

# ANDREW PERFORS

Associate Professor, University of Melbourne School of Psychological Sciences

andrew.perfors@unimelb.edu.au

## Research Interests

- Higher-order cognition and social reasoning: language, category and concept learning, and decision making; hypothesis testing and generation; computational (particularly Bayesian) approaches to these issues; linguistic and cultural evolution; information and misinformation transmission

## Career

- **University of Melbourne School of Psychological Sciences (2017-present)**
  - Associate Professor and Deputy Director of the Complex Human Data Hub
- **University of Adelaide School of Psychology (2008 - 2017)**
  - Hired as Lecturer; Senior Lecturer in 2012; Associate Professor in 2016
- **Ph.D., MIT Department of Brain and Cognitive Sciences (2003 - 2008)**
  - Thesis title: *Learnability, representation, and language: A Bayesian approach.*
- **Santa Fe Institute, Complex Systems Summer School (2002)**
  - Coursework in the mathematics of nonlinear dynamical systems and applications of complexity theory. Included independent research work.
- **Peace Corps of America (2000-2001)**
  - Homoine, Mozambique. Secondary school teacher and health educator (English and biology).
- **M.A., Stanford University Department of Linguistics (1999 - 2000)**
  - Thesis title: *Simulated evolution of communication: The emergence of meaning.*
- **B.S., Stanford University (1995 - 1999)**
  - Major: Symbolic systems (with distinction, with honours); Minor: Physics
  - Thesis title: *Slow and steady doesn't win the race: The relation between infant information processing skills and language comprehension.*

## Grants

- 2021: ARC-ONI NI210100224, worth \$573,802. Partner Investigator. Title: *Crowdsourcing persuasive and resilient messages to protect against malign informational influence.*
- 2021: Defence Science Technology Group, worth \$430,000. Partner Investigator. Title: *JIA Mass Influence Case study: Internet Research Agency.*
- 2020: Defence Science Technology Group, worth \$50,000. Partner Investigator. Title: *A Predictive Model for Forecasting and Explaining The Emergence of Internal Violent in Nation-States.*
- 2018: Defence Science Technology Group, worth \$887,593. Chief Investigator. Title: *Understanding information and trust: From the individual to the population.* Strategic Research Initiative, Modelling Complex Human Systems Under Uncertainty
- 2018: Defence Science Technology Group, worth \$93,495. Chief Investigator. Title: *Modelling and studying information and influence in human populations.* Strategic Research Initiative pilot

- 2018 - 2021: ARC Discovery Project DP180103600, worth \$290,011. Chief Investigator. Title: *Where do inductive biases come from? A Bayesian investigation*. 15-20% funding rate.
- 2014 - 2017: ARC Discovery Project DP150103280, worth \$301,300. Chief Investigator. Title: *Learning from others: Inductive reasoning based on human-generated data*. 15-20% funding rate.
- 2016 - University of Adelaide Small Grant Scheme, worth \$20,000. Partner investigator. Title: *Decision-making in a high-risk, uncertain scenario: The case of vaccination*. 20% funding rate.
- 2011 - 2015: ARC Discovery Early Career Researcher Award (DECRA) DE120102378, worth \$375,000. Chief investigator. Title: *What shapes the structure of language? An experimental and computational investigation*. 15-20% funding rate.
- 2010 - 2014: ARC Discovery Project DP110104949, worth \$454,995. Chief investigator. Title: *How are beliefs altered by data? Robust Bayesian models for human inductive learning*. 15-20% funding rate.
- 2007 - 2008: National Science Foundation (NSF) Graduate Research Fellowship: full tuition plus \$30,000 annual living stipend for two years, earned in 2004, deferred until 2007; 10% funding rate
- 2004 - 2006: National Defense Science and Engineering Graduate (NDSEG) Fellowship: full tuition plus \$30,000 annual living stipend for three years; 7% funding rate

## Honours and Awards

- 2020 - MSPS Award for Emerging Excellence in Teaching (University of Melbourne)
- 2019 - *Behaviour Research Methods*: Best Paper Award, De Deyne et al (2019)
- 2016 - *COLING*: Best Paper Award, De Deyne et al (2016)
- 2016 - *Language Learning & Development*: Peter Jusczyk Best Paper Award Winner, Perfors (2016)
- 2016 - Cognitive Science Conference: Marr Award for Best Student Paper, Vong et al (2016)
- 2011 - Executive Dean's Prize for Excellence in Teaching (University of Adelaide), awarded to five out of 700+ staff in the Faculty of Health Sciences
- 2007, 2006 - Walle Nauta Award for Continuing Dedication to Teaching (MIT)
- 2005 - Angus MacDonald Award for Excellence in Undergraduate Teaching (MIT)
- 2003 - Centennial TA Award, given to the top TA in each department (Stanford)
- 2000 - Center for Teaching and Learning Award for Excellence in Teaching (Stanford)
- 1999 - Firestone Medal for Excellence in Undergraduate Research (top 10% of honors theses)
- 1999 - Dean's Award for Academic Excellence, Stanford's most prestigious academic honor, annually awarded to eight undergraduates in the entire university

## Book

1. Chater, N., Clark, A., Goldsmith, J., Perfors, A. (2015) *Empiricism and language learnability*. Oxford University Press. Author order determined alphabetically.

## Journal articles

2. Fay, N., Walker, B., Kashima, Y., Perfors, A. (2021) Socially situated transmission: The bias to transmit negative information is moderated by the social context. *Cognitive Science* 45(9): e13033
3. Sullivan, J., Mei, M., Perfors, A., Wojcik, E., Frank, M. (2021) A large, longitudinal audiovisual dataset recorded from the infant's perspective. *Open Mind* 5: 20-29
4. De Deyne, S., Navarro, D., Collet, G., Perfors, A. (2021) Visual and affective multimodal models of word meaning in language and mind. *Cognitive Science* 45(1): e12922
5. Kashima, Y., Perfors, A., Ferdinand, V., Pattenden, E. (2021) Ideology, communication, and polarisation. *Philosophical Transactions of the Royal Society B* 376: 20200133
6. Croft, J., Grisham, J., Perfors, A., Hayes, B. (2021) Risking everything in Obsessive-Compulsive Disorder: An analogue decision-making study. *Journal of Psychopathology and Behavioral Assessment*
7. Baillie, E., Howe, P., Perfors, A., Miller, T., Kashima, Y., Beger, A. (2021) Explainable models for forecasting the emergence of political instability *PLoS ONE* 16(7): e0254350
8. Garrett, P., White, J., Lewandowsky, S., Kashima, Y., Perfors, A., Little, D., Geard, N., Mitchell, L., Tomko, M., Dennis, S. (2021) The acceptability and uptake of smartphone tracking for COVID-19 in Australia. *PLoS ONE* 16(1): e0244827
9. Lewandowsky, S., Dennis, S., Perfors, A., Kashima, Y., White, J., Garrett, P., Little, D., Yesilada, M. (2021) Public acceptance of privacy-encroaching policies to address the COVID-19 pandemic in the United Kingdom. *PLoS ONE* 16(1): e0245740
10. Kashima, Y., Dennis, S., Perfors, A., Laham, S. (2021) Culture and global societal threats: COVID-19 as a pathogen threat to humanity. *Group Processes & Intergroup Relations* 24(2): 223-230
11. De Deyne, S., Navarro, D., Perfors, A., Brysbaert, M., Storms, G. (2019) The "Small World of Words" English word association norms for over 12,000 cue words. *Behaviour Research Methods* 51: 987-1006  
**\*Best Paper Award Winner\***
12. Hendrickson, A., Perfors, A. (2019) Cross-situational learning in a Zipfian environment. *Cognition* 189: 11-22
13. Hendrickson, A., Perfors, A., Navarro, D., Ransom, K. (2019) Sample size, number of categories and sampling assumptions: Exploring some differences between categorization and generalization. *Cognitive Psychology* 111: 80-102
14. Pryor, C., Perfors, A., Howe, P. (2019) Conformity to the descriptive norms of people with opposing political or social beliefs. *PLoS ONE* 14(7): e0219464
15. Kashima, Y., Bain, P., Perfors, A. (2019) The psychology of cultural dynamics: What is it, what do we know, and what is yet to be known? *Annual Review of Psychology* 70: 499-529
16. Vong, W.K., Hendrickson, A., Navarro, D., Perfors, A. (2019) Do additional features help or hurt category learning? The curse of dimensionality in human learners *Cognitive Science* 43: e12724
17. Pryor, C., Perfors, A., Howe, P. (2019) Even arbitrary norms influence moral decision-making *Nature Human Behaviour* 3: 57-62
18. Navarro, D., Perfors, A., Kary, A., Brown, S., Donkin, C. (2018) When extremists win: Cultural transmission via iterated learning when populations are heterogeneous. *Cognitive Science* 42: 2108-2149
19. Howe, P., Perfors, A. (2018) Commentary: An argument for how (and why) to incentivise replication: Commentary. *Brain and Behavioural Sciences* 41: E135
20. Pryor, C., Perfors, A., Howe, P. (2018) Reversing the endowment effect. *Judgment and Decision Making* 13(3): 275-286

21. Langsford, S., Perfors, A., Hendrickson, A., Navarro, D., Kennedy, L. (2018) Quantifying sentence acceptability measures: Reliability, bias, and variability. *Glossa: A Journal of General Linguistics* 3(1): 37
22. Kennedy, L., Navarro, D., Perfors, A., Briggs, N. (2017) Not every credible interval is credible: Evaluating robustness in the presence of contamination in Bayesian data analysis. *Behavioral Research Methods* 49(6): 2219-2234
23. Perfors, A. (2017) Commentary: On simplicity and emergence. *Psychonomic Bulletin and Review* 24(1): 175-176
24. Smith, K., Perfors, A., Feher, O., Samara, A., Swoboda, K., Wonnacott, E. (2017) Language learning, language use, and the evolution of linguistic variation. *Philosophical Transactions of the Royal Society B: Biological Sciences* 372(1711)
25. Tauber, S., Navarro, D., Perfors, A., Steyvers, M (2017) Bayesian models of cognition revisited: Setting optimality aside and letting data drive psychological theory. *Psychological Review* 124(4): 410-441
26. Perfors, A. (2016) Adult regularization of inconsistent input depends on pragmatic factors. *Language Learning & Development* 12: 138-155 **\*Peter Jusczyk Best Paper Award Winner\***
27. Ransom, K., Perfors, A., Navarro, D. (2016) Leaping to conclusions: Why premise relevance affects argument strength. *Cognitive Science* 40(7): 1775-1796
28. Perfors, A. (2016) Piaget, probability, causality, and contradiction. *Human Development* 59: 26-33
29. De Deyne, S., Navarro, D., Perfors, A., Storms, G. (2016) Structure at every scale: A semantic network account of the similarities between very unrelated concepts. *Journal of Experimental Psychology: General* 145(9): 1228-1254
30. Gökyaydin, D., Navarro, D., Ma-Wyatt, A., Perfors, A. (2016) The structure of sequential effects. *Journal of Experimental Psychology: General* 145: 110-123
31. Hendrickson, A., Navarro, D., Perfors, A. (2016) Sensitivity to hypothesis size during information search. *Decision* 3: 62-80
32. Vong, W.K., Perfors, A., Navarro, D. (2016) The helpfulness of category labels in semi-supervised learning depends on category structure. *Psychonomic Bulletin & Review* 23: 230-238
33. Voorspoels, W., Navarro, D., Perfors, A., Ransom, K., Storms, G. (2015) How do people learn from negative evidence? Non-monotonic generalizations and sampling assumptions in inductive reasoning. *Cognitive Psychology* 81: 1-25
34. Perfors, A. (2014) Commentary: Representations, approximations, and limitations within a computational framework for cognitive science. *Physics of Life Reviews* 11 : 369-370
35. Perfors, A., Navarro, D. (2014) Language evolution can be shaped by the structure of the world. *Cognitive Science* 38 (4): 775-793
36. Navarro, D., Perfors, A., Vong, W.K. (2013) Learning time-varying categories. *Memory and Cognition* 41 : 917-927
37. Perfors, A. (2012) When do memory limitations lead to regularization? An experimental and computational investigation. *Journal of Memory and Language* 67: 486-506
38. Perfors, A. (2012) Bayesian models of cognition: What's built in after all? *Philosophy Compass* 7 (2): 127-138
39. Shafto, P., Eaves, B., Perfors, A., Navarro, D. (2012) Epistemic trust: Modeling children's reasoning about others' knowledge and intent *Developmental Science* 15 (4): 436-447
40. Perfors, A. (2012) Levels of explanation and the workings of science. *Australian Journal of Psychology* 64: 52-59

41. Navarro, D., Perfors, A. (2011) Commentary: Enlightenment grows from fundamentals. *Behavioral and Brain Sciences* 34: 207-208
42. Perfors, A., Tenenbaum, J.B., Griffiths, T., Xu, F. (2011) A tutorial introduction to Bayesian models of cognitive development. *Cognition* 120: 302-321
43. Navarro, D., Perfors, A. (2011) Hypothesis generation, hypothesis testing, and the emergence of the positive test strategy. *Psychological Review* 118: 120-134
44. Perfors, A., Tenenbaum, J.B., Regier, T. (2011) The learnability of abstract syntactic principles. *Cognition* 118 (3): 306-338
45. Griffiths, T., Chater, N., Kemp, C., Perfors, A., Tenenbaum, J. (2010) Probabilistic models of cognition: Exploring representations and inductive biases. *Trends in Cognitive Sciences* 14 (8): 357-364
46. Navarro, D., Perfors, A. (2010) Similarity, feature discovery, and the size principle. *Acta Psychologica* 133: 256-268
47. Perfors, A., Tenenbaum, J., Wonnacott, E. (2010) Variability, negative evidence, and the acquisition of verb argument constructions. *Journal of Child Language* 37: 607-642
48. Foraker, S., Regier, T., Khetarpal, N., Perfors, A., Tenenbaum, J.B. (2009) Indirect evidence and the poverty of the stimulus: The case of anaphoric one. *Cognitive Science* 33 (2): 287-300
49. Kemp, C., Perfors, A., Tenenbaum, J.B. (2007) Learning overhypotheses with hierarchical Bayesian models. *Developmental Science* 10 (3): 307-321
50. Fernald, A., Perfors, A., Marchman, V. (2006) Picking up speed in understanding: How increased efficiency in on-line speech processing relates to lexical and grammatical development in the second year. *Developmental Psychology* 42 (1): 98-116
51. Perfors, A. (2002) Simulated evolution of language: A review of the field. *Journal of Artificial Societies and Social Simulation* 5 (2)

## Peer-reviewed conference publications

52. Howe, P., Perfors, A., Ransom, K. (2021) What interventions and increase or decrease polarisation in a population of rational agents? In T Fitch, C Lamm, H Leder, and K Teßmar-Raible (Eds.) *Proceedings of the 43rd Annual Conference of the Cognitive Science Society*. 1733-1739. Austin, TX: Cognitive Science Society
53. Marris, J., Perfors, A., Mitchell, D., Wang, W., McCusker, M., Lovell, T., Gibson, R., Gaillard, F., Howe, P. (2021) How effective is perceptual training? Evaluating two perceptual training methods on a difficult visual categorisation task. In T Fitch, C Lamm, H Leder, and K Teßmar-Raible (Eds.) *Proceedings of the 43rd Annual Conference of the Cognitive Science Society*. 2678-2684. Austin, TX: Cognitive Science Society
54. Ransom, K., Perfors, A., Stephens, R. (2021) Social meta-inference and the evidentiary value of consensus. In T Fitch, C Lamm, H Leder, and K Teßmar-Raible (Eds.) *Proceedings of the 43rd Annual Conference of the Cognitive Science Society*. 833-839. Austin, TX: Cognitive Science Society
55. Ferdinand, V., Perfors, A. (2020) The evolution of category systems within and between learners. In S Denison, M Mack, Y Xu, and B Armstrong (Eds.) *Proceedings of the 42nd Annual Conference of the Cognitive Science Society*. 648-654. Austin, TX: Cognitive Science Society
56. Perfors, A., Navarro, D. (2019) Why do echo chambers form? The role of trust, population heterogeneity, and objective truth. In A Goel, C Seifert, and C Freksa (Eds.) *Proceedings of the 41st Annual Conference of the Cognitive Science Society*. 918-923. Austin, TX: Cognitive Science Society
57. Ransom, K., Perfors, A. (2019) Exploring the role that encoding and retrieval play in sampling effects. In A Goel, C Seifert, and C Freksa (Eds.) *Proceedings of the 41st Annual Conference of the Cognitive Science Society*. 946-952. Austin, TX: Cognitive Science Society

58. Mehrotra, S., Perfors, A. (2019) Generic noun phrases in child speech. In A Goel, C Seifert, and C Freksa (Eds.) *Proceedings of the 41st Annual Conference of the Cognitive Science Society*. 803-808. Austin, TX: Cognitive Science Society
59. Khoe, Y.H., Hendrickson, A., Perfors, A. (2019) Modeling individual performance in cross-situational word learning. In A Goel, C Seifert, and C Freksa (Eds.) *Proceedings of the 41st Annual Conference of the Cognitive Science Society*. 560-566. Austin, TX: Cognitive Science Society
60. De Deyne, S., Perfors, A., Navarro, D. (2018) Learning word meaning with little means: An investigation into the inferential capacity of paradigmatic information. In C Kalish, M Rau, J Zhu and T Rogers (Eds.) *Proceedings of the 40th Annual Conference of the Cognitive Science Society*. 1608-1613. Austin, TX: Cognitive Science Society
61. Perfors, A., Van Dam, N. (2018) Human decision making in black swan situations. In C Kalish, M Rau, J Zhu and T Rogers (Eds.) *Proceedings of the 40th Annual Conference of the Cognitive Science Society*. 870-875. Austin, TX: Cognitive Science Society
62. Perfors, A., Navarro, D., Shafto, P. (2018) Stronger evidence isn't always better: A role for social inference in evidence selection and interpretation. In C Kalish, M Rau, J Zhu and T Rogers (Eds.) *Proceedings of the 40th Annual Conference of the Cognitive Science Society*. 864-869. Austin, TX: Cognitive Science Society
63. Ransom, K., Hendrickson, A., Perfors, A., Navarro, D. (2018) Representational and sampling assumptions drive individual differences in single category generalisation. In C Kalish, M Rau, J Zhu and T Rogers (Eds.) *Proceedings of the 40th Annual Conference of the Cognitive Science Society*. 930-935. Austin, TX: Cognitive Science Society
64. De Deyne, S., Perfors, A., Navarro, D. (2017) Predicting human similarity judgments with distributional models: The value of word associations. *Proceedings of the 26th International Joint Conference on Artificial Intelligence*. 4806-4810, Melbourne, Australia
65. Langsford, S., Hendrickson, A., Perfors, A., Navarro, D. (2017) When do learned transformations influence similarity and categorization? In G Gunzelmann, A Howes, T Tenbrink, and E Davelaar (Eds.) *Proceedings of the 39th Annual Conference of the Cognitive Science Society*. 2530-2535. Austin, TX: Cognitive Science Society
66. Navarro, D., Perfors, A., Kary, A., Brown, S., Donkin, C. (2017) When extremists win: On the behavior of iterated learning chains when priors are heterogeneous. In G Gunzelmann, A Howes, T Tenbrink, and E Davelaar (Eds.) *Proceedings of the 39th Annual Conference of the Cognitive Science Society*. 847-852. Austin, TX: Cognitive Science Society
67. Ransom, K., Voorspoels, W., Perfors, A., Navarro, D. (2017) A cognitive analysis of deception without lying. In G Gunzelmann, A Howes, T Tenbrink, and E Davelaar (Eds.) *Proceedings of the 39th Annual Conference of the Cognitive Science Society*. 992-997. Austin, TX: Cognitive Science Society
68. De Deyne, S., Perfors, A., Navarro, D. (2016) Predicting human similarity judgments with distributional models: The value of word associations. *26th International Conference on Computational Linguistics (COLING 2016)*, Osaka, Japan: 1861-1870 **\*Best Paper Award Winner\***
69. Vong, W.K., Hendrickson, A., Perfors, A., Navarro, D. (2016) Do additional features help or harm during category learning? An exploration of the curse of dimensionality in human learners. In In A Papafragou, D Grodner, D Mirman and JC Trueswell (Eds.) *Proceedings of the 38th Annual Conference of the Cognitive Science Society*. 2471-2476. Austin, TX: Cognitive Science Society. **\*Marr Prize Winner for Best Student Paper\***
70. De Deyne, S., Verheyen, S., Perfors, A., Navarro, D. (2015) Evidence for widespread thematic structure in the mental lexicon. In R. Dale, C. Jennings, P. Maglio, T. Matlock, D. Noelle, A. Warlaumont, J. Yoshimi (Eds.) *Proceedings of the 37th Annual Conference of the Cognitive Science Society*. 518-523. Austin, TX: Cognitive Science Society.

71. Perfors, A., Ransom, K., Navarro, D. (2014) People ignore token frequency when deciding how far to generalize. In P. Bellow, M. Guarini, M. McShane, B. Scassellati (Eds.) *Proceedings of the 36th Annual Conference of the Cognitive Science Society*: 2759-2764. Austin, TX: Cognitive Science Society.
72. Hendrickson, A., Navarro, D., Perfors, A. (2014) Adaptive information source selection during hypothesis testing. In P. Bellow, M. Guarini, M. McShane, B. Scassellati (Eds.) *Proceedings of the 36th Annual Conference of the Cognitive Science Society*: 607-612. Austin, TX: Cognitive Science Society.
73. Langsford, S., Hendrickson, A., Perfors, A., Navarro, D. (2014) People are sensitive to hypothesis sparsity during category discrimination. In P. Bellow, M. Guarini, M. McShane, B. Scassellati (Eds.) *Proceedings of the 36th Annual Conference of the Cognitive Science Society*: 2531-2536. Austin, TX: Cognitive Science Society.
74. Vong, W.K., Perfors, A., Navarro, D. (2014) The relevance of labels in semi-supervised learning depends on category structure. In P. Bellow, M. Guarini, M. McShane, B. Scassellati (Eds.) *Proceedings of the 36th Annual Conference of the Cognitive Science Society*: 1718-1723. Austin, TX: Cognitive Science Society.
75. Vong, W.K., Hendrickson, A., Perfors, A., Navarro, D. (2013) The role of sampling assumptions in generalization with multiple categories. In M. Knauff, M. Pauen, N. Sebanz, & I. Wachsmuth (Eds.) *Proceedings of the 35th Annual Conference of the Cognitive Science Society*: 3699-3704. Austin, TX: Cognitive Science Society.
76. Perfors, A. (2012) Probability matching vs. over-regularization in language: Participant behavior depends on their interpretation of the task. In Miyake, N., Peebles, D., & Cooper, R. (eds) *Proceedings of the 34th Annual Conference of the Cognitive Science Society*: 845-850. Austin, TX: Cognitive Science Society.
77. Perfors, A., Ong, J. (2012) Musicians are better at learning non-native sound contrasts even in non-tonal languages. In Miyake, N., Peebles, D., & Cooper, R. (eds) *Proceedings of the 34th Annual Conference of the Cognitive Science Society*: 839-844. Austin, TX: Cognitive Science Society.
78. De Deyne, S., Navarro, D., Perfors, A., Storms, G. (2012) Strong structure in weak semantic similarity: A graph based account. In Miyake, N., Peebles, D., & Cooper, R. (eds) *Proceedings of the 34th Annual Conference of the Cognitive Science Society*: 1464-1469. Austin, TX: Cognitive Science Society.
79. Navarro, D., Perfors, A. (2012) Anticipating changes: Adaptation and extrapolation in category learning. In Miyake, N., Peebles, D., & Cooper, R. (eds) *Proceedings of the 34th Annual Conference of the Cognitive Science Society*: 809-814. Austin, TX: Cognitive Science Society.
80. Perfors, A., Navarro, D. (2011) Language evolution is shaped by the structure of the world: An iterated learning analysis. In Carlson, L., Hölscher, C., & T. Shipley (eds) *Proceedings of the 33rd Annual Conference of the Cognitive Science Society*: 477-482. Austin, TX: Cognitive Science Society.
81. Perfors, A. (2011) Memory limitations alone do not lead to over-regularization: An experimental and computational investigation. In Carlson, L., Hölscher, C., & T. Shipley (eds) *Proceedings of the 33rd Annual Conference of the Cognitive Science Society*: 3274-3279. Austin, TX: Cognitive Science Society.
82. Gökaydin, D., Ma-Wyatt, A., Navarro, D., Perfors, A. (2011) Humans use different statistics for sequence analysis depending on the task. In Carlson, L., Hölscher, C., & T. Shipley (eds) *Proceedings of the 33rd Annual Conference of the Cognitive Science Society*: 543-548. Austin, TX: Cognitive Science Society.
83. Yuan, S., Perfors, A., Xu, F., Tenenbaum, J. (2011) Learning individual words and learning about words simultaneously. In Carlson, L., Hölscher, C., & T. Shipley (eds) *Proceedings of the 33rd Annual Conference of the Cognitive Science Society*: 3280-3285. Austin, TX: Cognitive Science Society.

84. Montague, R., Navarro, D., Perfors, A., Shafto, P. (2011) To catch a liar: The effects of truthful and deceptive testimony on inferential learning. In Carlson, L., Hölscher, C., & T. Shipley (eds) *Proceedings of the 33rd Annual Conference of the Cognitive Science Society*: 1312-1317. Austin, TX: Cognitive Science Society.
85. Maurits, L., Perfors, A., Navarro, D. (2010) Why are some word orders more common than others? A uniform information density account. *Advances in Neural Information Processing Systems 23*: 1585-1593. Cambridge, MA: MIT Press.
86. Perfors, A., Burns, N. (2010) Adult language learners under cognitive load do not over-regularize like children. In R. Camtrabone & S. Ohlsson (eds) *Proceedings of the 32nd Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society: 2524-2529.
87. Perfors, A., Dunbar, D. (2010) Phonetic training makes word learning easier. In R. Camtrabone & S. Ohlsson (eds) *Proceedings of the 32nd Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society: 1613-1618.
88. Perfors, A., Navarro, D. (2010) How does the presence of a label affect attention to other features? In R. Camtrabone & S. Ohlsson (eds) *Proceedings of the 32nd Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society: 1834-1839.
89. Stephens, R., Perfors, A., Navarro, D. (2010) Social context effects on the impact of category labels. In R. Camtrabone & S. Ohlsson (eds) *Proceedings of the 32nd Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society: 1411-1416.
90. Perfors, A., Navarro, D. (2009) Confirmation bias is rational when hypotheses are sparse. In N. Taatgen, H. van Rijn, L. Schomaker, & J. Nerbonne (eds). *Proceedings of the 31st Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society: 2471-2476.
91. Maurits, L., Perfors, A., Navarro, D. (2009) Joint acquisition of word order and word reference. In N. Taatgen, H. van Rijn, L. Schomaker, & J. Nerbonne (eds). *Proceedings of the 31st Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society: 1728-1733.
92. Navarro, D., Perfors, A. (2009) Learning time-varying categories. In N. Taatgen, H. van Rijn, L. Schomaker, & J. Nerbonne (eds). *Proceedings of the 31st Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society: 419-424.
93. Perfors, A., Tenenbaum, J.B. (2009) Learning to learn categories. In N. Taatgen, H. van Rijn, L. Schomaker, & J. Nerbonne (eds). *Proceedings of the 31st Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society: 136-141.
94. Ejova, A., Navarro, D., Perfors, A. (2009) When to walk away: The effect of variability on keeping options viable. In N. Taatgen, H. van Rijn, L. Schomaker, & J. Nerbonne (eds). *Proceedings of the 31st Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society: 1258-1263.
95. Foraker, S., Regier, T., Khetarpal, N., Perfors, A., Tenenbaum, J.B. (2007) Indirect evidence and the poverty of the stimulus: The case of anaphoric one. In D. McNamara & J. Trafton (eds.) *Proceedings of the 29th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society: 275-281.
96. Perfors, A., Tenenbaum, J., Regier, T. (2006) Poverty of the stimulus? A rational approach. In R. Sun & N. Miyake (eds.) *Proceedings of the 28th Annual Meeting of the Cognitive Science Society*. Austin, TX: Cognitive Science Society: 663-668.
97. Kemp, C., Perfors, A., Tenenbaum, J. (2006) Learning overhypotheses. In R. Sun & N. Miyake (eds.) *Proceedings of the 28th Annual Meeting of the Cognitive Science Society*. Austin, TX: Cognitive Science Society: 417-422.
98. Perfors, A., Kemp, C., Tenenbaum, J. (2005) Modeling the acquisition of domain structure and feature understanding. In B. Bara, L. Barsalou, & M. Bucciarelli (eds.) *Proceedings of the 27th Annual Meeting of the Cognitive Science Society*. Austin, TX: Cognitive Science Society: 1720-1725.

99. Kemp, C., Perfors, A., Tenenbaum, J. (2004) Learning domain structures. In K. Forbus, D. Gentner, & T. Regier (eds.) *Proceedings of the 26th Annual Meeting of the Cognitive Science Society*. Austin, TX: Cognitive Science Society: 672-677.

### Invited chapters

100. Perfors, A. (2014) Induction in language learning. In P. Brooks & V. Kempe (eds). *Encyclopedia of Language Development*. Sage Publications. 281-283
101. Perfors, A. (2014) Bayesian inference in word learning. In P. Brooks & V. Kempe (eds). *Encyclopedia of Language Development*. Sage Publications. 46-49
102. Perfors, A. Navarro, D. (2012) What Bayesian modelling can tell us about statistical learning: What it requires and why it works. In P. Rebuschat & J. Williams (eds). *Statistical learning and language acquisition*. Mouton de Gruyter. 383-408.
103. Perfors, A. Wonnacott, E. (2011) Bayesian modeling of sources of constraint in language acquisition. In I. Arnon & E. Clark (eds). *Experience, Variation, and Generalization: Learning a first language*. John Benjamins Publishing Company. 277-294
104. Perfors, A. (2011) Simplicity and fit in grammatical theory. In E. Bender & J. Arnold (eds). *Language from a cognitive perspective: Grammar, usage, and processing*. CSLI Publications: Stanford University. 99-120
105. Perfors, A., Tenenbaum, J.B., Gibson, E., Regier, T. (2010) How recursive is language? A Bayesian exploration. In H. van der Hulst (ed). *Recursion and Human Language*. Berlin: Mouton de Gruyter: 159-175.
106. Xu, F., Dewar, K., Perfors, A. (2009) Induction, overhypotheses, and the shape bias: Some arguments and evidence for rational constructivism. In B. Hood & L. Santos (eds.) *The origins of object knowledge*. Oxford University Press: 263-284.
107. Wasow, T., Perfors, A., Beaver, D. (2005) The puzzle of ambiguity. In O. Orgun and P. Sells (eds) *Morphology and the Web of Grammar: Essays in Memory of Steven G. Lapointe*. CSLI Publications: 265-282.

### Pre-prints and under review

108. Perfors, A., Kidd, E. (under review) The role of stimulus-specific perceptual fluency in statistical learning. *Cognitive Science*
109. Ransom, K., Voorspoels, W., Navarro, D., Perfors, A. (under review) Where the truth lies: How sampling implications drive deception without lying. *Cognitive Psychology*
110. Ransom, K., Perfors, A., Hayes, B., Connor Desai, S. (under review) What do our sampling assumptions affect: how we encode data or how we reason from it? *Journal of Experimental Psychology: General*
111. Mansfield, J., Saldana, C., Hurst, P., Nordlinger, R., Stoll, S., Bickel, B., Perfors, A. (under review) Category clustering and morphological learning. *Cognitive Science*
112. White, J., Perfors, A. (under review) Ambiguity aversion in qualitative contexts: A vignette study. *Journal of Behavioural Decision Making*
113. Howe, P., Perfors, A., Walker, B., Kashima, Y., Fay, N. (under review) Base rate neglect and conservatism in probabilistic reasoning: Insights from eliciting full distributions. *Judgment and Decision Making*

114. Garrett, P., White, J., Dennis, S., Lewandowsky, S., Yang, C-T., Okan, Y., Perfors, A., Little, D., Kozyreva, A., Lorenz-Spreen, P., Kusumi, T., Kashima, Y. (under review) Papers please: Predictive factors for the uptake of national and international COVID-19 immunity and vaccination passports. *Journal of Medical Internet Research*
115. Sumner, E., Li, A., Perfors, A., Hayes, B., Navarro, D., Sarnecka, B. (under review) The exploration advantage: Children's instinct to explore allows them to find information that adults miss. *Journal of Experimental Psychology: General*

## Teaching

- **Complex Human Data Summer School (2018-2019)** *Ratings reflect the most recent year.*
  - Co-organiser and founder, with Charles Kemp and Danielle Navarro
  - Week-long introduction to data analysis, R, and online experiments
  - 70-75 students, all-day intensive. Student evaluation: 9.5 out of 10 (median: 10).
- **Centre of Excellence for the Dynamics of Language Summer School (2019)**
  - Two-day intensive introduction to designing experiments in linguistics
  - No student evaluations just for me available
- **University of Melbourne (student evaluations out of 5)** *Ratings reflect the most recent year.*
  - 2020-present: Research Methods, 3rd year, ~700-800 students, 20 lectures & course coordinator  
Student evaluation: 100% positive, mean: 4.97, median: 5  
Winner of the Award for Emerging Excellence in Teaching
  - 2020: Guest lecture, Science and Society, 1st year, one lecture on AI and human intelligence
  - 2018-present: Developmental Psychology, 2nd year, ~800 students, 3 lectures.  
Student evaluation: 94% positive, mean: 4.61, median: 5
  - 2018-present: Advanced Research Methods in Psychology ~120 students, 5 lectures.  
Student evaluation: 87% positive, mean: 4.46, median: 5
  - 2019: R Bootcamp, ~40 students.  
This was an optional extra offered to all members of the school, so no evaluations were done.
  - 2019: Honours Developmental Psychology, Honours year, ~80 students.  
No student evaluations for just me available
  - 2018-2019: Research Methods in Clinical Psychology, Clinical Masters, ~25 students.  
No student evaluations for just me available
  - 2018-2019: Capstone, 3rd year, ~20 students.  
No student evaluations for just me available
- **University of Adelaide (student evaluations out of 7)** *Ratings reflect the most recent year.*
  - 2016-2017: Doing Research in Psychology: Intro to Statistics. 2nd year, ~300 students.  
Student evaluation: 92% positive, mean: 6.4, median: 7
  - 2008-2017: Foundations of Perception & Cognition. 2nd year, ~300 students.  
Student evaluation: 94% positive, mean: 6.7, median: 7
  - 2009-2014: Perception & Cognition. 3rd year, ~200 students:  
Student evaluation: 94% positive, mean: 5.8, median: 6
  - 2010-2014: Computational Cognitive Science. 3rd year, ~15 students.  
Student evaluation: 100% positive, mean: 5.9, median: 6
  - 2010-2011: Doing Research in Psychology: Advanced Statistics. 3rd year, ~200 students.  
Student evaluation: 100% positive, mean: 6.2, median: 6
  - 2009-2011: Statistics and critical issues. Honours, ~50 students.  
Student evaluation: 100% positive, mean: 6.0, median: 6
  - 2008-2011: Introduction to Psychology. 1st year, ~500 students.  
Student evaluation: 94% positive, mean: 5.9, median: 6

- **Massachusetts Institute of Technology**
  - 2005-2008: Guest lecturer  
Cognitive science lab (graduate level)  
Language and Mind (upper level undergraduate)  
Psycholinguistics (upper level undergraduate)
  - Teaching assistant  
2007: Core class in cognitive science (9.012, graduate level)  
2005: Computational cognitive science (9.66, graduate level)  
2004: Introduction to Psychology (9.00, 1st year)
- **Stanford University**
  - Department of Human Biology  
2002-2003: Head course assistant, Human Biology Core (2nd year)  
1999-2000: Course assistant, Human Biology Core (2nd year)
- **Peace Corps (Mozambique)**
  - 2000-2001: Secondary School Biology and English Teacher  
Taught 450+ students per semester (in Portuguese); lived nearby in the village.  
Spearheaded an initiative to begin construction of a community library.

## Supervision

- **Postdoctoral associates**
  - Current: Simon De Deyne (previous DECRA award winner)  
Keith Ransom
  - Former: Vanessa Ferdinand (now working with Yoshi Kashima)  
Andrew Hendrickson (now Lecturer at Tilburg University)  
Sean Tauber (now postdoctoral associate at UNSW, Sydney)  
Wouter Voorspoels (now postdoctoral associate at University of Leuven)
- **PhD students**
  - Current: Andrew Wang (primary)  
Elle Pattenden (secondary)  
Jess Marris (secondary)
  - Former: Campbell Pryor (now in industry)  
Keith Ransom (thesis won University Medal; now postdoctoral associate with me)  
Steven Langsford (now postdoctoral associate at University of Michigan)  
Lauren Kennedy (now lecturer at Monash University)  
Wai Keen Vong (now postdoctoral associate at NYU)  
Dinis Gökaydin (now unknown)  
Luke Maurits (now postdoctoral associate in Finland)  
Rachel Stephens (now lecturer at University of Adelaide)
- **Honours students**
  - 2021: Ronlee Korren
  - 2020: Viola Pucci (1st), Sebastian Duggan (1st), Chuyin Zhang (1st), Hugo Mispelhorn (1st)
  - 2019: Priscilla Samuel (1st), Rachel Yam (1st), Michaela Peters-Vranic (1st)
  - 2018: Winky Lee (1st), Angelina Zha (1st)
  - 2017: Jing Qian (1st), Peter Davies (1st), Micah Cearns (1st)
  - 2014: Zhe Khor (1st)
  - 2013: Hazel Craig (1st), Lauren Kennedy (1st)
  - 2012: Angela Vause (2nd), Wai Keen Vong (1st)

- 2011: Natalie May (1st), Tin Yim Chuk (1st), Joey Ong (1st), Erica Behrens (2nd)
- 2010: Alexandra Christopher (1st), Pamela Lee (1st)
- 2009: David Dunbar (1st), Melissa de Vel (1st), Nick Colebatch (2nd), Xin Wei Sim (2nd)

- **Undergraduates and interns**

- 2019: Joshua White
- 2018: Cheng Chua, Vanessa Thompkins, Samarth Mehrotra
- 2015: Siok Ling Chin
- 2012: Lauren Kennedy, Beatrice Speck, Angela Vause, Timothy Larden, Daniel Carabellese
- 2011: Kym McCormick, Tin Yim Chuk
- 2009-2010: Wai Keen Vong, Natalie May, Joey Ong
- 2008: Wylie Li

## Professional Activities

- **Editorial**

- 2020-present: Senior editor at *Collabra*
- 2019-present: Action editor at *Open Mind*
- 2015-2018: Action editor at *Cognitive Science*
- 2015-2019: Editorial board of *Cognition*
- 2016-2019: Editorial board of *Open Mind*
- 2015-present: Program committee for *Cognitive Science Conference*

- **Student Advisory Committees**

- Committee chair, An Dang (2021-present)
- Committee chair, Valentina Bianchi (2021-present)
- Committee chair, Jesse Shapiro (2018-present)
- Committee chair, Joshua Rhee (2018-present)
- Committee chair, Marcellin Martinie (2018-2019)

- **Reviewing**

- Grants: Review for grant agencies in five countries (Australia, UK, US, Netherlands, Israel)
- Journals: Review for 25+ journals including some of the best ones in the field like *Brain & Behavioral Sciences*, *Cognitive Psychology*, *Developmental Science*, *Trends in Cognitive Sciences*, *PNAS*, and *Psychological Review*.
- Conferences: Review for eight conferences in cognitive science, computational linguistics, language evolution, and machine learning

- **External advising**

- 2019: Dissertation external reader for Jon Carr, University of Edinburgh
- 2018: Dissertation external reader for Babette Rae, University of Newcastle
- 2017: Dissertation external reader for Gabriel Tillman, University of Newcastle
- 2016: Dissertation external reader for Pragati Vasuki, Macquarie University
- 2014: Dissertation external reader for Vanessa Ferdinand, University of Edinburgh
- 2014: Dissertation external reader for Ben Borschinger, Macquarie University
- 2010: Dissertation external reader for Magdalena Dimitru, Macquarie University

- **Service**

- 2021-present: Member, organising committee for the 2022 Cognitive Science Conference
- 2021: Participant in Potentium Wargaming Initiative, Canberra, Australia
- 2021: Organiser of “This is your life” seminar series in the CHDH (Univ Melbourne)
- 2020-present: Advisory Committee, Melbourne Centre for Data Science (Univ. Melbourne)

- 2020-present: Advisory Board, Melbourne Defence Science Enterprise (Univ. Melbourne)
- 2018-present: Deputy Director of Teaching & Learning (Univ. Melbourne)  
Served as acting Director May-June 2021
- 2018-present: Associate Investigator, Centre of Excellence for the Dynamics of Language
- 2020: Member, Data Champions Network (Univ. Melbourne)
- 2018-2019: Member, Data, Systems and Society Research Network (Univ. Melbourne)
- 2018: Member, Two Level C/D search committees, Social Psychology (Univ. Melbourne)
- 2017: Member, Advisory committee, Australasian Society for Philosophy and Psychology
- 2017: Main organiser, 1st Australian Computational Social Science Workshop
- 2017-present: Deputy Director of Complex Human Data Hub (Univ. Melbourne)
- 2017: Member, Level B search committee, School of Mathematics & Statistics (Univ. Adelaide)
- 2016-2017: Member, Faculty of Health Sciences research committee (Univ. Adelaide)
- 2015-2017: Convenor and Chair, School research committee (Univ. Adelaide)
- 2009-2011, 2015-2017: Organiser, School seminar (Univ. Adelaide)
- 2012: Co-organiser, Australasian Mathematical Psychology Conference
- 2010-2011: Member, School infrastructure support committee (Univ. Adelaide)
- 2008-2009: Member, School Occupational Health & Safety Committee (Univ. Adelaide)
- 2005-2006: Member, Dept of Brain & Cognitive Sciences Faculty Search Committee (MIT)
- 2004-2005: Graduate student representative, Dept of Brain & Cognitive Sciences (MIT)

### Selected invited talks (does not include department colloquia, conferences, or symposia)

1. *Beyond corpus data: Language as the result of active, theory-driven, environmentally-grounded inference.* Keynote at 18th Annual Workshop of the Australasian Language Technology Association. January 2021
2. *How do we share information, and how does that shape the information landscape?* Information and Influence Series, co-hosted between University of Melbourne and the Maryland Applied Research Laboratory for Intelligence and Security. October 2020
3. *Data matters: social, cultural, and environmental grounding in human cognition.* UC Santa Barbara Workshop on Mind and Machine Intelligence. February 2020
4. *Unstructured data in psychology: Practical and ethical issues.* DSSRN Symposium on using unstructured data, University of Melbourne. November 2019
5. *Modelling cumulative cultural evolution: Problems and future directions.* Cumulative Cultural Evolution Working Group, Santa Fe Institute. August 2019
6. *Understanding information and trust: From individuals to populations.* Plenary, 6th ASOR National Conference for the Australian Society of Operations Research and Defence Operations Research Symposium. December 2018
7. *What makes us smart? On human and artificial intelligence.* Public lecture, University of Melbourne School of Psychological Sciences May Lecture series. May 2018
8. *Trust and pragmatics in language learning and evolution.* Plenary, Centre of Excellence for the Dynamics of Language summer school. December 2017
9. *Probabilistic approaches to human cognition: What can the math tell us?* University of Adelaide School of Mathematics and Statistics. June 2017
10. *Human decision making and information transmission: vaccination and extremism.* University of New South Wales. June 2017
11. *Data, language, and the mind: How people (and computers) learn, communicate, and reason about a complex world.* University of Rochester and UC Irvine. January 2017

12. *Who said that, and why? How assumptions about socially-generated data drive human learning.* Rational Inferences Workshop, CCD Developing Mind Series. Macquarie University. October 2016
13. *An exploration of when adults regularise, when they don't, and why.* Language Evolution and Computation Group, University of Edinburgh, UK. July 2014
14. *Levels of representation.* NeuroCog collective, Coffs Harbour. June 2014
15. *On the informational value of negative evidence.* Stanford workshop on Gradience in Grammar, Stanford University. January 2014
16. *Acquisition of linguistic structure and regularity: What can the models tell us?* Mayfest conference on the role of computational models in linguistic theory, University of Maryland. May 2012
17. *Language acquisition, representation, and use: What can we learn from computational and experimental evidence?* Harvard-Australia Workshop on Language, Learning, and Logic, Macquarie University. Aug 2011
18. *Comparing adult and child learners: The case of over-regularisation.* Stanford University Computational Language Group, Stanford University. July 2011
19. *Language evolution is shaped by the structure of the world.* Language Evolution and Computation Group, University of Edinburgh, UK. July 2011
20. *For better or for worse? Exploring the source of differences between adult and child language acquisition* Macquarie Centre for Cognitive Science, Macquarie University. October 2010
21. *What's innate, and how much input is enough?* Probabilistic Models of Cognitive Development Workshop, Banff, Canada. May 2009
22. *Learnability in language acquisition.* Berkeley Workshop on Connectionist and Probabilistic Models of Cognition, Berkeley, CA. August 2008
23. *Word learning: Bayes, labels, and inductive constraints.* Workshop on New Directions in Word Learning, York, UK. April 2008
24. *A Bayesian approach to the poverty of the stimulus.* Machine Learning and Cognitive Science of Language Acquisition Workshop, University College London. June 2007
25. *Hierarchical phrase structure and recursion: A Bayesian exploration of learnability.* Recursion in Human Languages Workshop, Normal, IL. April 2007

## Miscellaneous

- **Family**

I have two children, Sam and Luke, born in October 2012 and July 2015  
I'm transgender (he/him)

- **Citizenship**

Australian, American

- **Rugby**

Old Collegian's Women's Rugby Team (2009-2010), Adelaide  
MIT Women's Rugby Team (2003-2006); flanker/scrumhalf and captain (2005)  
San Francisco Women's Rugby Club (captain and MVP) (2000, 2002)  
Stanford Women's Rugby: Division I National Champions (1999) and runners-up (1998)