

Ryan Burnell

Curriculum Vitae

Email: rb967@cam.ac.uk

EMPLOYMENT

- Research Associate** 2021-present
Leverhulme Centre for the Future of Intelligence,
University of Cambridge
- Research Associate** 2020-2021
Leverhulme Centre for the Future of Intelligence,
Imperial College London

EDUCATION

- PhD, Psychology** 2021
University of Waikato, New Zealand
Supervisor: Maryanne Garry
Thesis Title: Empirical support for the adaptive and
maladaptive functions of autobiographical
memory
- Visiting Graduate Student** 2018
Claremont McKenna College, Claremont, CA, USA
- BSc with Honours (1st class)** 2016
Victoria University of Wellington, New Zealand

PUBLICATIONS

- Burnell, R.,** Burden, J., Rutar, D., Voudouris, K., Cheke, L., & Hernandez-Orallo, J. (2022). Not a Number: Identifying instance features for capability-oriented AI evaluation. *Proceedings of the 31st International Joint Conference on Artificial Intelligence*, 2827-2835. <https://doi.org/10.24963/ijcai.2022/392>
- Burnell, R.,** Nash, R. A., Umanath, S., & Garry, M (2022). Memories people no longer believe in can still affect them in helpful and harmful ways. *Memory & Cognition*. <https://doi.org/10.3758/s13421-022-01328-9> (*Altmetric* = 17)
- Rasmussen, A.S., **Burnell, R.,** & Garry, M. (2022). The memories that people would save or erase differ from their most positive and negative memories on function, emotion, and correspondence with the life script. *Memory*. <https://doi.org/10.1080/09658211.2022.2069821> (*Altmetric* = 25)
- Porat, T., **Burnell, R.,** Calvo, R. A., Ford, E., Paudyal, P., Baxter, W. L., & Parush, A. (2021). "Vaccine Passports" may backfire: Findings from a cross-sectional study in the UK and Israel on willingness to get vaccinated against COVID-19. *Vaccines*, 9. [doi:10.3390/vaccines9080902](https://doi.org/10.3390/vaccines9080902) (*Altmetric* = 1037)
- Burnell, R.,** & Garry, M. (2021). People draw on the consequences of others' negative experiences to make unwarranted appraisals about those

experiences. *Journal of Applied Research in Memory and Cognition*, 10(4), 656–666. [doi:10.1016/j.jarmac.2021.03.002](https://doi.org/10.1016/j.jarmac.2021.03.002)

Taylor, A., Sanson, M., **Burnell, R.**, Wade, K., & Garry, M. (2020). Disfluent difficulties are not desirable difficulties: The (lack of) effect of sans forgetica on memory. *Memory*, 28, 850-857. [doi:10.1080/09658211.2020.1758726](https://doi.org/10.1080/09658211.2020.1758726) (Altmetric = 164)

Burnell, R., Garry, M., & Rasmussen, A. S. (2020). Negative memories can serve functions in both adaptive and maladaptive ways. *Memory*, 24, 494-505. [doi:10.1080/09658211.2020.1737133](https://doi.org/10.1080/09658211.2020.1737133) (Altmetric = 14)

Undorf, M., Mah, E. Y., McDonald, D. L., Hamzagic, Z. I., **Burnell, R.**, Garry, M., & Bernstein, D. M. (2020). People who cheat on tests accurately predict their performance on future tests. *Learning and Instruction*, 66.

[doi: 10.1016/j.learninstruc.2019.101295](https://doi.org/10.1016/j.learninstruc.2019.101295)

MANUSCRIPTS UNDER REVIEW

Burnell, R., Umanath, S., & Garry, M. Collective memories of important historical events serve similar functions to people's autobiographical memories. *Revise & resubmit at Memory*.

Zmigrod, L., **Burnell, R.**, & Hameleers, M. The Misinformation Receptivity Framework: Political misinformation and disinformation as Bayesian inference problems exacerbated by unstable or ambiguous communication environments. *Under review at European Psychologist*.

Hohma, E., **Burnell, R.**, Corrigan, C., & Luetge, C. Individuality and fairness in public health surveillance technology: A survey of user perceptions in contact tracing apps. *Accepted for publication with minor revisions at IEEE Transactions on Technology and Society*.

Burnell, R., Peters, D., Ryan, R. M., & Calvo, R. A. Technology evaluations are associated with psychological need satisfaction across different spheres of experience: An application of the METUX Scales. *Under review at Computers in Human Behaviour*.

PREPRINTS

Burnell, R. (2020). R guide for psychology research. <https://ryanburnell.github.io/R-guide/>

Burton-Wood, C., **Burnell, R.**, Taylor, A., Brown, D., Robinson, B., & Garry, M. (2019, July 31). Medical professionals' (mis)remembering of a simulated interaction with a patient: A medical misinformation effect. [doi:10.31234/osf.io/wt8ma](https://doi.org/10.31234/osf.io/wt8ma)

MANUSCRIPTS IN PREPARATION

Burnell, R., Hernandez-Orallo, J., & Cheke, L. Developing a cognitive framework for AI evaluation. *In this manuscript, we lay out a roadmap for developing a cognitive framework for AI evaluation*.

Burnell, R., Burden, J., Martínez-Plumed, F., Schellaert, W., Rutar, D., Cheke, L., Ulman, T., Tenenbaum, J., Mitchell, M., & Hernandez-Orallo, J.

Rethinking the reporting of evaluation data in AI. *In this commentary, we explain how a lack of instance-level evaluation data is causing an evaluation crisis in the field of AI.*

Burnell, R., & Garry, M. Laypeople overestimate the harmful consequences of negative experiences. *In this project, we show that laypeople believe long-term harmful consequences, such as PTSD, are highly likely following a negative experience, despite the fact that most people actually respond to these events with resilience.*

ONGOING RESEARCH PROJECTS

Burnell, R., Rutar, D., Burden, J., Hernandez-Orallo, J., & Cheke, L. A cognitive approach to AI evaluation. *In this project, we are working to develop a framework for evaluating the cognitive capabilities of AI systems, drawing on theories and paradigms from cognitive, developmental, and comparative psychology.*

INVITED TALKS & PANELS

Cognitive Forum, Claremont Graduate University (September, 2022).

Evaluation Beyond Metrics Workshop, IJCAI (July, 2022). Cognitive Evaluation with the Animal AI Environment (panel chair).

The University of Waikato (April, 2022). A cognitive approach to AI evaluation. Psychology Department Seminar.

University of Victoria (October, 2020). The helpful and harmful effects of autobiographical memories. Cognition and Brain Sciences Seminar.

Claremont Graduate University (October, 2019). People's beliefs about negative experiences and the consequences of those beliefs. Psychology Department Seminar.

CONFERENCE PROCEEDINGS

Burnell, R., & Garry, M. (July 2021). Laypeople overestimate the negative consequences of traumatic events. Paper presented at the 2021 Virtual SARMAC Conference.

Burnell, R., & Garry, M. (November 2020). Laypeople's beliefs about PTSD and post-traumatic growth. Poster presented at the 61st annual meeting of the Psychonomic Society.

Burnell, R., & Garry, M. (July 2020). What do laypeople believe about the consequences of traumatic events? Poster presented at the 2020 APS Virtual Poster Showcase.

Burnell, R., & Garry, M. (December 2019). Laypeople overestimate the harm caused by traumatic events. Paper presented at the 6th Kiwi Cognition and Memory Conference, Auckland, New Zealand.

Burnell, R., Umanath, S., & Garry, M. (November 2019). Collective memories serve many of the same functions as people's autobiographical memories.

Poster presented at the 60th annual meeting of the Psychonomic Society, Montreal, Canada.

Burnell, R., & Garry, M. (June, 2019). To what extent do people use memories shared with them by others to evaluate the “owners” of the memories? Paper presented at the 13th biennial meeting of the Society for Applied Research in Memory and Cognition, Cape Cod, MA, USA.

Burnell, R., & Garry, M. (May, 2019). People make appraisals about other people's experiences based on the outcomes of those experiences. Poster presented at the 31st APS Annual Convention, Washington D.C., USA.

Burnell, R., Garry, M., & Zajac, R. (November, 2018). The effect of ease-of retrieval on people's ratings of autobiographical memory functions. Poster presented at the 59th annual meeting of the Psychonomic Society, New Orleans, LA, United States.

Burnell, R., Garry, M., & Nash, R. A. (June, 2018). Retracted memories can continue to serve functions. Poster presented at the 2018 Autobiographical Memory and the Self Conference, Aarhus, Denmark.

Burnell, R., & Garry, M. (December, 2017). People want to protect helpful negative memories. Paper presented at the 5th Kiwi Cognition and Memory Conference, Palmerston North, New Zealand.

Burnell, R., Garry, M., & Nash, R. A. (November, 2017). The helpful and harmful functions of memories people have realized are false. Poster presented at the 58th annual meeting of the Psychonomic Society, Vancouver, BC, Canada.

Burnell, R., & Garry, M. (October, 2017). The effect of cheating on eyewitness confidence. Paper presented at the International Roundtable on Memory Conference, Matsumoto, Japan.

Burnell, R., Burton-Wood, C., Taylor, A., Robinson, B., Brown, D., & Garry, M. (2017, January). Medical practitioners are susceptible to misleading information about their interactions with patients. Paper presented at the 12th biennial meeting of the Society for Applied Research in Memory and Cognition, Sydney, Australia.

Burnell, R., Burton-Wood, C., Taylor, A., Robinson, B., Brown, D., & Garry, M. (2016, November). How accurately do medical practitioners remember their interactions with patients? Paper presented at the 4th Kiwi Cognition and Memory Conference, Dunedin, New Zealand.

Burnell, R., Michael, R. B., & Garry, M. (2015, December). How ordered questions bias eyewitnesses. Paper presented at the meeting of Memory Days, Dunedin, New Zealand.

Burnell, R., Stuart, J., & Jose, P. (2015, July). The moderating effect of disability on the outcomes of bullying and victimisation. Paper presented at the meeting of the Australasian Human Development Association, Wellington, New Zealand.

HONOURS AND AWARDS

Postdoctoral Research Associate, Pembroke College,
University of Cambridge

2022

University of Waikato Doctoral Scholarship, University
of Waikato

2017-2020

SARMAC Travel Award	2019
University of Waikato Summer Research Scholarship, University of Waikato	2016
Victoria Graduate Award, Victoria University of Wellington	2015
Joseph Samuel Beaglehole Prize for highest grades in Psychology, Victoria University of Wellington	2014
Victoria University Summer Research Scholarship, Victoria University of Wellington	2014
Victoria Excellence Scholarship, Victoria University of Wellington	2013-2015

TEACHING EXPERIENCE

Co-instructor for PSYC591 (Dissertation workshop for Honours students), University of Waikato, Hamilton, New Zealand.	2020
Lectured for PSYCH322 (Memory and Cognition), University of Waikato, Hamilton, New Zealand.	2019-2020
Guest lecturer in PSYC40 (Cognitive Psychology), Claremont McKenna College, California, USA.	2019
Assisted in the design and delivery of PSYC360 (an online course on Cyber Security and Crime Science), University of Waikato, Hamilton, New Zealand.	2019
Lectured for PSYC307 (Psychological Research Methods), University of Waikato, Hamilton, New Zealand.	2018
Lectured for PSYC340 (Applied Cognitive Psychology), University of Waikato, Hamilton, New Zealand.	2017
Lectured for PSYC230 (Cognitive Psychology), University of Waikato, Hamilton, New Zealand.	2017
Lectured for PSYC322 (Memory and Cognition), Victoria University of Wellington, Wellington, New Zealand.	2016
Teaching Assistant for COMP103 (Intro to Computer Program Design), Victoria University of Wellington, Wellington, New Zealand.	2015
Tutor for COMP101 (Intro to Data Structures & Algorithms), Victoria University of Wellington, Wellington, New Zealand.	2014-2015

SELECTED MEDIA COVERAGE

Interviewed by BBC News, September 9, 2021.

[Stop Calling It a Pandemic of the Unvaccinated. Yasmin Tayag, *The Atlantic*,
September 16, 2021.](#)

[Font hailed as groundbreaking for learning has no memory boosting effects,
study finds. Phoebe Sourthworth, *The Telegraph*, May 28, 2020.](#)

[Previously claimed memory boosting font 'Sans Forgetica' does not actually
boost memory. *Science Daily*, May 28, 2020.](#)

UNDERGRADUATE STUDENTS MENTORED

Holly Wilson
Jade Wright
Samuel Bell-Tyrer
Jordan Maclaurin
Valentina Papa
Dana Teves

SERVICE

Wellbeing, Equality, Diversity, and Inclusivity committee, Leverhulme Centre for the Future of Intelligence.	2022-
Committee on Diversity and Inclusivity, Society for Applied Research in Memory and Cognition.	2022-
Board member, Society for Applied Research in Memory and Cognition	2019-
Virtual SARMAC Conference Organising Committee.	2020
Organised and delivered PSYCH Survivor, a yearly “on-ramp” programme for at-risk students starting first-year psychology.	2018-2020
Co-chair of the 2018 Kiwi Cognition and Memory Conference, the New Zealand national student cognition and memory conference.	2018