

Esti Blanco-Elorrieta

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ACADEMIC EMPLOYMENT

Post-doctoral fellow: **Harvard University** (2020 – present)
Cognitive Neuropsychology Lab
Department of Psychology

EDUCATION

Ph.D.: **New York University** (2020)
Psychology (Supervisor: Liina Pykkänen)
Thesis: *Towards an ecologically valid neuroscience of bilingualism.*

Harvard University (visiting fellow, 2018-2019)
Psychology (Supervisor: Alfonso Caramazza)

M.Sc.: **Basque Center on Cognition, Brain and Language** (Honors, 2013)
Cognitive Neuroscience of language.

B.A.: **University of Deusto** (Honors, 2012)
Basque philology and Linguistics

FELLOWSHIPS AND AWARDS

2020: Society for the Neurobiology of Language Dissertation award: honorable mention
2020: Coons/Leibowitz graduate student teaching award
2019: Forbes 30 under 30 in Science
2019: Martin Braine Fellowship in Psychology (awarded to the best student in the department).
2018: Dingwall Foundation: Dissertation Award in the Cognitive, Clinical, and Neural Foundations of Language (\$30,000).
2018: New York University: Dean's Student Travel Grant.
2017: Predoctoral fellow merit award: Society of the Neurobiology of Language (SNL).
2017: Woodcock Institute for the advancement of neurocognitive research (\$9,951).
2016: Helmsley Fellowship for cross-disciplinary research (\$2,350).
2016: New York University: Dean's Student Travel Grant.
2015: Neurobiology of Language Conference: Travel Award.
2015: New York University: MacCracken Fellowship (full funding of tuition and maintenance).
2014: La Caixa Foundation: fellowship for Graduate Studies in North America (4% success rate).
2012: BCBL: academic scholarship waiver of M.Sc. tuition fees (awarded to the most promising incoming students).

- 2011:** Basque Government: grant for undergraduate research projects (€3,300).
2010: University of Deusto: grant for undergraduate research projects (€3,000).
2008: Basque Government: Distinguished Academic scholarship (top 1% students graduating high school in the country).

MANUSCRIPTS AND PUBLICATIONS

1. Honari-Jahromi, M., Chouinard, B., Fyshe, A., **Blanco-Elorrieta, E.**, & Pykkänen, L. (*in prep.*). Machine learning semantics indicate differential encoding of adjective and nouns in simple compositional phrases.
2. **Blanco-Elorrieta** & Caramazza, A. (*under review*). A selection-by-activation model of bilingual lexical access.
3. **Blanco-Elorrieta, E.***, Gwilliams, L*., Marantz, A., & Pykkänen, L. (2020). Neural bases of perceptual adaptation to foreign accents. *Nature Scientific Reports*
4. **Blanco-Elorrieta, E.**, Ding, N., Pykkänen, L., & Poeppel, D. (2020). Understanding requires tracking: Noise and knowledge interact in bilingual language comprehension. *Journal of Cognitive Neuroscience*. 32(10), 1975-1983.
5. Liu, H., Zhang, Y., **Blanco-Elorrieta, E.**, Hea, Y., Chen, B. (2019). Role of proactive control on subcomponents of language control: Evidence from trilinguals. *Cognition*, 194, 104055.
6. **Blanco-Elorrieta, E.**, & Pykkänen, L. (2018). Ecological validity in bilingualism research and the bilingual advantage. *Trends in Cognitive Sciences*, 22(12), 1117-1126
7. **Blanco-Elorrieta, E.**, Emmorey, K., & Pykkänen, L. (2018). Language switching decomposed through MEG and evidence from bimodal bilinguals. *Proceedings of the National Academy of Sciences*, 115(39), 9708-9713.
8. **Blanco-Elorrieta, E.**, Kastner, I., Emmorey, K., & Pykkänen, L. (2018). A shared neurobiology for building phrases in signed and spoken language. *Nature Scientific Reports*, 8, 5492.
9. **Blanco-Elorrieta, E.** Emmorey, K., & Pykkänen, L. (2017). Decoding Language Switching in the Bilingual Brain: evidence from simultaneous speech and sign production. *Cognitive Computational Neuroscience (CCN)*.
10. Fyshe, A., **Blanco-Elorrieta, E.** & Pykkänen, L. (2017). The neural representation of concepts during composition. *Cognitive Computational Neuroscience (CCN)*.
11. **Blanco-Elorrieta, E.**, Ferreira, V.S., Del Prato, P., & Pykkänen, L. (2017). The priming of basic combinatory responses in MEG. *Cognition*, 70, 49-63.

12. **Blanco-Elorrieta, E. & Pylkkänen, L. (2017).** Bilingual language switching in the lab vs. in the wild: The spatio-temporal dynamics of adaptive language control. *The Journal of Neuroscience*, 37: 9022-9036.
13. **Blanco-Elorrieta, E. & Pylkkänen, L. (2016).** Bilingual language control in perception vs. action: MEG reveals comprehension control mechanisms in anterior cingulate cortex and domain-general production control in dorsolateral prefrontal cortex. *The Journal of Neuroscience*, 36(2): 290 – 301.
14. **Blanco-Elorrieta, E. & Pylkkänen, L. (2016).** Composition of complex numbers: Delineating the computational role of the left anterior temporal lobe. *NeuroImage*, 124, 194 - 203.
15. **Blanco-Elorrieta, E. & Pylkkänen, L. (2015).** Brain bases of language selection: MEG evidence from Arabic-English bilingual language production. *Frontiers in Human Neuroscience*, 9.
16. Pylkkänen, L., Bemis, D.K. & **Blanco-Elorrieta, E. (2014).** Building phrases in language production: An MEG study of simple composition. *Cognition*, 133, 371-384.

INVITED TALKS

1. **Blanco-Elorrieta, E. (2020).** La verdadera ventaja de ser multilingüe (The true bilingual advantage). TEDx Talk, Tarragona, Spain.
2. **Blanco-Elorrieta, E. (2020).** Bilingual speech comprehension. *Mesgarani lab*. Columbia University, New York, USA.
3. **Blanco-Elorrieta, E. (2020).** Growth in times of crisis. *Entre cuatro paredes*. Expatriados & Co., New York, USA.
4. **Blanco-Elorrieta, E. (2020).** The Neurobiology of Multilingualism. *Linguistics Colloquium*. Cornell University, USA.
5. **Blanco-Elorrieta, E. (2019).** The challenges of understanding bilingual speech in noise. *British Academy for Cognitive Neuroscience*. University of Cambridge, UK.
6. **Blanco-Elorrieta, E. (2018).** The neurobiology of bilingualism: Insight from MEG. *The bilingual mind seminars*. University of the Basque Country, Basque Country.
7. **Blanco-Elorrieta, E. (2018).** The neurobiology of bilingualism: Insight from MEG. *Language and Cognition Colloquium*. Harvard University, USA.
8. **Blanco-Elorrieta, E. (2018).** The neurobiology of bilingualism: insight from MEG. *Psychology Cognitive Brown Bag*. University of California San Diego (UCSD), USA.
9. **Blanco-Elorrieta, E. (2017).** The neurocognition of bilingualism. *Young Leaders of the Americas Initiative (YLAI)*, New York, USA.

10. **Blanco-Elorrieta, E. (2017).** Bilingual language switching in the lab vs. in the wild: The spatio-temporal dynamics of adaptive language control. *Summer school on Bilingualism and Multilingualism*, Barcelona, Spain.
11. **Blanco-Elorrieta, E. (2016).** Brain bases of bilingual language selection and switching: Evidence from production and comprehension. *Neurolinguistics Supper Colloquium*. Graduate Center of the City University of New York, New York, USA.

CONFERENCE TALKS

1. **Blanco-Elorrieta, E.** Emmorey, K., & Pylkkänen, L. (2018). Task switching decomposed: MEG evidence from bimodal language switching. Cognitive Neuroscience Society (CNS), Boston, USA.
2. **Blanco-Elorrieta, E.** Emmorey, K., & Pylkkänen, L. (2017). Turning a language “off” is cognitively effortful, but turning a language “on” is not: MEG evidence from bimodal language switching. Society for the Neurobiology of Language (SNL) Annual Conference, Baltimore, USA.
3. **Blanco-Elorrieta, E.** & Pylkkänen, L. (2016). While language-switching in the lab localizes in anterior cingulate cortex, comprehending code-switches in the wild engages the auditory cortex: MEG evidence from Arabic-English bilinguals. 22nd AMLaP Conference in Bilbao, Basque Country.
4. **Blanco-Elorrieta, E.**, Ferreira, V.S., Del Prato, P., & Pylkkänen, L. (2016). The priming of basic combinatorial responses in MEG. 29th CUNY Conference on Sentence Processing, Florida, USA.
5. **Blanco-Elorrieta, E.** & Pylkkänen, L. (2015). Switch mechanisms revealed by MEG: What is special about language switching?. Neuroscience of Language Workshop, Abu Dhabi, UAE.
6. **Blanco-Elorrieta, E.** & Pylkkänen, L. (2015). Bilingual language control: domain general in production but not comprehension? Evidence from MEG. Linguistics in the Gulf, Doha, Qatar.
7. **Blanco-Elorrieta, E.** & Pylkkänen, L. (2015). Brain bases of language selection: MEG evidence from Arabic-English bilingual language production. NYUAD Research Conference, Abu Dhabi.

POSTER PRESENTATIONS

1. **Blanco-Elorrieta, E.**, Hauptman, M., Pylkkänen, L. (2020). Planning production: Morphological, semantic, and syntactic representations. Society for the Neurobiology of Language. Virtual Conference
2. Lang, B., Gwilliams, L., **Blanco-Elorrieta, E.**, and Marantz, A. (2020). Do bilinguals better discriminate novel vowel contrasts? Neural correlates of perceptual assimilation using MEG decoding. Society for the Neurobiology of Language. Virtual Conference.

3. **Blanco-Elorrieta, E.,** Hauptman, M., Pylkkänen, L. (2020). Planning production: Morphological, semantic, and syntactic representations. Cognitive Neuroscience Society (CNS) Conference, Boston, USA.
4. **Blanco-Elorrieta, E.,** Gwilliams, L., Pylkkänen, L., & Maranz, A. (2019). Prefrontal cortex aids adaptation to accented speech. Society for the Neurobiology of Language (SNL) Conference, Helsinki, Finland.
5. **Blanco-Elorrieta, E.,** Gwilliams, L., Pylkkänen, L., & Maranz, A. (2019). Prefrontal cortex aids adaptation to accented speech. Cognitive Neuroscience Society (CNS) Conference, San Francisco, USA.
6. **Blanco-Elorrieta, E.,** Ding, N., Pylkkänen, L., & Poeppel, D. (2018). The impoverished comprehension of non-native speech in noise. Society for Neuroscience (SfN) Annual Conference, San Diego, USA.
7. **Blanco-Elorrieta, E.,** Ding, N., Pylkkänen, L., & Poeppel, D. (2018). The impoverished comprehension of non-native speech in noise. Society for the Neurobiology of Language (SNL) Annual Conference, Quebec City, Canada.
8. **Blanco-Elorrieta, E.** Emmorey, K., & Pylkkänen, L. (2018). Task switching decomposed: MEG evidence from bimodal language switching. Cognitive Neuroscience Society (CNS) Annual Conference, Boston, USA.
9. **Blanco-Elorrieta, E.** Emmorey, K., & Pylkkänen, L. (2017). Decoding Language Switching in the Bilingual Brain: evidence from simultaneous speech and sign production. Cognitive Computational Neuroscience (CCN), New York, USA.
10. Fyshe, A., **Blanco-Elorrieta, E.** & Pylkkänen, L. (2017). The neural representation of concepts during composition. Cognitive Computational Neuroscience (CCN), New York, USA.
11. **Blanco-Elorrieta, E.,** Ferreira, V.S., Del Prato, P., & Pylkkänen, L. (2016). The priming of basic combinatory responses in MEG. Society for the Neurobiology of Language (SNL) Annual Conference, London, UK.
12. **Blanco-Elorrieta, E.** & Pylkkänen, L. (2016). While language-switching in the lab localizes in anterior cingulate cortex, comprehending code-switches in the wild begins in auditory cortex: MEG evidence from Arabic-English bilinguals. Society for the Neurobiology of Language (SNL) Conference, London, UK.
13. **Blanco-Elorrieta, E.,** Ferreira, V.S., Del Prato, P., & Pylkkänen, L. (2016). The priming of basic combinatory responses in MEG. Cognitive Neuroscience Society (CNS) Annual Conference, New York, USA.
14. **Blanco-Elorrieta, E.** & Pylkkänen, L. (2016). Bilingual language control in perception vs. action: MEG reveals comprehension control mechanisms in anterior cingulate cortex and domain-general

production control in dorsolateral prefrontal cortex. 29th Annual CUNY Conference on Human Sentence Processing, Gainesville, USA.

15. **Blanco-Elorrieta, E.** & Pykkänen, L. (2015). Switching in perception vs. action revealed by MEG: Reactive control in the ACC and proactive control in the dorsolateral PFC. Society for the Neurobiology of Language (SNL) Annual Conference, Chicago, USA.
16. **Blanco-Elorrieta, E.** & Pykkänen, L. (2015). Composition of Complex Numbers: Delineating the computational role of the left anterior temporal lobe. Society for the Neurobiology of Language (SNL) Annual Conference, Chicago, USA.
17. Oseki Y., Gwilliams, L., Gaston, P., **Blanco-Elorrieta, E.**, Pykkänen, L. & Marantz, A. (2015). Neural dynamics of morphological and phrasal composition. Society for the Neurobiology of Language (SNL) Annual Conference, Chicago, USA.
18. **Blanco-Elorrieta, E.** & Pykkänen, L. (2014). Brain bases of language selection: MEG evidence from Arabic-English bilingual language production. Society for the Neurobiology of Language (SNL) Annual Conference, Amsterdam, The Netherlands.
19. Martin, C.D., **Blanco-Elorrieta, E.**, & Duñabeitia, J.A. (2013). An alternative explanation to asymmetrical switch-costs in unbalanced bilinguals. Annual Psychonomics Conference, Toronto, Canada.

TEACHING

Teaching assistant (NYU):

- 2019: Psychology and Linguistics: *Neurolinguistics*. (Graduate and Undergraduate).
- 2018: Psychology: *Introduction to Psychology*. (Undergraduate).
- 2018: Psychology: *Cognition* (Undergraduate).
- 2017: Psychology: *Cognition* (Undergraduate).
- 2016: Psychology and Linguistics: *Neural Bases of Language*. (Graduate and Undergraduate).

Guest lectures:

- 2019: *Neural bases of Language*: Lecture on the neurobiology of bilingualism
- 2017: *Neurolinguistics*. Lecture on bilingual language control, bilingualism and aging (Young Leaders of the Americas Initiative (YLA) at NYC).
- 2017: *Cognition*. Lecture on language and cognition (NYU).
- 2016: *Neural Bases of Language*. Lecture on the neurobiology of bilingualism (NYU).
- 2016: *Neural Bases of Language*. Lecture on the neural bases of perceptual attunement (NYU).

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

2020 – present Accessibility and Diversity Committee, Society for the Neurobiology of Language

2018 – present Elected Board Member, Society for the Neurobiology of Language

2016 – present Member, Society for Neuroscience

2015 – present Member, Cognitive Neuroscience Society

2014 – present Member, Society for the Neurobiology of Language

ACADEMIC SERVICE

a) Ad hoc reviewer for:

Journals: Cognition; Scientific Reports; Human Brain Mapping; Proceedings of the National Academy of Sciences, PLOS Biology; PLOS One; Journal of Neuroscience; NeuroImage; Brain and Language; Language, Cognition and Neuroscience; Journal of Cognitive Psychology; Journal of Neurolinguistics, Bilingualism: Language and Cognition.

Grants: Polish Ministry of Science and Higher Education, Polish National Centre for Research and Development.

b) Elected Student Representative.

Society for the Neurobiology of Language (2019-2022)

Undergraduate linguistics program (2008 –2012).

OTHER EDUCATION

Summer Course: Genetics & Neurobiology of Language Course. Cold Spring Harbor Laboratories (2016).

Summer University: German language and literature. Westfälische Wilhelms-Universität. Münster, Germany (2011).

Summer University: German language and literature. Heinrich-Heine Universität. Düsseldorf, Germany (2010).

LANGUAGES

Basque:	Native speaker. Certificate of Proficiency in Basque (EGA).
Spanish:	Native speaker.
English:	Cambridge Certificate of Proficiency in English (CPE), 113 internet Based Test TOEFL.
German:	Upper Intermediate (B2 European Framework of Reference).
Galician:	Elementary (A2 European Framework of Reference).
French:	Elementary (A1 European Framework of Reference).