

Daniel Bennett

Curriculum Vitae

School of Psychological Sciences, Monash University, Australia

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Research interests	In my research, I use the methods of computational cognitive science to understand the complex interactions between affect/emotion and cognition. Two areas of primary interest are: (i) the ways that interactions between mood, learning, and decision making go awry in mood disorders like major depression and bipolar disorder, and (ii) the cognitive and affective processes that underlie gambling-related harm in interactive sports betting.	
Employment	<i>Lecturer</i>	2022-present
	School of Psychological Sciences, Monash University	
	<i>Research Fellow</i>	2021-2022
Education	Department of Psychiatry, Monash University	
	<i>Postdoctoral Research Fellow</i>	2017-2020
	Princeton Neuroscience Institute, Princeton University Advisor: Yael Niv	
Publications	<i>Doctor of Philosophy (PhD) in Psychology</i>	2013-2017
	The University of Melbourne Thesis: Belief updating and information seeking in decision making under uncertainty Supervisors: Stefan Bode, Carsten Murawski, Rob Hester	
	<i>Bachelor of Science (Honours) in Psychology</i>	2011
Publications	The University of Melbourne	
	<i>Bachelor of Science and Bachelor of Arts</i>	2007-2010
	The University of Western Australia	
Publications	<i>Peer-reviewed journal articles and book chapters</i>	
	1. Weber, I., Zorowitz, S., Niv, Y., & Bennett, D. (2022). The effects of induced positive and negative affect on Pavlovian-instrumental interactions. In press at <i>Cognition and Emotion</i> .	
	2. Bennett, D. , Davidson, G., & Niv, Y. (2022). A model of mood as integrated advantage. <i>Psychological Review</i> , 129(3), 513-541.	
Publications	3. Bennett, D. , Niv, Y., & Langdon, A. J. (2021). Value-free reinforcement learning: Policy optimization as a minimal model of operant behavior. <i>Current Opinion in Behavioral Sciences</i> , 41, 113-121.	

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4. Smillie, L. D., **Bennett, D.**, Tan, N. P., Sutcliffe, K., Fayn, K., Bode, S., & Wacker, J. (2021). Does openness/intellect predict sensitivity to the reward value of information? *Cognitive, Affective, and Behavioral Neuroscience*, *21*(5), 993-1009.
5. Zorowitz, S., **Bennett, D.**, Choe, G. & Niv, Y. (2021). A recurring reproduction error in the administration of the Generalized Anxiety Disorder Scale. *The Lancet Psychiatry*, *8*(3), 180-181.
6. **Bennett, D.**, Sutcliffe, K., Tan, N. P., Smillie, L. D., & Bode, S. (2021). Anxious and obsessive-compulsive traits are independently associated with valuation of non-instrumental information. *Journal of Experimental Psychology: General*, *150*(4), 739-755.
7. Goh, A. X.-A., **Bennett, D.**, Bode, S., & Chong, T. T.-J. (2021). Neurocomputational mechanisms underlying the subjective value of information. *Communications Biology*, *4*(1), 1-14.
8. **Bennett, D.**, & Niv, Y. (2020). Opening Burton's clock: Psychiatric insights from computational cognitive models. Chapter in *The Cognitive Neurosciences, 6th edition* (M. Gazzaniga, ed.).
9. **Bennett, D.**, Silverstein, S., & Niv, Y. (2019). The two cultures of computational psychiatry. *JAMA Psychiatry*, *76*(6), 563-564.
10. **Bennett, D.***, Sasmita, K.*, Maloney, R. T., Murawski, C., & Bode, S. (2019). Monetary feedback modulates performance and electrophysiological indices of belief updating in reward learning. *Psychophysiology*, *56*(10), e13431.
11. Bode, S., Feuerriegel, D., **Bennett, D.**, & Alday, P. M. (2019). The Decision Decoding ToolBOX (DDTBOX): A multivariate pattern analysis toolbox for event-related potentials. *Neuroinformatics*, *17*(1), 27-42.
12. Sewell, D., Warren, H. A., Rosenblatt, D., **Bennett, D.**, Lyons, M., & Bode, S. (2018). Feedback discounting in probabilistic categorization: converging evidence from EEG and cognitive modelling. *Computational Brain and Behavior*, *1*(2), 165-183.
13. Bode, S., **Bennett, D.**, Sewell, D. K., Paton, B., Egan, G. F., Smith, P. L., & Murawski, C. (2018). Dissociating neural variability related to stimulus quality and response times in perceptual decision-making. *Neuropsychologia*, *111*, 190-200.
14. Brydevall, M.*, **Bennett, D.***, Murawski, C., & Bode, S. (2018). The neural encoding of information prediction errors during non-instrumental information seeking. *Scientific Reports*, *8*, 6134.
15. **Bennett, D.**, Yücel, M., & Murawski, C. (2018). Errors of statistical inference in the Information Sampling Task. *Biological Psychiatry*, *83*(12), e61-e62.
16. **Bennett, D.**, Oldham, S., Dawson, A., Parkes, L., Murawski, C., & Yücel, M. (2017). Systematic overestimation of reflection impulsivity in the Information Sampling Task. *Biological Psychiatry*, *82*(4), e29-e30.
17. Carter, O., **Bennett, D.**, Nash, T., Arnold, S., Brown, L., Cai, R.Y., Allan, Z., Dłuzniak, A., McAnally, K., Burr, D., & Sundram, S. (2017). Sensory integration deficits support a dimensional view of psychosis and are not limited to schizophrenia. *Translational Psychiatry*, *7*, e1118.

18. **Bennett, D.**, Bode, S., Brydevall, M., Warren, H., & Murawski, C. (2016). Intrinsic valuation of information in decision making under uncertainty. *PLoS Computational Biology*, 12(7), e1005020.
19. **Bennett, D.**, Dluzniak, A., Cropper, S., Partos, T., Sundram, S., & Carter, O. (2016). Selective impairment of global motion integration, but not global form integration, in schizophrenia and bipolar affective disorder. *Schizophrenia Research: Cognition*, 3, 11-14.
20. **Bennett, D.** (2015). The neural mechanisms of Bayesian belief updating. *The Journal of Neuroscience*, 35(50), 16300-16302.
21. **Bennett, D.**, Murawski, C., & Bode, S. (2015). Single-trial event-related potential correlates of belief updating. *eNeuro*, 2(5), 1-14.
22. Bode, S., **Bennett, D.**, Stahl, J., & Murawski, C. (2014). Distributed patterns of event-related potentials predict subsequent ratings of abstract stimulus attributes. *PLoS One*, 9(10), e109070.

Extended abstracts in peer-reviewed conference proceedings

23. **Bennett, D.** (2022). No evidence for short-timescale temporal declines in expectations within a controlled cognitive task. *Proceedings of the 44th Annual Meeting of the Cognitive Science Society*.
24. **Bennett, D.**, Davidson, G., & Niv, Y. (2019). Momentum and mood in policy-gradient reinforcement learning. *The 4th Multidisciplinary Conference on Reinforcement Learning and Decision Making*.
25. **Bennett, D.**, Feuerriegel, D., Alday, P. M., & Bode, S. (2017). The Decision Decoding ToolBOX (DDTBOX): A multivariate pattern analysis toolbox for event-related potentials. *Conference on Cognitive Computational Neuroscience 2017*.

Preprints and under review

26. **Bennett, D.***, Radulescu, A.*, Zorowitz, S., Falso, V., & Niv, Y. (under review). Affect-congruent attention drives changes in reward expectations. Preprint hosted at *PsyArXiv*: <https://psyarxiv.com/vu2cw>
27. Zorowitz, S., Niv, Y., & **Bennett, D.** (under review). Inattentive responding can induce spurious associations between task behavior and symptom measures. Preprint hosted at *PsyArXiv*: <https://psyarxiv.com/rynhk/>

* Denotes equal contribution

**Grants
and funding**

Activation Fund (AUD \$20,000 + GBP £10,000) **2022**
 Monash-Warwick Alliance
 Role: Chief investigator Project title: Building an online data-collection platform for in-play sports betting

Turner Institute Strategic Project Grants Scheme (AUD \$20,000) **2022**
 The Turner Institute for Brain and Mental Health, Monash University
 Role: Chief investigator Project title: Using computational cognitive science to tackle

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cash-out gambling

	<i>Sir Keith Murdoch Graduate Fellowship</i> (USD \$40,000) American-Australian Association	2019
	<i>CJ Martin Early Career Fellowship</i> (AUD \$417,192) National Health and Medical Research Council Role: Chief investigator Project title: Towards a neurocomputational model of mood instability in psychiatric illness.	2019-2022
Awards	<i>Best ECR Presentation</i> Australasian Society for Bipolar Disorder and Depression - ECR Webinar Series	2020
	<i>Travel Fellowship Award</i> (USD \$2,000) Society of Biological Psychiatry	2020
	<i>Career Development Award</i> (AUD \$1,500) School of Psychological Sciences, The University of Melbourne	2016
	<i>Postgraduate student presentation award</i> School of Psychological Sciences, The University of Melbourne	2015
	<i>Melbourne Abroad Travelling Scholarship</i> (AUD \$1,500) The University of Melbourne	2014
	<i>Australian Postgraduate Award</i> (AUD \$92,008) Postgraduate research scholarship, Australian Federal Department of Education	2013-2016
	<i>Dwight Prize for Honours in Psychology</i> For coursework in Psychology at The University of Melbourne	2011
	<i>Dean's Honours List in Science</i> For coursework in the Bachelor of Science at The University of Melbourne	2011
	<i>Convocation, The UWA Graduates Association Prize</i> Award for undergraduate coursework	2008
	<i>Commonwealth Accommodation Scholarship</i> Undergraduate scholarship, Australian Federal Department of Education	2007-2010
Teaching	<i>NB: Where available, student evaluations reflect the most recent year</i>	
	Monash University	2022-present
	<ul style="list-style-type: none">– <i>2022-present</i>: Lecturer, PSY3051 (Perception and Cognitive Psychology). Third-year undergraduate unit, ~400 students, delivered ~20 1-hr lectures, also serving as Chief Examiner from 2023 onwards. Student evaluation: 90/100 ('Very High', highest possible satisfaction band)– <i>2022-present</i>: Lecturer, PSY3032 (Psychological Disorders). Third-year undergraduate unit, ~400 students, delivered 12 1-hr lectures, also serving as Chief	

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Examiner from 2023 onwards.
No student evaluations yet available.

- *2022-present*: Lecturer, PSY1011 (Psychology 1A). First-year undergraduate unit, ~800 students, delivered 4 1-hr lectures on learning and memory.
Student evaluation: 90/100 ('Very High', highest possible satisfaction band).
- *2022*: Lecturer, PSY1022 (Psychology 1B). First-year undergraduate unit, ~800 students, delivered 4 1hr lectures on sensation and perception.
No student evaluations yet available.

Princeton University

2018

- *Fall 2018*: Postdoctoral Tutorial Leader, Junior Neuroscience Tutorial. Responsibilities: design, deliver, and assess a 6-week intensive undergraduate neuroscience tutorial series.

University of Melbourne

2011-2016

- *2016*: Lecturer, PSYC40004 (Current Topics in Cognitive Neuroscience). Honours-level unit, ~ 80 students, deliver 1 2-hr lecture on decision making.
- *2015*: Tutor, PSYC30018 (Neuroscience and the Mind). Third-year undergraduate unit, tutorial delivery and marking for two classes.
- *2011-2012*: Non-residential tutor in Psychology. Responsibilities: design and deliver first-year psychology coursework tutorials at residential colleges (Janet Clarke Hall, Newman College, St. Mary's College, University College).

Supervision

PhD

- 2022-present: PhD co-supervisor for Jeryl Lim (Monash University)
- 2017-2020: PhD co-supervisor for Ariel Goh (Monash University)

Honours

- 2022: Cassandra Dods, Robert Shirley, and Jianming Zhu
- 2021: Laura Forbes and Ashleigh Fulton
- 2014-2017: Assistant supervision for 6 Honours students at The University of Melbourne (primary supervision by Olivia Carter or Stefan Bode)

Undergraduates and interns

- 2022: Samuel Arsovski, Antonia Cholewick, and Chantel Wormington
- 2019-2020: Senior thesis co-supervisor for Claire Lee (Princeton University)
- 2019-2020: Junior project co-supervisor for Isla Weber (Princeton University)

Professional service

Reviewing (journal articles)

- Behavioural Processes; Biological Psychiatry; Cerebral Cortex; Cognition & Emotion; Cognitive, Affective, and Behavioral Neuroscience; Cognitive Psychology; Computational Brain & Behavior; Computational Psychiatry; Current Opinion in Behavioral

Sciences; Decision; eLife; Frontiers in Human Neuroscience; Journal of Affective Disorders; Journal of Behavioral Decision Making; Journal of Cognitive Neuroscience; Journal of Experimental Psychology: General; Journal of Individual Differences; Journal of Neuroscience; NeuroImage; Nature Human Behaviour; PLOS Computational Biology; PLOS One; Psychiatry & Clinical Neurosciences; Psychonomic Bulletin & Review; Psychological Medicine; Psychological Review; Schizophrenia Research; Translational Psychiatry.

Reviewing (funding)

- American-Australian Association (USA to Australia program and Australia to USA program)
- German Research Foundation (Deutsche Forschungsgemeinschaft)
- Swiss National Science Foundation (Sinergia scheme and Projects scheme)

External examining

- 2022: External thesis examiner for Henrik Siljebråt, Goldsmiths' College
- 2021: External thesis examiner for Tim Loossens, KU Leuven

Other service

- 2022-present: Head of *Cognition and Emotion Laboratory* at Monash University.
- 2022-present: Sole administrator of the Melbourne Cognitive Science List (jobs and events mailing list distributed to ~350 people).
- 2018-2019: Member of seminar series organising committee, Princeton Neuroscience Institute.
- 2016: Graduate student representative for external relations committee, Melbourne School of Psychological Sciences
- 2016: Workshop co-organiser, “Multivariate Analysis of Event-Related Potentials”, University of South Australia, Adelaide