

Gibson, E., Piantadosi, S.T. & Levy, R. (2017). Post-hoc analysis decisions drive the reported reading time effects in Hackl, Koster-Hale & Varvoutis (2012). *Journal of Semantics,* 1-8, doi: 10.1093/jos/ffx001

Kline, M., Schulz, L. & Gibson, E. (2017). Partial truths: Adults choose to mention agents and patients in proportion to informativity, even if it doesn't fully disambiguate the message. *Open Mind: Discoveries in Cognitive Science*.

Gibson, E., Tan, C., Futrell, R., Mahowald, K., Konieczny, L., Hemforth, B. & Fedorenko, E. (2017). Don't underestimate the benefits of being misunderstood. *Psychological Science*. https://doi.org/10.1177/0956797617690277

Rubio-Fernandez, P., Jara-Ettinger, J. & Gibson, E. (2017). Can processing demands explain toddlers' performance in false-belief tasks? *Proceedings of the National Academy of Sciences*. Letter to Editor. doi: 10.1073/pnas.1701286114

Dautriche, I., Mahowald, K., Gibson, E., Christophe, A. & Piantadosi, S. T. (2017). Words cluster phonetically beyond phonotactic regularities. *Cognition*, 163, 128-145. http://dx.doi.org/10.1016/j.cognition.2017.02.001

Shain, C., van Schijndel, M., Futrell, R., Gibson, E., & Schuler, W. (2016). Memory access during incremental sentence processing causes reading time latency. *Proceedings of the Workshop on Computational Linguistics for Linguistic Complexity*: 49-58. Osaka, Japan.

Dautriche, I., Mahowald, K., Gibson, E., & Piantadosi, S. T. (2016). Wordform Similarity Increases With Semantic Similarity: An Analysis of 100 Languages. *Cognitive Science*: 1-21. doi: 10.1111/cogs.12453.

Mahowald, K., Graff, P., Hartman, J., & Gibson, E. (2016). SNAP judgments: A small N acceptability paradigm (SNAP) for linguistic acceptability judgments. *Language*, 92(3), 619-635.

Futrell, R., & Gibson, E. (2016). L2 processing as noisy channel language comprehension. *Bilingualism: Language and Cognition*. doi: 10.1017/S1366728916001061.

Jouravleva, O., Stearns, L., Bergen, L., Eddy, M., Gibson, E. & Fedorenko, E. (2016). Processing temporal presuppositions: an event-related potential study. *Language, Cognition and Neuroscience.* dx.doi.org/10.1080/23273798.2016.1209531

Mahowald, K., James, A., Futrell, R., & Gibson, E. (2016). A meta-analysis of syntactic priming in language production. *Journal of Memory and Language*. doi: 10.1016/j.jml.2016.03.009.

Futrell, R., Stearns, L., Everett, D. L., Piantadosi, S. T., & Gibson, E. (2016). A corpus investigation of syntactic embedding in Pirahã. *PLoS ONE* 11(3): e0145289.

Jara-Ettinger, J., Piantadosi, S., Spelke, E.S., Levy, R. & Gibson, E. (2016). Mastery of the logic of natural numbers is not the result of mastery of counting: Evidence from late counters. *Developmental Science*.

Gibson, E., Sandberg, C., Fedorenko, E., Bergen, L. & Kiran, S. (2015). A rational inference approach to aphasic language comprehension. *Aphasiology*, DOI: 10.1080/02687038.2015.1111994

Singh, R., Fedorenko, E., Mahowald, K., & Gibson, E. (2015). Accommodating presuppositions is inappropriate in implausible contexts. *Cognitive Science.*

Jara-Ettinger, J., Gibson, E., Kidd, C., & Piantadosi, S. (2015). Native Amazonian children forego egalitarianism in merit-based tasks when they learn to count. *Developmental Science*. DOI: 10.1111/desc.12351

Futrell, R., Mahowald, K., & Gibson, E. (2015). Large-scale evidence of dependency length minimization in 37 languages. *Proceedings of the National Academy of Sciences*, *112*(33), 10336-10341.

Futrell, R., Hickey, T., Lee, A., Lim, E., Luchkina, E., & Gibson, E. (2015). Cross-linguistic gestures reflect typological universals: A subject-initial, verb-final bias in speakers of diverse languages. *Cognition*, 136, 215-221.

2011-2014

Yoon, J.M.D., Nathan Witthoft, Jonathan Winawer, Michael C. Frank, Daniel L. Everett, Edward Gibson. (2014). Cultural Differences in Perceptual Reorganization in US and Pirahã Adults. *PLoS ONE*, Published: November 20, 2014, DOI: 10.1371/journal.pone.0110225.

Gibson, E., Jacobson, P., Graff, P., Mahowald, K., Fedorenko, E. & Piantadosi, S.T. (2014). A pragmatic account of complexity in definite Antecedent-Contained-Deletion relative clauses. *Journal of Semantics.* First published online: July 10, 2014; doi: 10.1093/jos/ffu006

Piantadosi, S.T., Jara-Ettinger, J. & Gibson, E. (2014). Children's development of number in an indigenous farming-foraging group. *Developmental Science.* 17 (4), 553–563. DOI: 10.1111/desc.12078

Piantadosi, S.T. & Gibson, E. (2014). Quantitative standards for absolute linguistic universals. *Cognitive Science.* 38 (4), 736-756. DOI: 10.1111/cogs.12088

Levy, R. Fedorenko, E., & Gibson, E. (2013). The syntactic complexity of Russian relative clauses. *Journal of Memory and Language,* 69(4):461-495.

Mahowald, K. & Gibson, E. (2013). Short, frequent words are more likely to appear genetically related by chance. *Proceedings of the National Academy of Sciences.* Letter to Editor. doi:10.1073/pnas.1308822110

Perrachione, T.K., Fedorenko, E., Vinke, L., Gibson, E. & Dilley, L.C. (2013). Evidence for Shared Cognitive Processing of Pitch in Music and Language. *PLoS ONE*, 8(8): e73372. doi:10.1371/journal.pone.0073372.

Frank, M.C., Tenenbaum, J.C. & Gibson, E. (2013). Learning and long-term retention of large-scale artificial languages. PLoS ONE, 8(1): e52500. doi:10.1371/journal.pone.0052500.

Levy, R. & Gibson, E. (2013). Surprisal, the PDC, and the primary locus of processing difficulty in relative clauses. Response to MacDonald. *Frontiers in Psychology,* 4:229. doi: 10.3389/fpsyg.2013.00229.

Gibson, E., Piantadosi, S.T., Brink, K., Bergen, L., Lim, E. & Saxe, R. (2013). A noisy-channel account of crosslinguistic word order variation. *Psychological Science,* 24(7), 1079-1088.

Gibson, E., Bergen, L. & Piantadosi, S. (2013). The rational integration of noisy evidence and prior semantic expectations in sentence interpretation. *Proceedings of the National Academy of Sciences U.S.A.,* 110(20), 8051-8056.

Gibson, E., Piantadosi, S.T. & Fedorenko, E. (2013). Quantitative methods in syntax/semantics research: A response to Sprouse and Almeida (2013). *Language and Cognitive Processes, 2*8(3), 229-240.

Fedorenko, E., Piantadosi, S. & Gibson, E. (2013). The interaction of syntactic and lexical information sources in language processing: The case of the noun-verb ambiguity. *Journal of Cognitive Science,* 13(3), 249-285.

Mahowald, K., Fedorenko, E., Piantadosi, S.T. & Gibson, E. (2013). Info/information theory: speakers choose shorter words in predictive contexts. *Cognition, 126, 313-318.*

Fedorenko, E., Woodbury, R. & Gibson, E. (2013). Direct evidence of memory retrieval as a source of difficulty in non-local dependencies in language. *Cognitive Science,* 37(2), 378-394.

Gibson, E. & Wu, I. (2013). Processing Chinese relative clauses in context. *Language and*

Cognitive Processes, 28, 125-155.

Gibson, E. & Fedorenko, E. (2013). The need for quantitative methods in syntax and semantics research. *Language and Cognitive Processes,* 28, 88-124.

Brown, M., Savova, V. & Gibson. E. (2012). Syntax encodes information structure: Evidence from on-line reading comprehension. *Journal of Memory and Language.* 66, 194-209.

Fedorenko, E., Piantadosi, S. & Gibson, E. (2012). Processing relative clauses in supportive contexts. *Cognitive Science,* 36, 471–497.

Piantadosi, S., Tily, H., & Gibson, E. (2012). The communicative function of ambiguity in language. *Cognition*, 122, 280-291.

Frank, M.C., Fedorenko, E., Lai, P., Saxe, R. & Gibson, E. (2012). Verbal interference suppresses exact numerical representation. *Cognitive Psychology*, 64, 74-92.

Levy, R. Fedorenko, E., Breen, M. & Gibson, E. (2012). The processing of extraposed structures in English. *Cognition,* 122, 12-36.

Breen, M., Dilley, L., Kraemer, J. & Gibson, E. (2012). Inter-transcriber reliability for two systems of prosodic annotation: ToBI (Tones and Break Indices) and RaP (Rhythm and Pitch). *Corpus Linguistics and Linguistic Theory*, 2, 277-312.

Breen, M., Gibson, E. & Watson, D. (2011). Intonational phrasing is constrained by meaning, not balance. *Language and Cognitive Processes,* 26, 1532-1562.

Scontras, G. & Gibson, E. (2011). A quantitative investigation of the imperative-and-declarative construction in English. *Language,* 87, 817-829.

Gibson, E., Piantadosi, S. & Fedorenko, K. (2011). Using Mechanical Turk to Obtain and Analyze English Acceptability Judgments. *Language and Linguistics Compass.* 5(8), 509–524.

Piantadosi, S.T., Tily, H.J. & Gibson, E. (2011). Reply to Reilly and Kean: Clarifications on word length and information content. *Proceedings of the National Academy of Sciences U.S.A.*

Piantadosi, S.T., Tily, H.J. & Gibson, E. (2011). Rethinking Zipf: Word length reflects information content. *Proceedings of the National Academy of Sciences U.S.A.*, 108(9), 3526-3529.

Frank, M.C. & Gibson, E. (2011). Overcoming memory limitations in rule learning. *Language Learning and Development,* 7, 130-148.

2006-2010

Breen, M., Fedorenko, E., Wagner, M. & Gibson, E. (2010). Acoustic correlates of information structure. *Language and Cognitive Processes,* 25(7/8/9), 1044-1098.

Fedorenko, E. & Gibson, E. (2010). Adding a third wh-element does not increase the acceptability of object-initial multiple-wh-questions. *Syntax*, 13, 183-195.

Tily, H., Fedorenko, E., & Gibson, E. (2010). The time-course of lexical and structural processes in sentence comprehension. *Quarterly Journal of Experimental Psychology,* 63(5), 910-927.

Nakatani, K. & Gibson, E. (2010). An on-line study of Japanese nesting complexity. *Cognitive Science*, 34, 94-112.

Gibson, E. & Fedorenko, E. (2010). Weak quantitative standards in linguistics research. *Trends in Cognitive Science,* 14, 233-234.

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1998-2000

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Books

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Gibson, E., Wagner, M. & Watson, D. (2010). Special Issue: Experimental and Theoretical Advances in Prosody. *Language and Cognitive Processes.* Volume 25, Issue 7-9.

Gibson, E. & Pearlmutter, N.J. (eds.) (2011). *The processing and acquisition of reference.* MIT Press, Cambridge, MA.

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Frazier, L. & Gibson, E. (2015). Prosody and sentence processing. Springer.

Invited Talks at Conferences and Workshops

Keynote speaker at the Congreso Internacional de lenguas y technoligia, Universidad Autonoma del Estado de Hidalgo, Mexico, October, 2019.

Keynote speaker at the workshop on Word Order Evolution: Reconstruction, Typology, and Processing, University of Zurich, Zurich, Switzerland, November, 2018.

Keynote speaker at the Linguistic Evidence conference, University of Tuebingen, Tuebingen, Germany, February, 2018

Keynote speaker at the BAULT symposium, University of Helsinki, Helsinki, Finland, December 1, 2016.

TedX talk, Harvard, September 2016. https://www.youtube.com/watch?v=IN7IoD9udMs

Invited lecturer, CLASP, University of Gothenburg, Sweden, September, 2016.

Invited researcher, Brain & Language Research Institute, Aix-en-Provence, France, June-July, 2016.

Keynote speaker at Workshop in language complexity, Brain & Language Research Institute, Aix-en-Provence, France, June 28, 2016.

Keynote speaker at the Psycholinguistics in Flanders (PiF) conference, University of Antwerp, May 25, 2016.

Invited speaker at the Names Not Numbers conference, Oxford, September 27-29, 2015. http://namesnotnumbers.com/index.php

Keynote speaker at the 6th International Conference for Cognitive Science Studies (ICSS), Tehran, Iran, April 27-29, 2015.

Keynote speaker at the Workshop "Data mining and its use and usability for linguistic analysis", Saarbruecken, Germany, April 17, 2015.

Keynote speaker at the 12th Philippines Linguistics Congress, Manila, University of the Philippines, Diliman, November 26-28, 2014.

Invited speaker at the Princeton Language Processing Workshop, October 11-12, 2014.

Keynote speaker at the 25th International Conference on Computational Linguistics (COLING), Dublin, Ireland, August, 2014.

Keynote speaker at the Cognitive Modeling and Computational Linguistics (CMCL-2014), Association for Computational Linguistics, June, 2014.

Invited speaker at the workshop "Understanding Acceptability Judgments", University of Potsdam, September 2013.

A debate with Colin Phillips (U Maryland) on the topic of "The Scope and Limits of Chomsky's Contribution to the Study of Language", Association for Psychological Science annual meeting, April 2013.

Invited course, University of Paris Diderot, September-December 2012.

Invited speaker at a workshop on anaphora resolution, University of Paris, October 2012.

Invited speaker at a workshop on typology, University of Paris, November 2012.

Keynote speaker, CogFest, Ohio State University, June 2012.

Invited speaker at the workshop "Hybrid Cultures and Languages", Microsoft, November 2011.

Invited speaker at the workshop "Neuromarketing: Advertising as a Neurocultural Design Problem", DARPA (Tampa, FL), April 2010.

Invited lecturer, Freiburg Institute for Advanced Studies, 2009.

Keynote speaker at a workshop on language processing, Utrecht University, June 2009.

Invited speaker at a workshop on working memory and language, University of York (UK), April 2009.

Invited speaker, Language and Psychophysics session of Fechner Day, the 25th Annual Conference of the International Society for Psychophysics, Galway, Ireland, September 2009.

Invited speaker, Simons Foundation on Autism Research, New York, September 2008.

Invited lecturer, Summer School in Linguistics GLOW, Barcelona, Spain, Summer 2008.

Keynote speaker, Natural Language and Data Base conference, London, UK, June 2008.

Invited speaker at a workshop on semantics in language processing, Berlin, Germany, December 2007.

Invited speaker at a workshop on processing head-final languages, Leipzig, Germany, December 2007.

Invited speaker at a workshop on relative clauses, Cambridge UK, September 2007.

Invited lecturer, Summer Linguistic Institute, Stanford University, July 2007.

Invited speaker at a workshop on recursion, Illinois State University, April 2007.

Invited speaker at the Association for Computational Linguistics workshop "Constraints on language processing", Sydney, July 2006.

Invited speaker at the workshop "Optimality Theory and Sentence Processing", Nijmegen, June 2006.

Invited course, Summer Linguistic Institute at MIT/Harvard, Summer 2005.

Invited speaker at the third Hopkins Workshop on Language (HOWL), Johns Hopkins University, January 2005.

Invited course on language processing, École Normale Supérieure Paris, September 2004.

Invited speaker at the workshop "Anaphor resolution in sentence comprehension", CNRS Aix-en-Provence, June 2004.

Invited speaker at the workshop "The architecture of sentence and discourse comprehension", the F.C. Donders Centre for Cognitive Neuroimaging, Nijmegen, August 2003.

Invited speaker at the workshop "Working memory and sentence comprehension", Saarland University, Saarbruecken, July 2003.

Invited speaker at the workshop "Theoretical and experimental linguistics," the Utrecht Institute of Linguistics OTS, Utrecht, June 2003.

Invited speaker at the conference "Semantic Role Universals", Max Planck Institutes of Cognitive Neuroscience and Evolutionary Anthropology, Leipzig, December 2002.

Invited speaker at the conference "From parsing to discourse interpretation: Crossing the borders", the Utrecht Institute of Linguistics OTS, Utrecht, July 2001.

Invited speaker at the second "Image, Language, Brain" symposium, Tokyo, November 2000.

Invited speaker at the 12th CUNY Conference on Human Sentence Processing, New York, NY, March 1999.

Invited speaker at the first "Image, Language, Brain" symposium, Tokyo, November 1998.

Invited course, the University of Freiburg, May 1998.

Invited speaker at the Computational Psycholinguistics conference, University of California Berkeley, August 1997.

Invited speaker at a workshop on computational models of human syntactic processing, Wassenaar, June 1996.

Invited speaker at the Maryland Mayfest 96 "Linguistics and psycholinguistics in East Asian languages", May 1996.

Invited speaker at the 23rd meeting of the Berkeley Linguistics Society, parasession on learnability of human language, February 1996.

Invited speaker at the North Eastern Linguistics Society workshop on sentence processing, October 1995.

Invited speaker at the Maryland Mayfest 95 "Formal approaches to language learnability", May 1995.

Invited speaker at the workshop "Optimality in Syntax", MIT, May 1995.

Invited speaker at the mini-conference "Cognitive and Linguistic Universals: Computational Perspectives on Learning and Processing", Princeton University, June 1994.

Invited course "Lisp for Linguists", the Summer Linguistic Institute, Ohio State University, 1993.

Invited speaker at the 6th Annual CUNY Conference on Human Sentence Processing, Amherst, MA, March 1993.