

Willem S. van Bortel

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PERSONALIA

Citizen of the Netherlands / European Union Citizen
Settled Status (Indefinite Leave to Remain) in the United Kingdom
Skilled Worker (H-1B) in the United States
Languages: English (dominant/nativelike), Dutch (native), German (C2 CEFR)

EDUCATION & EMPLOYMENT

Louisiana State University, Baton Rouge (LA, USA)
Assistant Professor of Communication Sciences and Disorders (from August 2022)
Director, PELICAN Lab (*Psycholinguistics and Electrophysiology In Cognitive Aging and Neural damage*)

Purdue University Aphasia Lab, West Lafayette (IN, USA)
Postdoctoral Fellow (August 2022 – July 2024): Implicit structural priming as a treatment component in aphasia. *Principal Investigator*: Dr Jiyeon Lee, CCC-SLP.

University of Essex, Colchester (UK)
Doctor of Philosophy, Psycholinguistics (August 2022). *Thesis title*: “A Matter of Memory: Sentence Comprehension in Healthy Aging”. *Advisor*: Dr Laurel Lawyer.

University of Essex, Colchester (UK)
Master of Arts MA, with distinction, Psycholinguistics (September 2019)

Birmingham City University, Birmingham (UK)
Bachelor of Arts with Honours, with distinction, English (July 2018)

RESEARCH INTERESTS

- Sentence processing, complex syntactic operations, linguistic prediction, in adult neurogenic disorders and healthy aging;
- Cognitive mechanisms underlying sentence processing in impaired speech and speech across the lifespan (implicit learning, Working Memory, processing speed)
- Advanced statistical modelling, including multilevel modelling for proportional / bounded variables, applied Bayesian models, Beta and zero-inflated regression.
- Experimental methods applied to cognition and language impairments, using neuroimaging methods to study underlying cognitive patterns during language processing.
- Development & application of new experimental & treatment techniques, including webcam-based eye-tracking and structural priming.

AWARDS & HONORS

Purdue Speech, Language, and Hearing Sciences Outstanding Research Contribution Award	Feb 2024
Purdue Health and Human Sciences Life Inspired Research Event First Place Poster Award	March 2023
Associate Fellow of the United Kingdom Higher Education Academy (commended)	Jul 2021 - Present
Howard Jackson Prize (Birmingham City University)	Jun 2018

PUBLICATION RECORD

Lee, J., **Van Boxtel, W.S.**, Weirick, J.D., Martin, N., Ferreira, V., Bauman, E., Haven, L.N., Sayers, M. and Manning, R.C.G. (2025). Implicit structural priming as a treatment component for sentence production in aphasia: specifying essential treatment components. *Journal of Cognitive Neuroscience*. <https://doi.org/10.1080/02643294.2025.2479485>.

Van Boxtel, W.S., Linge, M., Manning, R.C.G., Haven, L., and Lee, J. (2024). Online Eye Tracking for Aphasia: A Feasibility Study Comparing Web and Lab Tracking and Implications for Clinical Use. *Brain and Behavior*, 14(11). <https://doi.org/10.1002/brb3.70112>.

Van Boxtel, W.S. & Lawyer, L.A. (2024). A Matter of Memory? Age-Invariant Relative Clause Disambiguation And Memory Interference in Older Adults. *Thematic Issue on Language Change and Impairment in Healthy Aging, Topics in Cognitive Science*. <https://doi.org/10.1111/tops.12753>.

Jerro, K., O’Gara, F., Ngoboka, J.P., Lawyer, L.A., and **Van Boxtel, W.S.** (2024). Meaning or Morphology: Individual Differences in the Categorization of Kinyarwanda Nouns. *Glossa Psycholinguistics*. <https://doi.org/10.5070/G6011226>.

Van Boxtel, W.S., Cox, B.N., Keen, A., and Lee, J. (2023). Planning sentence production in aphasia: evidence from structural priming and eye-tracking. *Frontiers in Language Sciences*, 2, 1175579. <https://doi.org/10.3389/flang.2023.1175579>

Van Boxtel, W.S. & Lawyer, L.A. (2023). In the Prime of Life: ERP Evidence for Syntactic Comprehension Priming in Older Adults. *Journal of Language and Aging Research*, 1(1). <https://doi.org/10.15460/jlar.2023.1.1.1108>.

Van Boxtel, W.S. & Lawyer, L.A. (2022). Syntactic Comprehension Priming and Lexical Boost Effects in Older Adults. *Language, Cognition, Neuroscience*. <https://doi.org/10.1080/23273798.2022.2091151>

Van Boxtel, W.S. & Lawyer, L.A. (2021). Sentence Comprehension in Aging and Alzheimer’s Disease. *Language and Linguistics Compass*, vol.15(6). DOI: <https://doi.org/10.1111/lnc3.12430>.

Under review:

Van Boxtel, W.S., and Weirick, J.D. (under review). Reading Comprehension in Aphasia: A Review of Research, Assessment, and Treatment. *Language and Linguistics Compass*.

Van Boxtel, W.S., Zhang, P., Rainey, K.M., Martin, N., Ferreira, V., and Lee, J. (under review) Structural priming as treatment: the role of lexical–syntactic interactions. *American Journal of Speech–Language Pathology*. <https://osf.io/d9sxx/>.

Van Boxtel, W.S., Zhang, P., Martin, N., Ferreira, V., and Lee, J. (under review) Cross-modality treatment generalization in agrammatic sentence comprehension: Evidence from webcam-based eye-tracking. *International Journal of Communication Sciences and Disorders*. <https://osf.io/rhbue/>.

Van Boxtel, W.S. and Miller, A.N. (under review) Re-learning language: A meta-analysis of syntactic priming in aphasia. *Aphasiology*. <https://osf.io/gfpz9/>.

In Preparation:

Lee, J., **Van Boxtel, W.S.**, Keen, A., and Man, G. (in prep.) Visual attention in word order choice: evidence from eyetracking in aging and aphasia. <https://osf.io/twzpn/>.

Van Boxtel, W.S., Hart, A., and Gautreau, Z. (in prep.) There Is No Age-Related Sentence Processing Deficit: Evidence from Implicit and Explicit Tasks. *Journal of Memory and Language*.

Van Boxtel, W.S., Miller, A.N., Folse, A., and Cody, C. (in prep.) Predictive processing remains functional in aphasia despite memory interference: A partial replication of Mack et al. (2013) using webcam-based eye-tracking. <https://osf.io/8zur3/>.

FUNDING & GRANTS — CURRENT

PI: American Speech-Hearing Foundation **Dec 2024 – Nov 2025**
New Investigators Research Grant (\$10,000)

With the aim of extending the validation of online eye-tracking methods in combination with determining whether patients with aphasia use predictive processing during speech comprehension and production, this grant application was awarded \$10,000 in funding.

Co-I: Provost's Fund for Innovation in Research **2024 – 2025**
Multidisciplinary Clinical Research Grant Writing for NIH (\$10,000)

This award was granted to bring two external speakers to Louisiana State University to hold workshops on grant writing for NIH proposals.

FUNDING & GRANTS — PAST

PI: Louisiana Board of Regents **2025–2028 Cycle**
Research Competitiveness Sub-Program (Applied; not funded)

Co-PI: Purdue Center for Research on Brain, Behavior, **April 2024**
and NeuroRehabilitation (CEREBBRAL) (\$5,000; awarded, returned)
Pilot Grant Funding

PI: National Aphasia Association **Summer 2023**
Barbara Martin Aphasia Research Grant (Applied; not funded)

PI: Purdue Institute for Integrative Neuroscience **12 Dec 2022**
Travel Award (\$300)

Co-I: University of Essex Faculty of Social Sciences **from Oct 2019**
Executive Dean's Fund (£5,071)

PI: Essex Social Sciences Doctoral Scholarship **2019-2022**
(Approx. £40,000)

SERVICE TO THE FIELD

Judge – Louisiana State University Undergraduate Research Conference Poster Session	Apr 2025
Volunteer – Louisiana State University College of Humanities and Social Sciences Faculty Reception, DESTINATION LSU	Apr 2025
Panellist – Purdue Postdoc Association Mentorship Panel	Feb 2025
Committee Member – Department of Communication Sciences and Disorders <u>Curriculum Committee</u>	Fall 2024–present
Committee Member – Department of Communication Sciences and Disorders <u>Admissions Committee</u>	Fall 2024–present
Senator – Louisiana State University & College of Humanities and Social Sciences Faculty Senate	Fall 2024–present
Grant Reviewer – Indiana Clinical and Translational Studies Institute Postdoctoral Funding Challenge	Spring 2023 & Spring 2024
Grant Reviewer – European Science Foundation	May – June 2023
Judge – Purdue Office of Undergraduate Research Undergraduate Research Conference	April 2023
Conference Organisation – Language at the University of Essex	Jan 2020 – July 2021
Research Assistant – Language Attrition & EEG	June 2021 - Aug 2022

Ad-Hoc Journal Reviews:

Psychology and Aging	July 2025
Nature Scientific Reports	October 2022, July 2025
Frontiers in Aging Neuroscience	February 2025, May 2025
BMC Psychology	January 2025
Aging, Neuropsychology, & Cognition	December 2024
Language, Cognition, Neuroscience	April 2024
Journal of Neurolinguistics	April 2024
Aphasiology	April 2023
Frontiers in Psychology	December 2022, July 2023
Intl. Journal of Language and Communication Disorders	August 2022
Neuropsychology Review	August 2022
Cognition	June 2022
Frontiers in Education	June 2022
Essex Student Journal	Febr ‘21 — July ‘22

SKILLS

Tools: EEG/ERP recording, Eye-Tracking (including online), OpenSesame, PsychoPy/Pavlovian, E-Prime, EEGlab, EyeLink, PRAAT, Gorilla.sc

Coding: R (fluent), L^AT_EX (fluent), (R) Markdown (fluent), Unix/Linux (familiar), Python (familiar), Matlab/EEGLab (familiar).

General: advanced mixed regression modelling (including non-linear and Bayesian), descriptive/inferential statistics, experimental design

TEACHING EXPERIENCE

Main Instructor, Special Topics in Linguistics **Spring 2025**
(Louisiana State Univ. COMD7750)

Main Instructor, Anatomy & Physiology for Speech and **Fall 2024 – Present**
Hearing Sciences (Louisiana State Univ. COMD4250)

Main Instructor, Phonetics **Fall 2024**
(Louisiana State Univ. COMD / LING 3150)

Co-Instructor, Language Disorders in Adults **Spring 2024**
(Purdue Univ. SLHS531); *Principal instructor: Dr Jiyeon Lee, CCC-SLP.*

Visiting Lectures, Speech-Language Disorders in Health Care **Autumn 2023**
Settings (Purdue Univ. SLHS430); *Principal instructor: Dr Jiyeon Lee, CCC-SLP.*

Assistant Lecturer **Oct 2020-Mar 2022**
University of Essex - Understanding Data in Linguistics

Graduate Teaching Assistant **Oct-Dec 2019**
University of Essex - Child Language Development

MENTORING EXPERIENCE

Anugraha Thorat **Aug 2025 – Jul 2029**
Pursuing: PhD in Communication Sciences and Disorders at Louisiana State University.

Postdoctoral Fellowship – Mentoring **Aug 2022–present**
From August 2022 I mentored four undergraduate, two graduate, and three PhD students in the use of behavioral and eye-tracking research methodology and data analysis.

INVITED TALKS

Purdue University **20th November 2023**
Speech, Language, and Hearing Sciences
Webcam-based eye tracking for clinical research: Evidence from healthy older adults and people with aphasia.

University of Essex **19th October 2023**
Department of Language and Linguistics
Language Rehabilitation through Syntactic Priming: Evidence from healthy older adults and people with aphasia

Beckman Institute / University of Illinois **8th February 2023**
Language Rehabilitation through Syntactic Priming: Evidence from healthy older adults and people with aphasia

Purdue National Student Speech, Language, and **9th November 2022**
Hearing Association Assessment Tool Workshop

CONFERENCE PRESENTATIONS & POSTERS

- 10/2024.** Sein Min, Willem S. van Boxtel & Jiyeon Lee. Fluency improvement in aphasia through sentence-level training. Academy of Aphasia Annual Meeting 2024, Nara, Japan.
- 10/2024.** Willem S. van Boxtel, Peng Zhang, Victor Ferreira, Nadine Martin, & Jiyeon Lee. Structural priming yields cross-modality treatment gains in aphasia: Evidence from webcam-based eye-tracking. Academy of Aphasia Annual Meeting 2024, Nara, Japan.
- 10/2024.** Jiyeon Lee, Willem S. van Boxtel, Katelin M. Rainey, Emily Bauman, Victor Ferreira, Nadine Martin & Sein Min. Using structural priming as an aphasia treatment: The role of lexical-syntactic Interactions. Academy of Aphasia Annual Meeting 2024, Nara, Japan.
- 11/2023.** Willem van Boxtel, Michael Linge, Rylee Manning, Lily Haven, & Jiyeon Lee. Online Eye-Tracking for Clinical Research: A Validation Study with Aphasia Patients. American Speech-Hearing Association Annual Convention, Boston, MA, USA.
- 10/2023.** Willem van Boxtel, Briana Cox, Austin Keen, & Jiyeon Lee. Priming from sentence comprehension to production in aphasia: evidence from eye-tracking. Academy of Aphasia Annual Meeting 2023, Reading, UK.
- 10/2023.** Willem van Boxtel, Michael Linge, Rylee Manning, Lily Haven, & Jiyeon Lee. Online Eye-Tracking for Clinical Research: A Validation Study with Aphasia Patients. Society for the Neurobiology of Language 2023, Marseille, France.
- 4/2023.** Nadia Seye, Willem van Boxtel, Josua Weirick, & Jiyeon Lee. The influence of sentence production training on speech fluency in post-stroke aphasia and older adults. Purdue Undergraduate Research Conference, Purdue University, West Lafayette, IN.
- 3/2023.** Willem van Boxtel, Michael Linge, Rylee Manning, Lily Haven, & Jiyeon Lee. Remote Eye-Tracking for Clinical Research: Designing a Validation Study with Aphasia Patients. Health and Human Sciences Life Inspired Research Event, Purdue University, West Lafayette, IN.
- 10/2022.** Willem van Boxtel & Laurel Lawyer. There Is No Age-Related Sentence Processing Deficit: Experimental Evidence and Implications for Aphasiology. Academy of Aphasia Annual Meeting 2022, Philadelphia, PA, United States.
- 10/2022.** Willem van Boxtel & Laurel Lawyer. In the Prime of Life: ERP Evidence for Syntactic Comprehension Priming in Older Adults. (Poster). Society for the Neurobiology of Language Annual Meeting 2022, Philadelphia, PA, United States.
- 4/2022.** Willem van Boxtel & Laurel Lawyer. In the Prime of Life: Electrophysiological Evidence for Syntactic Comprehension Priming in Older Adults. (Poster). 2022 Cognitive Aging Conference, Atlanta, GA, United States.
- 3/2022.** Willem van Boxtel & Laurel Lawyer. A Matter of Memory? Age-Invariant Relative Clause Disambiguation And Memory Interference in Older Adults. Corpora on Language and Aging Research 5 (CLARE5), Anchorage, AK, United States.
- 4/2021.** Willem van Boxtel & Laurel Lawyer. Syntactic Representations Remain Intact in Aging: Evidence from Structural Comprehension Priming. International Workshop on Language in Healthy and Pathological Aging, University of Salamanca.
- 7/2020.** Willem van Boxtel & Laurel Lawyer. The Bilingual Mind Matters: An EEG Study into Inhibition Advantages in Sequential Bilinguals. UK Cognitive Linguistics Conference, Birmingham, UK.

PROFESSIONAL DEVELOPMENT

Teaching Language Science Symposium Vanderbilt / Texas Christian University	Jun 2025
Summer Grant Writing Workshop Louisiana State University Office of Research and Economic Development	Jun 2025
Introduction to Python for Social Scientists University of Essex	Jul 2021
Virtual EEGLAB Workshop UC San Diego	Jun 2021
Routes to Impact University of Essex	17th Mar 2021
Cognitive and Affective Neurophysiology Summer School University of Porto	7-10th Sep 2020
MATLAB & PsychToolBox University of Essex	Jan 2020