



# 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
  - Funded by Moore-Sloan Data Science Environment
  - Affiliated with NYU's Psychology Department and Center for Data Science
  - Conducting research into human cognition through experimentation and computational modelling
- 2017–present **Seminar series organizer, NYU, New York, NY.**  
ConCats (Concepts and categories) series in Psychology department.
- 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

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- 2011–2016 **Private tuition**, *UCL*, London, UK.  
Private statistics and programming tuition at MSc level for cognitive science students
- 2016 **Programme participant**, *University of Cambridge*, Cambridge, 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 top speakers
  - Managing a small budget
  - 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

### Forthcoming

1. **Bramley, N. R.**, T. Gerstenberg, R. Mayrhofer, and D. A. Lagnado (submitted). The role of time in causal learning.
2. Coenen, A., A. Ruggeri, **N. R. Bramley**, and T. M. Gureckis (submitted). Beliefs about sparsity affect causal experimentation.

### Journal articles

3. **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.

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4. 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.
5. **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.

#### Peer reviewed conference proceedings

6. **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.
7. 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.
8. Schulz, E., E. D. Klenske, **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.
9. **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.
10. **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.
11. **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

12. **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.
13. **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

14. **Bramley, N. R.** (2017). "Constructing the world: Active causal learning in cognition". PhD thesis. UCL.
15. **Bramley, N. R.** (2013). "Algorithms for active causal learning". MRes thesis, UCL.
16. **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)
- £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)

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## 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

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## Symposia organised

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

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## 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

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## 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

○ Surfing

○ Long distance running

○ Travelling

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## References

### Prof David Lagnado

Experimental Psychology  
University College London  
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### Prof Peter Dayan

Gatsby Computational Neuroscience Unit  
University College London  
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### Assoc Prof Todd Gureckis

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### Prof Tom Griffiths

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Department of Psychology  
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