

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 linguistics, cognitive science, and psychology, utilising data science techniques and experiments to explore numerical communication across modalities, including speech, writing, gesture, and data visualization.

Academic Appointments

- **Post-doctoral Research Fellow** (Aug 2023–Present, University of Birmingham)
Working on Dr Bodo Winter's UKRI Future Leaders Fellowship 'Making Numbers Meaningful' project
- **Post-doctoral Research Assistant** (Nov 2022–June 2023, University of Birmingham)

Education

- **PhD English Language and Applied Linguistics** (2019–2023, University of Birmingham)
Passed with minor corrections; supervised by Professor Jeannette Littlemore, Dr Bodo Winter, and Dr Marcus Perlman
- **MA Social Research** (2018–2019, University of Birmingham)
Distinction; supervised by Professor Jeannette Littlemore and Dr Bodo Winter
- **MA by Research English Language and Applied Linguistics** (2017–2018, University of Birmingham)
Passed with no corrections; supervised by Professor Jeannette Littlemore and Dr Bodo Winter
- **BA (hons.) English Language** (2014–2017, University of Birmingham)
First class degree (average 80%); dissertation supervised by Dr Bodo Winter

Publications

- **Woodin, G. & Winter, B. (2024).** Numbers in context: Cardinals, ordinals, and nominals in American English. *Cognitive Science*, 48: 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>
- 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/>
- Banks, B., Borghi, A., Fargier, R., Fini, C., Jonauskaitė, 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.** (submitted). Iconicity in language and communication. *International Encyclopedia of Language and Linguistics*, 3rd edition.
- **Woodin, G., Winter, B. & Perlman, M.** (in prep). Iconicity in the evolution of spoken vocabularies: From utterance to the lexicon. *Journal of Language Evolution*.

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).

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/xgjqv>
- **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>

Programming

- **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/5acjs/>
- **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/dncjq/>
- **R:** The verticality of vagueness: Variation in spatial-numerical cognition (2018–2020), <https://osf.io/w8hq7/>
- **R:** Degrees of metaphoricity (2017–2018), <https://osf.io/3mpc7/>

Keynotes

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

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.
- **Cognitive Research Group 2022 – Talk – Northumbria University.** The spatial representation of abstract concepts. Funded by Northumbria University (£162).
- **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/>
- **PG Tips 2022 – Talk – University of Birmingham.** Why I chose an Alternative Format Thesis and what it entails. <https://twitter.com/PGTipsUoB>
- **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>
- **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.
- **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>
- **Potsdam Embodied Cognition Group 2021 – Talk – University of Potsdam.** Conceptual metaphor and graphical convention influence the interpretation of line graphs. <https://osf.io/9qz62>

- **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>
- **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>
- **Psycholinguistics Coffee 2021 – Talk – University of Edinburgh.** 'Tiny numbers' are actually tiny: Evidence from gestures in the TV News Archive. <https://osf.io/mzcxn>
- **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>
- **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>
- **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/py5mb>
- **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>
- **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>
- **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/jvc4>

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.

Academic Experience

- **Consultant at University of Birmingham** (Oct 2023 – Present). Statistical analysis for SignMorph project with Professor Adam Schembri
- **Research Assistant at University of Birmingham** (Jun 2021 – July 2021). Conducting literature review and scraping tweets for polarization study with Professor 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 Professor Jeannette Littlemore, Professor 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 Dr Bodo Winter, Dr Timo Röttger, 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 Professor 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 Professor Michaela Mahlberg
- **Research Assistant at University of Birmingham** (Jun 2017 – Oct 2017). Analysing gestures in the TV News Archive with Dr Bodo Winter and Dr Marcus Perlman
- **Research Assistant at University of Birmingham** (Jun 2017 – Oct 2017). Coding quantitative data and transcribing spoken data with Professor Jeannette Littlemore
- **Research Assistant (Scholarship) at University of Birmingham** (May 2016 – Aug 2016). Transcribing spoken data using ELAN for pilot study with Professor Jeannette Littlemore
- **Freelance Writer at University of Birmingham** (May 2016 – Aug 2016). Writing for Higher Education project with Professor Susan Hunston, and interviewing Professor 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

Peer Reviews

- 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**.

Editorial and Writing Experience

- **Editorial Assistant – Redbrick** (Oct 2017 – July 2018)
<https://www.redbrick.me/author/greg-woodin/>
- **Freelance Journalist – Vice, tmrw, and Redbrick** (July 2017 – July 2018)
<https://www.vice.com/en/contributor/greg-woodin>
<https://www.tmrwmagazine.com/features/legacy/accentism-birmingham>
- **Clubs Editor – Birmingham Wire** (Mar 2016 – June 2018)
<https://birminghamwire.co.uk/>
- **Music Editor – Redbrick** (Aug 2016 – June 2017)
- **Careers Editor – Redbrick** (Jan 2016 – Aug 2016)

Miscellaneous

- Underwent **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>

GREG WOODIN

- 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