

## References

- Abe, Kentaro, and Dai Watanabe. 2011. Songbirds possess the spontaneous ability to discriminate syntactic rules. *Nature Neuroscience* 14 (8): 1067–1074.
- Abutalebi, Jubin. 2008. Neural aspects of second language representation and language control. *Acta Psychologica* 128 (3): 466–478.
- Alaerts, Kaat, Kritika Nayar, Clare Kelly, Jessica Raitzel, Michael P. Milham, and Adriana Di Martino. 2015. Age-related changes in intrinsic function of the superior temporal sulcus in autism spectrum disorders. *Social Cognitive and Affective Neuroscience* 10 (10): 1413–1423.
- Amunts, Katrin, Marianne Lenzen, Angela D. Friederici, Axel Schleicher, Patricia Morosan, Nicola Palomero-Gallagher, and Karl Zilles. 2010. Broca's region: Novel organizational principles and multiple receptor mapping. *PLoS Biology* 8:e1000489.
- Amunts, Katrin, Axel Schleicher, Uli Bürgel, Hartmut Mohlberg, Harry B. M. Uylings, and Karl Zilles. 1999. Broca's region revisited: Cytoarchitecture and intersubject variability. *Journal of Comparative Neurology* 412 (2): 319–341.
- Amunts, Katrin, Axel Schleicher, Annette Ditterich, and Karl Zilles. 2003. Broca's region: Cytoarchitectonic asymmetry and developmental changes. *Journal of Comparative Neurology* 465 (1): 72–89.
- Amunts, Katrin, and Karl Zilles. 2012. Architecture and organizational principles of Broca's region. *Trends in Cognitive Sciences* 16 (8): 418–426.
- Andreewsky, Evelyne, and Xavier Seron. 1975. Implicit processing of grammatical rules in a classical case of agrammatism. *Cortex* 11 (4): 379–390.
- Angrilli, Alessandro, Barbara Penolazzi, Francesco Vespignani, Marica De Vincenzi, Remo Job, Laura Ciccarelli, Daniela Palomba, and Luciano Stegagno. 2002. Cortical brain responses to semantic incongruity and syntactic violation in Italian language: An event-related potential study. *Neuroscience Letters* 322 (1): 5–8.
- Anwander, Alfred, Marc Tittgemeyer, Detlef Yves von Cramon, Angela D. Friederici, and Thomas R. Knösche. 2007. Connectivity-based parcellation of Broca's area. *Cerebral Cortex* 17 (4): 816–825.
- Ash, Sharon, Corey McMillan, Delani Gunawardena, Brian Avants, Brianna Morgan, Alea Khan, Peachie Moore, James Gee, and Murray Grossman. 2010. Speech errors in progressive non-fluent aphasia. *Brain and Language* 113 (1): 13–20.
- Aslin, Richard N., David B. Pisoni, Beth L. Hennessy, and Alan J. Perey. 1981. Discrimination of voice onset time by human infants: New findings and implications for the effects of early experience. *Child Development* 52 (4): 1135–1145.
- Atchley, Ruth Ann, Mabel L. Rice, Stacy K. Betz, Kristin M. Kwasney, Joan A. Sereno, and Allard Jongman. 2006. A comparison of semantic and syntactic event related potentials generated by children and adults. *Brain and Language* 99 (3): 236–246.
- Bae, Byoung-Il, Ian Tietjen, Kutay D. Atabay, Gilad D. Evrony, Matthew B. Johnson, Ebenezer Asare, Peter P. Wang, et al. 2014. Evolutionarily dynamic alternative splicing of GPR56 regulates regional cerebral cortical patterning. *Science* 343 (6172): 764–768.

- Baggio, Giosue, Travis Choma, Michiel van Lambalgen, and Peter Hagoort. 2009. Coercion and compositionality. *Journal of Cognitive Neuroscience* 22 (9): 2131–2140.
- Bahlmann, Jörg, Ricarda I. Schubotz, and Angela D. Friederici. 2008. Hierarchical artificial grammar processing engages Broca's area. *NeuroImage* 42 (2): 525–534.
- Bahlmann, Jörg, Ricarda I. Schubotz, Jutta L. Mueller, Dirk Köster, and Angela D. Friederici. 2009. Neural circuits of hierarchical visuo-spatial sequence processing. *Brain Research* 1298:161–170.
- Basnakova, Jana, Kirsten Weber, Karl Magnus Petersson, Jos van Berkum, and Peter Hagoort. 2014. Beyond the language given: The neural correlates of inferring speaker meaning. *Cerebral Cortex* 24 (10): 2572–2578.
- Bastiaansen, Marcel, and Peter Hagoort. 2006. Oscillatory neuronal dynamics during language comprehension. *Progress in Brain Research* 159:179–196.
- Bastiaansen, Marcel, Lilla Magyari, and Peter Hagoort. 2010. Syntactic unification operations are reflected in oscillatory dynamics during on-line sentence comprehension. *Journal of Cognitive Neuroscience* 22 (7): 1333–1347.
- Bastiaansen, Marcel C. M., Marieke van der Linden, Mariken ter Keurs, Ton Dijkstra, and Peter Hagoort. 2005. Theta responses are involved in lexical-semantic retrieval during language processing. *Journal of Cognitive Neuroscience* 17 (3): 530–541.
- Bastos, Andre M., and Jan-Mathijs Schoffelen. 2016. A tutorial review of functional connectivity analysis methods and their interpretational pitfalls. *Frontiers in Systems Neuroscience* 9:175. doi:10.3389/fnsys.2015.00175.
- Bates, Elizabeth, and Brian MacWhinney. 1987. Competition, variation, and language learning. In *Mechanisms of Language Acquisition*, ed. Brian MacWhinney, 157–193. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Bavelier, Daphne, David P. Corina, and Helen J. Neville. 1998. Brain and language: A perspective from sign language. *Neuron* 21 (2): 275–278.
- Beaucousin, Virginie, Anne Lacheret, Marie-Renee Turbelin, Michel More, Bernard Mazoyer, and Nathalie Tzourio-Mazoyer. 2007. fMRI study of emotional speech comprehension. *Cerebral Cortex* 17 (2): 339–352.
- Beckers, Gabriel J. L., Johan J. Bolhuis, Kazuo Okanoya, and Robert C. Berwick. 2012. Birdsong neurolinguistics: Songbird context-free grammar claim is premature. *Neuroreport* 23 (3): 139–145.
- Behrens, Tim E. J., Heidi Johansen-Berg, Mark W. Woolrich, Stephen M. Smith, Claudia A. M. Wheeler-Kingshott, Philip A. Boulby, Gareth J. Barker, E. L. Sillery, K. Sheehan, Olga Ciccarelli, Alan J. Thompson, J. Michael Brady, and Paul M. Matthews. 2003. Non-invasive mapping of connections between human thalamus and cortex using diffusion imaging. *Nature Neuroscience* 6 (7): 750–757.
- Bellugi, Ursula, Howard Poizner, and Edward S. Klima. 1989. Language, modality and the brain. *Trends in Neurosciences* 12 (10): 380–388.
- Bemis, Douglas K., and Liina Pyykkänen. 2011. Simple composition: A magnetoencephalography investigation into the comprehension of minimal linguistic phrases. *Journal of Neuroscience* 31 (8): 2801–2814.
- Bemis, Douglas K., and Liina Pyykkänen. 2013. Basic linguistic composition recruits the left anterior temporal lobe and left angular gyrus during both listening and reading. *Cerebral Cortex* 23 (8): 1859–1873.
- Benavides-Varela, Silvia, Jean-Rémy Hochmann, Francesco Macagno, Marina Nespors, and Jacques Mehler. 2012. Newborn's brain activity signals the origin of word memories. *Proceedings of the National Academy of Sciences of the United States of America* 109 (44): 17908–17913.
- Ben-Shachar, Michal, Talma Hendler, Itamar Kahn, Dafna Ben-Bashat, and Yosef Grodzinsky. 2003. The neural reality of syntactic transformations: Evidence from functional magnetic resonance imaging. *Psychological Science* 14 (5): 433–440.
- Ben-Shachar, Michal, Dafna Palti, and Yosef Grodzinsky. 2004. Neural correlates of syntactic movement: Converging evidence from two fMRI experiments. *NeuroImage* 21 (4): 1320–1336.
- Bergelson, Erika, and Daniel Swingley. 2012. At 6–9 months, human infants know the meanings of many common nouns. *Proceedings of the National Academy of Sciences of the United States of America* 109 (9): 3253–3258.
- Bernal, Byron, Alfredo Ardila, and Monica Rosselli. 2015. Broca's area network in language function: A pooling-data connectivity study. *Frontiers in Psychology* 6:687. doi:10.3389/fpsyg.2015.00687.

- Bernal, Savita, Ghislaine Dehaene-Lambertz, Severine Millotte, and Anne Christophe. 2010. Two-year-olds compute syntactic structure on-line. *Developmental Science* 13 (1): 69–76.
- Berken, Jonathan A., Xiaoqian Chai, Jen-Kai Chen, Vincent L. Gracco, and Denise Klein. 2016. Effects of early and late bilingualism on resting-state functional connectivity. *Journal of Neuroscience* 36 (4): 1165–1172.
- Berthier, Marcelo L., Matthew A. Lambon Ralph, Jesus Pujol, and Cristina Green. 2012. Arcuate fasciculus variability and repetition: The left sometimes can be right. *Cortex* 48 (2): 133–143.
- Berwick, Robert C., and Noam Chomsky. 2015. *Why Only Us. Language and Evolution*. Cambridge, MA: MIT Press.
- Berwick, Robert C., Angela D. Friederici, Noam Chomsky, and Johan J. Bolhuis. 2013. Evolution, brain and the nature of language. *Trends in Cognitive Sciences* 17 (2): 89–98.
- Berwick, Robert C., Kazuo Okanoya, Gabriel J. L. Beckers, and Johan J. Bolhuis. 2011. Songs to syntax: The linguistics of birdsong. *Trends in Cognitive Sciences* 15 (3): 113–121.
- Bickerton, Derek. 1990. *Language and Species*. Chicago: University of Chicago Press.
- Bierwisch, Manfred. 1982. Formal and lexical semantics. *Linguistische Berichte* 80:3–17.
- Binder, Jeffrey R., Julie Anne Frost, Thomas A. Hammeke, Patrick S. Bellgowan, Jane A. Springer, Jacqueline N. Kaufman, and Edward T. Possing. 2000. Human temporal lobe activation by speech and nonspeech sounds. *Cerebral Cortex* 10 (5): 512–528.
- Binder, Jeffrey R., Rutvik H. Desai, William W. Graves, and Lisa L. Conant. 2009. Where is the semantic system? A critical review and meta-analysis of 120 functional neuroimaging studies. *Cerebral Cortex* 19 (12): 2767–2796.
- Biswal, Bharat, F. Zerrin Yetkin, Victor M. Haughton, and James S. Hyde. 1995. Functional connectivity in the motor cortex of resting human brain using echo-planar MRI. *Magnetic Resonance in Medicine* 34 (4): 537–541.
- Blessner, Barry. 1972. Speech perception under conditions of spectral transformation. I. Phonetic characteristics. *Journal of Speech, Language, and Hearing Research: JSLHR* 15:5–41.
- Bloch, Constantine, Anelis Kaiser, Esther Kuenzli, Daniela Zappatore, Sven Haller, Rita Franceschini, Georges Luedi, Ernst-Wilhelm Radue, and Cordula Nitsch. 2009. The age of second language acquisition determines the variability in activation elicited by narration in three languages in Broca's and Wernicke's area. *Neuropsychologia* 47 (3): 625–633.
- Blumenthal, P. J. 2003. *Kaspar Hausers Geschwister. Auf der Suche nach dem wilden Menschen*. Wien: Deuticke.
- Blumstein, Sheila E., William E. Cooper, Harold Goodglass, Sheila Statlender, and Jonathan Gottlieb. 1980. Production deficits in aphasia—voice-onset time analysis. *Brain and Language* 9 (2): 153–170.
- Bögels, Sara, Herbert Schriefers, Wietske Vonk, Dorothee J. Chwilla, and Roel Kerkhofs. 2010. The interplay between prosody and syntax in sentence processing: The case of subject- and object-control verbs. *Journal of Cognitive Neuroscience* 22 (5): 1036–1053.
- Bolhuis, Johan J., and Sanne Moorman. 2015. Birdsong memory and the brain: In search of the template. *Neuroscience and Biobehavioral Reviews* 50:41–55.
- Bolhuis, Johan J., Ian Tattersall, Noam Chomsky, and Robert C. Berwick. 2014. How could language have evolved? *PLoS Biology* 12 (8): e1001934. doi:10.1371/journal.pbio.1001934.
- Bookheimer, Susan. 2002. Functional MRI of language: New approaches to understanding the cortical organization of semantic processing. *Annual Review of Neuroscience* 25:151–188.
- Bornkessel, Ina, and Matthias Schlesewsky. 2006. The extended Argument Dependency Model: A neurocognitive approach to sentence comprehension across languages. *Psychological Review* 113 (4): 787–821.
- Bornkessel, Ina, Stefan Zysset, Angela D. Friederici, D. Yves von Cramon, and Matthias Schlesewsky. 2005. Who did what to whom? The neural basis of argument hierarchies during language comprehension. *NeuroImage* 26 (1): 221–233.
- Bornkessel-Schlesewsky, Ina, Franziska Kretzschmar, Sarah Tune, Luming Wang, Safiye Genç, Marcus Philipp, Dietmar Roehm, and Matthias Schlesewsky. 2011. Think globally: Cross-linguistic variation in electrophysiological activity during sentence comprehension. *Brain and Language* 117 (3): 133–152.

- Bornkessel-Schlesewsky, Ina, and Matthias Schlesewsky. 2008. An alternative perspective on “semantic P600” effects in language comprehension. *Brain Research. Brain Research Reviews* 59 (1): 55–73.
- Bozeat, Sasha, Matthew A. Lambon Ralph, Karalyn Patterson, Peter Garrard, and John R. Hodges. 2000. Non-verbal semantic impairment in semantic dementia. *Neuropsychologia* 38 (9): 1207–1215.
- Brårdvik, Björn, Christina Dravins, Stig Holtås, Ingmar Rosén, Erik Ryding, and David Ingvar. 1991. Disturbances of speech prosody following right hemisphere infarcts. *Acta Neurologica Scandinavica* 84 (2): 114–126.
- Brain Development Cooperative Group. 2012. Total and regional brain volumes in a population-based normative sample from 4 to 18 years: The NIH MRI study of normal brain development. *Cerebral Cortex* 22:1–12.
- Brauer, Jens, Alfred Anwander, and Angela D. Friederici. 2011. Neuroanatomical prerequisites for language functions in the maturing brain. *Cerebral Cortex* 21 (2): 459–466.
- Brauer, Jens, and Angela D. Friederici. 2007. Functional neural networks of semantic and syntactic processes in the developing brain. *Journal of Cognitive Neuroscience* 19 (10): 1609–1623.
- Brauer, Jens, Jane Neumann, and Angela D. Friederici. 2008. Temporal dynamics of perisylvian activation during language processing in children and adults. *NeuroImage* 41 (4): 1484–1492.
- Breitenstein, Caterina, Andreas Jansen, Michael Deppe, Ann-Freya Foerster, Jens Sommer, Thomas Wolbers, and Stefan Knecht. 2005. Hippocampus activity differentiates good from poor learners of a novel lexicon. *NeuroImage* 25 (3): 958–968.
- Brennan, Jonathan, Yuval Nir, Uri Hasson, Rafael Malach, David J. Heeger, and Liina Pyykkänen. 2012. Syntactic structure building in the anterior temporal lobe during natural story listening. *Brain and Language* 120 (2): 163–173.
- Bresnan, Joan. 2001. *Lexical-Functional Syntax*. Oxford: Blackwell.
- Broca, Paul. 1861. Remarques sur le siège de la faculté du langage articulé, suivies d’une observation d’aphémie (partie de la parole). *Bulletins de la Société Anatomique de Paris* 6:330–357.
- Brodmann, Korbinian. 1909. Beiträge zur histologischen Lokalisation der Grosshirnrinde: VI. Die Cortexgliederung des Menschen. *Journal für Psychologie und Neurologie* 10:231–246.
- Brown, Colin, and Peter Hagoort. 1993. The processing nature of the N400 - evidence from masked priming. *Journal of Cognitive Neuroscience* 5 (1): 34–44.
- Bryan, Karen L. 1989. Language prosody and the right hemisphere. *Aphasiology* 3 (4): 285–299.
- Buckner, Randy L., Jessica R. Andrews-Hanna, and Daniel L. Schacter. 2008. The brain’s default network—Anatomy, function, and relevance to disease. *Annals of the New York Academy of Sciences* 1124:1–38.
- Buckner, Randy L., and Fenna M. Krienen. 2013. The evolution of distributed association networks in the human brain. *Trends in Cognitive Sciences* 17 (12): 648–665.
- Buzsáki, György, Nikos Logothetis, and Wolf Singer. 2013. Scaling brain size, keeping timing: Evolutionary preservation of brain rhythms. *Neuron* 80 (3): 751–764.
- Capek, Cheryl M., Giordana Grossi, Aaron J. Newman, Susan L. McBurney, David Corina, Brigitte Roeder, and Helen J. Neville. 2009. Brain systems mediating semantic and syntactic processing in deaf native signers: Biological invariance and modality specificity. *Proceedings of the National Academy of Sciences of the United States of America* 106 (21): 8784–8789.
- Caplan, David, Evan Chen, and Gloria S. Waters. 2008. Task-dependent and task-independent neurovascular responses to syntactic processing. *Cortex* 44 (3): 257–275.
- Caplan, David, and Gloria S. Waters. 1999. Verbal working memory and sentence comprehension. *Behavioral and Brain Sciences* 22 (1): 77–94.
- Capone, Nina C., and Karla K. McGregor. 2004. Gesture development: A review for clinical and research practices. *Journal of Speech, Language, and Hearing Research: JSLHR* 47 (1): 173–186.
- Caramazza, Alfonso, and Edgar B. Zurif. 1976. Dissociation of algorithmic and heuristic processes in language comprehension—evidence from aphasia. *Brain and Language* 3 (4): 572–582.
- Catani, Marco, and Valentina Bambini. 2014. A model for Social Communication And Language Evolution and Development (SCALED). *Current Opinion in Neurobiology* 28:165–171.

- Catani, Marco, Matthew P. G. Allin, Masud Husain, Luca Pugliese, Marsel M. Mesulam, Robin M. Murray, and Derek K. Jones. 2007. Symmetries in human brain language pathways correlate with verbal recall. *Proceedings of the National Academy of Sciences of the United States of America* 104 (43): 17163–17168.
- Catani, Marco, Robert J. Howard, Sinisa Pajevic, and Derek K. Jones. 2002. Virtual in vivo interactive dissection of white matter fasciculi in the human brain. *NeuroImage* 17 (1): 77–94.
- Catani, Marco, Derek K. Jones, and Dominic H. Ffytche. 2005. Perisylvian language networks of the human brain. *Annals of Neurology* 57 (1): 8–16.
- Catani, Marco, and Marsel M. Mesulam. 2008. What is a disconnection syndrome? *Cortex* 44 (8): 911–913.
- Catani, Marco, and Michel Thiebaut de Schotten. 2008. A diffusion tensor imaging tractography atlas for virtual in vivo dissections. *Cortex* 44 (8): 1105–1132.
- Chait, Maria, Steven Greenberg, Takayuki Arai, Jonathan Z. Simon, and David Poeppel. 2015. Multi-time resolution analysis of speech: Evidence from psychophysics. *Frontiers in Neuroscience* 9:214. doi:10.3389/fnins.2015.00214.
- Chee, Michael W. L., Edsel W. L. Tan, and Thorsten Thiel. 1999. Mandarin and English single word processing studied with functional magnetic resonance imaging. *Journal of Neuroscience* 19 (8): 3050–3056.
- Cheour, Marie, Kimmo Alho, Kimmo Sainio, Kalevi Reinikainen, Martin Renlund, Olli Aaltonen, Osmo Eerola, and Risto Näätänen. 1997. The mismatch negativity to changes in speech sounds at the age of three months. *Developmental Neuropsychology* 13 (2): 167–174.
- Cheour, Marie, Rita Čeponiene, Paavo Leppänen, Kimmo Alho, Teija Kujala, Martin Renlund, Vineta Fellman, and Risto Näätänen. 2002. The auditory sensory memory trace decays rapidly in newborns. *Scandinavian Journal of Psychology* 43 (1): 33–39.
- Cheour, Marie, Rita Čeponiene, Anne Lehtokoski, Aavo Luuk, Jüri Allik, Kimmo Alho, and Risto Näätänen. 1998. Development of language-specific phoneme representations in the infant brain. *Nature Neuroscience* 1 (5): 351–353.
- Cheour-Luhtanen, Marie, Kimmo Alho, Teija Kujala, Kimmo Sainio, Kalevi Reinikainen, Martin Renlund, Olli Aaltonen, Osmo Eerola, and Risto Näätänen. 1995. Mismatch negativity indicates vowel discrimination in newborns. *Hearing Research* 82 (1): 53–58.
- Cheour-Luhtanen, Marie, Kimmo Alho, Kimmo Sainio, Teemu Rinne, Kalevi Reinikainen, M. Pohjavouri, Martin Renlund, Olli Aaltonen, Osmo Eerola, and Risto Näätänen. 1996. The ontogenetically earliest discriminative response of the human brain. *Psychophysiology* 33 (4): 478–481.
- Chi, Je Geung, Elizabeth C. Dooling, and Floyd H. Gilles. 1977. Left-right asymmetries of the temporal speech areas of the human fetus. *Archives of Neurology* 34 (6): 346–348.
- Chiarello, Christine, Robert Knight, and Mark Mandel. 1982. Aphasia in a prelingually deaf woman. *Brain* 105:29–51.
- Chomsky, Noam. 1957. *Syntactic Structures*. The Hague: Mouton & Co.
- Chomsky, Noam. 1965. *Aspects of the Theory of Syntax*. Cambridge, MA: MIT Press.
- Chomsky, Noam. 1980. On binding. *Linguistic Theory* 11 (1): 1–46.
- Chomsky, Noam. 1981. *Lectures on Government and Binding. The Pisa Lectures*. Dordrecht: Foris.
- Chomsky, Noam. 1986. *Knowledge of Language: Its Nature, Origin and Use*. New York: Praeger.
- Chomsky, Noam. 1995a. Language and nature. *Mind* 104 (413): 1–61.
- Chomsky, Noam. 1995b. *The Minimalist Program*. MIT Press.
- Chomsky, Noam. 2007. Approaching UG from below. In *Interfaces + Recursion = Language?* ed. Uli Sauerland and Hans-Martin Gärtner, 1–29. Berlin: Mouton de Gruyter.
- Chomsky, Noam. 2013. Problems of projection. *Lingua* 130:33–49.
- Chwilla, Dorothee J., Colin M. Brown, and Peter Hagoort. 1995. The N400 as a function of the level of processing. *Psychophysiology* 32 (3): 274–285.
- Citron, Francesca M. M., Regine Oberecker, Angela D. Friederici, and Jutta L. Mueller. 2011. Mass counts: ERP correlates of non-adjacent dependency learning under different exposure conditions. *Neuroscience Letters* 487 (3): 282–286.

- Clark, Herbert H. 1996. *Using Language*. Cambridge: Cambridge University Press.
- Clos, Mareike, Katrin Amunts, Angela R. Laird, Peter T. Fox, and Simon B. Eickhoff. 2013. Tackling the multifunctional nature of Broca's region meta-analytically: Co-activation-based parcellation of area 44. *NeuroImage* 83:174–188.
- Cohen, Laurent, Antoinette Jobert, Denis Le Bihan, and Stanislas Dehaene. 2004. Distinct unimodal and multimodal regions for word processing in the left temporal cortex. *NeuroImage* 23 (4): 1256–1270.
- Collins, Allan M., and Elizabeth F. Loftus. 1975. Spreading activation theory of semantic processing. *Physiological Reviews* 82 (6): 407–428.
- Crinion, Jennifer T., Matthew A. Lambon-Ralph, Elizabeth A. Warburton, David Howard, and Richard J. S. Wise. 2003. Temporal lobe regions engaged during normal speech comprehension. *Brain* 126 (5): 1193–1201.
- Curtiss, Susan, ed. 1977. *Genie. Psycholinguistic Study of a Modern-day "Wild Child"*. London: Academic Press Inc.
- Dapretto, Mirella, and Susan Y. Bookheimer. 1999. Form and content: Dissociating syntax and semantics in sentence comprehension. *Neuron* 24 (2): 427–432.
- Darwin, Charles. 1871. *The Descent of Man, and Selection in Relation to Sex*. 1st ed. London: John Murray.
- David, Olivier, Burkhard Maess, Korinna Eckstein, and Angela D. Friederici. 2011. Dynamic causal modeling of subcortical connectivity of language. *Journal of Neuroscience* 31 (7): 2712–2717.
- Davis, Mark H. 2015. The neurobiology of lexical access. In *Neurobiology of Language Volume*, ed. Steven L. Small and Gregory G. Hickok, 541–557. Elsevier Press.
- Davis, Mark H., and Gareth M. Gaskell. 2009. A complementary systems account of word learning: Neural and behavioural evidence. *Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences* 364 (1536): 3773–3800.
- Dax, Marc. 1836. Lesions de la moitié gauche de l'encephale soincidant avec l'oubli des signes de la pensee. *Congres meridional tenu a Montpellier*.
- De Diego Balaguer, Ruth, Juan Manuel Toro., Antoni Rodriguez-Fornells, and Anne-Catherine Bachoud-Levi. 2007. Different neurophysiological mechanisms underlying word and rule extraction from speech. *PLoS One* 2 (11): e1175. doi:10.1371/journal.pone.0001175.
- de Saussure, Ferdinand. 1916. *Cours de linguistique générale*, ed. Charles Bally and Albert Sechehaye. Lausanne and Paris: Payot. (Trans. Wade Baskin. 1977. *Course in General Linguistics*, Glasgow: Fontana/Collins).
- Dehaene, Stanislas, and Laurent Cohen. 2007. Cultural recycling of cortical maps. *Neuron* 56 (2): 384–398.
- Dehaene, Stanislas, Laurent Cohen, Mariano Sigman, and Fabien Vinckier. 2005. The neural code for written words: A proposal. *Trends in Cognitive Sciences* 9 (7): 335–341.
- Dehaene-Lambertz, Ghislaine. 2000. Cerebral specialization for speech and non-speech stimuli in infants. *Journal of Cognitive Neuroscience* 12:449–460.
- Dehaene-Lambertz, Ghislaine, and Sylvaine Baillet. 1998. A phonological representation in the infant brain. *Neuroreport* 9 (8): 1885–1888.
- Dehaene-Lambertz, Ghislaine, and Stanislas Dehaene. 1994. Speed and cerebral correlates of syllable discrimination in infants. *Nature* 370 (6487): 292–295.
- Dehaene-Lambertz, Ghislaine, Stanislas Dehaene, and Lucie Hertz-Pannier. 2002. Functional neuroimaging of speech perception in infants. *Science* 298 (5600): 2013–2015.
- Dehaene-Lambertz, Ghislaine, Emmanuel Dupoux, and Ariel Gout. 2000. Electrophysiological correlates of phonological processing: A cross-linguistic study. *Journal of Cognitive Neuroscience* 12 (4): 635–647.
- Dehaene-Lambertz, Ghislaine, Lucie Hertz-Pannier, Jessica Dubois, Sebastien Meriaux, Alexis Roche, Mariano Sigman, and Stanislas Dehaene. 2006. Functional organization of perisylvian activation during presentation of sentences in preverbal infants. *Proceedings of the National Academy of Sciences of the United States of America* 103 (38): 14240–14245.
- Dehaene-Lambertz, Ghislaine, Christophe Pallier, Willy Serniclaes, Liliane Sprenger-Charolles, Antoinette Jobert, and Stanislas Dehaene. 2005. Neural correlates of switching from auditory to speech perception. *NeuroImage* 24 (1): 21–33.

- Dehaene-Lambertz, Ghislaine, and Marcela Peña. 2001. Electrophysiological evidence for automatic phonetic processing in neonates. *Neuroreport* 12 (14): 3155–3158.
- Del Prado, Paul, and Liina Pyykkänen. 2014. MEG evidence for conceptual combination but not numeral quantification in the left anterior temporal lobe during language production. *Frontiers in Psychology* 5:524. doi:10.3389/fpsyg.2014.00524.
- Dell, Gary S. 1986. A spreading-activation theory of retrieval in sentence production. *Psychological Review* 93 (3): 283–321.
- Démonet, Jean-François, François Chollet, Stuart Ramsay, Dominique Cardebat, Jean-Luc Nespoulous, Richard Wise, André Rascol, and Richard Frackowiak. 1992. The anatomy of phonological and semantic processing in normal subjects. *Brain* 115:1753–1768.
- Démonet, Jean-François, Guillaume Thierry, and Dominique Cardebat. 2005. Renewal of the neurophysiology of language: Functional neuroimaging. *Physiological Reviews* 85 (1): 49–95.
- den Ouden, Dirk-Bart, Dorothee Saur, Wolfgang Mader, Bjoern Schelter, Sladjana Lukic, Eisha Wali, Jens Timmer, and Cynthia K. Thompson. 2012. Network modulation during complex syntactic processing. *NeuroImage* 59 (1): 815–823.
- Deutsch, Avital, and Shlomo Bentin. 2001. Syntactic and semantic factors in processing gender agreement in Hebrew: Evidence from ERPs and eye movements. *Journal of Memory and Language* 45 (2): 200–224.
- DeWitt, Iain, and Josef P. Rauschecker. 2012. Phoneme and word recognition in the auditory ventral stream. *Proceedings of the National Academy of Sciences of the United States of America* 109 (8): 2709–2710.
- Dick, Anthony Steven, and Iris Broce. 2015. The neurobiology of gesture and its development. In *Neurobiology of language*, ed. Gregory Hickok and Steven L. Small, 389–398. San Diego: Elsevier.
- Dick, Anthony Steven, Eva H. Mok, Anjali Raja Beharelle, Susan Goldin-Meadow, and Steven L. Small. 2014. Frontal and temporal contributions to understanding the iconic co-speech gestures that accompany speech. *Human Brain Mapping* 35 (3): 900–917.
- Diesch, Eugen, Carsten Eulitz, Scott Hampson, and Bernhard Ross. 1996. The neurotopography of vowels as mirrored by evoked magnetic field measurements. *Brain and Language* 53 (2): 143–168.
- Dikker, Suzanne, Hugh Rabagliati, and Liina Pyykkänen. 2009. Sensitivity to syntax in visual cortex. *Cognition* 110 (3): 293–321.
- Ding, Nai, Lucia Melloni, Hang Zhang, Xing Tian, and David Poeppel. 2015. Cortical tracking of hierarchical linguistic structures in connected speech. *Nature Neuroscience* 19 (1): 158–164.
- Dittmar, Miriam, Kirsten Abbot-Smith, Elena Lieven, and Michael Tomasello. 2008. Young German children's early syntactic competence: A preferential looking study. *Developmental Science* 11 (4): 575–582.
- Dronkers, Nina F. 1996. A new brain region for coordinating speech articulation. *Nature* 384 (6605): 159–161.
- Dronkers, Nina F., David P. Wilkins, Robert D. Van Valin, Jr., Brenda B. Redfern, and Jeri J. Jaeger. 2004. Lesion analysis of the brain areas involved in language comprehension. *Cognition* 92 (1–2): 145–177.
- Dubois, Jessica, Lucie Hertz-Pannier, Arnaud Cachia, Jean-Francois Mangin, Denis Le Bihan, and Ghislaine Dehaene-Lambertz. 2009. Structural asymmetries in the infant language and sensorimotor networks. *Cerebral Cortex* 19:414–423.
- Dubois, Jessica, Cyril Poupon, Bertrand Thirion, Hina Simonnet, Sofya Kulikova, Francois Leroy, Lucie Hertz-Pannier, and Ghislaine Dehaene-Lambertz. 2016. Exploring the early organization and maturation of linguistic pathways in the human infant brain. *Cerebral Cortex* 26 (5): 2283–2298.
- Duffau, Hugues. 2008. The anatomo-functional connectivity of language revisited new insights provided by electrostimulation and tractography. *Neuropsychologia* 46 (4): 927–934.
- Duffau, Hugues, Peggy Gatignol, Sylvie Moritz-Gasser, and Emmanuel Mandonnet. 2009. Is the left uncinate fasciculus essential for language? *Journal of Neurology* 256 (3): 382–389.
- Dunbar, Robin Ian MacDonald. 1996. *Grooming, Gossip and the Evolution of Language*. London: Faber and Faber.
- Eckstein, Korinna, and Angela D. Friederici. 2006. It's early: Event-related potential evidence for initial interaction of syntax and prosody in speech comprehension. *Journal of Cognitive Neuroscience* 18 (10): 1696–1711.

- Emmorey, Karen, Stephen McCullough, and Diane Brentari. 2003. Categorical perception in American Sign Language. *Language and Cognitive Processes* 18 (1): 21–45.
- Ethofer, Thomas, Johannes Breitscher, Markus Gschwind, Benjamin Kreifelts, Dirk Wildgruber, and Patrik Vuilleumier. 2012. Emotional voice areas: Anatomic location, functional properties, and structural connections revealed by combined fMRI/diffusion tensor imaging. *Cerebral Cortex* 22 (1): 191–200.
- Fabbri-Destro, Maddalena, and Giacomo Rizzolatti. 2008. Mirror neurons and mirror systems in monkeys and humans. *Physiology (Bethesda, MD)* 23:171–179.
- Falk, Dean. 1980. Hominid brain evolution: The approach from paleoneurology. *American Journal of Physical Anthropology* 23 (S1): 93–107.
- Falk, Dean. 2014. Interpreting sulci on hominin endocasts: Old hypotheses and new findings. *Frontiers in Human Neuroscience* 8:1–11. doi:10.3389/fnhum.2014.00134.
- Fedorenko, Evelina, Michael K. Behr, and Nancy Kanwisher. 2011. Functional specificity for high-level linguistic processing in the human brain. *Proceedings of the National Academy of Sciences of the United States of America* 108 (39): 16428–16433.
- Fedorenko, Evelina, and Sharon L. Thompson-Schill. 2014. Reworking the language network. *Trends in Cognitive Sciences* 18 (3): 120–126.
- Fell, Juergen, Eva Ludowig, Bernhard P. Staresina, Tobias Wagner, Thorsten Kranz, Christian E. Elger, and Nikolai Axmacher. 2011. Medial temporal theta/alpha power enhancement precedes successful memory encoding: Evidence based on intracranial EEG. *Journal of Neuroscience* 31 (14): 5392–5397.
- Felser, Claudia, Harald Clahsen, and Thomas F. Munte. 2003. Storage and integration in the processing of filler-gap dependencies: An ERP study in of topicalization and WH-movement in German. *Brain and Language* 87 (3): 345–354.
- Fengler, Anja, Lars Meyer, and Angela D. Friederici. 2016. How the brain attunes to sentence processing: Relating behavior, structure, and function. *NeuroImage* 129:268–278.
- Fernandez-Miranda, Juan C., Yibao Wang, Sudhir Pathak, Lucia Stefaneau, Timothy Verstynen, and Fang-Cheng Yeh. 2015. Asymmetry, connectivity, and segmentation of the arcuate fascicle in the human brain. *Brain Structure & Function* 220 (3): 1665–1680.
- Ferstl, Evelyn C. 2015. Inferences during text comprehension: What neuroscience can (or cannot) contribute. In *Inferences During Reading*, ed. Edward J. O'Brien, Anne E. Cook and Robert F. Lorch, Jr., 230–259. Cambridge: Cambridge University Press.
- Ferstl, Evelyn C., Thomas Guthke, and D. Yves von Cramon. 2002. Text comprehension after brain injury: Left prefrontal lesions affect inference processes. *Neuropsychology* 16 (3): 292–308.
- Fiebach, Christian J., Matthias Schlesewsky, and Angela D. Friederici. 2001. Syntactic working memory and the establishment of filler-gap dependencies: Insights from ERPs and fMRI. *Journal of Psycholinguistic Research* 30 (3): 321–338.
- Fiebach, Christian J., Matthias Schlesewsky, and Angela D. Friederici. 2002. Separating syntactic memory costs and syntactic integration costs during parsing: The processing of German WH-questions. *Journal of Memory and Language* 47 (2): 250–272.
- Fiez, Julie A. 1997. Phonology, semantics, and the role of the left inferior prefrontal cortex. *Human Brain Mapping* 5 (2): 79–83.
- Finkl, Theresa, Alfred Anwander, Angela D. Friederici, Johannes Gerber, Dirk Mürbe, and Anja Hahne. Submitted. Differential modulation of the brain networks for speech and language in deaf signers.
- Fisher, Simon E., Cecilia S. L. Lai, and Anthony P. Monaco. 2003. Deciphering the genetic basis of speech and language disorders. *Annual Review of Neuroscience* 26:57–80.
- Fisher, Simon E., and Sonja C. Vernes. 2015. Genetics and the Language Sciences. *Annual Review of Linguistics* 1:289–310. doi:10.1146/annurev-linguist-030514-125024.
- Fitch, W. Tecumseh. 2010. *The Evolution of Language*. Cambridge: Cambridge University Press.
- Fitch, W. Tecumseh, and Marc D. Hauser. 2004. Computational constraints on syntactic processing in a nonhuman primate. *Science* 303 (5656): 377–380.
- Flechsigs, Paul E. 1896. *Gehirn und Seele*. Leipzig: Veit & comp.



- Flinker, Adeen, Anna Korzeniewska, Avgusta Y. Shestyuk, Piotr J. Franaszczuk, Nina F. Dronkers, Robert T. Knight, and Nathan E. Crone. 2015. Redefining the role of Broca's area in speech. *Proceedings of the National Academy of Sciences of the United States of America* 112 (9): 2871–2875.
- Fodor, Jerry Alan. 1983. *The Modularity of Mind*. Cambridge, MA: MIT Press.
- Fogassi, Leonardo, Pier Francesco Ferrari, Benno Gesierich, Stefano Rozzi, Fabian Chersi, and Giacomo Rizzolatti. 2005. Parietal lobe: From action organization to intention understanding. *Science* 29 (5722): 662–667.
- Fonteneau, Elisabeth, and Heather K. J. van der Lely. 2008. Electrical brain responses in language-impaired children reveal grammar-specific deficits. *PLoS One* 3 (3): e1832. doi:10.1371/journal.pone.0001832.
- Fox, Michael D., and Marcus E. Raichle. 2007. Spontaneous fluctuations in brain activity observed with functional magnetic resonance imaging. *Nature Reviews. Neuroscience* 8 (9): 700–711.
- Frazier, Lyn, and Janet Dean Fodor. 1978. The sausage machine: A new two-stage parsing model. *Cognition* 6 (4): 291–325.
- Frey, Stephen, Jennifer S. W. Campbell, G. Bruce Pike, and Michael Petrides. 2008. Dissociating the human language pathways with high angular resolution diffusion fiber tractography. *Journal of Neuroscience* 28 (45): 11435–11444.
- Friederici, Angela D. 1982. Syntactic and semantic processes in aphasic deficits: The availability of prepositions. *Brain and Language* 15 (2): 249–258.
- Friederici, Angela D. 1983. Children's sensitivity to function words during sentence comprehension. *Linguistics* 21 (5): 717–739.
- Friederici, Angela D. 1985. Levels of processing and vocabulary types: Evidence from online comprehension in normals and agrammatics. *Cognition* 19 (2): 133–166.
- Friederici, Angela D. 1990. On the properties of cognitive modules. *Psychological Research* 52 (2–3): 175–180.
- Friederici, Angela D. 2002. Towards a neural basis of auditory sentence processing. *Trends in Cognitive Sciences* 6 (2): 78–84.
- Friederici, Angela D. 2005. Neurophysiological markers of early language acquisition: From syllables to sentences. *Trends in Cognitive Sciences* 9 (10): 481–488.
- Friederici, Angela D. 2009a. Pathways to language: Fiber tracts in the human brain. *Trends in Cognitive Sciences* 13 (4): 175–181.
- Friederici, Angela D. 2009b. Allocating function to fiber tracts: Facing its indirectness. *Trends in Cognitive Sciences* 13 (9): 370–371.
- Friederici, Angela D. 2011. The brain basis of language processing: From structure to function. *Physiological Reviews* 91 (4): 1357–1392.
- Friederici, Angela D. 2012a. Language development and the ontogeny of the dorsal pathway. *Frontiers in Evolutionary Neuroscience* 4:3. doi:10.3389/fnevo.2012.00003.
- Friederici, Angela D. 2012b. The cortical language circuit: From auditory perception to sentence comprehension. *Trends in Cognitive Sciences* 16:262–268.
- Friederici, Angela D. 2015. White matter pathways for speech and language processing. In *The Human Auditory System, Volume 129: Fundamental Organization and Clinical Disorders (Handbook of Clinical Neurology)*, ed. Gastone G. Celesia and Gregory Hickok, 177–186. San Diego: Elsevier.
- Friederici, Angela D. 2016. The neuroanatomical pathway model of language: Syntactic and semantic networks. In *Neurobiology of Language*, ed. Steven L. Small and Gregory Hickok, 349–356. San Diego: Elsevier.
- Friederici, Angela D., and Kai Alter. 2004. Lateralization of auditory language functions: A dynamic dual pathway model. *Brain and Language* 89 (2): 267–276.
- Friederici, Angela D., Jörg Bahlmann, Stefan Heim, Riccardo I. Schubotz, and Alfred Anwander. 2006. The brain differentiates human and non-human grammars: Functional localization and structural connectivity. *Proceedings of the National Academy of Sciences of the United States of America* 103 (7): 2458–2463.
- Friederici, Angela D., Christian J. Fiebach, Matthias Schlesewsky, Ina Bornkessel, and D. Yves von Cramon. 2006. Processing linguistic complexity and grammaticality in the left frontal cortex. *Cerebral Cortex* 16 (12): 1709–1717.

- Friederici, Angela D., Manuela Friedrich, and Anne Christophe. 2007. Brain responses in 4-month-old infants are already language specific. *Current Biology* 17 (14): 1208–1211.
- Friederici, Angela D., Manuela Friedrich, and Christiane Weber. 2002. Neural manifestation of cognitive and precognitive mismatch detection in early infancy. *Neuroreport* 13 (10): 1251–1254.
- Friederici, Angela D., and Stefan Frisch. 2000. Verb-argument structure processing: The role of verb-specific and argument-specific information. *Journal of Memory and Language* 43 (3): 476–507.
- Friederici, Angela D., and Sarah M. E. Gierhan. 2013. The language network. *Current Opinion in Neurobiology* 23 (2): 250–254.
- Friederici, Angela D., Thomas C. Gunter, Anja Hahne, and Kerstin Mauth. 2004. The relative timing of syntactic and semantic processes in sentence comprehension. *Neuroreport* 15 (1): 165–169.
- Friederici, Angela D., Anja Hahne, and Axel Mecklinger. 1996. The temporal structure of syntactic parsing: Early and late event-related brain potential effects. *Journal of Experimental Psychology: Learning, Memory, and Cognition* 22 (5): 1219–1248.
- Friederici, Angela D., Anja Hahne, and Douglas Saddy. 2002. Distinct neurophysiological patterns reflecting aspects of syntactic complexity and syntactic repair. *Journal of Psycholinguistic Research* 31 (1): 45–63.
- Friederici, Angela D., and Sonja A. Kotz. 2003. The brain basis of syntactic processes: Functional imaging and lesion studies. *NeuroImage* 20:S8–S17.
- Friederici, Angela D., Sonja A. Kotz, Sophie K. Scott, and Jonas Obleser. 2010. Disentangling syntax and intelligibility in auditory language comprehension. *Human Brain Mapping* 31 (3): 448–457.
- Friederici, Angela D., and Willem J. M. Levelt. 1988. Sprache. In *Psychobiologie. Grundlagen des Verhaltens*, ed. Klaus Immelmann, Klaus Scherer, Christian Vogel and Peter Schmoock, 648–671. Stuttgart: Gustav Fischer.
- Friederici, Angela D., Michiru Makuuchi, and Jörg Bahlmann. 2009. The role of the posterior superior temporal cortex in sentence comprehension. *Neuroreport* 20 (6): 563–568.
- Friederici, Angela D., and Claudia Männel. 2014. Neural correlates of the development of speech perception and comprehension. In *The Oxford Handbook of Cognitive Neuroscience*, ed. Kevin N. Ochsner and Stephen Kosslyn, 171–192. New York: Oxford University Press.
- Friederici, Angela D., Martin Meyer, and D. Yves von Cramon. 2000. Auditory language comprehension: An event-related fMRI study on the processing of syntactic and lexical information. *Brain and Language* 74 (2): 289–300.
- Friederici, Angela D., Jutta L. Mueller, and Regine Oberecker. 2011. Precursors to natural grammar learning: Preliminary evidence from 4-month-old infants. *PLoS One* 6 (3): e17920. doi:10.1371/journal.pone.0017920.
- Friederici, Angela D., Jutta L. Mueller, Bernhard Sehm, and Patrick Ragert. 2013. Language learning without control: The role of the PFC. *Journal of Cognitive Neuroscience* 25 (5): 814–821.
- Friederici, Angela D., Erdmut Pfeifer, and Anja Hahne. 1993. Event-related brain potentials during natural speech processing: Effects of semantic, morphological and syntactic violations. *Brain Research. Cognitive Brain Research* 1 (3): 183–192.
- Friederici, Angela D., Shirley-Ann Rüschemeyer, Anja Hahne, and Christian J. Fiebach. 2003. The role of left inferior frontal and superior temporal cortex in sentence comprehension: Localizing syntactic and semantic processes. *Cerebral Cortex* 13 (2): 170–177.
- Friederici, Angela D., and Wolf Singer. 2015. Grounding language processing on basic neurophysiological principles. *Trends in Cognitive Sciences* 19 (6): 329–338.
- Friederici, Angela D., Karsten Steinhauer, and Erdmut Pfeifer. 2002. Brain signatures of artificial language processing: Evidence challenging the critical period hypothesis. *Proceedings of the National Academy of Sciences of the United States of America* 99 (1): 529–534.
- Friederici, Angela D., D. Yves von Cramon, and Sonja A. Kotz. 1999. Language related brain potentials in patients with cortical and subcortical left hemisphere lesions. *Brain* 122:1033–1047.
- Friederici, Angela D., D. Yves von Cramon, and Sonja A. Kotz. 2007. Role of the corpus callosum in speech comprehension: Interfacing syntax and prosody. *Neuron* 53 (1): 135–145.
- Friederici, Angela D., Yunhua Wang, Christoph S. Herrmann, Burkhard Maess, and Ulrich Oertel. 2000. Localization of early syntactic processes in frontal and temporal cortical areas: A magnetoencephalographic study. *Human Brain Mapping* 11 (1): 1–11.

- Friederici, Angela D., and Isabell Wartenburger. 2010. Language and Brain. (Overview) *Wiley Interdisciplinary Reviews: Cognitive Science*. doi: 10.1002/WCS.9.
- Friederici, Angela D., and Jürgen Weissenborn. 2007. Mapping sentence form onto meaning: The syntax-semantic interface. *Brain Research* 1146:50–58.
- Friederici, Angela D., and Jeanine M. I. Wessels. 1993. Phonotactic knowledge of word boundaries and its use in infant speech perception. *Perception & Psychophysics* 54 (3): 287–295.
- Friedrich, Claudia K., and Sonja A. Kotz. 2007. ERP evidence of form and meaning coding during online speech recognition. *Journal of Cognitive Neuroscience* 19 (4): 594–604.
- Friedrich, Claudia K., Ulrike Schild, and Brigitte Röder. 2009. Electrophysiological indices of word fragment priming allow characterizing neuronal stages of speech recognition. *Biological Psychology* 80 (1): 105–113.
- Friedrich, Manuela, and Angela D. Friederici. 2005a. Lexical priming and semantic integration reflected in the ERP of 14-month-olds. *Neuroreport* 16 (6): 653–656.
- Friedrich, Manuela, and Angela D. Friederici. 2005b. Phonotactic knowledge and lexical-semantic processing in one-year-olds: Brain responses to words and nonsense words in picture contexts. *Journal of Cognitive Neuroscience* 17 (11): 1785–1802.
- Friedrich, Manuela, and Angela D. Friederici. 2005c. Semantic sentence processing reflected in the event-related potentials of one- and two-year-old children. *Neuroreport* 16 (6): 1801–1804.
- Friedrich, Manuela, and Angela D. Friederici. 2010. Maturing brain mechanisms and developing behavioral language skills. *Brain and Language* 114:66–71.
- Friedrich, Manuela, Ines Wilhelm, Jan Born, and Angela D. Friederici. 2015. Generalization of word meanings during infant sleep. *Nature Communications* 6:6004. doi:10.1038/ncomms7004.
- Frisch, Stefan, Anja Hahne, and Angela D. Friederici. 2004. Word category and verb-argument structure information in the dynamics of parsing. *Cognition* 91 (3): 191–219.
- Frisch, Stefan, Sonja A. Kotz, D. Yves von Cramon, and Angela D. Friederici. 2003. Why the P600 is not just a P300: The role of the basal ganglia. *Clinical Neurophysiology* 114 (2): 336–340.
- Frisch, Stefan, and Matthias Schleesky. 2001. The N400 reflects problems of thematic hierarchizing. *Neuroreport* 12 (15): 3391–3394.
- Friston, Karl J., Christian Buechel, Gereon R. Fink, John S. Morris, Edmund Rolls, and Ray J. Dolan. 1997. Psychophysiological and modulatory interactions in neuroimaging. *NeuroImage* 6 (3): 218–229.
- Friston, Karl J., Lee M. Harrison, and Will Penny. 2003. Dynamic causal modelling. *NeuroImage* 19 (4): 1273–1302.
- Frith, Uta, and Christopher D. Frith. 2003. Development and neurophysiology of mentalizing. *Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences* 358 (1431): 459–473.
- Fromkin, Victoria A., ed. 1973. *Speech errors as linguistic evidence*. The Hague: Mouton.
- Frühholz, Sascha, Markus Gschwind, and Didier Grandjean. 2015. Bilateral dorsal and ventral fiber pathways for the processing of affective prosody identified by probabilistic fiber tracking. *NeuroImage* 109:27–34.
- Fuster, Joaquin M. 2002. Frontal lobe and cognitive development. *Journal of Neurocytology* 31 (3): 373–385.
- Galaburda, Albert M., Marjorie LeMay, Thomas L. Kemper, and Norman Geschwind. 1978. Right-left asymmetries in the brain. *Science* 199 (4331): 852–856.
- Galantucci, Sebastiano, Maria Carmela Tartaglia, Stephen M. Wilson, Maya L. Henry, Massimo Filippi, Federica Agosta, Nina F. Dronkers, et al. 2011. White matter damage in primary progressive aphasia: A diffusion tensor tractography study. *Brain* 134:3011–3029.
- Gandour, Jackson, Yunxia Tong, Donald Wong, Thomas Talavage, Mario Dzemidzic, Yisheng Xu, Xiaojian Li, and Mark Lowe. 2004. Hemispheric roles in the perception of speech prosody. *NeuroImage* 23 (1): 344–357.
- Gandour, Jack, Donald Wong, Li Hsieh, Bret Weinzapfel, Diana Van Lancker, and Gary D. Hutchins. 2000. A cross-linguistic PET study of tone perception. *Journal of Cognitive Neuroscience* 12 (1): 207–222.
- Gandour, Jack, Donald Wong, Mark Lowe, Mario Dzemidzic, Nakarin Saththamnuwong, Yunxia Tong, and Xiaojian Li. 2002. A cross-linguistic fMRI study of spectral and temporal cues underlying phonological processing. *Journal of Cognitive Neuroscience* 14 (7): 1076–1087.

- Garfield, Jay L., ed. 1987. *Modularity in Knowledge Representation and Natural-Language Understanding*. Cambridge, MA: MIT Press.
- Garrett, Merrill F. 1980. Levels of processing in sentence production. In *Language Production, Volume 1: Speech and Talk*, ed. Brian Butterworth, 177–220. London: Academic Press.
- Garrido, Marta I., James M. Kilner, Klaas E. Stephan, and Karl J. Friston. 2009. The mismatch negativity: A review of underlying mechanisms. *Clinical Neurophysiology* 120 (3): 453–463.
- Ge, Jianqiao, Gang Peng, Bingjiang Lyu, Yi Wang, Yan Zhuo, Zhendong Niu, Hai Tan Li, Alexander P. Leff, and Jia-Hong Gao. 2015. Cross-language differences in the brain network subserving intelligible speech. *Proceedings of the National Academy of Sciences of the United States of America* 112 (10): 2972–2977.
- Gentner, Timothy Q., Kimberly M. Fenn, Daniel Margoliash, and Howard C. Nusbaum. 2006. Recursive syntactic pattern learning by songbirds. *Nature* 440 (7088): 1204–1207.
- Geschwind, Norman, and Walter Levitsky. 1968. Human brain: Left-right asymmetries in temporal speech region. *Science* 161 (3837): 186–187.
- Giedd, Jay N., Jonathan Blumenthal, Neal O. Jeffries, F. Xavier Castellanos, Hong Liu, Alex Zijdenbos, Tomas Paus, Alan C. Evans, and Judith L. Rapoport. 1999. Brain development during childhood and adolescence: A longitudinal MRI study. *Nature Neuroscience* 2 (10): 861–863.
- Gierhan, Sarah M. E. 2013. Connections for auditory language in the human brain. *Brain and Language* 127 (2): 205–221.
- Giraud, Anne-Lise, Andreas Kleinschmidt, David Poeppel, Torben E. Lund, Richard S. J. Frackowiak, and Helmut Laufs. 2007. Endogenous cortical rhythms determine cerebral specialization for speech perception and production. *Neuron* 56 (6): 1127–1134.
- Giraud, Anne-Lise, and David Poeppel. 2012. Cortical oscillations and speech processing: Emerging computational principles and operations. *Nature Neuroscience* 15 (4): 511–517.
- Giraud, Anne-Lise, and Cathy J. Price. 2001. The constraints functional neuroimaging places on classical models of auditory word processing. *Journal of Cognitive Neuroscience* 13 (6): 754–765.
- Glasser, Matthew F., and James K. Rilling. 2008. DTI tractography of the human brain's language pathways. *Cerebral Cortex* 18 (11): 2471–2482.
- Gleitman, Lila R., and Eric Wanner. 1982. Language acquisition: The state of the state of the art. In *Language Acquisition: The State of the Art*, ed. Eric Wanner and Lila R. Gleitman, 3–48. Cambridge: Cambridge University Press.
- Gogtay, Nitin, Jay N. Giedd, Leslie Lusk, Kiralee M. Hayashi, Deanna Greenstein, A. Catherine Vaituzis, Tom F. Nugent, et al. 2004. Dynamic mapping of human cortical development during childhood through early adulthood. *Proceedings of the National Academy of Sciences of the United States of America* 101 (21): 8174–8179.
- Gómez, Rebecca L., and LouAnn Gerken. 1999. Artificial grammar learning by 1-year-olds leads to specific and abstract knowledge. *Cognition* 70 (2): 109–135.
- Goodglass, Harold, and Edith Kaplan. 1972. *The Assessment of Aphasia and Related Disorders*. Philadelphia: Lea & Febiger.
- Goucha, Tomás, Alfred Anwander, and Angela D. Friederici. Submitted. Language differences shape a universal brain network.
- Goucha, Tomás, Alfred Anwander, and Angela D. Friederici. 2015. How language shapes the brain: Cross-linguistic differences in structural connectivity. Poster presented at 7th Annual Meeting of the Society for the Neurobiology of Language, Chicago, IL, USA (2015) and 45th Annual Meeting of the Society for Neuroscience (SfN 2015), Chicago, IL, USA (2015).
- Goucha, Tomás B., and Angela D. Friederici. 2015. The language skeleton after dissecting meaning: A functional segregation within Broca's area. *NeuroImage* 114 (6): 294–302.
- Green, Antonia, Benjamin Straube, Susanne Weis, Andreas Jansen, Klaus Willmes, Kerstin Konrad, and Tilo Kircher. 2009. Neural integration of iconic and unrelated coverbal gestures: A functional MRI study. *Human Brain Mapping* 30 (10): 3309–3324.
- Grewe, Tanja, Ina Bornkessel, Stefan Zysset, Richard Wiese, and D. Yves von Cramon. 2005. The emergence of the unmarked: A new perspective on the language-specific function of Broca's area. *Human Brain Mapping* 26 (3): 178–190.

- Griffiths, John D., William D. Marslen-Wilson, Emmanuel A. Stamatakis, and Lorraine K. Tyler. 2013. Functional organization of the neural language system: Dorsal and ventral pathways are critical for syntax. *Cerebral Cortex* 23 (1): 139–147.
- Griffiths, Timothy D., and Jason D. Warren. 2002. The planum temporale as a computational hub. *Trends in Neurosciences* 25 (7): 348–353.
- Grodzinsky, Yosef. 2000. The neurology of syntax: Language use without Broca's area. *Behavioral and Brain Sciences* 23 (1): 1–21.
- Grodzinsky, Yosef, and Angela D. Friederici. 2006. Neuroimaging of syntax and syntactic processing. *Current Opinion in Neurobiology* 16 (2): 240–246.
- Grodzinsky, Yosef, and Andrea Santi. 2008. The battle for Broca's region. *Trends in Cognitive Sciences* 12:474–480.
- Grossman, Murray, Ayanna Cooke, Chris DeVita, David Alsop, John Detre, Willis Chen, and James Gee. 2002. Age-related changes in working memory during sentence comprehension: An fMRI study. *NeuroImage* 15 (2): 302–317.
- Grossman, Murray, Corey McMillan, Peachie Moore, Lijun Ding, Guila Glosser, Melissa Work, and James Gee. 2004. What's in a name: Voxel-based morphometric analyses of MRI and naming difficulty in Alzheimer's disease, frontotemporal dementia and corticobasal degeneration. *Brain* 127:628–649.
- Gross, Joachim, Andreas A. Ioannides, Jürgen Dammers, Burkhard Maess, Angela D. Friederici, and Hans-Wilhelm Müller-Gärtner. 1998. Magnetic field tomography analysis of continuous speech. *Brain Topography* 10 (4): 273–281.
- Gruber, Oliver, and D. Yves von Cramon. 2003. The functional neuroanatomy of human working memory revisited—Evidence from 3-T fMRI studies using classical domain-specific interference tasks. *NeuroImage* 19 (3): 797–809.
- Guasti, Maria Teresa. 2002. *Language Acquisition. The Growth of Grammar*. Cambridge, MA: MIT Press.
- Guenther, Frank H. 1995. Speech sound acquisition, coarticulation, and rate effects in a neural network model of speech production. *Psychological Review* 102 (3): 594–621.
- Guenther, Frank H. 2016. *Neural Control of Speech*. Cambridge, MA: MIT Press.
- Guenther, Frank H., and Gregory Hickok. 2015. Role of the auditory system in speech production. In *Handbook of Clinical Neurology*, ed. Michael J. Aminoff, François Boller and Dick F. Swaab, 161–175. Amsterdam: Elsevier.
- Gunter, Thomas C., Angela D. Friederici, and Anja Hahne. 1999. Brain responses during sentence reading: Visual input affects central processes. *Neuroreport* 10 (15): 3175–3178.
- Gunter, Thomas C., Angela D. Friederici, and Herbert Schriefers. 2000. Syntactic gender and semantic expectancy: ERPs reveal early autonomy and late interaction. *Journal of Cognitive Neuroscience* 12 (4): 556–568.
- Gunter, Thomas C., Leon Kroczyk, Henning Holle, and Angela D. Friederici. 2013. Neural correlates of gesture-syntax interaction. *Poster presented at the 5th Annual Meeting of the Society for the Neurobiology of Language*. San Diego, CA.
- Haarmann, Henk J., and Katherine A. Cameron. 2005. Active maintenance of sentence meaning in working memory: Evidence from EEG coherences. *International Journal of Psychophysiology* 57 (2): 115–128.
- Haarmann, Henk J., Katherine A. Cameron, and Daniel S. Ruchkin. 2002. Neural synchronization mediates on-line sentence processing: EEG coherence evidence from filler-gap constructions. *Psychophysiology* 39 (6): 820–825.
- Hagoort, Peter. 2003. Interplay between syntax and semantics during sentence comprehension: ERP effects of combining syntactic and semantic violations. *Journal of Cognitive Neuroscience* 15 (6): 883–899.
- Hagoort, Peter. 2005. On Broca, brain, and binding: A new framework. *Trends in Cognitive Sciences* 9 (9): 416–423.
- Hagoort, Peter. 2008. The fractionation of spoken language understanding by measuring electrical and magnetic brain signals. *Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences* 363 (1493): 1055–1069.

- Hagoort, Peter, Giosuè Baggio, and Roel M. Willems. 2009. Semantic unification. In *The Cognitive Neurosciences*. 4th ed., ed. Michael S. Gazzaniga, 819–836. Cambridge, MA: MIT Press.
- Hagoort, Peter, Colin Brown, and Jolanda Groothusen. 1993. The syntactic positive shift (SPS) as an ERP measure of syntactic processing. *Language and Cognitive Processes* 8 (4): 439–483.
- Hagoort, Peter, Lea A. Hald, Marcel C. M. Bastiaansen, and Karl Magnus Petersson. 2004. Integration of word meaning and world knowledge in language comprehension. *Science* 304 (5669): 438–441.
- Hagoort, Peter, and Peter Indefrey. 2014. The neurobiology of language beyond single words. *Annual Review of Neuroscience* 37:347–362.
- Hagoort, Peter, and Jos van Berkum. 2007. Beyond the sentence given. *Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences* 362 (1481): 801–811.
- Hahne, Anja. 2001. What's different in second-language processing? Evidence from event-related brain potentials. *Journal of Psycholinguistic Research* 30 (3): 251–266.
- Hahne, Anja, Korinna Eckstein, and Angela D. Friederici. 2004. Brain signatures of syntactic and semantic processes during children's language development. *Journal of Cognitive Neuroscience* 16 (7): 1302–1318.
- Hahne, Anja, and Angela D. Friederici. 2002. Differential task effects on semantic and syntactic processes as revealed by ERPs. *Brain Research. Cognitive Brain Research* 13 (3): 339–356.
- Hahne, Anja, and Angela D. Friederici. 1999. Electrophysiological evidence for two steps in syntactic analysis: Early automatic and late controlled processes. *Journal of Cognitive Neuroscience* 11 (2): 194–205.
- Hahne, Anja, and Angela D. Friederici. 2001. Processing a second language: Late learners' comprehension strategies as revealed by event-related brain potentials. *Bilingualism: Language and Cognition* 4 (2): 123–141.
- Halgren, Eric, Rupali P. Dhond, Natalie Christensen, Cyma Van Petten, Ksenija Marinkovic, Jeffrey D. Lewine, and Anders M. Dale. 2002. N400-like magnetoencephalography responses modulated by semantic context, word frequency, and lexical class in sentences. *NeuroImage* 17 (3): 1101–1116.
- Hall, Deborah A., Ingrid S. Johnsrude, Mark P. Haggard, Alan R. Palmer, Michael A. Akeroyd, and A. Quentin Summerfield. 2002. Spectral and temporal processing in human auditory cortex. *Cerebral Cortex* 12 (2): 140–149.
- Haller, Sven, Ernst-Wilhelm Radue, Michael Erb, Wolfgang Grodd, and Tilo Kircher. 2005. Overt sentence production in event-related fMRI. *Neuropsychologia* 43 (5): 807–814.
- Harris, Julia J., and David Attwell. 2012. The energetics of CNS white matter. *Journal of Neuroscience* 32 (1): 356–371.
- Hartwigsen, Gesa, Thomas Golombek, and Jonas Obleser. 2015. Repetitive transcranial magnetic stimulation over left angular gyrus modulates the predictability gain in degraded speech comprehension. *Cortex* 68:100–110.
- Hauser, Marc D., Noam Chomsky, and W. Tecumseh Fitch. 2002. The faculty of language: What is it, who has it, and how did it evolve? *Science* 298 (5598): 1569–1579.
- He, Chao, Lisa Hotson, and Laurel J. Trainor. 2007. Mismatch responses to pitch changes in early infancy. *Journal of Cognitive Neuroscience* 19 (5): 878–892.
- Heilman, Kenneth M., Dawn Bowers, Lynn Speedie, and H. Branch Coslett. 1984. Comprehension of affective and nonaffective prosody. *Neurology* 34 (7): 917–921.
- Heilman, Kenneth M., Robert Scholes, and Robert T. Watson. 1975. Auditory affective agnosia—Disturbed comprehension of affective speech. *Journal of Neurology, Neurosurgery, and Psychiatry* 38 (1): 69–72.
- Heim, Stefan, Angela D. Friederici, Niels O. Schiller, Shirley-Ann Rueschemeyer, and Katrin Amunts. 2009. The determiner congruency effect in language production investigated with functional MRI. *Human Brain Mapping* 30 (3): 928–940.
- Heim, Stefan, Bertram Opitz, and Angela D. Friederici. 2002. Broca's area in the human brain is involved in the selection of grammatical gender for language production: Evidence from event-related functional magnetic resonance imaging. *Neuroscience Letters* 328 (2): 101–104.
- Hensch, Takao K. 2005. Critical period plasticity in local cortical circuits. *Nature Reviews. Neuroscience* 6 (11): 877–888.
- Herder, Johann Gottfried. 1772. Treatise on the Origin of Language. In *Philosophical Writings*, ed. Michael N. Forster, 65–165. Cambridge: Cambridge University Press.

- Hernandez, Arturo E., Juliane Hofmann, and Sonja A. Kotz. 2007. Age of acquisition modulates neural activity for both regular and irregular syntactic functions. *NeuroImage* 36 (3): 912–923.
- Herrmann, Bjoern, Burkhard Maess, and Angela D. Friederici. 2011. Violation of syntax and prosody—Disentangling their contributions to the early left anterior negativity (ELAN). *Neuroscience Letters* 490 (2): 116–120.
- Herrmann, Bjoern, Burkhard Maess, Anja Hahne, Erich Schröger, and Angela D. Friederici. 2011. Syntactic and auditory spatial processing in the human temporal cortex: An MEG study. *NeuroImage* 57 (2): 624–633.
- Herrmann, Bjoern, Burkhard Maess, Anna S. Hasting, and Angela D. Friederici. 2009. Localization of the syntactic mismatch negativity in the temporal cortex: An MEG study. *NeuroImage* 48 (3): 590–600.
- Hickok, Gregory. 2012. Computational neuroanatomy of speech production. *Nature Reviews. Neuroscience* 13 (2): 135–145.
- Hickok, Gregory, Mark Kritchevsky, Ursula Bellugi, and Edward S. Klima. 1996. The role of the left frontal operculum in sign language aphasia. *Neurocase* 2 (5): 373–380.
- Hickok, Gregory, and David Poeppel. 2000. Towards a functional neuroanatomy of speech perception. *Trends in Cognitive Sciences* 4 (4): 131–138.
- Hickok, Gregory, and David Poeppel. 2004. Dorsal and ventral streams: A framework for understanding aspects of the functional anatomy of language. *Cognition* 92 (1–2): 67–99.
- Hickok, Gregory, and David Poeppel. 2007. The cortical organization of speech perception. *Nature Reviews. Neuroscience* 8:393–402.
- Hodges, John R., Karalyn Patterson, Susan Oxbury, and Elaine Funnell. 1992. Semantic dementia—Progressive fluent aphasia with temporal lobe atrophy. *Brain* 115:1783–1806.
- Hoeks, John C. J., Laurie A. Stowe, and Gina Doedens. 2004. Seeing words in context: The interaction of lexical and sentence level information during reading. *Brain Research. Cognitive Brain Research* 19 (1): 59–73.
- Höhle, Barbara, Michaela Schmitz, Lynn M. Santelmann, and Jürgen Weissenborn. 2006. The recognition of discontinuous verbal dependencies by German 19-month-olds: Evidence for lexical and structural influences on children’s early processing capacities. *Language Learning and Development* 2 (4): 277–300.
- Hofer, Sabine, and Jens Frahm. 2006. Topography of the human corpus callosum revisited: Comprehensive fiber tractography using diffusion tensor magnetic resonance imaging. *NeuroImage* 32 (3): 989–994.
- Holcomb, Phillip J., Sharon A. Coffey, and Helen J. Neville. 1992. Visual and auditory sentence processing: A developmental analysis using event-related brain potentials. *Developmental Neuropsychology* 8 (2–3): 203–241.
- Holle, Henning, and Thomas C. Gunter. 2007. The role of iconic gestures in speech disambiguation: ERP evidence. *Journal of Cognitive Neuroscience* 19 (7): 1175–1192.
- Holle, Henning, Thomas C. Gunter, Shirley-Ann Rüschemeyer, Andreas Hennenlotter, and Marco Iacoboni. 2008. Neural correlates of the processing of co-speech gestures. *NeuroImage* 39 (4): 2010–2024.
- Holle, Henning, Christian Obermeier, Maren Schmidt-Kassow, Angela D. Friederici, Jamie Ward, and Thomas C. Gunter. 2012. Gesture facilitates the syntactic analysis of speech. *Frontiers in Psychology* 3:74. doi:10.3389/fpsyg.2012.00074.
- Holle, Henning, Jonas Obleser, Shirley-Ann Rueschemeyer, and Thomas C. Gunter. 2010. Integration of iconic gestures and speech in left superior temporal areas boosts speech comprehension under adverse listening conditions. *NeuroImage* 49 (1): 875–884.
- Holloway, Ralph L. 1978. The relevance of endocasts for studying primate brain evolution. In *Sensory systems of primates*, ed. Charles R. Noback, 181–200. New York, NY: Plenum Press.
- Holloway, Ralph L., Douglas C. Broadfield, and Michael S. Yuan. 2004. *The Human Fossil Record: Brain Endocasts—The Paleoneurological Evidence*. Hoboken, NJ: Wiley-Liss.
- Holloway, Ralph L., Ronald J. Clarke, and Phillip V. Tobias. 2004. Posterior lunule sulcus in *Australopithecus africanus*: Was Dart right? *Comptes Rendus. Palévol* 3 (4): 287–293.
- Homae, Fumitaka, Hama Watanabe, Tamami Nakano, Kayo Asakawa, and Gentaro Taga. 2006. The right hemisphere of sleeping infant perceives sentential prosody. *Neuroscience Research* 54 (4): 276–280.
- Houston, Derek M., Peter W. Jusczyk, Cecile Kuijpers, Riet Coolen, and Anne Cutler. 2000. Cross-language word segmentation by 9-month-olds. *Psychonomic Bulletin & Review* 7 (3): 504–509.

- Hua, Kegang, Kenichi Oishi, Jiangyang Zhang, Setsu Wakana, Takashi Yoshioka, Weihong Zhang, Kazi Dilruba Akhter, et al. 2009. Mapping of functional areas in the human cortex based on connectivity through association fibers. *Cerebral Cortex* 19 (8): 1889–1895.
- Huang, Hao, Jiangyang Zhang, Hangyi Jiang, Setsu Wakana, Lidia Poetscher, Michael I. Miller, Peter C. van Zijl, Argye E. Hillis, Robert Wytik, and Susumu Mori. 2005. DTI tractography based parcellation of white matter: Application to the mid-sagittal morphology of corpus callosum. *NeuroImage* 26 (1): 195–205.
- Hubel, David H., and Torsten Nils Wiesel. 1962. Receptive fields, binocular interaction and functional architecture in cats visual cortex. *Journal of Physiology-London* 160 (1): 106–154.
- Hublin, Jean-Jacques, Simon Neubauer, and Philipp Gunz. 1663. 2015. Brain ontogeny and life history in Pleistocene hominins. *Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences* 370:20140062. doi:10.1098/rstb.2014.0062.
- Humphries, Colin, Jeffrey R. Binder, David A. Medler, and Einat Lieberthal. 2006. Syntactic and semantic modulation of neural activity during auditory sentence comprehension. *Journal of Cognitive Neuroscience* 18 (4): 665–679.
- Humphries, Colin, Jeffrey R. Binder, David A. Medler, and Einat Lieberthal. 2007. Time course of semantic processes during sentence comprehension. *NeuroImage* 36 (3): 924–932.
- Humphries, Colin, Tracy Love, David Swinney, and Gregory Hickok. 2005. Response of anterior temporal cortex to prosodic and syntactic manipulations during sentence processing. *Human Brain Mapping* 26 (2): 128–138.
- Hurford, James R. 2004. Language beyond our grasp: What mirror neurons can, and cannot, do for the evolution of language. In *Evolution of Communication Systems: A Comparative Approach*, ed. D. Kimrough Oller and Ulrike Gabriel, 297–313. Cambridge, MA: MIT Press.
- Iacoboni, Marco, Istvan Molnar-Szakacs, Vittorio Gallese, Giovanni Buccino, John C. Mazziotta, and Giacomo Rizzolatti. 2005. Grasping the intentions of others with one's own mirror neuron system. *PLoS Biology* 3 (3): 529–535.
- Iacoboni, Marco, Roger P. Woods, Marcel Brass, Harold Bekkering, John C. Mazziotta, and Giacomo Rizzolatti. 1999. Cortical mechanisms of human imitation. *Science* 268 (5449): 2526–2528.
- Indefrey, Peter. 2007. Brain imaging studies of language production. In *Oxford Handbook of Psycholinguistics*, ed. Gareth Gaskell, 547–564. Oxford: Oxford University Press.
- Indefrey, Peter, Colin M. Brown, Frauke Hellwig, Katrin Amunts, Hans Herzog, Rüdiger J. Seitz, and Peter Hagoort. 2001. A neural correlate of syntactic encoding during speech production. *Proceedings of the National Academy of Sciences of the United States of America* 98 (10): 5933–5936.
- Indefrey, Peter, and Willem J. M. Levelt. 2004. The spatial and temporal signatures of word production components. *Cognition* 92 (1–2): 101–144.
- Indefrey, Peter, Frauke Hellwig, Hans Herzog, Rüdiger J. Seitz, and Peter Hagoort. 2004. Neural responses to the production and comprehension of syntax in identical utterances. *Brain and Language* 89 (2): 312–319.
- Isel, Frédéric, Thomas C. Gunter, and Angela D. Friederici. 2003. Prosody-assisted head-driven access to spoken German compounds. *Journal of Experimental Psychology: Learning, Memory, and Cognition* 29 (2): 277–288.
- Isel, Frédéric, Anja Hahne, Burkhard Maess, and Angela D. Friederici. 2007. Neurodynamics of sentence interpretation: ERP evidence from French. *Biological Psychology* 74 (3): 337–346.
- Itzhak, Inbal, Efrat Pauker, John E. Drury, Shari R. Baum, and Karsten Steinhauser. 2010. Event-related potentials show online influence of lexical biases on prosodic processing. *Neuroreport* 21 (1): 8–13.
- Iverson, Jana M., and Susan Goldin-Meadow. 2005. Gesture paves the way for language development. *Psychological Science* 16 (5): 367–371.
- Jacobsen, Roman. 1956. Two aspects of language and two types of aphasic disturbances. In *Fundamentals of Language*, ed. Roman Jakobson and Morris Halle, 69–106. The Hague: Mouton.
- Jackendoff, Ray. 1983. *Semantics and Cognition*. Cambridge, MA: MIT Press.
- Jackendoff, Ray. 2002. *Foundations of Language (Brain, Meaning, Grammar, Evolution)*. Oxford: Oxford University Press.



- Jackendoff, Ray, and Steven Pinker. 2005. The nature of the language faculty and its implications for evolution of language—(Reply to Fitch, Hauser, and Chomsky). *Cognition* 97 (2): 211–225.
- Jacquemot, Charlotte, Christophe Pallier, Denis LeBihan, Stanislas Dehaene, and Emmanuel Dupoux. 2003. Phonological grammar shapes the auditory cortex: A functional magnetic resonance imaging study. *Journal of Neuroscience* 23 (29): 9541–9546.
- Jasinska, Kaja K., and Laura-Ann Petitto. 2013. How age of bilingual exposure can change the neural systems for language in the developing brain: A functional near infrared spectroscopy investigation of syntactic processing in monolingual and bilingual children. *Developmental Cognitive Neuroscience* 6:87–101.
- Jeon, Hyeon-Ae, and Angela D. Friederici. 2013. Two principles of organization in the prefrontal cortex are cognitive hierarchy and degree of automaticity. *Nature Communications* 4:2041. doi:10.1038/ncomms3041.
- Jescheniak, Joerg D., and Willem J. M. Levelt. 1994. Word frequency effects in speech production: Retrieval of syntactic information and of phonological form. *Journal of Experimental Psychology: Learning, Memory, and Cognition* 20 (4): 824–843.
- Johansen-Berg, Heidi, Tim E. J. Behrens, Matthew D. Robson, Ivana Drobnjak, Matthew F. S. Rushworth, Michael J. Brady, Stephen M. Smith, Desmond J. Higham, and Paul M. Matthews. 2004. Changes in connectivity profiles define functionally distinct regions in human medial frontal cortex. *Proceedings of the National Academy of Sciences of the United States of America* 101 (36): 13335–13340.
- Johnsrude, Ingrid S., Anne Lise Giraud, and Richard S. J. Frackowiak. 2002. Functional imaging of the auditory system: The use of positron emission tomography. *Audiology & Neuro-Otology* 7 (5): 251–276.
- Jonides, John, Eric H. Schumacher, Edward E. Smith, Robert A. Koeppe, Edward Awh, Patricia A. Reuter-Lorenz, Christy Marshuetz, and Christopher R. Willis. 1998. The role of parietal cortex in verbal working memory. *Journal of Neuroscience* 18 (13): 5026–5034.
- Josse, Goulven, Sabine Joseph, Eric Bertasi, and Anne-Lise Giraud. 2012. The brain's dorsal route for speech represents word meaning: Evidence from gesture. *PLoS One* 7 (9): e46108. doi:10.1371/journal.pone.0046108.
- Jusczyk, Peter W., Derek M. Houston, and Mary Newsome. 1999. The beginnings of word segmentation in English-learning infants. *Cognitive Psychology* 39 (3–4): 159–207.
- Kaan, Edith, Anthony Harris, Edward Gibson, and Phillip Holcomb. 2000. The P600 as an index of syntactic integration difficulty. *Language and Cognitive Processes* 15 (2): 159–201.
- Kelly, Spencer D., Corinne Kravitz, and Michael Hopkins. 2004. Neural correlates of bimodal speech and gesture comprehension. *Brain and Language* 89 (1): 253–260.
- Kelly, Spencer D., Tara McDevitt, and Megan Esch. 2009. Brief training with co-speech gesture lends a hand to word learning in a foreign language. *Language and Cognitive Processes* 24 (2): 313–334.
- Kemeny, Stefan, Frank Q. Ye, Rasmus Birn, and Allan R. Braun. 2005. Comparison of continuous overt speech fMRI using BOLD and arterial spin labelling. *Human Brain Mapping* 24 (3): 173–183.
- Kerkhofs, Roel, Wietske Vonk, Herbert Schriefers, and Dorothee J. Chwilla. 2007. Discourse, syntax, and prosody: The brain reveals an immediate interaction. *Journal of Cognitive Neuroscience* 19 (9): 1421–1434.
- Kerkhofs, Roel, Wietske Vonk, Herbert Schriefers, and Dorothee J. Chwilla. 2008. Sentence processing in the visual and auditory modality: Do comma and prosodic break have parallel functions? *Brain Research* 1224:102–118.
- Kim, Albert, and Lee Osterhout. 2005. The independence of combinatory semantic processing: Evidence from event-related potentials. *Journal of Memory and Language* 52 (2): 205–225.
- Kim, Karl H. S., Norman R. Relkin, Kyoung-Min Lee, and Joy Hirsch. 1997. Distinct cortical areas associated with native and second languages. *Nature* 388 (6638): 171–174.
- Kinno, Ryuta, Mitsuru Kawamura, Seiji Shioda, and Kuniyoshi L. Sakai. 2008. Neural correlates of non-canonical syntactic processing revealed by a picture-sentence matching task. *Human Brain Mapping* 29 (9): 1015–1027.
- Klein, Denise, Robert J. Zatorre, Brenda Milner, and Viviane Zhao. 2001. A cross-linguistic PET study of tone perception in mandarin Chinese and English speakers. *NeuroImage* 13 (4): 646–653.
- Kleist, K. 1914. Aphasie und Geisteskrankheit. *Munchener Medizinische Wochenschrift* 61 (1): 8–12.

- Klouda, Gayle V., Donald A. Robin, Neill R. Graff-Radford, and William E. Copper. 1988. The role of callosal connections in speech prosody. *Brain and Language* 35 (1): 154–171.
- Knickmeyer, Rebecca C., Martin Styner, Sarah J. Short, Gabriele R. Lubach, Chaeryon Kang, Robert Hamer, Christopher L. Coe, and John H. Gilmore. 2010. Maturational trajectories of cortical brain development through the pubertal transition: Unique species and sex differences in the monkey revealed through structural magnetic resonance imaging. *Cerebral Cortex* 20 (5): 1053–1063.
- Knösche, Thomas R., Burkhard Maess, and Angela D. Friederici. 1999. Processing of syntactic information monitored by brain surface current density mapping based on MEG. *Brain Topography* 12 (2): 75–87.
- Kolk, Herman H. J., Dorothee J. Chwilla, Marieke van Herten, and Patrick J. W. Oor. 2003. Structure and limited capacity in verbal working memory: A study with event-related potentials. *Brain and Language* 85 (1): 1–36.
- Kooijman, Valesca, Peter Hagoort, and Anne Cutler. 2005. Electrophysiological evidence for prelinguistic infants' word recognition in continuous speech. *Brain Research. Cognitive Brain Research* 24 (1): 109–116.
- Kooijman, Valesca, Peter Hagoort, and Anne Cutler. 2009. Prosodic structure in early word segmentation: ERP evidence from Dutch ten-month-olds. *Infancy* 14 (6): 591–612.
- Kotz, Sonja A., Martin Meyer, Kai Alter, Mireille Besson, Yves von Cramon, and Angela D. Friederici. 2003. On the lateralization of emotional prosody: An event-related functional MR investigation. *Brain and Language* 86 (3): 366–376.
- Kotz, Sonja A., and Silke Paulmann. 2011. Emotion, language, and the brain. *Language and Linguistics Compass* 5 (3): 108–125.
- Kotz, Sonja A., and Michael Schwartz. 2015. Motor-Timing and Sequencing in Speech Production. In *Neurobiology of Language Volume*, ed. Steven L. Small and Gregory Hickok, 717–724. Amsterdam: Elsevier Press.
- Kovelman, Ioulia, Stephanie A. Baker, and Laura-Ann Petitto. 2008. Bilingual and monolingual brains compared: A functional magnetic resonance imaging investigation of syntactic processing and a possible “neural signature” of bilingualism. *Journal of Cognitive Neuroscience* 20 (1): 153–169.
- Krause, Johannes, Ludovic Orlando, David Serre, Bence Viola, Kay Prüfer, Michael P. Richards, Jean-Jacques Hublin, Catherine Hänni, Anatoly P. Derevianko, and Svante Pääbo. 2007. Neanderthals in central Asia and Siberia. *Nature* 449 (7164): 902–904.
- Kreitewolf, Jens, Angela D. Friederici, and Katharina von Kriegstein. 2014. Hemispheric lateralization of linguistic prosody recognition in comparison to speech and speaker recognition. *NeuroImage* 102 (2): 332–344.
- Krekelberg, Bart, Geoffrey M. Boynton, and Richard J. A. van Wezel. 2006. Adaptation: From single cells to BOLD signals. *Trends in Neurosciences* 29 (5): 250–256.
- Kubaneck, Jan, Peter Brunner, Aysegül Gunduz, David Poeppel, and Gerwin Schalk. 2013. The tracking of speech envelope in the human cortex. *PLoS One* 8 (1): e53398. doi:10.1371/journal.pone.0053398.
- Kubota, Mikio, Paul Ferrari, and Timothy P. L. Roberts. 2003. Magnetoencephalography detection of early syntactic processing in humans: Comparison between L1 speakers and L2 learners of English. *Neuroscience Letters* 353 (2): 107–110.
- Kumar, Sukhbinder, Klaas E. Stephan, Jason D. Warren, Karl J. Friston, and Timothy D. Griffiths. 2007. Hierarchical processing of auditory objects in humans. *PLoS Computational Biology*, 3 (6): e100, 977–985.
- Kuperberg, Gina R., David Caplan, Tatiana Sitnikova, Marianna Eddy, and Phillip J. Holcomb. 2006. Neural correlates of processing syntactic, semantic, and thematic relationships in sentences. *Language and Cognitive Processes* 21 (5): 489–530.
- Kuperberg, Gina R., Phillip J. Holcomb, Tatiana Sitnikova, Douglas Greve, Anders M. Dale, and David Caplan. 2003. Distinct patterns of neural modulation during the processing of conceptual and syntactic anomalies. *Journal of Cognitive Neuroscience* 15 (2): 272–293.
- Kuperberg, Gina R., Donna A. Kreher, Tatiana Sitnikova, David Caplan, and Phillip J. Holcomb. 2007. The role of animacy and thematic relationships in processing active English sentences: Evidence from event-related potentials. *Brain and Language* 100 (3): 223–238.
- Kuperberg, Gina R., Philip K. McGuire, Ed T. Bullmore, Michael J. Brammer, Sophia Rabe-Hesketh, I. C. Wright, David J. Lythgoe, Steven C. R. Williams, and Anthony S. David. 2000. Common and distinct neural

- substrates for pragmatic, semantic, and syntactic processing of spoken sentences: An fMRI study. *Journal of Cognitive Neuroscience* 12 (2): 321–341.
- Kurowski, Kathleen, Eric Hazen, and Sheila E. Blumstein. 2003. The nature of speech production impairments in anterior aphasics: An acoustic analysis of voicing in fricative consonants. *Brain and Language* 84 (3): 353–371.
- Kutas, Marta, and Kara D. Federmeier. 2000. Electrophysiology reveals semantic memory use in language comprehension. *Trends in Cognitive Sciences* 4 (12): 463–470.
- Kutas, Marta, and Steven A. Hillyard. 1980. Reading senseless sentences: Brain potentials reflect semantic incongruity. *Science* 207 (4427): 203–205.
- Kutas, Marta, and Steven A. Hillyard. 1983. Event-related brain potentials to grammatical errors and semantic anomalies. *Memory & Cognition* 11 (5): 539–550.
- Kutas, Marta, and Cyma Van Petten. 1994. Psycholinguistics electrified: Event-related brain potential investigations. In *Handbook of Psycholinguistics*, ed. Morton A. Gernsbacher, 83–143. San Diego: Academic Press.
- Kwon, Hyukchan, Shynia Kuriki, Jin Mok Kim, Jong Ho Lee, Kiwoong Kim, and Kichun Nam. 2005. MEG study on neural activities associated with syntactic and semantic violations in spoken Korean sentences. *Neuroscience Research* 51 (4): 349–357.
- Lakoff, George. 1987. *Women, Fire, and Dangerous Things. What Categories Reveal about the Mind*. Chicago: The University of Chicago Press.
- Lambon, Ralph Matthew A., and Karalyn Patterson. 2008. Generalization and differentiation in semantic memory: Insights from semantic dementia. *Annals of the New York Academy of Sciences* 1124:61–76.
- Larkum, Matthew. 2013. A cellular mechanism for cortical associations: An organizing principle for the cerebral cortex. *Trends in Neurosciences* 36 (3): 141–151.
- Lau, Ellen F., Colin Phillips, and David Poeppel. 2008. A cortical network for semantics: (De)constructing the N400. *Nature Reviews. Neuroscience* 9 (12): 920–933.
- Lauro, Leonor J. Romero, Janine Reis, Leonardo G. Cohen, Carlo Cecchetto, and Costanza Papagno. 2010. A case for the involvement of phonological loop in sentence comprehension. *Neuropsychologia* 48 (14): 4003–4011.
- Leaver, Amber M., and Josef P. Rauschecker. 2010. Cortical representation of natural complex sounds: Effects of acoustic features and auditory object category. *Journal of Neuroscience* 30 (22): 7604–7612.
- Lebel, Catherine, Lindsay Walker, Alexander Leemans, Linda Phillips, and Christian Beaulieu. 2008. Microstructural maturation of the human brain from childhood to adulthood. *NeuroImage* 40 (3): 1044–1055.
- Leigh, Steven R. 2004. Brain growth, life history, and cognition in primate and human evolution. *American Journal of Primatology* 62 (3): 139–164.
- Lenneberg, Eric H. 1967. *Biological foundations of language*. New York: John Wiley and Sons, Inc.
- Leitman, David I., Daniel H. Wolf, J. Daniel Ragland, Petri Laukka, James Loughhead, Jeffrey N. Valdez, Daniel C. Javitt, Bruce I. Turetsky, and Ruben C. Gur. 2010. “It’s not what you say, but how you say it”: A reciprocal temporo-frontal network for affective prosody. *Frontiers in Human Neuroscience* 4:19. doi:10.3389/fnhum.2010.00019.
- Leppänen, Paavo H. T., Elina Pihko, Kenneth M. Eklund, and Heikki Lyytinen. 1999. Cortical responses of infants with and without a genetic risk for dyslexia: II. Group effects. *Neuroreport* 10 (5): 969–973.
- Leppänen, Paavo H. T., Ulla Richardson, and Heikki Lyytinen. 1997. Brain ERPs to changes of speech segment durations in six-month-olds. *International Journal of Psychophysiology* 25 (1): 17–84.
- Leroy, Francois, Herve Glasel, Jessica Dubois, Lucie Hertz-Pannier, Bertrand Thirion, Jean-Francois Mangin, and Ghislaine Dehaene-Lambertz. 2011. Early maturation of the linguistic dorsal pathway in human infants. *Journal of Neuroscience* 31 (4): 1500–1506.
- Levelt, Willem J. M. 1989. *Speaking: From Intention to Articulation*. Cambridge, MA: The MIT Press.
- Levelt, Willem J. M. 2013. *A history of Psycholinguistics: The Pre-Chomskyan Era*. Oxford: Oxford University Press.
- Levelt, Willem J. M., Ardi Roelofs, and Antje S. Meyer. 1999. Multiple perspectives on word production. *Behavioral and Brain Sciences* 22 (1): 61–75.

- Levelt, Willem J. M., Herbert Schriefers, Dirk Vorberg, Antje S. Meyer, Thomas Pechmann, and Jaap Havinga. 1991. The time course of lexical access in speech production—a study of picture naming. *Psychological Review* 98 (1): 122–142.
- Levinson, Stephen C. 1983. *Pragmatics. Cambridge Textbooks in Linguistics*. Cambridge: Cambridge University Press.
- Lewis, Ashley G., and Marcel Bastiaansen. 2015. A predictive coding framework for rapid neural dynamics during sentence-level language comprehension. *Cortex* 68:155–168.
- Lewis, Ashley G., Jan-Mathijs Schoffelen, Herbert Schriefers, and Marcel Bastiaansen. 2016. A predictive coding perspective on beta oscillations during sentence-level language comprehension. *Frontiers in Human Neuroscience* 10:85. doi:10.3389/fnhum.2016.00085.
- Li, Xuesong, Hua Shu, Youyi Liu, and Ping Li. 2006. Mental representation of verb meaning: Behavioral and electrophysiological evidence. *Journal of Cognitive Neuroscience* 18 (10): 1774–1787.
- Li, Weijun, and Yufang Yang. 2009. Perception of prosodic hierarchical boundaries in Mandarin Chinese sentences. *Neuroscience* 158 (4): 1416–1425.
- Liberman, Alvin M., Katherine Safford Harris, Howard S. Hoffman, and Belver C. Griffith. 1957. The discrimination of speech sounds within and across phoneme boundaries. *Journal of Experimental Psychology* 54 (5): 358–368.
- Liu, Fang, Aniruddh D. Patel, Adrian Fourcin, and Lauren Stewart. 2010. Intonation processing in congenital amusia: Discrimination, identification and imitation. *Brain* 133:1682–1693.
- Lohmann, Gabriele, Kerstin Erfurth, Karsten Müller, and Robert Turner. 2012. Critical comments on dynamic causal modeling. *NeuroImage* 59 (3): 2322–2329.
- Lohmann, Gabriele, Stefanie Hoehl, Jens Brauer, Claudia Danielmeier, Ina Bornkessel-Schlesewsky, Joerg Bahlmann, Robert Turner, and Angela D. Friederici. 2010. Setting the frame: The human brain activates a basic low-frequency network for language processing. *Cerebral Cortex* 20 (6): 1286–1292.
- Lu, Lisa H., Christiana M. Leonard, Paul M. Thompson, E. Kan, J. Jolley, S. E. Welcome, Arthur Toga, and E. R. Sowell. 2007. Normal developmental changes in inferior frontal gray matter are associated with improvement in phonological processing: A longitudinal MRI analysis. *Cerebral Cortex* 17 (5): 1092–1099.
- Lyn, Heidi, Peter Pierre, Allyson J. Bennett, Scott Fears, Roger Woods, and William D. Hopkins. 2011. Planum temporale grey matter asymmetries in chimpanzees (*Pan troglodytes*), vervet (*Chlorocebus aethiops sabaeus*), rhesus (*Macaca mulatta*) and bonnet (*Macaca radiata*) monkeys. *Neuropsychologia* 49 (7): 2004–2012.
- Macedonia, Manuela, Karsten Müller, and Angela D. Friederici. 2011. The impact of iconic gestures on foreign language word learning and its neural substrate. *Human Brain Mapping* 32 (6): 982–998.
- MacDonald, Maryellen C., Neal J. Pearlmutter, and Mark S. Seidenberg. 1994. Lexical nature of syntactic ambiguity resolution. *Psychological Review* 101 (4): 676–703.
- MacGregor, Lucy J., Friedemann Pulvermüller, Marten van Casteren, and Yury Shtyrov. 2012. Ultra-rapid access to words in the brain. *Nature Communications* 3:711. doi:10.1038/ncomms1715.
- MacSweeney, Mairead, Cheryl M. Capek, Ruth Campbell, and Bencie Woll. 2008. The signing brain: The neurobiology of sign language. *Trends in Cognitive Sciences* 12 (11): 432–440.
- MacWhinney, Brian, Elizabeth Bates, and Reinhold Kliegl. 1984. Cue validity and sentence interpretation in English, German, and Italian. *Journal of Verbal Learning and Verbal Behavior* 23 (2): 127–150.
- Maess, Burkhard, Angela D. Friederici, Markus Damian, Antje S. Meyer, and Willem J. M. Levelt. 2002. Semantic category interference in overt picture naming: Sharpening current density localization by PCA. *Journal of Cognitive Neuroscience* 14 (3): 455–462.
- Männel, Claudia, and Angela D. Friederici. 2009. Pauses and intonational phrasing: ERP studies in 5-month-old German infants and adults. *Journal of Cognitive Neuroscience* 21 (10): 1988–2006.
- Männel, Claudia, and Angela D. Friederici. 2011. Intonational phrase structure processing and syntactic knowledge in childhood: ERP studies in 2-, 3-, and 6-year-old children. *Developmental Science* 14 (4): 786–798.
- Männel, Claudia, Christine Schipke, and Angela D. Friederici. 2013. The role of pause as prosodic boundary marker: Language ERP studies in German 3- and 6-year-olds. *Developmental Cognitive Neuroscience* 5:86–94.

- Mahmoudzadeh, Mahdi, Ghislaine Dehaene-Lambertz, Marc Fournier, Guy Kongolo, Sabrina Goudjil, Jessica Dubois, Reinhard Grebe, and Fabrice Wallois. 2013. Syllabic discrimination in premature human infants prior to complete formation of cortical layers. *Proceedings of the National Academy of Sciences of the United States of America* 110 (12): 4846–4851.
- Makris, Nikos, David N. Kennedy, Sean McInerney, A. Gregory Sorensen, Ruopeng Wang, Verne S. Caviness, and Deepak N. Pandya. 2005. Segmentation of subcomponents within the superior longitudinal fascicle in humans: A quantitative, in vivo, DT-MRI study. *Cerebral Cortex* 15 (6): 854–869.
- Makris, Nikos, and Deepak N. Pandya. 2009. The extreme capsule in humans and rethinking of the language circuitry. *Brain Structure & Function* 213 (3): 343–358.
- Makuuchi, Michiru, Joerg Bahlmann, Alfred Anwander, and Angela D. Friederici. 2009. Segregating the core computational faculty of human language from working memory. *Proceedings of the National Academy of Sciences of the United States of America* 106 (20): 8362–8367.
- Makuuchi, Michiru, Joerg Bahlmann, and Angela D. Friederici. 2012. An approach to separating the levels of hierarchical structure building in language and mathematics. *Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences* 367 (1598): 2033–2045.
- Makuuchi, Michiru, and Angela D. Friederici. 2013. Hierarchical functional connectivity between the core language system and the working memory system. *Cortex* 49 (9): 2416–2423.
- Mampe, Birgit, Angela D. Friederici, Anne Christophe, and Kristiane Wermke. 2009. Newborns' cry melody is shaped by their native language. *Current Biology* 19 (23): 1994–1997.
- Marcus, Gary F., S. Vijayan, Shoba Bandi Rao, and Peter M. Vishton. 1999. Rule learning by seven-month-old infants. *Science* 283 (5398): 77–80.
- Marler, Peter. 1970. Birdsong and speech development—could there be parallels. *American Scientist* 58 (6): 669–673.
- Marslen-Wilson, William. 1987. Functional parallelism in spoken word-recognition. *Cognition* 25 (1–2): 71–102.
- Marslen-Wilson, William, and Lorraine K. Tyler. 1980. The temporal structure of spoken language understanding. *Cognition* 8 (1): 1–71.
- Marslen-Wilson, William, and Lorraine K. Tyler. 1987. Against modularity. In *Modularity in Knowledge Representation and Natural-Language Understanding*, ed. Jay L. Garfield, 37–62. Cambridge, MA: MIT Press.
- Marslen-Wilson, William D., Lorraine K. Tyler, Paul Warren, P. Grenier, and C. S. Lee. 1992. Prosodic effects in minimal attachment. *Quarterly Journal of Experimental Psychology* 45 (1): 73–87.
- Martynova, Olga, Jarkko Kirjavainen, and Marie Cheour. 2003. Mismatch negativity and late discriminative negativity in sleeping human newborns. *Neuroscience Letters* 340 (2): 75–78.
- Matsumoto, Riki, Dileep R. Nair, Eric LaPresto, Imad Najm, William Bingaman, Hiroshi Shibusaki, and Hans O. Lüders. 2004. Functional connectivity in the human language system: a cortico-cortical evoked potential study. *Brain*, 127: 2316–2330.
- Matsuo, Koushun, Toshiki Mizuno, Kei Yamada, Kentaro Akazawa, Takashi Kasai, Masaki Kondo, Satoru Mori, Tsunehiko Nishimura, and Masanori Nakagawa. 2008. Cerebral white matter damage in frontotemporal dementia assessed by diffusion tensor tractography. *Neuroradiology* 50 (7): 605–611.
- Mazoyer, Bernard M., Nathalie Tzourio, V. Frak, André Syrota, N. Murayama, Olivier Levrier, George Salamon, Stanislas Dehaene, Laurent Cohen, and Jacques Mehler. 1993. The cortical representation of speech. *Journal of Cognitive Neuroscience* 5 (4): 467–479.
- McGee, Aaron W., Yupeng Yang, Quentin S. Fischer, Nigel W. Daw, and Stephen M. Strittmatter. 2005. Experience-driven plasticity of visual cortex limited by myelin and Nogo receptor. *Science* 305 (5744): 2222–2226.
- McLaughlin, Judith, Lee Osterhout, and Albert Kim. 2004. Neural correlates of second-language word learning: Minimal instruction produces rapid change. *Nature Neuroscience* 7 (7): 703–704.
- Meisel, Juergen M. 2011. *First and Second Language Acquisition: Parallels and Differences*. Cambridge: Cambridge University Press.
- Mellem, Monika S., Rhonda B. Friedman, and Andrei V. Medvedev. 2013. Gamma- and theta-band synchronization during semantic priming reflect local and long-range lexical-semantic networks. *Brain and Language* 127 (3): 440–451.

- Menenti, Laura, Sarah M. E. Gierhan, Katrien Segaert, and Peter Hagoort. 2011. Shared language: Overlap and segregation of the neuronal infrastructure for speaking and listening revealed by functional MRI. *Psychological Science* 22 (9): 1173–1182.
- Menenti, Laura, Katrien Segaert, and Peter Hagoort. 2012. The neuronal infrastructure of speaking. *Brain and Language* 122 (2): 71–80.
- Meringer, R., and C. Mayer. 1895. *Versprechen und Verlesen: Eine psychologisch-linguistische Studie*. Stuttgart: G. J. Göschensche Verlagshandlung.
- Mestres-Misse, Anna, Antoni Rodriguez-Fornells, and Tomas F. Münte. 2010. Neural differences in the mapping of verb and noun concepts onto novel words. *NeuroImage* 49 (3): 2826–2835.
- Mesulam, M. Marsel, Cynthia K. Thompson, Sandra Weintraub, and Emily J. Rogalski. 2015. The Wernicke conundrum and the anatomy of language comprehension in primary progressive aphasia. *Brain* 138:2423–2437.
- Meyer, Lars, Maren Grigutsch, Nora Schmuck, Phoebe Gaston, and Angela D. Friederici. 2015. Frontal-posterior theta oscillations reflect memory retrieval during sentence comprehension. *Cortex* 71:205–218.
- Meyer, Lars, Molly J. Henry, Phoebe Gaston, Noura Schmuck, and Angela D. Friederici. 2016. Linguistic bias modulates interpretation of speech via neural delta-band oscillations. *Cerebral Cortex*; Advance online publication. doi:10.1093/cercor/bhw228.
- Meyer, Lars, Jonas Obleser, Alfred Anwander, and Angela D. Friederici. 2012. Linking ordering in Broca's area to storage in left temporo-parietal regions: The case of sentence processing. *NeuroImage* 62 (3): 1987–1998.
- Meyer, Lars, Jonas Obleser, and Angela D. Friederici. 2013. Left parietal alpha enhancement during working memory-intensive sentence processing. *Cortex* 49 (3): 711–721.
- Meyer, Martin, Kai Alter, Angela D. Friederici, Gabriele Lohmann, and D. Yves von Cramon. 2002. fMRI reveals brain regions mediating slow prosodic modulations in spoken sentences. *Human Brain Mapping* 17 (2): 73–88.
- Meyer, Martin, Karsten Steinhauer, Kai Alter, Angela D. Friederici, and D. Yves von Cramon. 2004. Brain activity varies with modulation of dynamic pitch variance in sentence melody. *Brain and Language* 89 (2): 277–289.
- Meyer, Martin, Ulrike Toepel, Joerg Keller, Daniela Nussbaumer, Stefan Zysset, and Angela D. Friederici. 2007. Neuroplasticity of sign language: Implications from structural and functional brain imaging. *Restorative Neurology and Neuroscience* 25 (3–4): 335–351.
- Meyer, Patric, Axel Mecklinger, Thomas Grunwald, Juergen Fell, Christian E. Elger, and Angela D. Friederici. 2005. Language processing within the human medial temporal lobe. *Hippocampus* 15 (4): 451–459.
- Milberg, William P., Sheila E. Blumstein, and Barbara Dworetzky. 1987. Processing of lexical ambiguities in aphasia. *Brain and Language* 31 (1): 138–150.
- Miller, George A. 1978. Semantic relations among words. In *Linguistic Theory and Psychological Reality*, ed. Morris Halle, Joan Bresnan and George A. Miller, 60–118. Cambridge, MA: MIT Press.
- Miller, Daniel J., Tetyana Duka, Cheryl D. Stimpson, Steven J. Schapiro, Wallace B. Baze, Marc J. McArthur, Archibald J. Fobbs, et al. 2012. Prolonged myelination in human neocortical evolution. *Proceeding of the National Academy of Sciences of the United States of America* 109 (41): 16480–16485.
- Mills, Debra L., Sharon Coffey-Corina, and Helen J. Neville. 1997. Language comprehension and cerebral specialization from 13 to 20 months. *Developmental Neuropsychology* 13 (3): 397–446.
- Milne, Alice E., Jutta L. Mueller, Claudia Männel, Adam Attaheri, Angela D. Friederici, and Chris I. Petkov. 2016. Evolutionary origins of non-adjacent sequence processing in primate brain potentials. *Scientific Reports* 6:36259. doi:10.1038/srep36259.
- Milner, Brenda, Larry R. Squire, and Eric R. Kandel. 1998. Cognitive neuroscience and the study of memory. *Neuron* 20 (3): 445–468.
- Minagawa-Kawai, Yasuyo, Alejandrina Cristia, and Emmanuel Dupoux. 2011. Cerebral lateralization and early speech acquisition: A developmental scenario. *Developmental Cognitive Neuroscience* 1 (3): 217–232.
- Mitchell, Don C. 1994. Sentence parsing. In *Handbook of Psycholinguistics*, ed. Morton Ann Gernsbacher, 375–409. San Diego: Academic Press.
- Mitchell, Rachel L. C., Rebecca Elliott, Martin Barry, Alan Cruttenden, and Peter W. R. Woodruff. 2003. The neural response to emotional prosody, as revealed by functional magnetic resonance imaging. *Neuropsychologia* 41 (10): 1410–1421.

- Molinaro, Nicola, Pedro M. Paz-Alonso, Jon Andoni Duñabeitia, and Manuel Carreiras. 2015. Combinatorial semantics strengthens angular-anterior temporal coupling. *Cortex* 65:113–127.
- Montgomery, James W., Beula M. Magimairaj, and Michelle H. O'Malley. 2008. Role of working memory in typically developing children's complex sentence comprehension. *Journal of Psycholinguistic Research* 37 (5): 331–354.
- Moore-Parks, Erin Nicole, Erin L. Burns, Rebecca Bazzill, Sarah Levy, Valerie Posada, and Ralph-Axel Muller. 2010. An fMRI study of sentence-embedded lexical-semantic decision in children and adults. *Brain and Language* 114 (2): 90–100.
- Morford, Marolyn, and Susan Goldin-Meadow. 1992. Comprehension and production of gesture in combination with speech in one-word speakers. *Journal of Child Language* 19 (3): 559–580.
- Mori, Susumu, and Peter C. M. Zijl. 2002. Fiber tracking: Principles and strategies—a technical review. *NMR in Biomedicine* 15 (7–8): 468–480.
- Morillon, Benjamin, Katia Lehongre, Richard S. J. Frackowiak, Antoine Ducorps, Andreas Kleinschmidt, David Poeppel, and Anne-Lise Giraud. 2010. Neurophysiological origin of human brain asymmetry for speech and language. *Proceeding of the National Academy of Sciences of the United States of America* 107 (43): 18688–18693.
- Moro, Andrea. 2014. On the similarity between syntax and actions. *Trends in Cognitive Sciences* 18 (3): 109–110.
- Morosan, Patricia, Jörg Rademacher, Axel Schleicher, Katrin Amunts, Thorsten Schormann, and Karl Zilles. 2001. Human primary auditory cortex: Cytoarchitectonic subdivisions and mapping into a spatial reference system. *NeuroImage* 13 (4): 684–701.
- Morosan, Patricia, Jörg Rademacher, Nicola Palomero-Gallagher, and Karl Zilles. 2005. Anatomical organization of the human auditory cortex: Cytoarchitecture and transmitter receptors. In *Auditory Cortex: A Synthesis of Human and Animal Research*, ed. Peter Heil, Henning Scheich, Eike Budinger and Reinhard König, 27–50. Mahwah, NJ: Lawrence Erlbaum.
- Morr, Mara L., Valerie L. Shafer, Judith A. Kreuzer, and Diane Kurtzberg. 2002. Maturation of mismatch negativity in typically developing infants and preschool children. *Ear and Hearing* 23 (2): 118–136.
- Mueller, Jutta L., Angela D. Friederici, and Claudia Männel. 2012. Auditory perception at the root of language learning. *Proceedings of the National Academy of Sciences of the United States of America* 109 (39): 15953–15958.
- Mueller, Jutta L., Regine Oberecker, and Angela D. Friederici. 2009. Syntactic learning by mere exposure—An ERP study in adult learners. *BMC Neuroscience* 10:89. doi:10.1186/1471-2202-10-89.
- Mummery, Catherine J., John Ashburner, Sophie K. Scott, and Richard J. S. Wise. 1999. Functional neuroimaging of speech perception in six normal and two aphasic subjects. *Journal of the Acoustical Society of America* 106 (1): 449–457.
- Muralikrishnan, Ramasamy, Matthias Schlesewsky, and Ina Bornkessel-Schlesewsky. 2015. Animacy-based predictions in language comprehension are robust: Contextual cues modulate but do not nullify them. *Brain Research* 1608:108–137.
- Musso, Mariacristina, Andrea Moro, Volkmar Glauche, Michel Rijntjes, Jürgen Reichenbach, Christian Büchel, and Cornelius Weiller. 2003. Broca's area and the language instinct. *Nature Neuroscience* 6 (7): 774–781.
- Nakamura, Akinori, Burkhard Maess, Thomas R. Knösche, Thomas C. Gunter, Patric Bach, and Angela D. Friederici. 2004. Cooperation of different neuronal systems during hand sign recognition. *NeuroImage* 23 (1): 25–34.
- Nan, Yun, and Angela D. Friederici. 2013. Differential roles of right temporal cortex and Broca's area in pitch processing: Evidence from music and Mandarin. *Human Brain Mapping* 34 (9): 2045–2054.
- Nan, Yun, Yanan Sun, and Isabelle Peretz. 2010. Congenital amusia in speakers of a tone language: Association with lexical tone agnosia. *Brain* 133:2635–2642.
- Narain, Charvy, Sophie K. Scott, Richard J. S. Wise, Stuart Rosen, Alexander Leff, S. D. Iversen, and Paul M. Matthews. 2003. Defining a left-lateralized response specific to intelligible speech using fMRI. *Cerebral Cortex* 13 (12): 1362–1368.
- Näätänen, R., and Kimmo Alho. 1997. Higher-order processes in auditory change detection. *Trends in Cognitive Sciences* 1 (2): 44–45.

- Nääätänen, Risto, Anne Lehtokoski, Mietta Lennes, Marie Cheour, Minna Huotilainen, Antti Iivonen, Martti Vainio, et al. 1997. Language-specific phoneme representations revealed by electric and magnetic brain responses. *Nature* 385 (6615): 432–434.
- Nääätänen, Risto, Petri Paavilainen, Teemu Rinne, and Kimmo Alho. 2007. The mismatch negativity (MMN) in basic research of central auditory processing: A review. *Clinical Neurophysiology* 118 (12): 2544–2590.
- Nääätänen, Risto, Mari Tervaniemi, Elyse Sussman, Petri Paavilainen, and István Winkler. 2001. ‘Primitive intelligence’ in the auditory cortex. *Trends in Neurosciences* 24 (5): 283–288.
- Neubert, Franz-Xaver, Rogier B. Mars, Adam G. Thomas, Jerome Sallet, and Matthew F. S. Rushworth. 2014. Comparison of human ventral frontal cortex areas for cognitive control and language with areas in monkey frontal cortex. *Neuron* 81 (3): 700–713.
- Neville, Helen J., and Daphne Bavelier. 1998. Neural organization and plasticity of language. *Current Opinion in Neurobiology* 8 (2): 254–258.
- Neville, Helen J., Daphne Bavelier, David Corina, Josef Rauschecker, Avi Karni, Anil Lalwani, Allen Braun, Vince Clark, Peter Jezzard, and Robert Turner. 1998. Cerebral organization for language in deaf and hearing subjects: Biological constraints and effects of experience. *Proceedings of the National Academy of Sciences of the United States of America* 95 (3): 922–929.
- Neville, Helen J., Sharon A. Coffey, Donald S. Lawson, Andrew Fischer, Karen Emmorey, and Ursula Bellugi. 1997. Neural systems mediating American sign language: Effects of sensory experience and age of acquisition. *Brain and Language* 57 (3): 285–308.
- Neville, Helen J., Janet L. Nicol, Andrew Barss, Kenneth I. Forster, and Merrill F. Garrett. 1991. Syntactically based sentence processing classes: Evidence from event-related brain potentials. *Journal of Cognitive Neuroscience* 3 (2): 151–165.
- Newman, Aaron J., Daphne Bavelier, David Corina, Peter Jezzard, and Helen J. Neville. 2002. A critical period for right hemisphere recruitment in American Sign Language processing. *Nature Neuroscience* 5 (1): 76–80.
- Newman, Sharlene D., Toshikazu Ikuta, and Thomas Burns, Jr. 2010. The effect of semantic relatedness on syntactic analysis: An fMRI study. *Brain and Language* 113 (2): 51–58.
- Ng, Wai Pui, Nicholas Cartel, John Roder, Arthur Roach, and Andres Lozano. 1996. Human central nervous system myelin inhibits neurite outgrowth. *Brain Research* 720 (1–2): 17–24.
- Nosarti, Chiara, Teresa M. Rushe, Peter W. R. Woodruff, Ann L. Stewart, Larry Rifkin, and Robin M. Murray. 2004. Corpus callosum size and very preterm birth: Relationship to neuropsychological outcome. *Brain* 127:2080–2089.
- Nunez, S. Christopher, Mirella Dapretto, Tami Katzir, Ariel Starr, Jennifer Bramen, Eric Kan, Susan Bookheimer, and Elizabeth R. Sowell. 2011. fMRI of syntactic processing in typically developing children: Structural correlates in the inferior frontal gyrus. *Developmental Cognitive Neuroscience* 1 (3): 313–323.
- Oberecker, Regine, and Angela D. Friederici. 2006. Syntactic event-related potential components in 24-month-olds’ sentence comprehension. *Neuroreport* 17 (10): 1017–1021.
- Oberecker, Regine, Manuela Friedrich, and Angela D. Friederici. 2005. Neural correlates of syntactic processing in two-year-olds. *Journal of Cognitive Neuroscience* 17 (10): 1667–1678.
- Obermeier, Christian, Thomas Dolk, and Thomas C. Gunter. 2012. The benefit of gestures during communication: Evidence from hearing and hearing impaired persons. *Cortex* 48 (7): 857–870.
- Obleser, Jonas, and Sonja A. Kotz. 2010. Expectancy constraints in degraded speech modulate the language comprehension network. *Cerebral Cortex* 20 (3): 633–640.
- Obleser, Jonas, Aditi Lahiri, and Carsten Eulitz. 2003. Auditory-evoked magnetic field codes place of articulation in timing and topography around 100 milliseconds post syllable onset. *NeuroImage* 20 (3): 1839–1847.
- Obleser, Jonas, Lars Meyer, and Angela D. Friederici. 2011. Dynamic assignment of neural resources in auditory comprehension of complex sentences. *NeuroImage* 56 (4): 2310–2320.
- Obleser, Jonas, Sophie K. Scott, and Carsten Eulitz. 2006. Now you hear it, now you don’t: Transient traces of consonants and their nonspeech analogues in the human brain. *Cerebral Cortex* 16 (8): 1069–1076.
- Obleser, Jonas, Richard J. S. Wise, M. Alex Dresner, and Sophie K. Scott. 2007. Functional integration across brain regions improves speech perception under adverse listening conditions. *Journal of Neuroscience* 27 (9): 2283–2289.



- Obleser, Jonas, Jonas Zimmermann, John Van Meter, and Josef P. Rauschecker. 2007. Multiple stages of auditory speech perception reflected in event-related fMRI. *Cerebral Cortex* 17 (10): 2251–2257.
- Özyürek, Asli, Roel M. Willems, Sotaro Kita, and Peter Hagoort. 2007. On-line integration of semantic information from speech and gesture: Insights from event-related brain potentials. *Journal of Cognitive Neuroscience* 19 (4): 605–616.
- Ohta, Shinri, Naoki Fukui, and Kuniyoshi L. Sakai. 2013. Syntactic computation in the human brain: The degree of merger as a key factor. *PLoS One* 8 (2): e56230. doi:10.1371/journal.pone.0056230.
- Okanoya, Kazuo. 2004. The Bengalese finch: A window on the behavioral neurobiology of birdsong syntax. *Annals of the New York Academy of Sciences* 1016:724–735.
- Olshausen, Bruna A., and David J. Field. 2004. Sparse coding of sensory inputs. *Current Opinion in Neurobiology* 14 (4): 481–487.
- Oostenveld, Robert, Pascal Fries, Eric Maris, and Jan-Mathijs Schoffelen. 2011. FieldTrip: Open source software for advanced analysis of MEG, EEG, and Invasive Electrophysiological Data. *Computational Intelligence and Neuroscience*, vol. 2011, Article ID 156869, 9 pages. doi:10.1155/2011/156869.
- Opitz, Bertram, and Angela D. Friederici. 2003. Interactions of the hippocampal system and the prefrontal cortex in learning language-like rules. *NeuroImage* 19 (4): 1730–1737.
- Opitz, Bertram, and Angela D. Friederici. 2004. Brain correlates of language learning: The neuronal dissociation of rule-based versus similarity-based learning. *Journal of Neuroscience* 24 (39): 8436–8440.
- Opitz, Bertram, and Angela D. Friederici. 2007. Neural basis of processing sequential and hierarchical syntactic structures. *Human Brain Mapping* 28 (7): 585–592.
- Osterhout, Lee, and Phillip J. Holcomb. 1992. Event-related brain potentials elicited by syntactic anomaly. *Journal of Memory and Language* 31 (6): 785–806.
- Osterhout, Lee, Phillip J. Holcomb, and David A. Swinney. 1994. Brain potentials elicited by garden-path sentences: Evidence of the application of verb information during parsing. *Journal of Experimental Psychology: Learning, Memory, and Cognition* 20 (4): 786–803.
- Osterhout, Lee, and Linda A. Mobley. 1995. Event-related brain potentials elicited by failure to agree. *Journal of Memory and Language* 34 (6): 739–773.
- Osterhout, Lee, Judith McLaughlin, Ilona Pitkanen, Cheryl Frenck-Mestre, and Nicola Molinaro. 2006. Novice learners, longitudinal designs, and event-related potentials: A means for exploring the neurocognition of second language processing. *Language Learning* 56 (Suppl 1): 199–230.
- Osterhout, Lee, and Janet Nicol. 1999. On the distinctiveness, independence, and time course of the brain responses to syntactic and semantic anomalies. *Language and Cognitive Processes* 14 (3): 283–317.
- Pakulak, Eric, and Helen J. Neville. 2011. Maturation constraints on the recruitment of early processes for syntactic processing. *Journal of Cognitive Neuroscience* 23 (10): 2752–2765.
- Pallier, Christophe, Anne-Dominique Devauchelle, and Stanislas Dehaene. 2011. Cortical representation of the constituent structure of sentences. *Proceedings of the National Academy of Sciences of the United States of America* 108 (6): 2522–2527.
- Pannekamp, Ann, Ulrike Toepel, Kai Alter, Anja Hahne, and Angela D. Friederici. 2005. Prosody-driven sentence processing: An event-related brain potential study. *Journal of Cognitive Neuroscience* 17 (3): 407–421.
- Pannekamp, Ann, Christiane Weber, and Angela D. Friederici. 2006. Prosodic processing at the sentence level in infants. *Neuroreport* 17 (6): 675–678.
- Papoutsis, Marina, Emmanuel A. Stamatakis, John Griffiths, William D. Marslen-Wilson, and Lorraine K. Tyler. 2011. Is left fronto-temporal connectivity essential for syntax? Effective connectivity, tractography and performance in left-hemisphere damaged patients. *NeuroImage* 58 (2): 656–664.
- Park, Hae-Jeong, Jae Jin Kim, Seung-Koo Lee, Jeong Ho Seok, Jiwon Chun, Dong Ik Kim, and Jong Doo Lee. 2008. Corpus callosal connection mapping using cortical gray matter parcellation and DT-MRI. *Human Brain Mapping* 29 (5): 503–516.
- Parker, Geoffrey J. M., Simona Luzzi, Daniel C. Alexander, Claudia A. M. Wheeler-Kingshott, Olga Ciccarelli, and Matthew A. Lambon Ralph. 2005. Lateralization of ventral and dorsal auditory language pathways in the human brain. *NeuroImage* 24 (3): 656–666.

- Patel, Aniruddh D. 2008. *Music, Language, and the Brain*. New York: Oxford University Press.
- Patterson, Karalyn, and Matthew A. Lambon Ralph. 2016. The hub-and-spoke hypothesis of semantic memory. In *Neurobiology of Language*, ed. Steven L. Small and Gregory Hickok, 765–775. Elsevier Press.
- Patterson, Karalyn, Peter J. Nestor, and Timothy T. Rogers. 2007. Where do you know what you know? The representation of semantic knowledge in the human brain. *Nature Reviews. Neuroscience* 8 (12): 976–987.
- Paulmann, Silke, and Marc D. Pell. 2010. Contextual influences of emotional speech prosody on face processing: How much is enough? *Cognitive, Affective & Behavioral Neuroscience* 10 (2): 230–242.
- Paulmann, Silke, Debra Titone, and Marc D. Pell. 2012. How emotional prosody guides your way: Evidence from eye movements. *Speech Communication* 54 (1): 92–107.
- Pearce, Joshua M. 1987. Communication and language. In *An Introduction to Animal Cognition*, 251–283. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Pell, Marc D., and Shari R. Baum. 1997. Unilateral brain damage, prosodic comprehension deficits, and the acoustic cues to prosody. *Brain and Language* 57 (2): 195–214.
- Peña, Marcela, Atsushi Maki, Damir Kovacic, Ghislaine Dehaene-Lambertz, Hideaki Koizumi, Furio Bouquet, and Jacques Mehler. 2003. Sounds and silence: An optical topography study of language recognition at birth. *Proceedings of the National Academy of Sciences of the United States of America* 100 (20): 11702–11705.
- Peña, Marcela, Janet F. Werker, and Ghislaine Dehaene-Lambertz. 2012. Earlier speech exposure does not accelerate speech acquisition. *Journal of Neuroscience* 32 (33): 11159–11163.
- Penke, Martina, Helga Weyerts, Matthias Gross, Elke Zander, Thomas F. Münte, and Harald Clahsen. 1997. How the brain processes complex words: An event-related potential study of German verb inflections. *Brain Research. Cognitive Brain Research* 6 (1): 37–52.
- Perani, Daniela, Eraldo Paulesu, Nuria Sebastian Galles, Emmanuel Dupoux, Stanislas Dehaene, Valentino Bettinardi, Stefano F. Cappa, Ferruccio Fazio, and Jacques Mehler. 1998. The bilingual brain. Proficiency and age of acquisition of the second language. *Brain* 121 (10): 1841–1852.
- Perani, Daniela, Maria C. Saccuman, Paola Scifo, Alfred Anwander, Danilo Spada, Cristina Baldoli, Antonella Poloniato, Gabriele Lohmann, and Angela D. Friederici. 2011. The neural language networks at birth. *Proceedings of the National Academy of Sciences of the United States of America* 108 (38): 16056–16061.
- Peretz, Isabelle. 1993. Auditory atonalia for melodies. *Cognitive Neuropsychology* 10 (1): 21–56.
- Perkins, Judy M., Jane A. Baran, and Jack Gandour. 1996. Hemispheric specialization in processing intonation contours. *Aphasiology* 10 (4): 343–362.
- Petersson, Karl-Magnus, Vasiliki Folia, and Peter Hagoort. 2012. What artificial grammar learning reveals about the neurobiology of syntax. *Brain and Language* 120 (2): 83–95.
- Petersson, Karl-Magnus, Christian Forkstam, and Martin Ingvar. 2004. Artificial syntactic violations activate Broca's region. *Cognitive Science* 28 (3): 383–407.
- Petitto, Laura Ann, and Paula F. Marentette. 1991. Babbling in the manual mode—evidence for the ontogeny of language. *Science* 251 (5000): 1493–1496.
- Petitto, Laura Ann, Siobhan Holowka, Lauren E. Sergio, and David Ostry. 2013. Language rhythms in baby hand movements. *Nature* 413 (6851): 35–36.
- Petitto, Laura Ann, Robert J. Zatorre, Kristine Gauna, E. J. Nikelski, Deanna Dostie, and Alan C. Evans. 2000. Speech-like cerebral activity in profoundly deaf people processing signed languages: Implications for the neural basis of human language. *Proceedings of the National Academy of Sciences of the United States of America* 97 (25): 13961–13966.
- Petkov, Christopher I., and Erich D. Jarvis. 2012. Birds, primates, and spoken language origins: Behavioral phenotypes and neurobiological substrates. *Frontiers in Evolutionary Neuroscience* 4:12. doi:10.3389/fnevo.2012.00012.
- Petrides, Michael, and Deepak N. Pandya. 1984. Projections to the frontal cortex from the posterior parietal region in the rhesus monkey. *Journal of Comparative Neurology* 228 (1): 105–116.
- Petrides, Michael, and Depaak N. Pandya. 2009. Distinct parietal and temporal pathways to the homologues of Broca's area in the monkey. *PLoS Biology* 7 (8): e1000170. doi:10.1371/journal.pbio.1000170.
- Phillips, Colin. 2001. Levels of representation in the electrophysiology of speech perception. *Cognitive Science* 25 (5): 711–731.

- Phillips, Colin, Thomas Pellathy, Alec Marantz, Elron Yellin, Kenneth Wexler, David Poeppel, Martha McGinnis, and Timothy Roberts. 2000. Auditory cortex accesses phonological categories: An MEG mismatch study. *Journal of Cognitive Neuroscience* 12 (6): 1038–1055.
- Pick, Arnold. 1913. *Die agrammatischen Sprachstörungen; Studien zur psychologischen Grundlegung der Aphasielehre*. Berlin: Springer.
- Picton, Terry W., Shlomo Bentin, Patrick Berg, Emanuel Donchin, Steven A. Hillyard, Ray Johnson, Jr., Gregory A. Miller, et al. 2000. Guidelines for using human event-related potentials to study cognition: Recording standards and publication criteria. *Psychophysiology* 37 (2): 127–152.
- Pierce, Lara J., Denise Klein, Jen-Kai Chen, Audrey Delcenserie, and Fred Genesee. 2014. Mapping the unconscious maintenance of a lost first language. *Proceedings of the National Academy of Sciences of the United States of America* 111 (48): 17314–17319.
- Pihko, Elina, Paavo H. T. Leppänen, Kenneth M. Eklund, Marie Cheour, Tomi K. Guttorm, and Heikki Lyytinen. 1999. Cortical responses of infants with and without a genetic risk for dyslexia: I. Age effects. *Neuroreport* 10 (5): 901–905.
- Pinard, Minola, Howard Chertkow, Sandra Black, and Isabelle Peretz. 2002. A case study of pure word deafness: Modularity in auditory processing? *Neurocase* 8 (1–2): 40–55.
- Pinker, Steven. 1994. *The Language Instinct*. New York: Harper Perennial Modern Classics.
- Plante, Elena, Marlena Creusere, and Cynthia Sabin. 2002. Dissociating sentential prosody from sentence processing: Activation interacts with task demands. *NeuroImage* 17 (1): 401–410.
- Poeppel, David, Colin Phillips, Elron Yellin, Howard A. Rowley, Timothy P. L. Roberts, and Alec Marantz. 1997. Processing of vowels in supratemporal auditory cortex. *Neuroscience Letters* 221 (2–3): 145–148.
- Poizner, Howard, Edward S. Klima, and Ursula Bellugi. 1987. *What the Hands Reveal about the Brain*. Cambridge, MA: Bradford Books/MIT Press. (Reprinted in paperback, 1990.)
- Pollard, Carl, and Ivan A. Sag. 1994. *Head-Driven Phrase Structure Grammar*. Chicago; Stanford, CA: University of Chicago Press and CSLI Publications.
- Pollmann, Stefan, Marianne Maertens, D. Yves von Cramon, Joeran Lepsien, and Kenneth Hughdahl. 2002. Dichotic listening in patients with posterior CC and nonsplenic callosal lesions. *Neuropsychologia* 16 (1): 56–64.
- Polka, Linda, and Megha Sundara. 2012. Word segmentation in monolingual infants acquiring Canadian-English and Canadian-French: Native language, cross-language and cross-dialect comparisons. *Infancy* 17 (2): 198–232.
- Price, Cathy J. 2010. The anatomy of language: A review of 100 fMRI studies published in 2009. *Annals of the New York Academy of Sciences* 1191:62–88.
- Price, Amy R., Michael F. Bonner, Jonathan E. Peelle, and Murray Grossman. 2015. Converging evidence for the neuroanatomic basis of combinatorial semantics in the angular gyrus. *Journal of Neuroscience* 35 (7): 3276–3284.
- Prüfer, Kay, Fernando Racimo, Nick Patterson, Flora Jay, Sriram Sankararaman, Susanna Sawyer, Anja Heinze, et al. 2014. The complete genome sequence of a Neanderthal from the Altai Mountains. *Nature* 505 (7481): 43–49.
- Pulvermüller, Friedemann, and Luciano Fadiga. 2010. Active perception: Sensorimotor circuits as a cortical basis for language. *Nature Reviews. Neuroscience* 11:351–360.
- Pulvermüller, Friedemann, Werner Lutzenberger, and Hubert Preissl. 1999. Nouns and verbs in the intact brain: Evidence from event-related potentials and high-frequency cortical responses. *Cerebral Cortex* 9 (5): 497–506.
- Pustejovsky, James. 1995. *The Generative Lexicon*. Cambridge, MA: MIT Press.
- Quian Quiroga, Rodrigo, Leila Reddy, Gabriel Kreiman, Christof Koch, and Itzhak Fried. 2005. Invariant visual representation by single neurons in the human brain. *Nature* 435:1102–1107.
- Raettig, Tim, Sonja A. Kotz, Alfred Anwander, D. Yves von Cramon, and Angela D. Friederici. Submitted. [The language connection: a structural connectivity-based parcellation of the left superior temporal cortex.]
- Rauschecker, Josef P., and Sophie K. Scott. 2009. Maps and streams in the auditory cortex: Nonhuman primates illuminate human speech processing. *Nature Neuroscience* 12 (6): 718–724.

- Rauschecker, Josef P., and Biao Tian. 2000. Mechanisms and streams for processing of “what” and “where” in auditory cortex. *Proceedings of the National Academy of Sciences of the United States of America* 97 (22): 11800–11806.
- Richardson, Fiona M., Michael S. C. Thomas, Roberto Filippi, Helen Harth, and Cathy J. Price. 2010. Contrasting effects of vocabulary knowledge on temporal and parietal brain structure across lifespan. *Journal of Cognitive Neuroscience* 22 (5): 943–954.
- Rilling, James K., Sarah K. Barks, Lisa A. Parr, Todd M. Preuss, Tracy L. Faber, Giuseppe Pagnoni, J. Douglas Bremner, and John R. Votaw. 2007. A comparison of resting-state brain activity in humans and chimpanzees. *Proceedings of the National Academy of Sciences of the United States of America* 104 (43): 17146–17151.
- Rilling, James K., Matthew F. Glasser, Saad Jbabdi, Jesper Andersson, and Todd M. Preuss. 2012. Continuity, divergence, and the evolution of brain language pathways. *Frontiers in Evolutionary Neuroscience* 3:11. doi:10.3389/fnevo.2011.00011.
- Rilling, James K., Matthew F. Glasser, Todd M. Preuss, Xiangyang Ma, Tiejun Zhao, Xiaoping Hu, and Timothy E. J. Behrens. 2008. The evolution of the arcuate fasciculus revealed with comparative DTI. *Nature Neuroscience* 11 (4): 426–428.
- Rilling, James K., and Rebecca A. Seligman. 2002. A quantitative morphometric comparative analysis of the primate temporal lobe. *Journal of Human Evolution* 42 (5): 505–533.
- Rivera-Gaxiola, Maritza, Juan Silva-Pereyra, and Patricia K. Kuhl. 2005. Brain potentials to native and non-native speech contrasts in 7- and 11-month-old American infants. *Developmental Science* 8 (2): 162–172.
- Rizzolatti, Giacomo, and Michael A. Arbib. 1998. Language within our grasp. *Trends in Neurosciences* 21 (5): 188–194.
- Rizzolatti, Giacomo, Luciano Fadiga, Massimo Matelli, Valentino Bettinardi, Eraldo Paulesu, Daniela Perani, and Ferruccio Fazio. 1996. Localization of grasp representations in humans by PET. 1. Observation versus execution. *Experimental Brain Research* 111 (2): 246–252.
- Rodd, Jennifer M., Matthew H. Davis, and Ingrid S. Johnsrude. 2005. The neural mechanisms of speech comprehension: fMRI studies of semantic ambiguity. *Cerebral Cortex* 15 (8): 1261–1269.
- Röder, Brigitte, Oliver Stock, Helen Neville, Siegfried Bien, and Frank Rösler. 2002. Brain activation modulated by the comprehension of normal and pseudo-word sentences of different processing demands: A functional magnetic resonance imaging study. *NeuroImage* 15 (4): 1003–1014.
- Rösler, Frank. 2011. *Psychophysiologie der Kognition: Eine Einführung in die Kognitive Neurowissenschaft*. Heidelberg: Spektrum Akademischer Verlag.
- Rogalsky, Corianne. 2015. The role of the anterior temporal lobe in sentence processing. In *Neurobiology of Language Volume*, ed. Steven L. Small and Gregory Hickok, 587–596. Elsevier Press.
- Rogalsky, Corianne, and Gregory Hickok. 2011. The role of Broca’s area in sentence comprehension. *Journal of Cognitive Neuroscience* 23 (7): 1664–1680.
- Rogalsky, Corianne, William Matchin, and Gregory Hickok. 2008. Broca’s area, sentence comprehension, and working memory: An fMRI Study. *Frontiers in Human Neuroscience* 2:14. doi:10.3389/neuro.09.014.2008.
- Roland, Per E., and Karl Zilles. 1998. Structural divisions and functional fields in the human cerebral cortex. *Brain Research. Brain Research Reviews* 26 (2–3): 87–105.
- Rolheiser, Tyler, Emmanuel A. Stamatakis, and Lorraine K. Tyler. 2011. Dynamic processing in the human language system: Synergy between the arcuate fascicle and extreme capsule. *Journal of Neuroscience* 31 (47): 16949–16957.
- Román, Patricia E., Julio González, Noelia Ventura-Campos, Aina Rodríguez-Pujadas, Ana Sanjuán, and Cesar Avila. 2015. Neural differences between monolinguals and early bilinguals in their native language during comprehension. *Brain and Language* 150:80–89.
- Rossi, Sonja, Manfred F. Gugler, Angela D. Friederici, and Anja Hahne. 2006. The impact of proficiency on syntactic second language processing of German and Italian: Evidence from event-related potentials. *Journal of Cognitive Neuroscience* 18 (12): 2030–2048.
- Rumsey, Judith M., Manuel Casanova, Glenn B. Mannheim, Nicholas Patronas, Nathan DeVaughn, Susan D. Hamburger, and Tracy Aquino. 1996. Corpus callosum morphology, as measured with MRI, in dyslexic men. *Biological Psychiatry* 39 (9): 769–775.

- Rüschemeyer, Shirley-Ann, Christian J. Fiebach, Vera Kempe, and Angela D. Friederici. 2005. Processing lexical semantic and syntactic information in first and second language: fMRI evidence from German and Russian. *Human Brain Mapping* 25 (2): 266–286.
- Rymarczyk, Krystyna, and Anna Grabowska. 2007. Sex differences in brain control of prosody. *Neuropsychologia* 45 (5): 921–930.
- Saffran, Jenny R., Richard N. Aslin, and Elissa L. Newport. 1996. Statistical learning by 8-month-old infants. *Science* 274 (5294): 1926–1928.
- Sahin, Ned T., Steven Pinker, Sydney S. Cash, Donald Schomer, and Eric Halgren. 2009. Sequential processing of lexical, grammatical, and phonological information within Broca's area. *Science* 326 (5951): 445–449.
- Sajin, Stanislav M., and Cynthia M. Connine. 2014. Semantic richness: The role of semantic features in processing spoken words. *Journal of Memory and Language* 70:13–35.
- Sakai, Tomoko, Mie Matsui, Akichika Mikami, Ludise Malkova, Yuzuru Hamada, Masaki Tomonaga, Juri Suzuki, et al. 2013. Developmental patterns of chimpanzee cerebral tissues provide important clues for understanding the remarkable enlargement of the human brain. *Proceedings of the National Academy of Sciences of the United States of America* 280 (1753): 20122398.
- Sakai, Tomoko, Akichika Mikami, Masaki Tomonaga, Mie Matsui, Juri Suzuki, Yuzuru Hamada, Masayuki Tanaka, et al. 2011. Differential prefrontal white matter development in chimpanzees and humans. *Current Biology* 21 (16): 1397–1402.
- Sammler, Daniela, Sonja A. Kotz, Korinna Eckstein, Derek V. M. Ott, and Angela D. Friederici. 2010. Prosody meets syntax: The role of the corpus callosum. *Brain* 133:2643–2655.
- Sammler, Daniela, Marie-Helene Grosbras, Alfred Anwander, Patricia E. G. Bestelmeyer, and Pascal Belin. 2015. Dorsal and ventral pathways for prosody. *Current Biology* 25 (23): 3079–3085.
- Sanides, Friedrich. 1962. The architecture of the human frontal lobe and the relation to its functional differentiation. *International Journal of Neurology* 5:247–261.
- Santelmann, Lynn M., and Peter W. Jusczyk. 1998. Sensitivity to discontinuous dependencies in language learners: Evidence for limitations in processing space. *Cognition* 69 (2): 105–134.
- Santi, Andrea, and Yosef Grodzinsky. 2010. fMRI adaptation dissociates syntactic complexity dimensions. *NeuroImage* 51 (4): 1285–1293.
- Sarnthein, Johannes, Hellmuth Petsche, Peter Rappelsberger, Gordon L. Shaw, and Astrid von Stein. 1998. Synchronization between prefrontal and posterior association cortex during human working memory. *Proceedings of the National Academy of Sciences of the United States of America* 95 (12): 7092–7096.
- Sarubbo, Silvio, Alessandro De Benedictis, Igor L. Maldonado, Gianpaolo Basso, and Hugues Duffau. 2013. Frontal terminations for the inferior fronto-occipital fascicle: Anatomical dissection, DTI study and functional considerations on a multi-component bundle. *Brain Structure & Function* 218 (1): 21–37.
- Saur, Dorothee, Annette Baumgaertner, Anja Moehring, Christian Büchel, Matthias Bonnesen, Michael Rose, Mariachristina Musso, and Jürgen M. Meisel. 2009. Word order processing in the bilingual brain. *Neuropsychologia* 47 (1): 158–168.
- Saur, Dorothee, Björn W. Kreher, Susanne Schnell, Dorothee Kümmerer, Philipp Kellmeyer, Magnus-Sebastian Vry, Roza Umarova, et al. 2008. Ventral and dorsal pathways for language. *Proceedings of the National Academy of Sciences of the United States of America* 105 (46): 18035–18040.
- Saur, Dorothee, Björn Schelter, Susanne Schnell, David Kratochvil, Hanna Küpper, Philipp Kellmeyer, Dorothee Kümmerer, et al. 2010. Combining functional and anatomical connectivity reveals brain networks for auditor language comprehension. *NeuroImage* 49 (4): 3187–3197.
- Sauseng, Paul, Wolfgang Klimesch, Manuel Schabus, and Michael Doppelmayr. 2005. Fronto-parietal EEG coherence in theta and upper alpha reflect central executive functions of working memory. *International Journal of Psychophysiology* 57 (2): 97–103.
- Saxe, Rebecca, and Nancy Kanwisher. 2003. People thinking about thinking people—The role of the temporoparietal junction in “theory of mind”. *NeuroImage* 19 (4): 1835–1842.
- Scharff, Constance, and Jana Petri. 2011. Evo-devo, deep homology and FoxP2: Implications for the evolution of speech and language. *Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences* 366 (1574): 2124–2140.

- Scheibel, Arnold B. 1984. A dendritic correlate of human speech. In *Cerebral dominance: The biological foundations*, ed. Norman Geschwind and Albert M. Galaburda, 43–52. Cambridge, MA: Harvard University Press.
- Schenker, Natalie M., William D. Hopkins, Muhammad A. Spocter, Amy R. Garrison, Cheryl D. Stimpson, Joseph M. Erwin, Patrick R. Hof, and Cher C. Sherwood. 2010. Broca's area homologue in chimpanzees (pan troglodytes): Probabilistic mapping, asymmetry, and comparison to humans. *Cerebral Cortex* 20 (3): 730–742.
- Schipke, Christine S., Angela D. Friederici, and Regine Oberecker. 2011. Brain responses to case-marking violations in German preschool children. *Neuroreport* 22 (16): 850–854.
- Schipke, Christine S., Lisa J. Knoll, Angela D. Friederici, and Regine Oberecker. 2012. Preschool children's interpretation of object-initial sentences: Neural correlates of their behavioral performance. *Developmental Science* 15 (6): 762–774.
- Schirmer, Annett, Nicolas Escoffier, Stefan Zysset, Dirk Koester, Tricia Striano., and Angela D. Friederici. 2008. When vocal processing gets emotional. On the role of social orientation in relevance detection by the human amygdala. *NeuroImage* 40 (3): 1402–1410.
- Schirmer, Annett, and Sonja A. Kotz. 2006. Beyond the right hemisphere: Brain mechanisms mediating vocal emotional processing. *Trends in Cognitive Sciences* 10 (1): 24–30.
- Schirmer, Annett, Sonja A. Kotz, and Angela D. Friederici. 2002. Sex differentiates the role of emotional prosody during word processing. *Brain Research. Cognitive Brain Research* 14 (2): 228–233.
- Schirmer, Annett, Sonja A. Kotz, and Angela D. Friederici. 2005. On the role of attention for the processing of emotions in speech: Sex differences revisited. *Brain Research. Cognitive Brain Research* 24 (3): 442–452.
- Schmahmann, Jeremy D., Depaak N. Pandya, Ruopeng Wang, Guangping Dai, Helen E. D'Arceuil, Alex J. de Crespigny, and Van J. Wedeen. 2007. Association fibre pathways of the brain: Parallel observations from diffusion spectrum imaging and autoradiography. *Brain* 130:630–653.
- Scott, Sophie K., Catrin Blank, Stuart Rosen, and Richard J. S. Wise. 2000. Identification of a pathway for intelligible speech in the left temporal lobe. *Brain* 123:2400–2406.
- Scott, Sophie K., and Ingrid S. Johnsrude. 2003. The neuroanatomical and functional organization of speech perception. *Trends in Neurosciences* 26 (2): 100–107.
- Seidl, Amanda. 2007. Infants' use and weighting of prosodic cues in clause segmentation. *Journal of Memory and Language* 57 (1): 24–48.
- Service, Elisabet, Paeivi Helenius, Sini Maury, and Riitta Salmelin. 2007. Localization of syntactic and semantic brain responses using magnetoencephalography. *Journal of Cognitive Neuroscience* 19 (7): 1193–1205.
- Shannon, Robert V., Fang-Gang Zeng, Vivek Kamath, John Wygonski, and Michael Ekelid. 1995. Speech recognition with primarily temporal cues. *Science* 270 (5234): 303–304.
- Shestakova, Anna, Elvira Brattico, Alexei Soloviev, Vasily Klucharev, and Minna Huotilainen. 2004. Orderly cortical representation of vowel categories presented by multiple exemplars. *Brain Research. Cognitive Brain Research* 21 (3): 342–350.
- Shtyrov, Yury, Friedemann Pulvermüller, Risto Näätänen, and Risto J. Ilmoniemi. 2003. Grammar processing outside the focus of attention: An MEG study. *Journal of Cognitive Neuroscience* 15 (8): 1195–1206.
- Shukla, Mohinish, Katherine S. White, and Richard N. Aslin. 2011. Prosody guides the rapid mapping of auditory word forms onto visual objects in 6-month-old infants. *Proceedings of the National Academy of Sciences of the United States of America* 108 (15): 6038–6043.
- Siapas, Anthanassios G., Evgueniy V. Lubenov, and Matthew A. Wilson. 2005. Prefrontal phase locking to hippocampal theta oscillations. *Neuron* 46 (1): 141–151.
- Siebörger, Florian Th., Evelyn C. Ferstl, and D. Yves von Cramon. 2007. Making sense of nonsense: An fMRI study of task induced coherence processes. *Brain Research* 1166:77–91.
- Sigurðsson, Torfi, Kimberly L. Stark, Maria Karayiorgou, Joseph A. Gogos, and Joshua A. Gordon. 2010. Impaired hippocampal-prefrontal synchrony in a genetic mouse model of schizophrenia. *Nature* 464 (7289): 763–767.
- Silva-Pereyra, Juan F., and Manuel Carreiras. 2007. An ERP study of agreement features in Spanish. *Brain Research* 1185:201–211.

- Silva-Pereyra, Juan F., Lindsay Klarman, Lotus Jo-Fu Lin, and Patricia K. Kuhl. 2005. Sentence processing in 30-month-old children: An event-related potential study. *Neuroreport* 16 (6): 645–648.
- Silva-Pereyra, Juan F., Maritza Rivera-Gaxiola, and Patricia K. Kuhl. 2005. An event-related brain potential study of sentence comprehension in preschoolers: Semantic and morphosyntactic processing. *Brain Research. Cognitive Brain Research* 23 (2–3): 247–258.
- Simonds, Roderick J., and Arnold B. Scheibel. 1989. The postnatal development of the motor speech area: A preliminary study. *Brain and Language* 37 (1): 42–58.
- Singer, Tania, and Claus Lamm. 2009. The social neuroscience of empathy. *Annals of the New York Academy of Sciences* 1156:81–96.
- Skeide, Michael A., Jens Brauer, and Angela D. Friederici. 2014. Syntax gradually segregates from semantics in the developing brain. *NeuroImage* 100:206–211.
- Skeide, Michael A., Jens Brauer, and Angela D. Friederici. 2016. Brain functional and structural predictors of language performance. *Cerebral Cortex* 26 (5): 2127–2139.
- Skeide, Michael A., and Angela D. Friederici. 2016. The ontogeny of the cortical language network. *Nature Reviews. Neuroscience* 17:323–332.
- Smith, G. Elliot. 1904. The morphology of the occipital region of the cerebral hemisphere in man and the apes. [Annals of Anatomy] *Anatomischer Anzeiger* 24:436–451.
- Smith, Edward E., and John Jonides. 1999. Storage and executive processes in the frontal lobes. *Science* 283 (5408): 1657–1661.
- Snijders, Tineke M., Theo Vosse, Gerard Kempen, Jos J. A. Van Berkum, Karl Magnus Petersson, and Peter Hagoort. 2009. Retrieval and unification of syntactic structure in sentence comprehension: An fMRI study using word-category ambiguity. *Cerebral Cortex* 19 (7): 1493–1503.
- Song, Xindong, Michael S. Osmanski, Yueqi Guo, and Xiaoqin Wang. 2016. Complex pitch perception mechanisms are shared by humans and a New World monkey. *Proceedings of the National Academy of Sciences of the United States of America* 113 (3): 781–786.
- Sowell, Elizabeth R., Bradley S. Peterson, Paul M. Thompson, Suzanne E. Welcome, Amy L. Henkenius, and Arthur W. Toga. 2003. Mapping cortical change across the human life span. *Nature Neuroscience* 6 (3): 309–315.
- Starkstein, Sergio E., J. Paul Federoff, Thomas R. Price, Ramón C. Leiguarda, and Robert G. Robinson. 1994. Neuropsychological and neuroradiologic correlates of emotional prosody comprehension. *Neurology* 44 (3): 515–522.
- Steinhauer, Karsten. 2003. Electrophysiological correlates of prosody and punctuation. *Brain and Language* 86 (1): 142–164.
- Steinhauer, Karsten, Kai Alter, and Angela D. Friederici. 1999. Brain potentials indicate immediate use of prosodic cues in natural speech processing. *Nature Neuroscience* 2 (2): 191–196.
- Steinhauer, Karsten, and John E. Drury. 2012. On the early left-anterior negativity (ELAN) in syntax studies. *Brain and Language* 120 (2): 135–162.
- Steinhauer, Karsten, and Angela D. Friederici. 2001. Prosodic boundaries, comma rules, and brain responses: The Closure Positive Shift in the ERPs as a universal marker for prosodic phrasing in listeners and readers. *Journal of Psycholinguistic Research* 30 (3): 267–295.
- Steinmann, Saskia, Gregor Leicht, Matthias Ertl, Christina Andreou, Nenad Polomac, Rene Westerhausen, Angela D. Friederici, and Christoph Mulert. 2014. Conscious auditory perception related to long-range synchrony of gamma oscillations. *NeuroImage* 100:435–443.
- Steinmetz, Helmuth, Jörg Rademacher, Yanxiong Huang, Harald Hefter, Karl Zilles, Armin Thron, and Hans-Joachim Freund. 1989. Cerebral asymmetry—MR planimetry of the human planum temporale. *Journal of Computer Assisted Tomography* 13 (6): 996–1005.
- Strauss, Antje, Sonja A. Kotz, Matthias Scharinger, and Jonas Obleser. 2014. Alpha and theta brain oscillations index dissociable processes in spoken word recognition. *NeuroImage* 97:387–395.
- Strelnikov, Kuzma N., V. A. Vorobyev, Tatiana V. Chernigovskaya, and Svyatoslav V. Medvedev. 2006. Prosodic clues to syntactic processing: A PET and ERP study. *NeuroImage* 29 (4): 1127–1134.

- Strotseva-Feinschmidt, Anna, Christine S. Schipke, Thomas C. Gunter, Angela D. Friederici, and Jens Brauer. Submitted. The use of syntactic and semantic cues during sentence comprehension in early childhood. *Developmental Cognitive Neuroscience*.
- Stroud, Claire, and Colin Phillips. 2012. Examining the evidence for an independent semantic analyzer: An ERP study in Spanish. *Brain and Language* 120 (2): 108–126.
- Stowe, Laurie A., Cees A. J. Broere, Anne M. J. Paans, Albertus A. Wijers, Gijsbertus Mulder, Wim Vaalburg, and Frans Zwarts. 1998. Localizing components of a complex task: Sentence processing and working memory. *Neuroreport* 9 (13): 2995–2999.
- Summerfield, Christopher, and Jennifer A. Mangels. 2005. Coherent theta-band EEG activity predicts item-context binding during encoding. *NeuroImage* 24 (3): 692–703.
- Suzuki, Kei, and Kuniyoshi L. Sakai. 2003. An event-related fMRI study of explicit syntactic processing of normal/anomalous sentences in contrast to implicit syntactic processing. *Cerebral Cortex* 13 (5): 517–526.
- Tadayonnejad, Reza, Shaolin Yang, Anand Kumar, and Olusola Ajilore. 2015. Clinical, cognitive, and functional connectivity correlations of resting-state intrinsic brain activity alterations in unmedicated depression. *Journal of Affective Disorders* 172:241–250.
- Takashima, Atsuko, Iske Bakker, Janet G. van Hell, Gabriele Janzen, and James M. McQueen. 2014. Richness of information about novel words influences how episodic and semantic memory networks interact during lexicalization. *NeuroImage* 84:265–278.
- Tan, Arlene A., and Dennis L. Molfese. 2009. ERP Correlates of noun and verb processing in preschool-age children. *Biological Psychology* 8 (1): 46–51.
- Teffer, Kate, and Katerina Semendeferi. 2012. Human prefrontal cortex: Evolution, development, and pathology. *Progress in Brain Research* 195:191–218.
- ten Cate, Carel, and Kazuo Okanoya. 2012. Revisiting the syntactic abilities of non-human animals: Natural vocalizations and artificial grammar learning. *Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences* 367 (1598): 1984–1994.
- Tettamanti, Marco, Hatem Alkhadhi, Andrea Moro, Dorothea Weniger, Daniela Perani, Spyros Kollias, and Ferruccio Fazio. 2001. Neural correlates of learning new grammatical rules: A fMRI study. *NeuroImage* 13 (6): S616–S616.
- Tettamanti, Marco, Hatem Alkadhhi, Andrea Moro, Daniela Perani, Spyros Kollias, and Dorothea Weniger. 2002. Neural correlates for the acquisition of natural language syntax. *NeuroImage* 17 (2): 700–709.
- Thiebaut de Schotten, Michel, Flavio Dell'Acqua, Romain Valabregue, and Marco Catani. 2012. Monkey to human comparative anatomy of the frontal lobe association tracts. *Cortex* 48 (1): 82–96.
- Thiebaut de Schotten, Michel, Dominic H. Ffytche, Alberto Bizzi, Flavio Dell'Acqua, Matthew Allin, Muriel Walshe, Robin Murray, Steven C. Williams, Declan G. M. Murphy, and Marco Catani. 2011. Atlasing location, asymmetry and inter-subject variability of white matter tracts in the human brain with MR diffusion tractography. *NeuroImage* 54 (1): 49–59.
- Thierry, Guillaume, Marilyn Vihman, and Marc Roberts. 2003. Familiar words capture the attention of 11-month-olds in less than 250 ms. *Neuroreport* 14 (18): 2307–2310.
- Thompson, Sandra A. 1978. Modern English from a typological point of view: Some implications of the function of word order. *Linguistische Berichte Braunschweig* 54:19–35.
- Thompson-Schill, Sharon L., Mark D'Esposito, Geoffrey K. Aguirre, and Martha J. Farah. 1997. Role of left inferior prefrontal cortex in retrieval of semantic knowledge: A reevaluation. *Proceedings of the National Academy of Sciences of the United States of America* 94 (26): 14792–14797.
- Tillmann, Barbara, Denis Burnham, Sebastien Nguyen, Nicolas Grimault, Nathalie Gosselin, and Isabelle Peretz. 2011. Congenital amusia (or tone-deafness) interferes with pitch processing in tone languages. *Frontiers in Psychology* 2:120. doi:10.3389/fpsyg.2011.00120.
- Tincoff, Ruth, Lynn M. Santelmann, and Peter W. Juszyk. 2000. Auxiliary verb learning and 18-month-olds' acquisition of morphological relationships. In *Proceedings of the 24th Annual Boston University Conference on Language Development*, Vol. 2, ed. S. Catherine Howell, Sarah A. Fish, and Thea Keith-Lucas, 726–737. Somerville, MA: Cascadilla Press.



- Tomasello, Michael. 1999. *The Cultural Origins of Human Cognition*. Cambridge, MA: Harvard University Press.
- Tomasello, Michael. 2008. *Origins of Human Communication*. Cambridge, MA: MIT Press.
- Tomasello, Michael, Malinda Carpenter, Josep Call, Tanya Behne, and Henrike Moll. 2005. Understanding and sharing intentions: The origins of cultural cognition. *Behavioral and Brain Sciences* 28 (5): 675–691.
- Tomasi, Dardo, and Nora D. Volkow. 2012. Resting functional connectivity of language networks: Characterization and reproducibility. *Molecular Psychiatry* 17 (8): 841–854.
- Trainor, Laurel, Melissa McFadden, Lisa Hodgson, Lisa Darragh, Jennifer Barlow, Laura Matsos, and Ranil Sonnadara. 2003. Changes in auditory cortex and the development of mismatch negativity between 2 and 6 months of age. *International Journal of Psychophysiology* 51 (1): 5–15.
- Travis, Katherine E., Matthew K. Leonard, Timothy T. Brown, Donald J. Hagler, Megan Curran, Anders M. Dale, Jeffrey L. Elman, and Eric Halgren. 2011. Spatiotemporal neural dynamics of word understanding in 12- to 18-month-old-infants. *Cerebral Cortex* 21 (8): 1832–1839.
- Tune, Sarah, Matthias Schlesewsky, Steven L. Small, Anthony J. Sanford, Jason Bohan, Jona Sassenhagen, and Ina Bornkessel-Schlesewsky. 2014. Cross-linguistic variation in the neurophysiological response to semantic processing: Evidence from anomalies at the borderline of awareness. *Neuropsychologia* 56:147–166.
- Turner, Robert. 2015. Myelin Imaging. *Brain Mapping* 1:137–142.
- Turkeltaub, Peter E., Guinevere F. Eden, Karen M. Jones, and Thomas A. Zeffiro. 2002. Meta-analysis of the functional neuroanatomy of single-word reading: Method and validation. *NeuroImage* 16 (3): 765–780.
- Turken, And U., and Nina F. Dronkers. 2011. The neural architecture of the language comprehension network: Converging evidence from lesion and connectivity analyses. *Frontiers in Systems Neuroscience* 5:1. doi:10.3389/fnsys.2011.00001.
- Tyler, Lorraine K., and William D. Marslen-Wilson. 2008. Fronto-temporal brain systems supporting spoken language comprehension. *Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences* 363 (1493): 1037–1054.
- Tyler, Lorraine K., Meredith A. Shafto, Billi Randall, Paul Wright, William D. Marslen-Wilson, and Emmanuel A. Stamatakis. 2010. Preserving syntactic processing across the adult life span: The modulation of the fronto-temporal language system in the context of age-related atrophy. *Cerebral Cortex* 20 (2): 352–364.
- Tyler, Lorraine K., Emmanuel A. Stamatakis, Peter Bright, Kadia Acres, Sherief Abdallah, Jennifer M. Rodd, and Helen E. Moss. 2004. Processing objects at different levels of specificity. *Journal of Cognitive Neuroscience* 16 (3): 351–362.
- Tzourio-Mazoyer, Nathalie, and Bernard Mazoyer. 2017. Variations of planum temporale asymmetries with Heschl's Gyri duplications and association with cognitive abilities: MRI investigation of 428 healthy volunteers. *Brain Structure and Function*. doi:10.1007/s00429-017-1367-5.
- Uddén, Julia, Vasiliki Folia, Christian Forkstam, Martin Ingvar, Guillen Fernandez, Sebastiaan Overeem, Gijs van Elswijk, Peter Hagoort, and Karl Magnus Petersson. 2008. The inferior frontal cortex in artificial syntax processing: An rTMS study. *Brain Research* 1224:69–78.
- Uddin, Lucina Q., Kaustubh Supekar, Hitha Amin, Elena Rykhlevskaia, Daniel A. Nguyen, Michael D. Greicius, and Vinod Menon. 2010. Dissociable connectivity within human angular gyrus and intraparietal sulcus: Evidence from functional and structural connectivity. *Cerebral Cortex* 20 (11): 2636–2646.
- Ullman, Michael T. 2001. A neurocognitive perspective on language: The declarative/procedural model. *Nature Reviews. Neuroscience* 2 (10): 717–726.
- Ullman, Michael T., Suzanne Corkin, Marie Coppola, Gregory Hickok, John H. Growdon, Walter J. Koroshetz, and Steven Pinker. 1997. A neural dissociation within language: Evidence that the mental dictionary is part of declarative memory, and that grammatical rules are processed by the procedural system. *Journal of Cognitive Neuroscience* 9 (2): 266–276.
- Upadhyay, Jaymin, Andrew Silver, Tracey A. Knaus, Kristin A. Lindgren, Mathieu Ducros, Dae-Shik Kim, and Helen Tager-Flusberg. 2008. Effective and structural connectivity in the human auditory cortex. *Journal of Neuroscience* 28 (13): 3341–3349.
- van der Lely, Heather K. J., and Steven Pinker. 2014. The biological basis of language: Insight from developmental grammatical impairments. *Trends in Cognitive Sciences* 18 (11): 586–595.

- van der Lely, Heather K. J., Stuart Rosen, and Alastair McClelland. 1998. Evidence for a grammar-specific deficit in children. *Current Biology* 8 (23): 1253–1258.
- Van Lancker, Diana. 1980. Cerebral lateralization of pitch cues in the linguistic signal. *Papers in Linguistics: International Journal of Human Communication* 13 (2): 227–277.
- Van Lancker, Diana, and John J. Sidtis. 1992. The identification of affective-prosodic stimuli by left-hemisphere-damaged and right-hemisphere-damaged subjects—all errors are not created equal. *Journal of Speech and Hearing Research* 35 (5): 963–970.
- van Turenhout, Miranda, Peter Hagoort, and Colin M. Brown. 1998. Brain activity during speaking: From syntax to phonology in 40 milliseconds. *Science* 280 (5363): 572–574.
- Vandenbergh, Rik, Anna C. Nobre, and Cathy J. Price. 2002. The response of left temporal cortex to sentences. *Journal of Cognitive Neuroscience* 14 (4): 550–560.
- Van den Brink, Danielle, and Peter Hagoort. 2004. The influence of semantic and syntactic context constraints on lexical selection and integration in spoken-word comprehension as revealed by ERPs. *Journal of Cognitive Neuroscience* 16 (6): 1068–1084.
- Vernooij, Meike W., Marion Smits, Piotr A. Wielopolski, Gavin C. Houston, Gabriel P. Krestin, and Aad van der Lugt. 2007. Fiber density asymmetry of the arcuate fasciculus in relation to functional hemispheric language lateralization in both right- and left-handed healthy subjects: A combined fMRI and DTI study. *NeuroImage* 35 (3): 1064–1076.
- Vigneau, Mathieu, Virginie Beaucousin, Pierre-Yves Herve, Hugues Duffau, Fabrice Crivello, Olivier Houde, Bernard Mazoyer, and Nathalie Tzourio-Mazoyer. 2006. Meta-analyzing left hemisphere language areas: Phonology, semantics, and sentence processing. *NeuroImage* 30 (4): 1414–1432.
- Vissienon, Kodjo, Angela D. Friederici, Jens Brauer, and Chiao-Yi Wu. 2017. Functional organization of the language network in three- and six-year-old children. *Neuropsychologia* 98 (4): 24–33.
- Wang, Liping, Lynn Uhrig, Bechir Jarraya, and Stanislas Dehaene. 2015. Representation of numerical and sequential patterns in macaque and human brains. *Current Biology* 25 (15): 1966–1974.
- Wake, Hiroaki, Philip R. Lee, and Douglas Fields. 2011. Control of local protein synthesis and initial events in myelination by action potentials. *Science* 333 (6049): 1647–1651.
- Warren, Paul, Esther Grabe, and Francis Nolan. 1995. Prosody, phonology and parsing closure ambiguities. *Language and Cognitive Processes* 10 (5): 457–486.
- Wartenburger, Isabell, Hauke R. Heekeren, Jubin Abutalebi, Stefano F. Cappa, Arnold Villringer, and Daniela Perani. 2003. Early setting of grammatical processing in the bilingual brain. *Neuron* 37 (1): 159–170.
- Watkins, Kate E., Tomas Paus, Jason P. Lerch, Alex Zijdenbos, D. Louis Collins, Peter Neelin, John C. Taylor, Keith J. Worsley, and Alan C. Evans. 2001. Structural asymmetries in the human brain: A voxel-based statistical analysis of 142 MRI scans. *Cerebral Cortex* 11 (9): 868–877.
- Waxman, Stephen G. 1980. Determinants of conduction velocity in myelinated nerve fibers. *Muscle & Nerve* 3 (2): 141–150.
- Weber, Christiane, Anja Hahne, Manuela Friedrich, and Angela D. Friederici. 2004. Discrimination of word stress in early infant perception: Electrophysiological evidence. *Brain Research. Cognitive Brain Research* 18 (2): 149–161.
- Weber-Fox, Christine M., and Helen J. Neville. 1996. Maturation constraints on functional specializations for language processing: ERP and behavioral evidence in bilingual speakers. *Journal of Cognitive Neuroscience* 8 (3): 231–256.
- Weighall, Anna R., and Gerry T. M. Altmann. 2011. The role of working memory and contextual constraints in children's processing of relative clauses. *Journal of Child Language* 38 (3): 579–605.
- Weiller, Cornelius, Mariachristina Musso, Michel Rijntjes, and Dorothee Saur. 2009. Please don't underestimate the ventral pathway in language. *Trends in Cognitive Sciences* 13 (9): 369–370.
- Weiller, Cornelius, Tobias Bormann, Dorothee Saur, Mariachristina Musso, and Michel Rijntjes. 2011. How the ventral pathway got lost: And what its recovery might mean. *Brain and Language* 118 (1–2): 29–39.
- Weintraub, Sandra, M. Marsel Mesulam, and Lena Kramer. 1981. Disturbances in prosody: A right-hemisphere contribution to language. *Archives of Neurology* 38 (12): 742–744.

- Weiss, Sabine, and Peter Rappelsberger. 2000. Long-range EEG synchronization during word encoding correlates with successful memory performance. *Brain Research. Cognitive Brain Research* 9 (3): 299–312.
- Wernicke, Carl. 1874. *Der aphasische Symptomencomplex*. Berlin: Springer-Verlag.
- Werker, Janet, and Takao K. Hensch. 2015. Critical periods in speech perception: New directions. *Annual Review of Psychology* 66:173–196.
- Werker, Janet F., and Richard C. Tees. 1984. Cross language speech perception: Evidence for perceptual reorganization during the first year of life. *Infant Behavior and Development* 25 (1): 121–133.
- Westerlund, Masha, and Liina Pyykkänen. 2014. The role of the left anterior temporal lobe in semantic composition vs. semantic memory. *Neuropsychologia* 57:59–70.
- Westerlund, Masha, Itamar Kastner, Meera Al Kaabi, and Liina Pyykkänen. 2015. The LATL as locus of composition: MEG evidence from English and Arabic. *Brain and Language* 141:124–134.
- Wiesel, Torsten N. 1982. Postnatal-development of the visual-cortex and the influence of environment. *Nature* 299 (5884): 583–591.
- Wildgruber, Dirk, Hermann Ackermann, Benjamin Kreifelts, and Thomas Ethofer. 2006. Cerebral processing of linguistic and emotional prosody: fMRI studies. *Progress in Brain Research* 156:249–268.
- Wildgruber, Dirk, Axel Riecker, Ingo Hertrich, Michael Erb, Wolfgang Grodd, Thomas Ethofer, and Hermann Ackermann. 2005. Identification of emotional intonation evaluated by fMRI. *NeuroImage* 24 (4): 1233–1241.
- Willems, Roel M., Ash Özyürek, and Peter Hagoort. 2007. When language meets action: The neural integration of gesture and speech. *Cerebral Cortex* 17 (10): 2322–2333.
- Willems, Roel M., Ash Özyürek, and Peter Hagoort. 2009. Differential roles for left inferior frontal and superior temporal cortex in multimodal integration of action and language. *NeuroImage* 47 (4): 1992–2004.
- Wilson, Benjamin, Heather Slater, Yukiko Kikuchi, Alice E. Milne, William D. Marslen-Wilson, Kenny Smith, and Christopher I. Petkov. 2013. Auditory artificial grammar learning in macaque and marmoset monkeys. *Journal of Neuroscience* 33 (48): 18825–18835.
- Wilson, Benjamin, Yukiko Kikuchi, Li Sun, David Hunter, Frederic Dick, Kenny Smith, Alexander Thiele, Timothy D. Griffiths, William D. Marslen-Wilson, and Christopher I. Petkov. 2015. Auditory sequence processing reveals evolutionarily conserved regions of frontal cortex in macaques and humans. *Nature Communications* 6:8901. doi:10.1038/ncomms9901.
- Wilson, Stephen M., Nina F. Dronkers, Jennifer M. Ogar, Jung Jang, Matthew E. Growdon, Federica Agosta, Maya L. Henry, Bruce L. Miller, and Maria Luisa Gorno-Tempini. 2010. Neural correlates of syntactic processing in the nonfluent variant of primary progressive aphasia. *Journal of Neuroscience* 30 (50): 16845–16854.
- Wilson, Stephen M., Sebastiano Galantucci, Maria Carmela Tartaglia, Kindle Rising, Dianne K. Patterson, Maya L. Henry, Jennifer M. Ogar, Jessica DeLeon, Bruce L. Miller, and Maria Luisa Gorno-Tempini. 2011. Syntactic processing depends on dorsal language tracts. *Neuron* 72 (2): 397–403.
- Winkler, István, János Horvath, Júlia Weisz, and Leonard J. Trejo. 2009. Deviance detection in congruent audiovisual speech: Evidence for implicit integrated audiovisual memory representations. *Biological Psychology* 82 (3): 281–292.
- Wise, Richard J. S. 2003. Language systems in normal and aphasic subjects: Functional imaging studies and inferences from animal studies. *British Medical Bulletin* 65 (1): 95–119.
- Wise, Richard J. S., Sophie K. Scott, S. Catrin Blank, Cath J. Mummery, Kevin Murphy, and Elizabeth A. Warburton. 2001. Separate neural subsystems within “Wernicke’s area”. *Brain* 124:83–95.
- Witelson, Sandra F. 1982. Hemisphere specialization from birth. *International Journal of Neuroscience* 17 (1): 54–55.
- Wolff, Susann, Matthias Schlesewsky, Masako Hirotsu, and Ina Bornkessel-Schlesewsky. 2008. The neural mechanisms of word order processing revisited: Electrophysiological evidence from Japanese. *Brain and Language* 107 (2): 133–157.
- Wong, Patrick C. M., Lawrence M. Parsons, Michael Martinez, and Randy L. Diehl. 2004. The role of the insular cortex in pitch pattern perception: The effect of linguistic contexts. *Journal of Neuroscience* 24 (41): 9153–9160.

- Wu, Ying Choon, and Seana Coulson. 2007. How iconic gestures enhance communication: An ERP study. *Brain and Language* 101 (3): 234–245.
- Xiang, Hua-Dong, Hubert M. Fonteijn, David G. Norris, and Peter Hagoort. 2010. Topographical functional connectivity pattern in the perisylvian language networks. *Cerebral Cortex* 20 (3): 549–560.
- Xiao, Yaqiong, Angela D. Friederici, Daniel Margulies, and Jens Brauer. 2016a. Development of a selective left-hemispheric fronto-temporal network for processing syntactic complexity in language. *Neuropsychologia* 83:274–282.
- Xiao, Yaqiong, Angela D. Friederici, Daniel Margulies, and Jens Brauer. 2016b. Longitudinal changes in resting-state fMRI from age 5 to age 6 years covary with language development. *NeuroImage* 128:116–124.
- Xu, Wei, and Thomas C. Sudhof. 2013. A neural circuit for memory specificity and generalization. *Science* 339 (6125): 1290–1295.
- Yeatman, Jason D., Michal Ben-Shachar, Gary H. Glover, and Heidi M. Feldman. 2010. Individual differences in auditory sentence comprehension in children: An exploratory event-related functional magnetic resonance imaging investigation. *Brain and Language* 114 (2): 72–79.
- Zaccarella, Emiliano, and Angela D. Friederici. 2015a. Merge in the human brain: A sub-region based functional investigation in the left pars opercularis. *Frontiers in Psychology* 6:1818. doi:10.3389/fpsyg.2015.01818.
- Zaccarella, Emiliano, and Angela D. Friederici. 2015b. Syntax in the Brain. In *Brain Mapping: An Encyclopedic Reference*, ed. Arthur W. Toga, 461–468. Academic Press: Elsevier.
- Zaccarella, Emiliano, and Angela D. Friederici. 2016. The neuroanatomical network of syntactic merge for language. MPI CBS, Research Report 2014–2016 (p. 68). <http://www.cbs.mpg.de/institute/research-reports>.
- Zaccarella, Emiliano, Lars Meyer, Michiru Makuuchi, and Angela D. Friederici. 2015. Binding by syntax: The neural basis of minimal linguistic structures. *Cerebral Cortex*. doi:10.1093/cercor/bhv234.
- Zaehle, Tino, Torsten Wüstenberg, Martin Meyer, and Lutz Jäncke. 2004. Evidence for rapid auditory perception as the foundation of speech processing: A sparse temporal sampling fMRI study. *European Journal of Neuroscience* 20 (9): 2447–2456.
- Zatorre, Robert J., Pascal Belin, and Virginia B. Penhune. 2002. Structure and function of auditory cortex: Music and speech. *Trends in Cognitive Sciences* 6 (1): 37–46.
- Zatorre, Robert J., Alan C. Evans, Ernst Meyer, and Albert Gjedde. 1992. Lateralization of phonetic and pitch discrimination in speech processing. *Science* 256 (5058): 846–849.
- Zilles, Karl, and Katrin Amunts. 2009. Receptor mapping: Architecture of the human cerebral cortex. *Current Opinion in Neurology* 22 (4): 331–339.
- Zilles, Karl, Maraike Bacha-Trams, Nicola Palomero-Gallagher, Katrin Amunts, and Angela D. Friederici. 2014. Common molecular basis of the sentence comprehension network revealed by neurotransmitter receptor fingerprints. *Cortex* 63:79–89.
- Zilles, Karl, Nicola Palomero-Gallagher, and Axel Schleicher. 2004. Transmitter receptors and functional anatomy of the cerebral cortex. *Journal of Anatomy* 205 (6): 417–432.
- Zurif, Edgar B., Alfonso Caramazza, and Roger Myerson. 1972. Grammatical judgments of agrammatic aphasics. *Neuropsychologia* 10 (4): 405–417.
- Zou, Qihong, Thomas J. Ross, Hong Gu, Xiujuan Geng, Xi-Nian Zuo, L. Elliot Hong, Jia-Hong Gao, Elliot A. Stein, Yu-Feng Zang, and Yihong Yang. 2013. Intrinsic resting-state activity predicts working memory brain activation and behavioral performance. *Human Brain Mapping* 34 (12): 3204–3215.
- Zwitserslood, Pienie. 1989. The locus of the effects of sentential-semantic context in spoken-word processing. *Cognition* 32 (1): 25–64.

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# Language in Our Brain

## The Origins of a Uniquely Human Capacity

By: Angela D. Friederici

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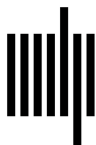
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