



# Neil Robert Bramley

## *Curriculum Vitae*

### Education

- 2013–2017 **PhD, Experimental Psychology, UCL, London.**  
Title: Constructing the world: Active causal learning in cognition  
Supervisors: Prof David Lagnado & Prof Peter Dayan
- 2012–2013 **MRes, Computer Science, UCL, London.**  
Project grade: Distinction (84/100)  
Overall grade: Merit (80/100)
- 2010–2011 **MSc, Cognitive & Decision Sciences, UCL, London.**  
Project grade: Distinction (90/100)  
Overall grade: Distinction & class prize (86/100)
- 2005–2009 **MA (Hons), Philosophy, University of Glasgow, Glasgow.**  
Dissertation grade: 19/22  
Overall grade: 17/22

### Experience

- 2017–present **Moore-Sloan Post-Doctoral Associate, NYU, New York, NY.**  
Working in Todd Gureckis' Cognition and Computation Lab  
Researching human cognition using a combination of computational modelling and behavioural experimentation.
- 2017–present **Seminar series organizer, NYU, New York, NY.**  
ConCats (Concepts and categories)
- 2012–2016 **Occasional MSc-level lecturer, UCL, London, UK.**  
Giving 2-3 lectures per year as part of MSc Cognitive & Decision Sciences.  
Topics taught:
  - Active learning
  - Causal learning
  - Philosophy of mind
  - Information theory
- 2011–2016 **Private tuition, UCL, London, UK.**  
Private statistics and programming tuition at MSc level for cognitive science students

627, 60 5<sup>th</sup> Avenue – New York, NY, 10003 – USA

☎ +1 (929) 309 3173 • ✉ [neil.bramley@nyu.edu](mailto:neil.bramley@nyu.edu) • 🌐 [neilbramley.com](http://neilbramley.com)

🐦 [NeilBramley](#) • 🌐 [neilbramley](#)

- 2016 **Programme participant**, *University of Cambridge*, London, UK.  
 “Probability and Statistics in Forensic Science” workshop at the Isaac Newton Institute for Mathematical Sciences
- 2015 **Visiting researcher**, *UC Berkeley*, Berkeley, CA, USA.  
 Bogue fellowship funded research visit to Tom Griffiths’ Computational Cognitive Science lab and Alison Gopnik’s Cognitive Development lab.
- 2015 **Visiting researcher**, *NYU / MIT*, New York, NY / Cambridge, MA.  
 Bogue fellowship funded research visit to Josh Tenenbaum’s Computational Cognitive Science lab and Todd Gureckis’ Computation and Cognition lab.
- 2012–2016 **Seminar series organizer**, *UCL*, London, UK.  
 London Judgment and Decision Making Seminar Series  
 Responsibilities:
  - Inviting and hosting 30 top speakers on small budget (£500 per year)
  - Promoting seminars, managing JDM mailing list
  - Helping organise affiliate conference “Forecasting, monitoring, controlling: Dealing with a dynamic world” 19–20 Sep, 2013
- 2011–2014 **Statistics & programming demonstratorship**, *UCL*, London, UK.  
 Cognitive, Perceptual & Brain Sciences  
 Responsibilities:
  - Providing teaching assistance, tutorial and in class support for 4 MSc programmes and 1st year PhD students for core Statistics and MATLAB courses
  - Leading statistics tutorial sessions
- 2011–2012 **Research assistant**, *Queen Mary, University of London*, London, UK.  
 Biological & Experimental Psychology Group  
 Responsibilities:
  - Designing and programming pilot experiments for grant application
  - Writing an ultimately successful ESRC grant application “Cognitive causal models of dynamic control”
  - Securing endorsements from major UK energy regulators and suppliers

## Publications

### Under review

1. **Bramley, N. R.**, T. Gerstenberg, R. Mayrhofer, and D. A. Lagnado (submitted). The role of time in causal learning.

### Journal articles

2. **Bramley, N. R.**, P. Dayan, T. L. Griffiths, and D. A. Lagnado (2017). Formalizing Neurath’s ship: Approximate algorithms for online causal learning. *Psychological Review* **124**(3), 301–338.
3. McCormack, T., **N. R. Bramley**, C. Frosch, F. Patrick, and D. A. Lagnado (2016). Children’s Use of Interventions to Learn Causal Structure. *Journal of Experimental Child Psychology* **141**, 1–22.
4. **Bramley, N. R.**, D. A. Lagnado, and M. Speekenbrink (2015). Conservative forgetful scholars: How people learn causal structure through interventions. *Journal of Experimental Psychology: Learning, Memory & Cognition* **41**(3), 708–731.

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🐦 [NeilBramley](#) • 🌐 [neilbramley](#)

### Peer reviewed conference proceedings

5. **Bramley, N. R.**, R. Mayrhofer, T. Gerstenberg, and D. A. Lagnado (2017). Causal learning from interventions and dynamics in continuous time. In: *Proceedings of the 39<sup>th</sup> Annual Meeting of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.
6. Coenen, A., **N. R. Bramley**, A. Ruggeri, and T. M. Gureckis (2017). Beliefs about sparsity affect causal experimentation. In: *Proceedings of the 39<sup>th</sup> Annual Meeting of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.
7. Schulz, E., E. D. Klenke, **N. R. Bramley**, and M. Speekenbrink (2017). Strategic exploration in human adaptive control. In: *Proceedings of the 39<sup>th</sup> Annual Meeting of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.
8. **Bramley, N. R.**, T. Gerstenberg, and J. B. Tenenbaum (2016). Natural science: Active learning in dynamic physical microworlds. In: *Proceedings of the 38<sup>th</sup> Annual Meeting of the Cognitive Science Society*. Austin, TX: Cognitive Science Society, pp.2567–2573.
9. **Bramley, N. R.**, P. Dayan, and D. A. Lagnado (2015). Staying afloat on Neurath's boat: Heuristics for sequential causal learning. In: *Proceedings of the 37<sup>th</sup> Annual Meeting of the Cognitive Science Society*. Austin, TX: Cognitive Science Society, pp.262–267.
10. **Bramley, N. R.**, T. Gerstenberg, and D. A. Lagnado (2014). The order of things: Inferring causal structure from temporal patterns. In: *Proceedings of the 36<sup>th</sup> Annual Meeting of the Cognitive Science Society*. Austin, TX: Cognitive Science Society, pp.236–242.

### Posters

11. **Bramley, N. R.**, J. D. Nelson, M. Speekenbrink, V. Crupi, and D. A. Lagnado (2014). *What should causal learners value?* Poster presented at the Annual Meeting of the Psychonomic Society.
12. **Bramley, N. R.**, M. Speekenbrink, and D. A. Lagnado (2013). *Mechanisms of active causal learning*. Poster presented at the 35<sup>th</sup> Annual Meeting of the Cognitive Science Society.

### Theses

13. **Bramley, N. R.** (2017). "Constructing the world: Active causal learning in cognition". PhD thesis. UCL.
14. **Bramley, N. R.** (2013). "Algorithms for active causal learning". MRes thesis, UCL.
15. **Bramley, N. R.** (2011). "Mechanisms of active causal learning". MSc thesis, UCL.

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### Awards and Scholarships

- £500 EPS Grindley Grant (2016)
- £1204 SLMS Graduate School Conference Fund (2016)
- \$500 Robert J. Glushko and Pamela Samuelson Foundation Award for top 20 student papers at CogSci (2015)
- £1470 SLMS Graduate School Conference Fund (2015)

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- £3000 Bogue Research Fellowship from University College London funding 3 month visit to UC Berkeley and NYU in the USA (2015)
- £79,600 London Centre for Financial Computing and Analytics 4-year EPSRC PhD scholarship (2012 – 2016)
- £150 Award for best performing student in MSc Cognitive Decision Sciences (2011)

## Invited talks

- Mar 2017 ConCats, NYU, New York, NY
- Mar 2016 Summerfield lab, Experimental Psychology, University of Oxford, UK
- Oct 2015 London Judgment and Decision Making Group, University College London, London, UK
- Jul 2015 Decision Making Symposium, Birkbeck, London, UK
- Mar 2015 Computational Cognitive Science Lab, UC Berkeley, CA, USA
- Feb 2015 Centre for Logic, Language and Cognition, University of Turin, Italy
- May 2014 Max Planck Institute for Human Development, Berlin, Germany

## Symposia organised

- Aug 2016 “Beyond Bayes nets” ICT16, Brown University Discussants: James Woodward, Anna Coenen, Neil Bramley, Elias Bareinboim and Steven Sloman

## Conference & Workshop Presentations

- Feb 2017 Gureckis lab talk, NYU, New York, NY, USA
- Aug 2016 CogSci2016, Philadelphia, PA, USA
- Aug 2016 ICT16, Brown University, Providence, RI, USA
- Aug 2015 CogSci2015, Pasadena, CA, USA
- Jul 2014 Decision making Bristol, University of Bristol, UK
- Jul 2013 SPUDM24, ISCE, Barcelona, Spain
- Jul 2013 MathPsych, Potsdam, Germany
- Mar 2012 TeaP (Conference on Experimental Psychology), Mannheim, Germany
- Feb 2012 Causality Workshop, Causal Cognition Group, UCL, London, UK
- Aug 2011 Causality Workshop, Causal Cognition Group, UCL, London, UK
- Mar 2011 English Graduate Conference on Lies and Deception, UCL, London, UK

## Computer skills

- Modelling / statistics C, Cogent, Mathematica, MATLAB, Python, R, SPSS, WinBUGS
- Web development ActionScript, Box2D, CSS, Flash, Flex, HTML5, Git, Java, Javascript, Jekyll, Perl, PHP, PsiTurk, Ruby, SQL
- Misc LaTeX, Sublime, MS Office

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## Professional service

Ad-hoc reviewer for *Journal of Experimental Psychology: General* (1), *Journal of Experimental Psychology: Learning, Memory & Cognition* (3), *Memory & Cognition* (4), *Cognitive Science* (1), *Journal of Behavioural Decision Making* (1), *Experimental Psychology* (1), *Quarterly Journal of Experimental Psychology* (1), *Open Mind* (1), *Annual Meeting of the Cognitive Science Society* (7).

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## Languages

English **Native**  
Spanish **Intermediate**  
German **Basic**

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## Interests

- Guitar
- Long distance running
- Surfing
- Travelling

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## References

### Prof David Lagnado

Experimental Psychology  
University College London  
26 Bedford Way, 203  
London, WC1H, 0AP  
+44 20 7679 5389  
d.lagnado@ucl.ac.uk

### Assoc Prof Todd Gureckis

New York University  
Department of Psychology  
6 Washington Place, 859  
New York, NY 10003  
+1 212 998 3794  
todd.gureckis@nyu.edu

### Prof Peter Dayan

Gatsby Computational Neuroscience Unit  
University College London  
25 Howlands Street, 241  
London, W1T 4JG  
+44 20 3108 8101  
dayan@gatsby.ucl.ac.uk

### Prof Tom Griffiths

University of California, Berkeley  
Department of Psychology  
Tolman Hall, 3123  
Berkeley, CA 94720  
tom\_griffiths@berkeley.edu

(more available upon request)