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 Postdoc**, *NYU*, New York, NY.
- Funded by Moore-Sloan Data Science Environment
- Working in Cognition and Computation lab and NYU Center for Data Science
- Conducting research into human cognition
- Combining behavioural experimentation, modelling & big data

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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2016 **Programme participant**, *University of Cambridge*, Cambridge, UK.
"Probability and Statistics in Forensic Science" workshop at the Isaac Newton Institute for Mathematical Sciences

2011–2016 **Private tuition**, *UCL*, London, UK.
Private statistics and programming tuition at MSc level for cognitive science students

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. Bramley, N. R., T. Gerstenberg, J. B. Tenenbaum, and T. M. Gureckis (submitted). Active learning in physical microworlds.
3. Coenen, A., A. Ruggeri, N. R. Bramley, and T. M. Gureckis (submitted). Beliefs about sparsity affect causal experimentation.

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Journal articles

4. 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.
5. 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.
6. 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

7. 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 39th Annual Meeting of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.
8. Coenen, A., N. R. Bramley, A. Ruggeri, and T. M. Gureckis (2017). Beliefs about sparsity affect causal experimentation. In: *Proceedings of the 39th Annual Meeting of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.
9. Schulz, E., E. D. Klenske, N. R. Bramley, and M. Speekenbrink (2017). Strategic exploration in human adaptive control. In: *Proceedings of the 39th Annual Meeting of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.
10. Bramley, N. R., T. Gerstenberg, and J. B. Tenenbaum (2016). Natural science: Active learning in dynamic physical microworlds. In: *Proceedings of the 38th Annual Meeting of the Cognitive Science Society*. Austin, TX: Cognitive Science Society, pp.2567–2573.
11. 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 37th Annual Meeting of the Cognitive Science Society*. Austin, TX: Cognitive Science Society, pp.262–267.
12. Bramley, N. R., T. Gerstenberg, and D. A. Lagnado (2014). The order of things: Inferring causal structure from temporal patterns. In: *Proceedings of the 36th Annual Meeting of the Cognitive Science Society*. Austin, TX: Cognitive Science Society, pp.236–242.

Posters

13. 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.
14. Bramley, N. R., M. Speekenbrink, and D. A. Lagnado (2013). *Mechanisms of active causal learning*. Poster presented at the 35th Annual Meeting of the Cognitive Science Society.

Theses

15. Bramley, N. R. (2017). "Constructing the world: Active causal learning in cognition". PhD thesis. UCL.

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16. Bramley, N. R. (2013). "Algorithms for active causal learning". MRes thesis, UCL.
17. Bramley, N. R. (2011). "Mechanisms of active causal learning". MSc thesis, UCL.

Grants

NSF "Exploring the logic of discovery" – Computational Cognition co-PI with Professor Fei Xu, Berekley (under review)

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 UCL 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

Oct 2017 Tenenbaum Lab, MIT, Cambridge, MA, USA

Aug 2017 ILCC series, Informatics Forum, University of Edinburgh, UK

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, UCL, 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

July 2017 CogSci2017, London, UK

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

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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, Pytorch, R, Scikit Learn, SPSS, Stan, WinBUGS
Web development	AWS, ActionScript, Box2D, CSS, Flash, Flex, HTML5, Git, Java, Javascript, Jekyll, Perl, PHP, PsiTurk, Ruby, SQL
Misc	Illustrator, LaTeX, Sublime, Microsoft Office

Professional service

Ad-hoc reviewer for *Journal of Experimental Psychology: General* (1), *Topics in Cognitive Science* (1), *Journal of Experimental Psychology: Learning, Memory & Cognition* (4), *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* (10).

Languages

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

Interests

- Guitar
- Surfing
- Long distance running
- Travelling

References

Prof David Lagnado
Experimental Psychology
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Prof Peter Dayan
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