

MATIAS FERNANDEZ-DUQUE

Curriculum Vitae, June 2025

Northwestern University
Evanston, IL 60208

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EDUCATION

Ph.D. in Communication Sciences & Disorders 2019 – 2025

Northwestern University, Evanston, IL

Cognitive Science Specialization

Dissertation: “The Effects of Dual-Language Experience on Memory and Creativity”

Committee: Dr. Viorica Marian (advisor), Dr. Adriana Weisleder, Dr. Matthew Goldrick

B.A. in Cognitive Science, *magna cum laude* 2015

University of Pennsylvania, Philadelphia, PA

Honors Thesis: “Identifying the Boundaries of Fast Mapping Learning”

RESEARCH INTERESTS

Bilingualism, memory, creativity, effects of language on higher-order cognition

PUBLICATIONS

Peer-Reviewed Journal Articles

1. **Fernandez-Duque, M.**, Hayakawa, S., & Marian, V. (2023). Speakers of Different Languages Remember Visual Scenes Differently. *Science Advances*, 9(33), eadh0064. <https://doi.org/10.1126/sciadv.adh0064>
2. Fernandez-Duque, F., Miller, E. T., **Fernandez-Duque, M.**, Falk, J., Venable, G., Rabinowicz, S., Becker, C. D., & Hauber, M. E. (2023). Phenotype predicts interspecific dominance hierarchies in a cloud-forest hummingbird guild. *Ethology*, eth.13410. <https://doi.org/10.1111/eth.13410>
3. **Fernandez-Duque, M.**, Chapman, C. A., Glander, K. E., & Fernandez-Duque, E. (2018). Darting primates: Steps toward procedural and reporting standards. *International Journal of Primatology*, 39(6), 1009–1016. <https://doi.org/10.1007/s10764-017-9963-z>

Book Chapters

1. **Fernandez-Duque, M.**, Standley, M., Roy, A., & Marian, V. (in press). Language-dependent memory in bilingualism. In A. de Bruin & D. Trenkic (Eds.), *The Encyclopedia of Applied Linguistics*. Wiley-Blackwell.
2. Chung-Fat-Yim, A., **Fernandez-Duque, M.**, & Marian, V. (2024). Multilingualism, creativity, and problem-solving. In E. Babatsouli (Ed.), *Multilingual Acquisition and Learning: An Eco-Systemic View to Diversity* (Vol. 67, pp. 36–59). John Benjamins Publishing Company. <https://doi.org/10.1075/sibil.67.01chu>
3. Valdés Kroff, J. R., & **Fernández-Duque, M.** (2017). Experimentally inducing Spanish-English code-switching: A new conversation paradigm. In K. Bellamy, M. W. Child, P. González, A. Muntendam, & M. C. Parafita Couto (Eds.), *Issues in Hispanic and Lusophone Linguistics* (Vol. 13, pp. 211–231). John Benjamins Publishing Company. <https://doi.org/10.1075/ihll.13.09val>

Popular Science Essays

1. Marian, V., **Fernandez-Duque, M.**, & Chung-Fat-Yim, A. (2023). The surprising creative power of the multilingual brain. *Fast Company*. <https://fastcompany.com/90884912>

CONFERENCE PRESENTATIONS

1. **Fernandez-Duque, M.**, Chung-Fat-Yim, A., & Marian, V. (accepted). *Associative Thinking in Bilinguals: How Dual-Language Experience Influences Conceptual Associations* [Poster presentation]. 15th International Symposium on Bilingualism, Donostia-San Sebastián, Spain.
2. Chung-Fat-Yim, A., **Fernandez-Duque, M.**, & Marian, V. (accepted). *Language Proficiency and Dominance Shape Bilinguals' Performance on the Alternate Uses Test of Creativity* [Poster presentation]. 15th International Symposium on Bilingualism, Donostia-San Sebastián, Spain.
3. Chen, S., **Fernandez-Duque, M.**, & Marian, V. (2025, April 10-12). *Language proficiency influences divergent thinking in bilinguals* [Poster presentation]. 97th Annual Meeting of the Midwestern Psychological Association, Chicago, IL.
4. Chen, S., **Fernandez-Duque, M.**, & Marian, V. (2025, March 13-15). *Assessing divergent thinking: The impact of scoring methodology on creativity ratings* [Poster presentation]. Society for the Psychology of Aesthetics, Creativity, and the Arts (APA Division 10), New Haven, CT.
5. **Fernandez-Duque, M.**, Chen, S., & Marian, V. (2025, March 13-15). *Bilingualism and creativity: How dual-language proficiency shapes divergent thinking in the Alternate Uses Test* [Conference presentation]. Society for the Psychology of Aesthetics, Creativity, and the Arts (APA Division 10), New Haven, CT.
6. **Fernandez-Duque, M.**, & Marian, V. (2024, November 21-24). *The Consequences of Bilingual Co-Activation for Memory and Creativity* [Conference presentation]. Psychonomic Society 65th Annual Meeting, New York City, NY.
7. **Fernandez-Duque, M.**, Chung-Fat-Yim, A., & Marian, V. (2024, November 21-24). *Dual-Language Experience Influences Divergent Thinking* [Poster presentation]. Psychonomic Society 65th Annual Meeting, New York City, NY.
8. **Fernandez-Duque, M.**, Marian, V., & Hayakawa S. (2023, November 16-19). *Speaking Multiple Languages Changes Memory of Visual Scenes* [Poster presentation]. Psychonomic Society 64th Annual Meeting, San Francisco, CA.
9. **Fernandez-Duque, M.**, Hayakawa, S., & Marian, V. (2023, August 9-12). *Phonological Overlap Facilitates Episodic Memory* [Conference presentation]. Society for Applied Research in Memory and Cognition, Nagoya, Japan.
10. **Fernandez-Duque, M.**, Marian, V., & Hayakawa S., (2022, October 27–28). *Dual-language competition changes memory for visual items*. [Conference presentation]. University of Illinois at Chicago 2022 Bilingualism Forum, Chicago, United States.
11. **Fernandez-Duque, M.**, Hayakawa, S., & Marian, V. (2022, August 4-5). *The effects of dual-language phonological competition on memory*. [Conference presentation]. 4th International Symposium on Bilingual L2 Processing in Adults and Children, Tromsø, Norway.
12. Chabal, S., **Fernandez-Duque, M.**, Hayakawa, S., & Marian, V. (2020, July 29 – August 1). *Role of working memory in language activation during visual scene processing*. [Conference poster]. Cognitive Science Society 42nd Annual Virtual Meeting.

13. **Fernandez-Duque, M.**, Chabal, S., Hayakawa, S., & Marian, V. (2020, June 1 – September 1). *Language activation in visual processing occurs regardless of memory demands*. [Poster presentation]. Association for Psychological Science Poster Showcase.
14. **Fernandez-Duque, M.** & Valdés Kroff, J. R. (2014, October 6). A new conversation paradigm for the experimental study of code-switching in bilingual speech, *Penn State University Undergraduate Exhibition in Hispanic and General Linguistics*. [Poster presentation].

HONORS & AWARDS

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| • Best Oral Student Presentation at the 4 th International Symposium on Bilingual L2 Processing in Adults and Children in Tromsø, Norway. | 2022 |
| • Penn State Undergraduate Exhibition in Hispanic and General Linguistics (PSUxLing) Travel Award (\$500) | 2014 |

GRANTS & FELLOWSHIPS

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| • TGS Conference Travel Grant, Northwestern University (\$1,000) | 2023 |
| • TGS Conference Travel Grant, Northwestern University (\$1,100) | 2022 |
| • Cognitive Science University Fellowship (\$32,844) | 2019 |
| • Pinkel Endowment Undergraduate Research Fund (\$600) | 2015 |

REVIEWER EXPERIENCE

Ad Hoc Journal Reviewer

The Journal of Creative Behavior, Bilingualism: Language and Cognition, Translational Issues in Psychological Science

Conference Abstract Reviewer

International Symposium on Bilingual and L2 Processing in Adults and Children

TEACHING & MENTORING

Teaching Assistant, Northwestern University

- Language Science
- Culture, Language & Learning, Spring 2023-24
- Anatomy & Physiology of the Vocal Mechanism, Fall 2022
- Intro. to Hearing and Speech Acoustics, Fall 2020-22
- Phonetics, Winter 2021-22, 24, 25

Guest Lecturer, Northwestern University

- 1st Year PhD Student Seminar, Fall 2022-23 (Statistics & Programming Resources)
- Language Science, Fall 2023 (Language Acquisition & Perceptual Narrowing)
- Culture, Language & Learning, Spring 2023-24 (Language & Memory in Bilinguals)
- Intro. to Hearing & Speech Acoustics, Fall 2020-22 (Language Acquisition & Perceptual Narrowing)
- Bilingualism, Fall 2020-22 (Bilingual Research Methods)

Research Mentor, Northwestern University

- Suhuai Chen, 2022 – present
Undergraduate Researcher, Northwestern University, Evanston, IL
Various projects, including designing experimental stimuli and writing code to analyze multilingual datasets.
- Arshi Hirani, 2023 – 2024
High School Researcher, Colleyville Heritage High School, Colleyville, TX
Project on bilingualism and executive functions for the 2024 Texas State Science and Engineering Fair.

RESEARCH & WORK EXPERIENCE

PhD Candidate

- Bilingualism and Psycholinguistics Research Lab, Northwestern Univ. 2019 – present
Advisor: Dr. Viorica Marian

Undergraduate Researcher

- Thompson-Schill Laboratory, University of Pennsylvania 2013 – 2015
Advisors: Dr. Sharon Thompson-Schill & Dr. Jorge Valdés-Kroff
- Dahan Laboratory, University of Pennsylvania 2012 – 2013
Advisor: Dr. Delphine Dahan
- Linguistics Department, University of Pennsylvania 2012
Advisor: Dr. Gillian Sankoff

Market Researcher

- Senior Analyst at Collage Group, Bethesda, MD 2016 – 2018

MEDIA COVERAGE

Interviews

- ViX: Noticias Univision 24/7, “[Los retos y beneficios de criar un hijo bilingüe](#)” (2024)
- Univision Chicago, “[La inteligencia artificial llegó para quedarse: ¿puede esta tecnología poner en riesgo tu empleo?](#)” (2023)
- Descifrando La Ciencia Podcast, [Hablar varios idiomas y tu cerebro](#) (2022)

Media Coverage

- *The Conversation*. Why bilinguals have a memory advantage – new research. August 16, 2023. <http://theconversation.com/why-bilinguals-may-have-a-memory-advantage-new-research-211530>
- *Big Think*. Being bilingual affects your visual perception and memory. September 4, 2023. <https://bigthink.com/neuropsych/language-affects-memory/>
- *El País*. “Un idioma es una forma de ver el mundo”: las personas que hablan distintas lenguas memorizan mejor. August 19, 2023. <https://elpais.com.cdn.ampproject.org/c/s/elpais.com/salud-y-bienestar/2023-08-19/un-idioma-es-una-forma-de-ver-el-mundo-las-personas-que-hablan-distintas-lenguas-memorizan-mejor.html?outputType=amp>
- *Northwestern Now*. Was it a tortoise, or a torte? Study finds overlapping sounds can cue memory across languages. August 18, 2023. <https://news.northwestern.edu/stories/2023/08/spoken-words-influence-memory/>

- *Sciences et Avenir*. Le bilinguisme améliore la mémoire visuelle grâce à l'activation de "mots concurrents" August 30, 2023. https://www.sciencesetavenir.fr/sante/cerveau-et-psy/le-bilinguisme-ameliore-la-memoire-visuelle-grace-a-l-activation-de-mots-concurrents_173433
- *Tagesschau*. Fremdsprachen helfen dem Gedächtnis. August 29, 2023. <https://www.tagesschau.de/wissen/forschung/mehrsprachigkeit-100.html>
- *Neuroscience News*. Bilingual brain boost: How knowing two languages enhances memory and prediction. August 27, 2023. <https://neurosciencenews.com/neuroscience-terms/memory/>
- *Tek Crispy*. Detrás del cerebro bilingüe: ¿Por qué los hablantes de varios idiomas memorizan mejor? August 23, 2023. <https://www.tekcrispy.com/2023/08/23/detras-del-cerebro-bilingue-por-que-los-hablantes-de-varios-idiomasmemorizan-mejor/>
- *Index*. A nyelvtudás megváltoztatja az emlékezetet. September 10, 2023. <https://index.hu/techtud/2023/09/10/pszichologia-emlekezet-nyelv-nyelvtudas-homonimak-hasonlo-hangzasu-szavak/#>
- *Aktual24*. A fi bilingv iti afecteaza perceptia vizuala si memoria. September 5, 2023. https://www.aktual24.ro/a-fi-bilingv-iti-afecteaza-perceptia-vizuala-si-memoria/#google_vignette
- *The Jerusalem Post*. How does bilingualism impact memory? - Study. August 21, 2023. <https://www.jpost.com/health-and-wellness/article-755511>
- *Tech Explorist*. Objects with similar sounds are easier to remember. August 21, 2023. <https://www.techexplorist.com/objects-similar-sounds-easier-remember/67384/>
- *Scinexx*. Wie Sprache unser visuelles Gedächtnis beeinflusst. August 18, 2023. <https://www.scinexx.de/news/psychologie/wie-sprache-unser-visuelles-gedaechtnis-beeinflusst/>

TECHNICAL SKILLS

- Programming Languages: R, Python
- Experimental Design: Qualtrics, PsychoPy, Pavlovia, Prolific
- Microsoft Office

REFERENCES

Dr. Viorica Marian

Ralph and Jean Sundin Endowed Professor

Department of Communication Sciences and Disorders, Northwestern University

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Dr. Adriana Weisleder

Department of Communication Sciences and Disorders, Northwestern University

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Dr. Matthew Goldrick

Departments of Linguistics and Psychology, Northwestern University

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