

# Alexander MARTIN

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## Education

expected June 30, 2017	PhD in Cognitive Science "Biases in phonological processing & learning" École Normale Supérieure – PSL Research University
2014	Master's of Cognitive Science, <i>with highest honors</i> (rank 1st/52) Focus: <i>Experimental Linguistics</i> "An Investigation into the Functional Load of Phonological Features and Perceptual Correlates" EHESS · ENS · Université Paris Descartes
2012	Bachelor's of Language Sciences, <i>with highest honors</i> Focus: <i>Theoretical &amp; Descriptive Linguistics</i> Université Paris Diderot
2012	Bachelor's of Applied Modern Languages, <i>with highest honors</i> Focus: <i>English &amp; German, Civilization Studies</i> Université Paris Diderot

## Current Projects

### Learning biases for phonetically natural rules

The aim of this project is to examine different parameters that come into play during the learning of different kinds of phonological rules (specifically phonetically natural and typologically abundant rules compared to unnatural, unattested ones), and the different levels at which a learning bias can be observed. We explore this "naturalness" effect in different tasks (based both in perception and production), and different populations, and by modulating variability in the input, and exploring differential effects of memory consolidation after sleep. We also study the role of bias in transmission over time with the help of computer simulations.

### Perceptual asymmetries in phonological processing

This project focuses on asymmetrical processing of phonological features during speech perception, both in prelexical phonological processing, and in word recognition. Its goal is to tease apart lexical bias from low-level acoustic bias. It includes a computational component focusing on measuring lexical *functional load* to explain lexical influence on perception.

### Phonological emergence in language contact

As phonological contrasts can be lost over time, so too can they emerge. This project focuses on a current emergence in Dutch (namely /g/) with the specific aim of exploring the different levels at which phonological emergence can occur (perception, production, the lexicon), and what social (foreign language knowledge/use, education, region) and linguistic (phonological and phonetic specificities of the language) factors may be at play.

# Publications

## Submitted manuscripts

- **Martin, A.**, & S. Peperkamp (in revision). Sensitivity to phonetic naturalness in phonological rules: evidence from learning and consolidation with sleep.
- **Martin, A.**, A. Guevara-Rukoz, T. Schatz, & S. Peperkamp (resubmitted). Phonetic naturalness and the shaping of sound patterns: the role of learning bias and its transmission across generations.

## Journal Articles

- **Martin, A.**, & S. Peperkamp (2017). Assessing the distinctiveness of phonological features in word recognition: prelexical and lexical influences. *Journal of Phonetics*, 62, 1–11.
- **Martin, A.**, & S. Peperkamp (2015). Asymmetries in the exploitation of phonetic features for word recognition. *The Journal of the Acoustical Society of America*, 137(4), EL303–EL314.
- Fort, M., **A. Martin**, & S. Peperkamp (2015). Consonants are more important than vowels in the bouba-kiki effect. *Language and Speech*, 58(2), 247–266.

## Conference Proceedings

- Fort, M., A. Weiss, **A. Martin**, & S. Peperkamp (2013). Looking for the bouba-kiki effect in prelexical infants. In: S. Ouni, F. Berthommier & A. Jesse (eds.) *Proceedings of the 12th International Conference on Auditory-Visual Speech Processing*, INRIA, 71–76.

## Presentations

### Oral Presentations

- White, J., R. Kager, T. Linzen, **A. Martin**, A. Nevins, S. Peperkamp, K. Polgárdi, P. Rebrus, N. Topintzi, M. Törkenczy, & R. van de Vijver (2017). "Artificial grammar learning of harmony patterns: Universal biases and L1 transfer". Workshop at Societas Linguistica Europaea - 50th Annual Meeting, September 10th–13th, 2017, Zürich, Switzerland (to be presented by J. White).
- White, J., R. Kager, T. Linzen, **A. Martin**, A. Nevins, S. Peperkamp, K. Polgárdi, N. Topintzi, & R. van de Vijver (2017). "Preference for locality is affected by the prefix/suffix asymmetry: Evidence from artificial language learning". The 25th Manchester Phonology Meeting, May 25th–27th, 2017, Manchester, United Kingdom (presented by J. White).
- **Martin, A.**, M. van Heugten, R. Kager, & S. Peperkamp (2016). "Phonological emergence in Dutch: Relating perception and production in contact-induced change". Satellite workshop of LabPhon 15 on Marginal Contrasts, July 17th, 2016, Ithaca, New York.
- **Martin, A.** & S. Peperkamp (2016). "Coalescing sources of bias in perception: Lexical and prelexical influences on the processing of phonological features". The 15th Conference of Laboratory Phonology, July 13th–17th, 2016, Ithaca, New York.
- Guevara-Rukoz, A., **A. Martin**, & S. Peperkamp (2015). "The role of phonetic naturalness in shaping sound patterns". Workshop on modeling variability in speech, Stuttgart, Germany, October 1st–2nd, 2015 (co-presented with A. Guevara-Rukoz).
- **Martin, A.** (2015). "Similarity in the lexicon: A new measure of functional load & experimental evidence". 23rd Conference of the Student Organization of Linguistics in Europe (ConSOLE XXIII), Paris, France, January 7th–9th, 2015.
- Fort, M., A. Weiss, **A. Martin**, & S. Peperkamp (2013). "Looking for the bouba-kiki effect in prelexical infants". 12th International Conference on Auditory-Visual Speech Processing, Annecy, France, August 29th–September 1st, 2013 (presented by M. Fort).

### Poster Presentations

- **Martin, A.**, M. van Heugten, R. Kager, & S. Peperkamp (2016). "Relating perception and production in contact-induced change". Workshop on Linking social effects in language processing to social effects in language evolution, September 15th–16th, 2016, Nijmegen, The Netherlands.
- Peperkamp, S. & **A. Martin** (2016). "Sleep-dependent consolidation in the learning of natural vs. unnatural phonological rules". The 15th Conference of Laboratory Phonology, July 13th–17th, 2016, Ithaca, New York.
- Fort, M., A. Weiss, **A. Martin**, & S. Peperkamp (2013). "Looking for the bouba-kiki effect in prelexical infants". Workshop on Infant Language Development, Donostia, Spain, June 20th–22nd, 2013 (presented by S. Peperkamp).

- Fort, M., A. Weiss, **A. Martin**, & S. Peperkamp (2013). "Looking for the bouba-kiki effect in prelexical infants". International Child Phonology Conference 2013, June 10th–12th, 2013, Nijmegen, The Netherlands (presented by M. Fort).
- Fort, M., **A. Martin**, & S. Peperkamp (2013). "Consonants are more important than vowels for the maluma-takete effect". The 11th International Symposium of Psycholinguistics, March 20th–23rd, 2013, Tenerife, Spain (co-presented with M. Fort).

## Invited Talks

- Université Paris Diderot, LingLunch (October, 2016)
- Utrecht University, Experimental Linguistics Talks in Utrecht (ELiTU) (June, 2016)

## Teaching (at the Department of Cognitive Science of the École Normale Supérieure)

### Introduction to Phonology (with M. Giavazzi) Fall term 2014, 2015, 2016 · 12-week graduate course

- Helped select and design course content
- Focus on rule-based and OT frameworks (main readings: Hayes, 2008 and Kager, 2004)
- Led section (2 hours per week)
- Gave various lectures
- Designed and graded all problem sets
- Prepared and graded midterm evaluation

### Topics in Phonology (with A. Cristia) Spring term 2015, 2016 · 12-week graduate course

- Collection of modules on various topics in phonology (i.e., tonal phonology, prosodic hierarchy, lexical organization)
- TA duties (e.g., mini-quiz preparation and grading, attendance)
- Taught module (two lectures) on *Evolutionary Phonology* (Blevins, 2004)
- Taught module (two lectures) on phonolexical structure (Itô & Mester, 2008; Albright, 2009)

## Service Activities

- Co-creator of the #barbarplots initiative to raise awareness about data visualization techniques, including the associated Kickstarter which raised over 3,400€ (2016)
- Co-founder and treasurer of the DEC Life scientific and cultural association (2015–2016)
- Official translator (English/French) of the Department of Cognitive Science at the ENS (from 2015, paid service)
- Creation and organization of the Phonology Journal Club at the LSCP (with Yue Sun) (2014–2016)
- Coordination of the lab-wide Writing Group at the LSCP (2014–2015)
- Creation and organization of the department-wide Language Groups (2014–2016)
- Ad-hoc reviewing for *Linguistic Inquiry*, OCP

## Grants & Awards

- Travel award to attend the 15th Conference of Laboratory Phonology, \$400 (2016)
- PhD grant for "Life and Health Sciences" from PSL Research University (2014–2017)
- PhD grant offer from the *Cerveau, Cognition, Comportement* Doctoral School (declined)

## In the Media

- Research featured in a popular science article in Scientific American: "Does an M Sound Round to You?" written by Anne Pycha (<http://www.scientificamerican.com/article/does-an-m-sound-round-to-you/h>) (November, 2015)
- Research featured in a popular science article from the newsmagazine Vice: "The Parts of Speech" written by Ben Richond ([motherboard.vice.com/read/the-parts-of-speech](http://motherboard.vice.com/read/the-parts-of-speech)) (April, 2015)