Dr Greg Woodin BA, MA, MA, PhD

Website www.gregwoodin.co.uk

Google Scholar https://scholar.google.co.uk/citations?user=7xUR-DQAAAAJ&hl=en

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Post-doctoral researcher in cognitive science, psychology, and linguistics, combining computational corpus and experimental methods to investigate how multimodal communication is shaped by—and shapes—cognition, with a focus on iconicity, metaphor, gesture, and numerical cognition.

Academic Appointments

- Research Fellow in Data Sciences (Jan 2025–Present), Language and Cognition Lab, Experimental Psychology, University College London, Prof Gabriella Vigliocco
- Post-doctoral Research Fellow (Jul 2024–Dec 2024), Translation and Transcultural Studies, University of Warwick, Dr David Orrego-Carmona
- Post-doctoral Research Fellow (Aug 2023–Aug 2024), Linguistics and Communication, University of Birmingham, Prof Bodo Winter
- Post-doctoral Research Assistant (Nov 2022–June 2023), Linguistics and Communication, University of Birmingham, Prof Bodo Winter

Education

- PhD English Language and Applied Linguistics (2019–2023), University of Birmingham, supervised by Prof Bodo Winter, Prof Jeannette Littlemore, and Dr Marcus Perlman
- MA Social Research (2018–2019), University of Birmingham
- MA by Research English Language and Applied Linguistics (2017–2018), University of Birmingham, supervised by Prof Bodo Winter and Prof Jeannette Littlemore
- BA (hons.) English Language (2014–2017), University of Birmingham

Publications

- **Woodin,** G. (in press). Iconicity in language and communication. *International Encyclopedia of Language and Linguistics*, 3rd edition.
- Winter, B., Woodin, G. & Perlman, M. (in press). Defining iconicity for the cognitive sciences. In Fischer, O., Akita, K., & Perniss, P. (Eds.) Oxford Handbook of Iconicity in Language. Oxford, UK: Oxford University Press, https://osf.io/5e3rc/
- **Woodin**, G. & Winter, B. (2024). Numbers in context: Cardinals, ordinals, and nominals in American English. *Cognitive Science*, 48 (6): 1-27, http://dx.doi.org/10.1111/cogs.13471
- **Woodin,** G., Winter, B., Littlemore, J., Perlman, M. & Grieve, J. (2024). Large-scale patterns of number use in spoken and written English. *Corpus Linguistics and Linguistic Theory*, 20(1): 123–152, https://doi.org/10.1515/cllt-2022-0082
- Banks, B., Borghi, A., Fargier, R., Fini, C., Jonauskaite, D., Mazzuca, C., Montalti, M., Villani, C. & Woodin, G. (2023). Consensus paper: Current perspectives on abstract concepts and future research directions. *Journal of Cognition*, 6(1): 62, 1–26, https://doi.org/10.5334/joc.238
- Woodin, G. (2023). Interfaces between Language and Cognition: Metaphor, Iconicity, and Multimodal Numerical Communication. PhD thesis. University of Birmingham, https://etheses.bham.ac.uk/id/eprint/13504/
- **Woodin,** G., Winter, B. & Padilla, L. (2022). Conceptual metaphor and graphical convention influence the interpretation of line graphs. *IEEE Transactions on Visualization and Computer Graphics*, 28(2): 1209 1221, http://doi.org/10.1109/TVCG.2021.3088343.
- Perlman, M. & **Woodin,** G. (2021). A complete real-world theory of language should explain how iconicity remains a stable property of linguistic systems. *Journal of Cognition*, 4(1): 43, http://doi.org/10.5334/joc.166
- **Woodin,** G., Winter, B., Perlman, M., Littlemore, J. & Matlock, T. (2020). 'Tiny numbers' are actually tiny: Evidence from gestures in the TV News Archive. *PLOS One*, https://doi.org/10.1371/journal.pone.0242142
- Woodin, G. (2019). Degrees of Metaphoricity: A Quantitative Gesture Analysis. MA thesis. University of Birmingham, https://etheses.bham.ac.uk/id/eprint/9966/

• **Woodin**, G. & Winter, B. (2018). Placing abstract concepts in space: quantity, time and emotional valence. *Frontiers in Psychology*, 9, 2169: 1-14, https://doi.org/10.3389/fpsyg.2018.02169

Work in Preparation

- **Woodin,** G., Lorson, A., & Winter, B. (in prep). How round is 'a million'? Numbers are more approximate at higher magnitudes.
- Duffy, S., Littlemore, J., Turner, S., **Woodin**, G., Winter, B. (in prep). Out of the mouths of babes: How children employ metaphor and spatial representations to reason about number, time, emotion and music.
- **Woodin,** G., Winter, B., & Perlman, M. (in prep). Iconicity in the evolution of spoken vocabularies: From utterance to the lexicon.

Keynotes

• Birmingham English Language Postgraduate Conference 2023 – University of Birmingham. How people talk and think about numbers: Insights from corpus and cognitive linguistics.

Invited Presentations

- Psycholinguistics Coffee 2025 Talk University of Edinburgh. How round is 'a million'? Numerical cognition is more approximate at higher magnitudes.
- Cognition, Language, Sound Symbolism, Iconicity (CLaSSI) Lab 2025 Talk Carleton University. Interfaces between language and cognition: Metaphor, iconicity, and multimodal numerical communication. https://osf.io/kga4c
- Language and Cognition Lab 2025 Talk University College London. Interfaces between language and cognition: Metaphor, iconicity, and multimodal numerical communication. https://osf.io/kga4c
- Cognitive Research Group 2022 Talk Northumbria University. The spatial representation of abstract concepts. Funded by Northumbria University (£162). https://northumbriaenglish.org/2022/10/17/spatial-representation-of-abstract-concepts/
- **PG Tips 2022 Talk University of Birmingham.** Why I chose an Alternative Format Thesis and what it entails. https://twitter.com/PGTipsUoB
- The Linguistics Lab 2022 Talk FAU Erlangen-Nürnberg. Rounding as communicative practice: A large-scale corpus analysis of number frequencies. https://osf.io/ce2s3
- Open Science Festive Gifts 2021 Talk Virtual. Making science open to all: The Realising Opportunities programme.
- Potsdam Embodied Cognition Group 2021 Talk University of Potsdam. Conceptual metaphor and graphical convention influence the interpretation of line graphs. https://osf.io/9gz62
- Psycholinguistics Coffee 2021 Talk University of Edinburgh. 'Tiny numbers' are actually tiny: Evidence from gestures in the TV News Archive. https://osf.io/mzcxn
- Birmingham-Budapest Doctoral Seminar 2021 Talk University of Birmingham & Eötvös Loránd University. Building a multimodal corpus with the TV News Archive. https://osf.io/8uah4
- English Language Conference for A-Level Students 2020 Talk Worcester Racecourse. Metaphor in language and thought. https://www.southbromsgrove.worcs.sch.uk/
- English Language Research Seminar 2019 Talk University of Birmingham. The spatial organisation of abstract thought. https://osf.io/dvynf
- **PG Tips 2019 Talk University of Birmingham.** Using the TV News Archive for gesture research. https://osf.io/9p6q2
- Figurative Language: Experimental and Corpus-based Studies 2018 Poster University of Nottingham. Thinking metaphorically: what do figurative language and metaphoric gestures reveal about thought? Funded by University of Nottingham. https://osf.io/a6jup

Peer-reviewed Presentations

- 45th Annual Meeting of the Cognitive Science Society 2024 Poster Rotterdam. Numbers in context: Cardinals, ordinals, and nominals.
- 16th International Cognitive Linguistics Conference 2023 Talk HHU Düsseldorf. How numerical communication reflects cognition: A corpus-based analysis.

- British Association for Applied Linguistics 2022 Talk Queen's University Belfast. How people
 gesture when they talk about actions: Evidence from English TV news media. Funded by ESRC RTSG (see
 Awards and Achievements). https://osf.io/uz7d3
- 9th Conference of the International Society for Gesture Studies 2022 Talk Loyola University Chicago. Data science methods for the study of co-speech gesture: Open datasets and baseline machine learning. Funded by ESRC RTSG (see Awards and Achievements). https://www.youtube.com/watch?v=lq4rXwLphgE/
- Language and Cognition at Birmingham 2022 Talk University of Birmingham. What metaphor and iconicity reveal about the mind: Interfaces between language and cognition. https://osf.io/xg68a
- **IEEE Visualization & Visual Analytics (VIS) 2021 Talk Virtual.** Conceptual metaphor and graphical convention influence the interpretation of line graphs. https://osf.io/b73hw
- Embodied and Situated Language Processing (ESLP) 2021 Talk Virtual. Conceptual metaphor and graphical convention influence the interpretation of line graphs. https://osf.io/9s6ba
- **Protolang 7 2021 Talk University of Düsseldorf.** The iconic impetus of language: From sensorimotor simulation to the lexicon. https://www.youtube.com/watch?v=8Z9HGJBj3o8
- Birmingham English Language Postgraduate Conference 2021 Talk University of Birmingham. The iconic impetus of language: From sensorimotor simulation to the lexicon. https://osf.io/guavc
- 5th International Conference on Figurative Thought and Language 2020 Talk Sofia University. Tiny numbers are actually tiny: Gestural evidence from the TV News Archive. https://osf.io/nyu6k
- **UK Cognitive Linguistics Conference 2020 Poster University of Birmingham.** The effect of conceptual metaphors on the interpretation of data visualisations. https://osf.io/xjctu
- Language and Cognition at Birmingham 2019 Poster University of Birmingham. More is mostly up: Vertical trumps horizontal in spatial metaphors for quantity. https://osf.io/bpsae
- 12th International Symposium on Iconicity in Language and Literature 2019 Talk Lund University. Degrees of metaphoricity: a large-scale, quantitative analysis of iconic gestures in the TV News Archive. Funded by ESRC RTSG (see Awards and Achievements). https://osf.io/pgdc7
- Birmingham English Language Postgraduate Conference 2019 Talk University of Birmingham. Degrees of metaphoricity: a large-scale, quantitative analysis of gestures in the TV News Archive. https://osf.io/pv5mb
- The Creative Power of Metaphor 2019 Poster University of Oxford. Degrees of metaphoricity: a quantitative gesture analysis. Funded by ESRC RTSG (see Awards and Achievements). https://osf.io/5cm9d
- **Spatial Cognition 2018 Poster University of Tübingen**. Placing abstract concepts in space: quantity, time and emotional valence. https://osf.io/ursn5
- Researching and Applying Metaphor 2018 Talk Hong Kong Polytechnic University. The continuity of metaphor? Horizontal and vertical metaphors in the spatialization of time, quantity and valence. Funded by School of EDACS and College of Arts & Law (£575). https://osf.io/r2wt9
- Research Poster Conference 2018 Poster University of Birmingham. Thinking metaphorically: what do language and gesture reveal about thought? https://osf.io/b9su3
- Birmingham English Language Postgraduate Conference 2018 Talk University of Birmingham.
 Metaphors of space: recent developments and new questions in Conceptual Metaphor Theory.
 https://osf.io/jvcb4

Co-authored Presentations

- 45th Annual Meeting of the Cognitive Science Society 2024 Poster Rotterdam. Goal bias in using spatial language to describe changing quantities.
- 45th Annual Meeting of the Cognitive Science Society 2024 Poster Rotterdam. Rounding and magnitude: Pragmatic halos are bigger for larger numbers.
- 7th International Symposium on Figurative Thought and Language 2023 Talk University of Genoa. Using spatial language to describe quantities: A corpus-based analysis of English change-of-state verbs.
- 16th International Cognitive Linguistics Conference 2023 Talk HHU Düsseldorf. A corpus analysis of English change-of-state verbs used to talk about quantity.
- 16th International Cognitive Linguistics Conference 2023 Talk HHU Düsseldorf. How children and adults use metaphor to reason about time, number, emotion, and music.

- 16th Researching and Applying Metaphor Conference 2023 Talk Universidad de Alcalá. 'I've drawn five blobs and five half blobs': Comparing the ways in which children and adults use metaphor to reason about time, number, emotion, and music.
- Numerical Cognition Workshop 2023 Talk ZAS Berlin. Preference for round numbers in corpus data.

Teaching

- Consultancy 2022. Mentoring MA student and advising on their dissertation.
- PG Tips 2022 Talk University of Birmingham. A crash course in statistical modelling. https://osf.io/xgjqu
- Teaching Associate 2021–2022 UG Fundamentals of Language: Sounds and Words. Leading two seminars per week (10 weeks) and marking assessments.
- Realising Opportunities Academic Skills Module Reflective Tutor 2021–2022. Providing feedback on reflective pieces written by students enrolled on the ASM programme. https://www.birmingham.ac.uk/teachers/year-12/realising-opportunities.aspx
- **Teaching Associate 2021 UG Applied Linguistics University of Birmingham.** Leading two seminars per week (10 weeks) and marking assessments.
- PG Tips 2021 Workshop University of Birmingham. Linear and logistic regression in R. https://osf.io/sa26g
- PG Tips 2021 Talk University of Birmingham. A crash course in statistical modelling. https://osf.io/3xctn
- **PG Tips 2020 Workshop University of Birmingham.** Using R and RStudio for data wrangling and visualization. https://osf.io/38hzb

Academic Experience

- Statistical Consultant at University of Birmingham (Oct 2023 Present). Statistical analysis for SignMorph project with Prof Adam Schembri
- Research Communications Assistant (Sep 2024 Nov 2024). Designing research posters for Department of Linguistics and Communication
- Research Assistant at University of Birmingham (Jun 2021 July 2021). Conducting literature review and scraping tweets for polarization study with Prof Jack Grieve and Dr Matteo Fuoli
- Committee Member for Birmingham English Language Postgraduate Conference 2021 (February 2021 April 2021). Reviewing abstract submissions and chairing conference sessions
- Panel Chair for UK Cognitive Linguistics Conference 2020 (July 2020)
- Research Assistant at University of Birmingham (Jun 2018 Jun 2020). Running reaction time tests and conducting statistical analyses for Prof Jeannette Littlemore, Prof John Barnden, and Dr Eirini Mavritsaki
- Research Assistant at University of Birmingham (Feb 2020 Mar 2020). Running experiments for Dr Dagmar Divjak and Dr Peter Milin
- Committee Member for UK Cognitive Linguistics Conference 2020 (Jan 2020 Mar 2020) Reviewing abstract submissions
- **BEAR Software Carpentry Python** (Sep 2019). Training in Python and Linux programming and using Git for version control
- Student Member of Quinquennial Vice-Chancellor's Integrated Review (Nov 2019 Mar 2020). Participating in review of School of History and Cultures at University of Birmingham
- Assistant for Birmingham Statistics for Linguists Summer School (Jun 2018). With Prof Bodo Winter, Dr Timo Röettger, and Dr Márton Sóskuthy
- Teaching Associate at University of Birmingham (Oct 2017 Mar 2020). Running eye-tracking experiments and data-cleaning with Dr Gareth Carroll
- Transcript Checker at University of Birmingham (Dec 2018). Anonymising transcripts for 'Death before birth' research project with Prof Jeannette Littlemore
- Research Centre Assistant at University of Birmingham (Oct 2017 June 2018). Organising Corpus Linguistics Summer School 2018 with Dr Florent Perek, and social media and events promotion for Centre for Corpus Research with Prof Michaela Mahlberg
- Research Assistant at University of Birmingham (Jun 2017 Oct 2017). Analysing gestures in the TV News Archive with Prof Bodo Winter and Dr Marcus Perlman

- Research Assistant at University of Birmingham (Jun 2017 Oct 2017). Coding quantitative data and transcribing spoken data with Prof Jeannette Littlemore
- Research Assistant (Scholarship) at University of Birmingham (May 2016 Aug 2016). Transcribing spoken data using ELAN for pilot study with Prof Jeannette Littlemore
- Freelance Writer at University of Birmingham (May 2016 Aug 2016). Writing for Higher Education project
 with Prof Susan Hunston, and interviewing Prof Mark Ryan and writing short piece relaying his findings to
 public
- Research Assistant at University of Birmingham (May 2016 Jun 2016). Transcribing spoken data for Multimodal Metaphor in Advertising study with Dr Paula Pérez-Sobrino
- Academic Shadowing Scheme at University of Birmingham (Jan 2016 May 2016). Shadowing and having regular meetings with an academic to learn about their various roles at the university

Awards and Achievements

- Awarded **HPC-Europa3 Transnational Access** funding (travel, accommodation, and subsistence) to undertake 10-week high-performance computing visit to Dr Peter Uhrig at FAU Erlangen-Nürnberg (€3,080) (2021). http://www.hpc-europa.eu/
- Awarded HEFi Horizon Award for completing five modules relating to higher education teaching (2021). https://www.birmingham.ac.uk/university/hefi/index.aspx
- Awarded Constance Naden Medal for submitting the highest quality thesis for the MPhil/MRes/MA by Research degree across the College of Arts and Law (2018)
- Awarded ESRC Midlands Graduate School DTP Studentship. 1+3 programme. Annual payment consists
 of course fees (£4,260) and maintenance award (£14,777), and £2,250 Research Training Support Grant
 (RTSG) (2018), https://warwick.ac.uk/fac/cross_fac/mgsdtp/studentships/
- Offered AHRC Midlands3Cities DTP Studentship (annual course fees £4,260 + annual maintenance award £14,777, and £600 Research Training Support Grant) (2018). https://www.midlands4cities.ac.uk/ (now Midlands4Cities)
- Highly Commended in Language & Linguistics category of The Undergraduate Awards Programme 2017
 (2017) (now The Global Undergraduate Awards) https://gua.soutron.net/Portal/Default/en-GB/RecordView/Index/1421
- Awarded College of Arts & Law Masters Scholarship to undertake MA by Research in English Language and Applied Linguistics at the University of Birmingham worth £4,195 (2017). https://www.birmingham.ac.uk/funding/postgraduate/college-of-arts-and-law-masters-scholarships.aspx
- Awarded **Gwyneth Fox Award** for having highest mark overall (80.291) enrolled on the English Language or the English Language and Linguistics single honours programmes worth £250 (2017).
- Won **Vera Adamson Prize** for being the first-year undergraduate deemed to have produced "the most outstanding work in the field of Modern English Language" worth £100 (2015).
- Won the **Sonnenschein Prize**, given to "first year students whose performance in their examinations is deemed to be of sufficient merit" worth £75 (2015).
- Longlisted for the **Notting Hill Editions Essay Prize 2015** amongst names such as Hilary Mantel (2015). https://www.nottinghilleditions.com/prizes/
- Awarded **Access to Birmingham (A2B) Scholarship** for undergraduate study worth £4,500 (2014). https://www.birmingham.ac.uk/alumni/giving/support-students/access-to-birmingham-scholarships.aspx
- Received unconditional offer to undertake undergraduate degree at the University of Birmingham (2014).

Programming

- **R:** Out of the mouths of babes: How children employ metaphor and spatial representations to reason about number, time, emotion and music (2023–2025). https://osf.io/g7g2s/
- Python and R: Numbers in context: Cardinals, ordinals, and nominals in American English (2023–2024), https://osf.io/mdtb4/
- Python and R: Large-scale patterns of number use in spoken and written English (2020–2023), https://osf.io/ze9vk/
- R: A time series regression analysis of Covid-19 deaths in the UK (2022), https://osf.io/esb79/
- Python and R: Polarization on Twitter (2021–2022), https://osf.io/dn8ac

- R: Conceptual metaphor and graphical convention influence the interpretation of line graphs (2019–2022), https://osf.io/5acis/
- **R:** An introduction to R (2020–2021), https://osf.io/p4e67/
- R: 'Tiny numbers' are actually tiny: Evidence from gestures in the TV News Archive (2019–2020), https://osf.io/dncjg/
- R: The verticality of vagueness: Variation in spatial-numerical cognition (2018–2020), https://osf.io/w8hg7/
- R: Degrees of metaphoricity (2017–2018), https://osf.io/3mpc7/

Peer Reviews

- Metaphorical embodiment of size and amount in co-speech gestures. Current Psychology.
- When words and pointing compete: Young children's referential comprehension under uncertainty. **Journal** of Experimental Child Psychology.
- Metaphorical embodiment of size and amount in co-speech gestures. Metaphor and Symbol.
- The language of infographics: Toward understanding conceptual metaphor use in scientific storytelling. IEEE
 Transactions on Visualization and Computer Graphics.
- Diachronic changes of number use in the TIME magazine from 1923 to 2008. Language Sciences.
- A multimodal approach to polysemy: the senses of touch. **Language and Cognition.** https://doi.org/10.1017/langcog.2024.23
- Iconic hand gestures from ideophones exhibit stability and emergent phonological properties: An iterated learning study. **Cognitive Science.**
- Perceptual strength norms for 510 Japanese words, including ideophones: A comparative study with English. **CogSci 2023.** https://escholarship.org/uc/item/1cg0835m
- Expressing attitudes indirectly by manipulating the distance and size of objects in an interactive software environment. **Metaphor and Symbol.** https://doi.org/10.1080/10926488.2023.2215847
- Things we smell and things they smell like: Communicatively relevant odours and odorants. **International Journal of Corpus Linguistics.** https://doi.org/10.1075/ijcl.21028.pou
- Implicit effect of abstract/concrete components in the categorization of Chinese words. **Journal of Cognitive Psychology.** https://doi.org/10.1080/20445911.2022.2049279
- Time heals all wounds: Analysis of changes in temporal focus and implicit space-time mappings among survivors of the 2018 China earthquake over time. Language and Cognition. https://doi.org/10.1017/langcog.2021.14
- The influence of metaphor-congruent motor action on word learning of adults and children. Journal of Cognitive Psychology.
- An implicit task reveals space-time associations along vertical and diagonal axes. Psychological Research. https://doi.org/10.1007/s00426-021-01561-y
- Towards a corpus-based description of speech-gesture units of meaning: the case of the circular gesture. **International Journal of Corpus Linguistics.** https://doi.org/10.1075/ijcl.20174.che
- Un-box LIS signs: conceptual metaphors comprehension through the eyes of hearing speakers. Language and Cognition.
- The vertical time-space association. **Quarterly Journal of Experimental Psychology.** https://doi.org/10.1177/17470218211057031
- Is there an iconic motivation for the morphophonological distinctions between noun-verb pairs in American Sign Language? Language and Cognition.
- Cultural evolution leads to vocal iconicity in an experimental iterated learning task. **Journal of Language Evolution.** https://doi-org.eres.qnl.qa/10.1093/jole/lzab001
- Quantifying the speech-gesture relation with massive multimodal datasets: Informativity in time expressions. **PLOS One.** https://doi.org/10.1371/journal.pone.0233892
- Figurative meaning in multimodal work by an autistic artist and vlogger: A cognitive semantic approach. **Language and Cognition.** https://doi.org/10.1017/langcog.2020.20
- 'Living things': Combative metaphors and urban youth culture in Abolore Akande Adigun's (9ice) hip hop music. **Metaphor and the Social World.**
- Low numbers from a low head? Effects of observed head orientation on numerical cognition. **Psychological Research.** https://doi.org/10.1007/s00426-019-01221-2

• The vertical and horizontal pair-order effect among Mandarin speakers: Number and time might not be associated through spatial mediation. **Acta Psychologica.**

Miscellaneous

- Wrote post for Cognitive Science's CogSci Unpacked blog: https://cognitivesciencesociety.org/how-we-use-numbers/
- Open Data and Open Materials badges awarded to Woodin & Winter (2024) in *Cognitive Science*, https://onlinelibrary.wiley.com/doi/10.1111/cogs.13471
- Undertook British Sign Language course (2024)
- Forecaster for Delios, A., Clemente, E., Wu, T., Tan, H., Wang, Y., Gordon, M., Viganola, D., Chen, Z., Dreber, A., Johannesson, M., Pfeiffer, T., Generalizability Tests Forecasting Collaboration, & Uhlmann, E. (2022). Examining the generalizability of research findings from archival data. *Proceedings of the National Academy of Sciences*, 119 (30), 1–9. https://doi.org/10.1073/pnas.2120377119
- **Replicability Stamp** awarded to Woodin et al. (2022) in *IEEE Transactions on Visualization and Computer Graphics*, https://www.replicabilitystamp.org/#https-github-com-gregwoodin-dataviz
- Passed **British Sign Language exams** 101 and 103 (prior to COVID-19 postponement of exams)
- Interviewed for Metaphor & Emotion video alongside **Zoltán Kövecses, Marianna Bolognesi, Jeannette Littlemore**, and **Francesca Citron**, https://www.youtube.com/watch?v=ttUEG6Lafz
- Interviewed for Metaphor Column and interviewed Jeannette Littlemore for RAAM Fall 2020 Newsletter