

Laura E. Gwilliams

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Education

Ph.D. 2015 - Present

Cognition and Perception

New York University, USA

Supervisors: Dr. Alec Marantz & Dr. David Poeppel

M.Sc. 2012 - 2013

Cognitive Neuroscience of Language

Basque Center on Cognition, Brain and Language (BCBL), Spain

Grade: *Excellent*

Supervisors: Dr. Arthur Samuel & Dr. Philip Monahan

B.A. 2009 - 2012

Linguistics

Cardiff University, UK

Grade: *1st Class with honours*

Supervisor: Dr. Lise Fontaine

Awards and Scholarships

2016 *Dean's Travel Grant*, New York University

2016 *Travel Award*, Society for the Neurobiology of Language Conference

2016 *Helmsley Fellowship*, Cold Springs Harbor

(Genetics and Neurobiology of Language Course attendance fee)

2015 *Henry M. MacCracken Fellowship*, New York University

(Full funding of PhD tuition and maintenance)

2012 *Dell Hymes Commendation for Academic Achievement*, Cardiff University

(Awarded to the top graduating student within the department)

Publications

Gwilliams, L., Lewis, G. & Marantz, A. (2016). Functional characterisation of letter-specific responses in time, space and current polarity using magneto-encephalography. *NeuroImage*. [PDF].

Brodbeck, C., **Gwilliams, L.** & Pylkkänen, L. (2015). EEG can track the time course of reference resolution in small visual worlds. *Frontiers in Psychology*. [PDF].

Gwilliams, L. & Marantz, A. (2015). Tracking non-linear prediction in a linear speech stream: Influence of morphological structure on spoken word recognition. *Brain and Language*. [PDF].

Gwilliams, L., Monahan, P., & Samuel, A. (2015). Sensitivity to morphological composition: Evidence from grammatical and lexical decision tasks. *Journal of Experimental Psychology: Language, Memory and Cognition*. [PDF].

Gwilliams, L. & Fontaine, L. (2015). Indeterminacy in process type classification. *Functions of Language*. [PDF].

Politzer-Ahles, S., & **Gwilliams, L.** (2015). Involvement of prefrontal cortex in scalar implicatures: Evidence from magnetoencephalography. *Language and Cognitive Neuroscience*. [PDF].

Manuscripts

Gwilliams, L., Linzen, T., Poeppel, D. & Marantz, A. (In Prep.). In spoken word recognition, the future predicts the past.

Gwilliams, L. & Marantz, A. (Submitted). Recognising unseen stems: How extrapolation of grammatical rules dictates morphological processing.

Brodbeck, C., **Gwilliams, L.** & Pylkkänen, L. (Submitted). Language in context: MEG evidence for modality general and specific responses to reference resolution.

Invited Talks

Gwilliams, L. & Marantz, A. (2016, February). Taking Morphology Seriously: MEG Studies of Morphological Representations. Presentation at 17th International Morphology Meeting, Vienna, Austria

Oral Presentations

Gwilliams, L. Linzen, T., Neophytou, K., Poeppel, D. & Marantz, A. (2016, September). *Phonological commitment and sensitivity to subphonemic detail are independent*. Presentation at AMLAP. Bilbao, Basque Country.

Stockall, L., Manouilidou, C., **Gwilliams, L.** & Marantz, A. (2016, February). Un/Re-packing argument and event structure restrictions on prefixation: MEG evidence. Workshop on the syntax of argument structure: empirical advancements and theoretical relevance. Leipzig, Germany.

Gwilliams, L. & Marantz, A. (2015, June). *Abstract representation of the root morpheme: A magnetoencephalography study of spoken Arabic*. Presentation at the 9th Morphological Processing Conference, Potsdam, Germany.

Gwilliams, L. & Marantz, A. (2015, March). *Decomposition of spoken Arabic words into root morphemes during processing: Evidence from magnetoencephalography*. Presentation at the Linguistics in the Gulf 5 Conference, Doha, Qatar

Gwilliams, L. (2015, March). *Letter specific sensitivities in the brain: located in time, space and current direction*. Presentation at the Neuroscience of Language Workshop 2015, Abu Dhabi, UAE

Gwilliams, L., & Marantz, A. (2015, February). *Non-linear processing of a linear speech stream*. Presentation at the NYUAD Annual Research Conference 2015, Abu Dhabi, UAE.

Gwilliams, L. & Fontaine, L. (2014, July). *Ambiguity in process type selection in systemic functional linguistics*. Presentation at the 25th European Systemic Functional Linguistics Conference, Paris, France.

Brodbeck, C., **Gwilliams, L.** & Pykkänen, L. (2014, February). *Reference resolution and prediction in a visual world: MEG evidence from English and Arabic*. Presentation at the NYUAD Annual Research Conference 2014, Abu Dhabi, UAE.

Poster Presentations

Gwilliams, L. Linzen, T., Neophytou, K., Poeppel, D. & Marantz, A. (2016, September). *Phonological commitment and sensitivity to subphonemic detail are independent* Presentation at the Society for the Neurobiology of Language. London, UK.

Mow, J., **Gwilliams, L.**, Khalighinsjad, B., Mesgarani, N. & Marantz, A. (2016, September). *Encoding and organisation of phonemes by feature in STG*. Poster presentation at the Society for the Neurobiology of Language. London, UK.

Gwilliams, L., Linzen, T., Neophytou, K., Warnke, L., Poeppel, D & Marantz, A. (2016, April). *Early and asymmetric sensitivity to phonological boundaries and within-category variation across hemispheres*. Poster presented at the 2016 CNS Annual meeting, New York, USA

Brodbeck, C., **Gwilliams, L.** & Pytkkanen, L. (2016, April). *Amodal reference resolution in medial parietal cortex*. Poster presented at the 2016 CNS Annual meeting, New York, USA

Gwilliams, L., Linzen, T., Neophytou, K., Warnke, L., Poeppel, D & Marantz, A. (2016, March). *Phoneme ambiguity is reflected very early in primary auditory cortex*. Poster presented at the 29th Annual CUNY Conference on Human Sentence Processing, Florida, USA

Brodbeck, C., **Gwilliams, L.** & Pytkkanen, L. (2016, March). *Modality general and specific brain responses during reference resolution*. Poster presented at the 29th Annual CUNY Conference on Human Sentence Processing, Florida, USA

Gwilliams, L. & Marantz, A. (2015, October). *Representations stems you can't see: An MEG study of morphological decomposition*. Poster presented at the Society for the Neurobiology of Language Conference, Chicago, USA

Stockall, L., **Gwilliams, L.**, Manouilidou, C. & Marantz, A. (2015, October). *Access to lexical category and verb argument structure in the early stages of processing morphologically complex words: MEG investigations of prefixation*. Poster presented at the Society for the Neurobiology of Language Conference, Chicago, USA

Gaston, P., **Gwilliams, L.** & Marantz, A. (2015, October). *The time-course of cohort restriction in syntactic context: MEG evidence for a single auditory word-form*. Poster presented at the Society for the Neurobiology of Language Conference, Chicago, USA

Oseki, Y., **Gwilliams, L.**, Blanco-Elorrieta, E., Gaston, P., Pytkkanen, L. & Marantz, A. (2015, October). *Neural Dynamics of Morphological and Phrasal Composition*. Poster presented at the Society for the Neurobiology of Language Conference, Chicago, USA

Brodbeck, C., **Gwilliams, L.** & Pytkkanen, L. (2015, October). *EEG can track the time course of successful reference resolution in small visual worlds*. Poster presented at the Society for the Neurobiology of Language Conference, Chicago, USA

Gwilliams, L., Lewis, G., & Marantz, A. (2014, August). *Revealing the cortical dynamics of letter string perception*. Poster presented at the Society for the Neurobiology of Language Conference, Amsterdam, Netherlands. **[PDF]**.

Linzen, T., Gaston, P., **Gwilliams, L.** & Marantz, A. (2014, August). *Competition and prediction in the auditory processing of morphologically complex words*. Poster presented at the Society for the Neurobiology of Language Conference, Amsterdam, Netherlands. **[PDF]**.

Gwilliams, L., Monahan, P. & Samuel, A. (2013, June). *Why an Avalanche is faster than an Explosion*. Poster presented at The 8th International Morphological Processing Conference, Cambridge, UK. **[PDF]**.

Gwilliams, L., Monahan, P., & Samuel, A. (2013, March). *Decompositional processing of nominalisations*. Poster presented at the Basque Center on Cognition, Brain and Language (BCBL), San Sebastian, Spain.

Teaching

- 2016: **Teaching Assistant**
Mathematical Tools for Cognitive and Neural Science
Departments: Psychology and Neural Science
Instructors: Dr. Eero Simoncelli & Dr. Pascal Wallisch
- 2016: **Guest Lecturer**
Neural Bases of Language: Auditory Lexical Access
Departments: Psychology and Linguistics
Instructor: Dr. Liina Pyllkkanen
- Guest Lecturer**
Neural Bases of Language: Perceptual Attunement
Departments: Psychology and Linguistics
Instructor: Dr. Liina Pyllkkanen
- Guest Lecturer**
Linguistics as a Cognitive Science
Departments: Psychology and Linguistics
Instructor: Dr. Alec Marantz

Research Positions

- 2013 - 2015 *Research Assistant, New York University Abu Dhabi*
 Supervisors: Dr. Alec Marantz and Dr. Liina Pyllkkanen
- 2012 - 2014 *Research Assistant, Cardiff University*
 Supervisor: Dr. Lise Fontaine
- 2011 - 2012 *Graduate Research Team, Cardiff University*

Mentoring

Fall 2015: Supervised an undergraduate intern

Spring 2016: Supervised an undergraduate independent study student

Project title: *Unconscious, arbitrary visual symbols as a cue for phoneme identification*

Reviewer for

- *NeuroImage*
- *Psychonomic Bulletin & Review*
- *Brain & Language*