

Ryan M. C. Law

MRC Cognition and Brain Sciences Unit
University of Cambridge
15 Chaucer Rd, Cambridge CB2 7EF, UK

ryan.law@mrc-cbu.cam.ac.uk
<https://rmc-law.github.io>

Education

- 2022 – present *PhD in Medical Science*
MRC Cognition and Brain Sciences Unit, University of Cambridge, UK
Supervisors: Dr Olaf Hauk & Prof Matt A. Lambon-Ralph
- 2021 – 2022 *MSc in Cognitive Neuroscience (Research)*
Donders Institute for Brain, Cognition and Behaviour, Radboud University, the Netherlands
Supervisors: Dr Hugo Weissbart & Dr Andrea E. Martin
- 2015 – 2018 *BA in Linguistics*
University College London, UK
Supervisor: Dr Wing Yee Chow

Awards and Scholarships

- 2024 *Student Award, 23rd International Conference on Biomagnetism (AUD500)*
- 2022 *Gates Cambridge Scholarship (Full PhD funding at Overseas rate), accepted*
- 2022 *Leverhulme Doctoral Training Programme for the Ecological Study of the Brain, declined*
- 2022 *UCL Overseas Research Scholarship (PhD tuition at Overseas rate), declined*
- 2022 *UCL Graduate Research Scholarship (PhD tuition at UK Home rate and maintenance), declined*
- 2022 *UCL-Birkbeck Medical Research Council Doctoral Training Programme Funding (PhD tuition at UK Home rate and maintenance), declined*
- 2022 *UCL International Scholar Award for Doctoral Training (PhD tuition at Overseas rate), declined*
- 2021 *Featured Scientist, 100 Scientists of Malaysia, Malaysia*
- 2018 *Best Presentation Prize, UCL Faculty of Brain Sciences Undergraduate Conference*

- 2018 *Sultan Ibrahim Johor Bursary*, State of Johor, Malaysia. (Awarded to promising Malaysian students studying abroad from the Sultanate of Johor in Malaysia).
- 2017 *Summer Undergraduate Research Internship Bursary*, Harvard University, USA.
- 2017 *UCL International Short Mobility Bursary*
- 2015 *Award for Academic Excellence*, UCL Department of Linguistics, UK.

Publications

Manuscripts

- [1] **Law, R.M.C.**, Hauk, O., Lambon Ralph, M.A., (*in review*). A common framework for semantic memory and semantic composition.
- [2] **Law, R.M.C.**, Hauk, O., Lambon Ralph, M.A., (*in prep*). Measuring conceptual specificity in words and phrases using EEG-MEG.
- [3] **Law, R.**, Kaufeld, G., Bosker, H.R., Martin, A.E., (*in prep*). Cortical tracking of linguistic units at different speech rates.
- [4] **Law, R.**, Weissbart, H., Martin, A.E., (*in prep*). Representational dynamics of meaning composition during natural listening.

Peer-reviewed articles

- [1] Rane, S.*, Kirkman, C.F.*, Todd, G.*, Royka, A.*, **Law, R.M.C.***, Cartmill, E., Foster, J.G. (*accepted*). Position: Principles of Animal Cognition to Improve LLM Evaluations. *Proceedings of the 42nd International Conference on Machine Learning (ICML)*. (*equal contribution.) [[OpenReview](#)]
- [2] Hauk, O., Magnabosco F., **Law, R.M.C.** (2023). Can we separate semantic representations from computations? A commentary on Calzavarini (2023). *Language, Cognition and Neuroscience*. DOI: [10.1080/23273798.2023.2226269](https://doi.org/10.1080/23273798.2023.2226269)
- [3] **Law, R.**, Pykkänen, L. (2021). Lists with and without syntax: A new approach to measuring the neural processing of syntax. *Journal of Neuroscience*. DOI: [10.1523/JNEUROSCI.1179-20.2021](https://doi.org/10.1523/JNEUROSCI.1179-20.2021)
- [4] Tulling, M., **Law, R.**, Cournane, A., Pykkänen, L. (2020). Neural correlates of modal displacement and discourse-updating under (un)certainty. *eNeuro*. DOI: [10.1523/ENEURO.0290-20.2020](https://doi.org/10.1523/ENEURO.0290-20.2020)

Presentations

Invited talks

- [1] *University of Oxford, Psycholinguistics Seminar*. Oxford, UK. (2025, May)
- [2] *Neuroscience of Language Lab*, New York University, USA. (2025, May)
- [3] *University of Cambridge, Cambridge Neuroscience*, Cambridge, UK. (2025, March).
- [4] *Norwich Science Festival*, Norwich, UK. (2025, February).
- [5] *UCL, Linguistics Departmental Seminar Series*. London, UK. (2024, May).
- [6] *Bristol University, Department of Computer Science*. Bristol, UK. (2023, December).
- [7] *Dartmouth College, Department of Linguistics*. Hanover, New Hampshire, USA. (2020, October).

Slide presentations

- [1] **Law, R.M.C.**, Hauk, O., Lambon Ralph, M.A. (2025, July). Meaning construction in the anterior temporal lobe: an MEG/EEG study. Blitz talk presentation at the MEG-UKI Conference 2025. London, UK.
- [2] Rane, S.*, Kirkman, C.F.*, Todd, G.*, Royka, A.*, **Law, R.M.C.***, Cartmill, E., Foster, J.G. (2024, December). Principles of Animal Cognition for LLM Evaluations: A Case Study on Transitive Inference. *NeurIPS 2024 Workshop on Behavioral Machine Learning*. Vancouver, Canada. (*equal contribution.)
- [3] **Law, R.M.C.**, Lambon Ralph, M.A., Hauk, O. (2024, August). Tracking compositional semantic processing using MEG and EEG. Slide presentation at the 23rd International Conference on Biomagnetism. Sydney, Australia.
- [4] **Law, R.**, Weissbart, H., Martin, A.E. (2022, May). Decoding composition during natural listening. Slide presentation at the Radboud University Cognitive Neuroscience Conference Synapsium. Nijmegen, the Netherlands.
- [5] **Law, R.**, Kaufeld, G., Bosker, H.R., Martin, A.E. (2021, September). Cortical tracking of linguistic units at different rates. Slide slam at 13th Annual Meeting of the Society for the Neurobiology of Language Virtual Edition.
- [6] **Law, R.**, Pylkkänen, L. (2020, May). Lists with and without syntax: Neural correlates of syntactic structure. Data blitz presentation at the CNS 2020 Virtual Meeting.
- [7] **Law, R.**, Pylkkänen, L. (2019, April). Neural correlates of syntactic structure: MEG study using lists. Slide presentation at the Neuroscience of Language Conference 2019. Abu Dhabi, UAE.
- [8] **Law, R.**, Arkhipova, Y., Chow, W.Y. (2018, March). Tracking expectation reversal during discourse comprehension using EEG. Slide presentation at the Faculty of Brain Sciences Fifth Annual Undergraduate Conference. London, UK.

Poster presentations

- [1] **Law, R.M.C.**, Hauk, O., Lambon Ralph, M.A. (2025, July). Meaning construction in the anterior temporal lobe: an MEG/EEG study. Poster presentation at the MEG-UKI Conference 2025. London, UK.

- [2] **Law, R.M.C.**, Lambon Ralph, M.A., Hauk, O., (2024, October). Tracking the neural dynamics of compositional semantics with MEG and EEG. Poster presentation at the MEG-UKI Conference 2024. Birmingham, UK.
- [3] **Law, R.M.C.**, Lambon Ralph, M.A., Hauk, O., (2023, October). An MEEG study bridging semantic composition and semantic cognition. Poster presentation at the 15th Annual Meeting of the Society of the Neurobiology of Language. Marseille, France.
- [4] **Law, R.**, Weissbart, H., Martin, A.E., (2022, June). Decoding composition during natural listening. Poster presentation at the International Max Planck Research School Conference: Interdisciplinary Approaches to the Language Sciences. Nijmegen, the Netherlands.
- [5] **Law, R.**, Kaufeld, G., Bosker, H.R., Martin, A.E., (2022, April). Cortical tracking of linguistic units at different rates. 18th NVP Winter Conference on Brain and Cognition. Egmond aan Zee, the Netherlands.
- [6] **Law, R.**, Pylkkänen, L. (2020, June). Lists with and without syntax: Neural correlates of syntactic structure. Virtual poster presentation at the International Max Planck Research School Conference: Interdisciplinary Approaches to the Language Sciences.
- [7] **Law, R.**, Pylkkänen, L. (2020, May). Lists with and without syntax: Neural correlates of syntactic structure. Poster presentation at the CNS 2020 Virtual Meeting.
- [8] **Law, R.**, Pylkkänen, L. (2019, October). Lists with and without syntax: MEG effects of syntactic composition when local conceptual combination is controlled. Poster presentation at the International Brain and Syntax Think Tank. Evanston, USA.
- [9] Arkhipova, Y., Sostarics, T., **Law, R.**, Xiang, M., Chow, W.Y. (2019, September). ‘Nonetheless’ can reverse predictions immediately: evidence from ERPs. Poster presentation at the 25th Architectures and Mechanisms of Language Processing Conference. Moscow, Russia.
- [10] **Law, R.**, Pylkkänen, L. (2019, August). Lists with and without syntax: MEG effects of syntactic composition when local conceptual combination is controlled. Poster presentation at the 11th Annual Meeting of the Society for the Neurobiology of Language. Helsinki, Finland.
- [11] Tulling, M., **Law, R.**, Cournane, A., Pylkkänen, L. (2019, August). Discourse belief updating in the right hemisphere. Poster presentation at the 11th Annual Meeting of the Society for the Neurobiology of Language. Helsinki, Finland.
- [12] Arkhipova, Y., **Law, R.**, Xiang, M., Chow, W.Y. (2019, March). ‘Nonetheless’ can reverse predictions immediately: evidence from ERPs. Poster presentation at the 32nd Annual CUNY Human Sentence Processing Conference. Boulder, USA.

Teaching

| | |
|--------------|--|
| 2024—present | <i>Supervisor</i> , University of Cambridge, UK Psychology of Language Processing & Learning, Undergraduate |
| 2020 | <i>Guest lecturer</i> , Dartmouth College, USA Psycholinguistics, Undergraduate |

2020 *Instructor*, New York University Abu Dhabi, UAE
MEG preprocessing and analysis workshop, Graduate

Service

| | | |
|--------------|---|--|
| 2025—2027 | Elected representative | Society for the Neurobiology of Language Student and post-doc representative to the Board |
| 2023–present | Equity, Diversity, and Inclusion Committee member | MRC Cognition and Brain Science Unit, University of Cambridge |
| 2022 | Mentor | Cambridge Access to Mental Health & Psychology, Department of Psychiatry, University of Cambridge (aimed at applicants from underrepresented backgrounds in Psychology and Psychiatry) |
| 2020–2022 | Diversity, Equity, and Inclusion Committee member | Max Planck Institute for Psycholinguistics |
| 2019 | Conference organizing committee | Neuroscience of Language Conference, Abu Dhabi |
| Ad-hoc | Reviewer | <i>Language, Cognition, and Neuroscience, Topics in Cognitive Science, Journal of Psycholinguistic Research</i> |

Skills

| | |
|---|---|
| Machine Learning/Deep Learning frameworks | PyTorch, scikit-learn |
| Programming languages | Python (7+ years), R, MATLAB, HTML/CSS, JavaScript |
| Natural languages | English • Mandarin • Malay • Cantonese • Teochew • Hokkien • Dutch (B1) • Arabic (A2) |

Research positions

| | |
|-------------|--|
| 2020 – 2022 | <i>Research project coordinator</i> , Language and Computation in Neural Systems Group Max Planck Institute for Psycholinguistics, the Netherlands Supervisor: Dr Hugo Weissbart & Dr Andrea E. Martin |
| 2022 | <i>Lab rotation student</i> , Cognitive Neuromodulation Lab Radboud University, the Netherlands Supervisors: Soha Farboud & Dr Lennart Verhagen |

- 2021 – 2022 *Lab rotation student*, Neurobiology of Language Department
Radboud University, the Netherlands
Supervisor: Dr Laura Giglio & Prof Peter Hagoort
- 2018 – 2020 *Research assistant*, NYU Neuroscience of Language Lab
New York University Abu Dhabi, UAE
Supervisor: Prof Liina Pykkänen
- 2017 *Research intern*, Harvard Laboratory for Developmental Studies
Harvard University, USA
Supervisor: Dr Tanya Levari & Prof Jesse Snedeker
- 2016 – 2018 *Undergraduate research assistant*, UCL Psycholinguistics Lab
University College London, UK
Dr Caterina Paolazzi & Dr Wing Yee Chow
- 2017 *Undergraduate research assistant*, UCL Experimental Pragmatics Lab
University College London, UK
Dr Sun Chao & Dr Richard Breheny