Esti Blanco-Elorrieta

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ACADEMIC EMPLOYMENT

Assistant Professor: **New York University** (2023 -)
Department of Psychology

Post-doctoral fellow: **Harvard University** (2020 – 2023)
Cognitive Neuropsychology Lab (PI: Alfonso Caramazza)
Department of Psychology

EDUCATION

Ph.D.: **New York University** (2015 – 2020)
Psychology (Supervisor: Liina Pylkkänen)
Thesis: *Towards an ecologically valid neuroscience of bilingualism.*

Harvard University (research 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

2021: Glushko dissertation award: Cognitive Science Society.
2021: NYU-wide Outstanding dissertation award in the basic sciences.
2021: Graduate School of Arts and Sciences: Outstanding dissertation award.
2020: Ben Barres fellowship for post-doctoral research.
2020: Coons/Leibowitz graduate student teaching award.
2019: Forbes 30 under 30 in Science.
2019: Martin Braine Fellowship in Psychology.
2018: Dingwall Foundation Award in the Cognitive, Clinical, and Neural Foundations of Language.
2018: New York University: Dean's Student Travel Award.
2017: Society of the Neurobiology of Language: Predoctoral fellow merit award.
2017: Woodcock Institute Award for the advancement of neurocognitive research.
2016: Helmsley Fellowship for cross-disciplinary research.
2016: New York University: Dean's Student Travel Award.
2015: Neurobiology of Language Conference: Travel Award.
2015: New York University: MacCracken Fellowship for doctoral studies.
2014: La Caixa Foundation: fellowship for graduate studies in North America (4% success rate).
2012: BCBL: academic scholarship (awarded to the 5% most promising incoming students).

2011: Basque Government fellowship for undergraduate research projects.

2010: University of Deusto: Dean's fellowship for undergraduate research projects.

2008: Basque Government: Distinguished Academic scholarship (top 1% students graduating high school in the country).

CURRENT FUNDING

MANUSCRIPTS AND PUBLICATIONS

19. Zhu, J., **Blanco-Elorrieta, E.,** Sun, Y., Szakay, A, & Sowman, P. (*2022*). Natural vs. forced language switching: free selection and consistent choices eliminate significant performance costs and cognitive demands in the brain. *NeuroImage,* 247, 188797.

18. **Blanco-Elorrieta, E**.*, Hauptman, M.*, & Pylkkänen, L. (*2021*). Inflection across categories: Tracking abstract morphological processing in language production with MEG. *Cerebral Cortex,* 309.

17. **Blanco-Elorrieta, E.** & Caramazza, A. (*2021*). On the need of theoretically guided approaches to possible bilingual advantages: an evaluation of the potential loci in the language and executive control systems. *Neurobiology of Language, 1-16.*

16. Honari-Jahromi, M., Chouinard, B., Fyshe, A., **Blanco-Elorrieta**, **E.,** & Pylkkänen, L. (2021). Neural representation of words within phrases:Temporal evolution of color-adjectives and object-nouns during simple composition. *Plos One*, 16(3), e0242754.

15. **Blanco-Elorrieta, E.** & Caramazza, A. (2021). A common selection mechanism at each linguistic level in bilingual and monolingual language production. *Cognition,* 104625.

14. **Blanco-Elorrieta, E*.,** Gwilliams, L*., Marantz, A., & Pylkkänen, L. (2020). Adaptation to mis-pronounced speech: evidence for a prefrontal-cortex repair mechanism. *Nature Scientific Reports,* 11, 97.

13. **Blanco-Elorrieta, E.,** Ding, N., Pylkkänen, L., & Poeppel, D. (2020). Understanding requires tracking: Noise and knowledge interact in bilingual language comprehension. *Journal of Cognitive Neuroscience*. 32(10), 1975-1983.

12. 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.

11. **Blanco-Elorrieta, E.,** & Pylkkänen, L. (2018). Ecological validity in bilingualism research and the bilingual advantage. *Trends in Cognitive Sciences,* 22(12), 1117-1126

10. **Blanco-Elorrieta, E.,** Emmorey, K., & Pylkkänen, L. (2018). Language switching decomposed through MEG and evidence from bimodal bilinguals. *Proceedings of the National Academy of Sciences, 115(39),* 9708-9713.

9. **Blanco-Elorrieta, E.,** Kastner, I., Emmorey, K., & Pylkkänen, L. (2018). Shared neural correlates for building phrases in signed and spoken language. *Nature Scientific Reports,* 8, 5492.

8. **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)*.

7. Fyshe, A., **Blanco-Elorrieta, E.** & Pylkkänen, L. (2017). The neural representation of concepts during composition. *Cognitive Computational Neuroscience (CCN)*.

6. **Blanco-Elorrieta, E.,** Ferreira, V.S., Del Prato, P., & Pylkkänen, L. (2017). The priming of basic combinatory responses in MEG. *Cognition,* 70, 49-63.

5. **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.

4. **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.

3. **Blanco-Elorrieta, E.** & Pylkkänen, L. (2016). Composition of complex numbers: Delineating the computational role of the left anterior temporal lobe. *NeuroImage*, 124*, 194 - 203*.

2. **Blanco-Elorrieta, E.** & Pylkkänen, L. (2015). Brain bases of language selection: MEG evidence from Arabic-English bilingual language production. *Frontiers in Human Neuroscience*, 9.

1. 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

26. **Blanco-Elorrieta, E. (2022)**. Towards a more inclusive neurobiology of language. *Psychology Department Seminar,* New York University, USA.

25. **Blanco-Elorrieta, E. (2022)**. Towards a more inclusive neurobiology of language. *Cognitive Science Seminar,* Johns Hopkins University, USA.

24. **Blanco-Elorrieta, E. (2022)**. Towards a more inclusive neurobiology of language. *Language and Cognitive Science Seminar,* Delaware University, USA.

23. **Blanco-Elorrieta, E. (2022)**. Towards a more inclusive neurobiology of language. *Princeton Neuroscience Institute Seminar Series,* Princeton University, USA.

22. **Blanco-Elorrieta, E. (2022)**. The bilingual brain. *Neuroscience Research Research Seminar Series,* University of Texas Rio Grande Valley, USA.

21. **Blanco-Elorrieta, E. (2022).** Towards an inclusive neurobiology of language. *Cognitive Area Talk,* University of Michigan, Ann Arbor, USA.

20. **Blanco-Elorrieta, E. (2022).** Gender non-conformity, inclusivity, and academia. *Intersectional Experiences in Academia,* University of Oslo, Norway.

19. **Blanco-Elorrieta, E. (2021).** Language-specific and language-general neural mechanisms in bilingual aphasic patients. *Aphasia Community Group*, Boston University, USA.

18. **Blanco-Elorrieta, E. (2021).** Towards an inclusive neurobiology of language. *Language and Brain Colloquium*, University of Florida, USA.

17. **Blanco-Elorrieta, E. (2021).** Towards an ecologically valid neurobiology of bilingualism. *Department of Language Science Colloquium*, University of California Irvine, USA.

16. **Blanco-Elorrieta, E. (2021).** Towards and ecologically valid neurobiology of bilingualism. *Plenary speaker: Young Scholar Speaker Series*, Pennsylvania State University, USA.

15. **Blanco-Elorrieta, E. (2021).** Bilingualism and Cognitive Reserve and Resilience. *NIH National Institute on Aging's Virtual Workshop*, USA.

14. **Blanco-Elorrieta, E. (2020).** The true bilingual advantage. *TEDx Talk*, Tarragona, Spain.

13. **Blanco-Elorrieta, E. (2020).** Towards and ecologically valid neurobiology of bilingualism. *MIT*, Cambridge, USA.

12. **Blanco-Elorrieta, E. (2020).** Bilingualism: questions, answers, and future directions. *Dartmouth University*, New Hampshire, USA.

11. **Blanco-Elorrieta, E. (2020).** Bilingualism, language and cognition. *Meet the author series*, Linguistics Department, NYU, USA.

10. **Blanco-Elorrieta, E. (2020).** Bilingual speech comprehension. *Mesgarani lab*. Columbia University, New York, USA.

9. **Blanco-Elorrieta, E. (2020).** Growth in times of crisis. *Entre cuatro paredes*. Expatriados & Co., New York, USA.

8. **Blanco-Elorrieta, E. (2020).** The Neurobiology of Multilingualism. *Linguistics Colloquium*. Cornell University, USA.

7. **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.

5. **Blanco-Elorrieta, E. (2018).** The neurobiology of bilingualism: Insight from MEG. *Language and Cognition Colloquium*. Harvard University, USA.

4. **Blanco-Elorrieta, E. (2018).** The neurobiology of bilingualism: insight from MEG. *Psychology Cognitive Brown Bag*. University of California San Diego (UCSD), USA.

3. **Blanco-Elorrieta, E. (2017).** The neurocognition of bilingualism. *Young Leaders of the Americas Initiative*, New York, USA.

2. **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.

1. **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

7.	**Blanco-Elorrieta, E.** Emmorey, K., & Pylkkänen, L. (2018). Task switching decomposed: MEG evidence from bimodal language switching. Cognitive Neuroscience Society (CNS), Boston, USA.

6.	**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.

5.	**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 combinatory responses in MEG. 29th CUNY Conference on Sentence Processing, Florida, USA.

3.	**Blanco-Elorrieta, E.** & Pylkkänen, L. (2015). Switch mechanisms revealed by MEG: What is special about language switching?. Neuroscience of Language Workshop, Abu Dhabi, UAE.

2.	**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.

1.	**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

18.	**Blanco-Elorrieta, E.,** Hauptman, M., Pylkkänen, L. (2020). Planning production: Morphological, semantic, and syntactic representations. Society for the Neurobiology of Language. Virtual Conference

17.	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.

16.	**Blanco-Elorrieta, E.,** Hauptman, M., Pylkkänen, L. (2020). Planning production: Morphological, semantic, and syntactic representations. Cognitive Neuroscience Society (CNS) Conference, Boston, USA.

15.	**Blanco-Elorrieta, E.,** Gwilliams, L., Pylkkänen, L., & Maranz, A. (2019). Prefrontal cortex aids adaptation to accented speech. Society for the Neurobiology of Language Conference, Helsinki, Finland.

14.	**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.

13.	**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.

12.	**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.

11.   **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.

10.   **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.

9.   Fyshe, A., **Blanco-Elorrieta, E**. & Pylkkänen, L. (2017). The neural representation of concepts during composition. Cognitive Computational Neuroscience (CCN), New York, USA.

8.   **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.

7.   **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.

6.   **Blanco-Elorrieta, E**., Ferreira, V.S., Del Prato, P., & Pylkkänen, L. (2016). The priming of basic combinatory responses in MEG. Cognitive Neuroscience Society (CNS) Conference, New York, USA.

5.   **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.

4.   **Blanco-Elorrieta, E.** & Pylkkänen, 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.

3.   **Blanco-Elorrieta, E.** & Pylkkänen, 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.

2.   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.

1.   **Blanco-Elorrieta, E.** & Pylkkänen, 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.

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:

2020:   *Cognitive Psychology*. Lecture on bilingualism and sign language cognition (Darmouth).
2019:   *Neural bases of Language:* Lecture on the neurobiology of bilingualism (NYU).
2017:   *Neurolinguistics.* Lecture on bilingualism and aging (Young Leaders of the Americas Initiative).
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) Departmental service:
Cognitive Neuropsychology colloquium organizer (Harvard University, 2020-2022).

b) Journal editor: Frontiers in Language Sciences

c) Ad hoc journal reviewer:
Nature Reviews Psychology; Neurobiology of Language; 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; Cerebral Cortex; Journal of Cognitive Neuroscience.

d) Ad hoc grant reviewer:
Polish Ministry of Science and Higher Education, Polish National Centre for Research and Development, Rochester Neuroscience Grant Program.

e) Conference organization:
Program committee (Society for the Neurobiology of Language annual meeting; 2020, 2021).

f) Elected Representative:
Society for the Neurobiology of Language (2019-2022); Linguistics student body (University of Deusto; 2008-2012).

SCIENTIFIC OUTREACH

2022:   Interview at 'Gure artean' podcast, EiTB
2021:   Panelist and Organizer, Early Career Event, Society for the Neurobiology of Language
2021:   Speaker, Doctoral Student Welcome Event, New York University
2021:   TED en Español Podcast episode (available here, in Spanish)

2021:   Interview in Archiletras bi-monthly scientific magazine (available <u>here</u>, in Spanish)
2021:   Baipasa: weekly contribution to science radio program (available <u>here</u>, in Basque)
2020:   Interview in a TV episode of 'The brain hunter' (available <u>here</u>, in Spanish)
2020:   TED Talk in Spain, 2020 (available <u>here</u>, in Spanish)
2020:   Interview on the Neurobiology of multilingualism on COPE radio (available <u>here</u>, in Spanish)
2019:   *'How to build a career in Science'* panelist; Young Leaders of the America Initiative (YLAI)

(TRANS)GENDER ADVOCACY

2022:   University of Oslo: Intersectional Experiences in Academia workshop. Panelist and workshop leader.
2021:   Spanish ministry for Gender Equality: advisory committee
2021:   *'Identity, language, and the future'* Twitch interview for 'The Future Game' (available <u>here</u>, in Basque)
2021:   Bayer pharmaceutical Latin-American branch: Pride event panelist
2021:   *'Non-binary'* feature documentary on trans experience (available <u>here</u>, English subtitles)
2020:   ELA Basque Trade Union: Pride event panelist
2020:   National Organization of Gay and Lesbian Scientists and Technical Professionals: Speaker, career panel
2020:   Harvard Women in STEM Initiative, Mentor
2019:   The Lesbian, Gay, Bisexual & Transgender Community Center: Panelist, 'Being trans* in Academia'

MEDIA COVERAGE (selected)

2020:   'Bilingual individuals' interview in El Pais newspaper (available <u>here</u>, in Spanish)
2020:   *'Genius of a thousand languages'* interview in Deia newspaper (available <u>here</u>, in Spanish)
2020:   Interview on Multilingualism and being a Forbes Scientist, on EITB radio (available <u>here</u>, in Basque)
2020:   *'How does one become a Forbes Scientist?'* interview on ONDA CERO radio; <u>here</u> in Spanish)
2019:   Coverage and Interview in the *Inspire* series by Euronews (available <u>here</u> in English)
2018:   *'When we sign, we build phrases with similar neural mechanisms as when we speak'* (American Association for the Advancement of Science, available <u>here</u> in English)
2018:   *'Uno stesso circuito per lingua parlata e lingua dei segni'*, Le Scienze magazine, available <u>here</u>, in Italian)
2018:   *'Four amazing discoveries you probably didn't hear about this week'*, NSF podcast, <u>here</u>, in English)
2018:   *'How we turn on and off languages'*, Science Daily (available <u>here</u>, in English)
2017:   *'Chatting makes it easy to switch languages'*, Futurity news (available <u>here</u>, in English)
2017*:*   *'Is changing languages effortful for bilingual speakers?',* Science Daily (available <u>here</u>, in English)
2016:   '*Bilinguals are smarter than you think'*, Khaleej Times (available <u>here</u>, in English)

OTHER EDUCATION

Summer Course: Genetics & Neurobiology of Language Course. Cold Spring Harbor Laboratories (2016).
Summer University: German language and literature. Westfälische Wilhems-Universität. Münster, Germany (2011).
Summer University: German language and literature. Heinrich-Heine Universität. Düsseldorf, Germany (2010).

LANGUAGES

Basque/Spanish: Native speaker. **English:** Near native. **German:** Conversational.