

## Dr Andrea Krott MA, PhD

Senior Lecturer

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### About

Andrea Krott is a psycholinguist who is interested in language acquisition and brain responses to language processing. Many of her studies, carried out in various languages, have focused on how adults and children understand and produce compound words (e.g. "baby bottle"). Her current research concerns children's word learning and language-related brain responses (EEG) in adults.

### Qualifications

- M.A., University of Trier (Germany)
- Ph.D., University of Nijmegen (The Netherlands)

### Biography

Andrea Krott studied Computational Linguistics and German Language and Literature at the University of Trier (Germany), and received her M.A. in 1995. From 1995 to 1998 she worked as a database manager (Max Planck Institute of Psycholinguistics, The Netherlands) and research assistant (Humboldt University of Berlin). In 2001 she obtained a Ph.D. at the Max Planck Institute for Psycholinguistics under the supervision of Harald Baayen and Robert Schreuder. She then worked for one year as a postdoctoral fellow in the Linguistics department at the University of Alberta (Canada), before taking up a position as a Lecturer at Birmingham University in 2002 and being promoted to Senior Lecturer in 2008.

### Teaching

- Level 3 module 'Language development and disorders in children'

### Postgraduate supervision

If you are interested in exploring one of her research topics in a PhD or MRes project, or if you are interested in research experience (volunteer work or summer bursary), don't hesitate to contact her.

### Research

Dr Krott is interested in how children acquire language in such a short time and in the brain processes that are involved in language comprehension and production in adults.

With regards to adult language processing, she often uses EEG to better understand the neural processes that underlie language comprehension or production. One of her projects focused on a language-related EEG effect, the left anterior negativity (LANs), and its occurrence during the processing of morphologically complex words. This project had been funded by the Wellcome Trust (2007-2010). Currently, she is investigating neural correlates of language production.

With regards to language acquisition, she studies how children acquire words. In collaboration with Elena Nicoladis and Christina Gagné (both University of Alberta, Canada) she has been studying children's understanding of compound words (such as chocolate cake or orange juice). This project aims to determine which type of knowledge children use when interpreting novel compound words such as 'chocolate truck' (truck for transporting chocolate or truck made of chocolate) and how their interpretations become adult like. This project had been financially supported by a British Academy Joint Activities Grant (2004-2007) and a British Academy Small Grant (2006-2007). Recently, she is focusing on how static and relational aspects of words affects children's word learning, especially their acquisition of compound words, and why it is difficult for children to acquire the relational part of a word's meaning, for instance that a toothbrush is not simply an object that has the shape of a toothbrush, but that is used to brush teeth.

In a further recent collaborative project with colleagues at the Universities of Plymouth (Caroline Floccia and Allegra Catani) and Kent (Kirsten Abbot-Smith), she is exploring language assessment tools for bilingual children.

### Related websites

[The School's cognitive development group \(/research/activity/psychology/cognitive-development/index.aspx\)](/research/activity/psychology/cognitive-development/index.aspx)

[IASCL - International Association for the Study of Child Language \(http://iascl.talkbank.org/\)](http://iascl.talkbank.org/)

[The Linguist List \(http://www.linguistlist.org/\)](http://www.linguistlist.org/)

[CHILDES - Child Language Data Exchange System \(http://childes.psy.cmu.edu/\)](http://childes.psy.cmu.edu/)

## Publications

- Porcaro, C., Medaglia, M. T., & Krott, A. (in press). Removing speech artifacts from electroencephalographic recordings during overt picture naming. *NeuroImage*.
- Cattani, A., Abbot-Smith, K., Farag, R., Krott, A., Arrecks, F., Denis, I., & Floccia, C. (2014). How much exposure to English is necessary for a bilingual toddler to perform like a monolingual peer in language tests? *International Journal of Language and Communication Disorders*, 49 (6), 649-671. DOI:10.1111/1460-6984.12082
- Breadmore, H., Krott, A., & Olson, A. (2013). Agreeing to disagree: Deaf and hearing children's awareness of subject-verb number agreement. *Quarterly Journal of Experimental Psychology*, DOI:10.1080/17470218.2013.818702
- Krott, A., & Lebib, R. (2013). Electrophysiological evidence for a neural substrate of morphological rule application in correct wordforms. *Brain Research*, 1496, 70-83.
- Ganushchak, L.Y., Krott, A., Frisson, S., & Meyer, A.S. (2013). Processing words and Short Message Service shortcuts in sentential contexts: An eye-movement study. *Applied Psycholinguistics*, 34, 163-179.
- Breadmore, H., Olson, A., & Krott, A. (2012). Deaf and hearing children's plural noun spelling. *Quarterly Journal of Experimental Psychology*, 65 (11), 2169-2192.
- L.Y. Ganushchak, A. Krott, & A. S. Meyer. (2012). From gr8 to great: Lexical access to SMS shortcuts. *Frontiers in Language Sciences*, 3, 150.
- L.Y. Ganushchak, A. Krott, & A. S. Meyer. (2010). Electroencephalographic responses to SMS shortcuts. *Brain Research*, 1348, 120-127.
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- Krott, A., Gagné, C., and Nicoladis, E. (2009). How the parts relate to the whole: frequency effects on children's interpretations of novel compounds. *Journal of Child Language*, 36 (1), 85-112.
- Nicoladis, E. and Krott, A. (2007). Family size and French-speaking children's segmentation of existing compounds. *Language Learning*, 57 (2), 201-228.
- Krott, A., Schreuder, R. and Baayen, R.H., Dressler, W.U. (2007). Analogical effects on linking elements in German compounds. *Language and Cognitive Processes*, 22 (1), 25-57.
- Krott, A., Baayen, R.H., & Hagoort, P. (2006). The nature of anterior negativities caused by misapplications of morphological rules. *Journal of Cognitive Neuroscience* 18 (10), 1616-1630.
- Krott, A., & Nicoladis, E. (2005). Large constituent families help children parse compounds. *Journal of Child Language*, 32 (1), 139-158.
- Krott, Andrea (2004). Ein funktionalanalytisches Modell der Wortbildung [A functional analytical model of word formation]. Köhler, Reinhard (Ed.): *Korpuslinguistische Untersuchungen zur Quantitativen und Systemtheoretischen Linguistik [Corpus-linguistic Investigations of Quantitative and System-theoretical Linguistics]* (pp. 75-126). Elektronische Hochschulschriften an der Universität Trier. [See PDF - 364KB \(http://ubt.opus.hbz-nrw.de/volltexte/2004/279/pdf/04\\_krott.pdf\)](http://ubt.opus.hbz-nrw.de/volltexte/2004/279/pdf/04_krott.pdf)
- Krott, A., Hagoort, P., & Baayen, H. (2004): Sublexical units and supralephical combinatorics in the processing of interfixed Dutch compounds. *Language and Cognitive Processes*, 19 (3), 453-471.
- Krott, A., Libben, G., Jarema, G., Dressler, W.U., Schreuder, R., & Baayen, H. (2004): Probability in the grammar of German and Dutch: interfixation in tri-constituent compounds. *Speech and Language*, 47 (1), 83-106.
- Krott, A., Schreuder, R. and Baayen, R.H. (2002): A note on the function of Dutch linking elements. In G. Booij & van Marle, J. (Eds.): *Yearbook of Morphology 2001* (pp. 237-252). Dordrecht: Kluwer Academic Publishers.
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- Krott, A., Schreuder, R. and Baayen, R.H. (2002): Linking elements in Dutch noun noun compounds: constituent families as analogical predictors for response latencies. *Brain and Language*, 81 (1-3), 723-735.
- Krott, A., Krebbers, L., Schreuder, R. and Baayen, R. H. (2002): Semantic influence on linkers in Dutch noun-noun compounds. *Folia Linguistica*, 36 (1-2), 7-22.
- Baayen, R. H., Schreuder, R., De Jong, N. H. and Krott, A. (2002): Dutch inflection: the rules that prove the exception. In S. Nooteboom, F. Weerman, & F. Wijnen (Eds.): *Storage and computation in the language faculty* (pp.61-92). Dordrecht: Kluwer Academic Publishers.
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- Krott, A., Schreuder, R. and Baayen, R.H. (1999): Complex words in complex words. *Linguistics*, 37 (5), 905-926.
- Schreuder, R., De Jong, N. H., Krott, A. and Baayen, R. H. (1999): Rules and rote: beyond the linguistic either-or fallacy. *Behavioral and Brain Sciences*, 22, 1038-1039.
- Krott, A. (1999): Influence of morpheme polysemy on morpheme frequency. *Journal of Quantitative Linguistics*, 6 (1), 58-65.
- Krott, A. (1996): Some remarks on the relation between word length and morpheme length. *Journal of Quantitative Linguistics*, 3 (1), 29-37.

## Books

- Meyer, A., Wheeldon, L., & Krott, A. (2007). *Automaticity and Control in Language Processing*. Hove and New York: Psychology Press.

