

Laurence Tudor Hunt

Current Position

2018- Sir Henry Dale Fellow, Wellcome Centre for Integrative Neuroimaging, Department of Psychiatry, University of Oxford

Education and Training

2013-17 Sir Henry Wellcome Postdoctoral Fellow, University College London
2007-12 D.Phil. in Neuroscience, Department of Experimental Psychology, Oxford
2006-07 M.Sc. in Neuroscience, Wadham College, Oxford
2003-06 B.A. in Medical and Veterinary Sciences, Jesus College, Cambridge

Research Summary

My research has addressed the neural mechanisms by which we make decisions. To gain insight into these mechanisms, I have used mathematical models that make precise predictions of both behavioural and neural data. I have tested these predictions using a range of techniques in both humans and animals.

Current/Recent Research Funding

2018-23 Royal Society/Wellcome Sir Henry Dale Fellowship (£919,348)
2017-19 NARSAD Young Investigator Award (~\$70,000)
2014-17 Sir Henry Wellcome Fellowship Enhancement (£200,000)
2013-17 Sir Henry Wellcome Postdoctoral Fellowship (£250,000)

Selected Publications (Total citations: 1709; h-index = 14; i10-index = 16)

1. **Hunt LT**, Hayden BY. A distributed, hierarchical and recurrent approach to reward-guided choice. **Nature Reviews Neuroscience**, 2017; 18, 172–182.
2. Cavanagh SW, Wallis JD, Kennerley SW, **Hunt LT**. Autocorrelation structure at rest predicts value correlates of single neurons during reward-guided choice. **eLife**, 2016; 5, e18937.
3. **Hunt LT**, Rutledge RB, Malalasekera WMN, Kennerley SW, Dolan RJ. Approach induced biases in human information sampling. **PLOS Biology**, 2016; 14(11), e2000638.
4. **Hunt LT**, Behrens TE, Hosokawa T, Wallis JD, Kennerley SW. Capturing the temporal evolution of choice across prefrontal cortex. **eLife** 2015; 10.7554/eLife.11945
5. Hauser TU*, **Hunt LT***, Iannaccone R, Walitza S, Brandeis D, Brem S, Dolan RJ. Temporally dissociable contributions of human medial prefrontal subregions to reward-guided learning. **Journal of Neuroscience**, 2015; 35(32), 11209–20.
6. **Hunt LT**, Dolan RJ, Behrens TEJ. Hierarchical competitions subserving multi-attribute choice. **Nature Neuroscience**, 2014; 17(11), 1613–22.
7. **Hunt LT**, Woolrich MW, Rushworth MF, Behrens TEJ. Trial-type dependent frames of reference for value comparison. **PLOS Computational Biology**, 2013;9(9):e1003225
8. Jocham G, **Hunt LT**, Near J, Behrens TEJ. A mechanism for value-guided choice based on the excitation-inhibition balance in prefrontal cortex. **Nature Neuroscience**, 2012 Jun 17;15(7):960-1
9. **Hunt LT**, Kolling N, Soltani A, Woolrich MW, Rushworth MFS, Behrens TEJ. Mechanisms underlying cortical activity during value-guided choice. **Nature Neuroscience**, 2012 Jan 8;15(3):470-6
10. Behrens TE*, **Hunt LT***, Woolrich MW, Rushworth MF. Associative learning of social value. **Nature** 2008 Nov 13; 456: 245-249

* denotes joint first authorship

For full publication list, visit <http://tinyurl.com/LHPubList>

Recent Talks (selection; typically 6-8/year)

- The Computational Neuroscience of Prediction, Brain Conference, Denmark
- Annual Conference on Cognitive Computational Neuroscience, New York
- Kavli Symposium on Cognitive Neuroscience, Santa Barbara
- 2nd Workshop on Information Seeking, Curiosity and Attention, London
- 13th International Conference on Cognitive Neuroscience, Amsterdam
- Google DeepMind, London
- Riken Brain Sciences Institute, Japan

Teaching and Outreach

- 2017-18 College lecturer in Experimental Psychology, St John's College, Oxford (maternity cover, MT 2017/HT 2018 - taught Prelims courses in Perception, Psychobiology and Cognitive Psychology)
- 2017- EP/PPL FHS (Part II) Psychology block practical in "Cognitive and computational models of learning and decision-making"
- 2016- Course lecturer, SPM Course, UCL (most positive feedback rating of all lecturers, May 2016)
- 2016 Mentor for undergraduates from underrepresented backgrounds at Cosyne conference
- 2015-16 Tutor at The Brilliant Club, a non-profit organisation that trains and places postdocs/PhD students to deliver university-style tutorials to high-achieving pupils at schools with low participation in higher education. I designed a 6-week, tutorial-based course and delivered this to 2 groups of 6 pupils at Haberdashers' Aske's Knights Academy, Lewisham.

Supervision/Examination of Students

I have supervised 7 MSc students, all of whom have either gone on to pursue doctoral studies or returned to clinical training. I have previously provided day-to-day supervision for 2 PhD students at UCL, and currently supervise 2 DPhil students at Oxford. I have examined 1 PhD thesis.

Public Engagement/Professional Service

- 2016- Executive committee, *Science is Vital*. I coordinated a joint submission from >1,600 Early Career Researchers to the Science and Technology Select Committee concerning the impact of Brexit on Early Career Researchers. An abridged version was published in *The Times*. In January 2017, I organized a Parliamentary lobby to further raise MPs' awareness, attended by Minister for Science Jo Johnson, shadow minister Chi Onwurah, and Select Committee chair Stephen Metcalfe.
- 2015- One of eight scientists behind *The Great Brain Experiment*, a Wellcome Trust funded smartphone app. This provided members of the public with the opportunity to participate in large-scale psychology research and learn about cognitive neuroscience. Downloaded by >110,000 users. Featured in The Guardian, The Wall Street Journal, BBC One.

Peer review (selection)

Ad hoc reviewer for Current Biology; eLife; Journal of Cognitive Neuroscience; Journal of Computational Neuroscience; Journal of Neuroscience (nominated for *special recognition* as peer reviewer by Daeyeol Lee, Reviewing Editor); Journal of Neurophysiology; Nature; Nature Human Behavior; Nature Neuroscience; Neuroimage; Neuron; Neuropsychologia; Philosophical Transactions of the Royal Society B; PLoS Biology; PLoS Computational Biology; Science

Grant review for German Research Foundation, Medical Research Council, Royal Society