

# Parpart Paula

#### Curriculum Vitae

## Academic Experience

- Oct 2018 **Postdoctorate Research Fellow**, *Behavioural Science Unit*, Warwick Business present School, University of Warwick, Coventry, UK.
- Jan 2018 **Visiting Researcher**, *Moore-Sloan Center for Data Science*, New York University, June 2018 New York, USA.
- 2016– 2017 **Teaching Fellow**, *Computational Decision Making*, University College London, UK, Co-directed Masters course in Cognitive and Decision Sciences; with Prof Dave Lagnado.
- 2013– 2017 **PhD in Experimental Psychology**, *University College London*, UK, Title: Why less can be more: A Bayesian Framework for Heuristics Supervisors: Prof Bradley C. Love & Dr Maarten Speekenbrink.
- 2012–2013 MRes in Computer Science, *University College London*, UK, Focus: Machine Learning and Statistics.
- 2010–2011 **MSc in Cognitive and Decision Sciences**, *University College London*, UK, Supervisors: Dr Anne Hsu & Prof Nick Chater.
- 2006–2010 Vordiplom (eqvl. Bsc) in Psychology, Humboldt University Berlin, Germany.
  - 2009 **Fall term studying mathematics at NYU**, *Courant Insitute for Mathematical Sciences*, New York University, New York, USA.

## Industry Experience

#### 2016–2018 Founder at Brainpool.ai, London, UK.

 Brainpool AI is a network of over 320 top-level artificial intelligence and machine learning experts, spanning PhDs, post-docs, professors and professionals. Brainpool links up top academics with organisations in finance, retail, healthcare, marketing and government. Brainpool started as a start-up at UCL and has grown into a recognised data science company in London. Partners include Kx systems, IBM, or Nvidia. 2012– 2015 **Medical Decision Making Project**, *St Andrews Healthcare Psychiatric Hospital*, Northampton, UK.

Improving Clinicians Risk Assessment

- As part of a collaboration between St Andrews (Dr Paul Wallang) and UCL (Prof Brad Love, Lukasz Kopec, Paula Parpart), we analysed a psychiatric test instrument for predicting risk levels of harm/self-harm in psychiatric patients, and made improvement suggestions based on decision models and machine learning approach developed during PhD (regularized regressions, support vector machines).
- 2012 **Behavioural Insights Consultant**, *Cabinet Office, UK Government*, London, UK. Industry placement by the UCL Centre for Financial Computing & Analytics PhD funding
  - Tackling benefit fraud: Applied Bayesian machine learning model (COR) developed during the PhD to propose a new model for detecting fraud cases. The focus was on fraud prevention by detecting fraud from non-fraud cases early on.
- 2007–2010 **Research Assistant**, ABC Research Group, Max Planck Institute for Human Development, Berlin, Germany.
  - Research under supervision of Prof Edward Cokely, Prof Leal Schooler and Prof Gerd Gigerenzer in the ABC research group on fast and frugal heuristics and the relationship with cognitive control, memory processes and dual system theories: We showed that heuristic processes need not stem from 'system 1' processes. Further, we did research on financial decision making relating to the fluency heuristic, as well as graph literacy and numeracy skills. Helped design and ran a total of 23 experiments.

#### Publications

#### Peer-reviewed articles

- 1. **Parpart, P.**, Schulz, E., Speekenbrink, M. & Love, B. (in revision), Active learning reveals underlying decision strategies. Preprint: bioRxiv
- 2. Mumford, K., Lagnado, D. A. & **Parpart, P.** (submitted), An illusion of understanding in Brexit policies does not cause people to change their extreme attitudes.
- 3. **Parpart, P.**, Schulz, E. & Love, B. (forthcoming), Robustness through sparsity in decision heuristics.
- 4. Parpart, P., & Love, B. (forthcoming), Reversing less-is-more effects.
- 5. **Parpart, P.**, Jones, M. & Love, B.C. (2018), Heuristics as Bayesian inference under extreme priors. *Cognitive Psychology, 102, 127-144*, Link
- 6. Guarda, P., **Parpart, P.**, Harvey, N., & Juan Carlos Muñoz (2018), Understanding decisions about time in public transport. *Proceedings of the 40th Annual Meeting of the Cognitive Science Society. Austin, TX: Cognitive Science Society.*
- 7. **Parpart, P.**, Schulz, E., Speekenbrink, M. & Love, B. (2015), Active learning as a means to distinguish among prominent decision strategies. *Proceedings of the 37th Annual Conference of the Cognitive Science Society*, PDF
- 8. Cokely, E.T., **Parpart, P.**, & Schooler, L.J. (2009), On the link between cognitive control and heuristic processes. *Proceedings of the 31st Annual Conference of the Cognitive Science Society*. PDF

## Peer-reviewed abstracts, presentations & posters 2018

- 9. **Parpart, P.**, Schulz, E. & Love, B. (2018), Robustness through sparsity: A comparison of decision heuristics. *Poster presented at the 40th Annual Meeting of the Cognitive Science Society. Austin, TX: Cognitive Science Society.*
- 10. **Parpart, P.** (2018), Reinterpreting heuristics as Bayesian inference. Workshop on Contemporary Decision Making, 40th Annual Meeting of the Cognitive Science Society.

#### 2016

11. Kopec, L., **Parpart, P.**, Wallang, P. & Love, B.C. (2016), Less Information Can Improve Clinical Risk Assessments. *Society for Medical Decision Making Biennial European Conference, 2016, London, United Kingdom* 

#### 2015

- 12. **Parpart, P.**, Schulz, E., Speekenbrink, M. & Love, B. (2015), Active learning as a means to distinguish among prominent decision strategies. *Talk presented at the 37th Annual Conference of the Cognitive Science Society, 2015, Pasadena, CA.*
- 13. **Parpart, P.**, Jones, M., & Love, B.C. (2015), Simple Heuristics as Special Cases of Bayesian Inference. *Poster presented at the Memory and Decision Making Workshop, University of Basel, Basel, Switzerland*
- 14. **Parpart, P.**, Jones, M., & Love, B.C. (2015), Simple Heuristics as Special Cases of Bayesian Inference. Simple Heuristics as Special Cases of Bayesian Inference. *Poster presented at the Cumberland Lodge PhD Conference, Windsor, United Kingdom* 2014
- 15. **Parpart, P.**, Jones, M., & Love, B.C. (2014), Heuristics as a Special Case of Bayesian Inference. *Talk at Decision Making Bristol 2014, University of Bristol, Bristol, United Kingdom*
- 16. **Parpart, P.**, Jones, M., & Love, B.C. (2014), Heuristics as Special Cases of Bayesian Inference. *Poster presented at the 36th Annual Conference of the Cognitive Science Society, 2014, Quebec City, Canada*
- 17. **Parpart, P.**, Jones, M., & Love, B.C. (2014), Heuristics as Special Cases of Bayesian Inference. *Talk at the Mathematical Psychology Conference 2014, Quebec City, Canada*
- 18. **Parpart, P.**, Jones, M., & Love, B.C. (2014), Heuristics as Special Cases of Bayesian Inference. Reconciling irrational and adaptive views of heuristics. *Talk at the Cumberland Lodge PhD Conference, Windsor, United Kingdom* 2013
- 19. **Parpart, P.**, Jones, M., & Love, B.C. (2013), Reconciling irrational and adaptive views of heuristics. Talk at the 34th International Conference on Subjective Probability, Utility and Decision Making (SPUDM24), ISCE, Barcelona, Spain

20. **Parpart, P.**, Jones, M., & Love, B.C. (2013), When is it rational to rely on heuristics? Poster presented at the 35th Annual Conference of the Cognitive Science Society, 2013, Berlin, Germany

2011

- 21. Parpart, P., & Cokely, E.T. (2011), When does Cognitive Control lead to Biases? Evidence from Memory and Stock Profit Estimation Tasks. Poster presented at the 23rd International Conference on Subjective Probability, Utility and Decision Making (SPUDM23), Kingston Upon Thames, United Kingdom
- 22. Okan,Y., **Parpart, P.**, Cokely, E.T. & Garcia-Retamero, R. (2011), The effect of misleading graphs on the comprehension of health and political communications: Who is more susceptible to misinterpret data? *Poster presented at the 23rd International Conference on Subjective Probability, Utility and Decision Making (SPUDM23*), Kingston Upon Thames, United Kingdom
- 23. Okan, Y., Woller-Carter, M., Simon, S.R., Russell, K., Ghazal S., **Parpart, P.**, Garcia-Retamero R., Cokely, E.T. (2011), Overcoming distortions in political and health communication: Mechanisms of graph literacy. *Poster presented at the 83rd Annual meeting of the Midwestern Psychological Association, Chicago, IL*.

2010

24. **Parpart, P.**, & Cokely, E.T. (2010), Fluency and cognitive control in judgment: Influences of memory and elaborative encoding. *Poster presented at the Proceedings of the 32nd Annual Conference of the Cognitive Science Society, 2010, Portland, Oregon* 

2009

- 25. Cokely, E.T., **Parpart, P.**, & Schooler, L.J. (2009), Mechanisms of superior judgment: Ironic effects of cognitive control. *Talk at the 23rd Annual Meeting of the Society for Judgment and Decision-Making, Boston, MA*.
- 26. Cokely, E.T., & **Parpart, P.** (2009), There is no "the" heuristic system: Modes of cognitive control in judgment and decision making. *Talk at the 16th European Society for Cognitive Psychology Conference, Krakow, Poland*
- 27. Cokely, E.T., & **Parpart, P.** (2009), Modes of cognitive control in judgment & decision making. *Talk at the 22nd Subjective Probability Utility Decision Making (SPUDM22) Conference, Reverto, Italy*
- 28. Cokely, E.T., & **Parpart, P.** (2008), There is no "the" heuristic system: Evidence of reflective heuristic processing. *Poster presented at the 49th Annual Meeting of the Psychonomic Society, Chicago, IL.*

2008

29. Parpart, P. & Cokely, E.T. (2008), Individual differences and the use of fluency in judgment: Paradoxical evidence of reflective heuristic processing. *Poster presented at the 2nd Biennial Symposium on Personality and Social Psychology, Warsaw, Poland* 

## Invited Talks

- June 2018 **Parpart, P.**, Reinterpreting heuristics as Bayesian inference. Invited Talk at the Human Information Processing Research Group (PI: Christopher Summerfield), Oxford University, Department of Experimental Psychology, Oxford, United Kingdom
- Nov 2017 **Parpart, P.**, Heuristics as Bayesian priors in cognition. Invited Talk at the ARC Research Group (Ralph Hertwig), Max Planck Institute for Human Development, Berlin, Germany
- Oct 2017 **Parpart, P.**, Heuristics as Bayesian priors in cognition. Invited Talk at the Moore-Sloan lunch time seminars, NYU Center for Data Sciences, New York Unvirsity, New York
- Oct 2017 **Parpart, P.**, Heuristics as Bayesian inference under extreme priors. Invited Talk at the ConCats Seminar Series, Todd Gureckis lab, Dept of Psychology, New York Unvirsity, New York
- Feb 2015 **Parpart, P.**, Heuristics as special cases of Bayesian Inference. Invited Talk at the Decision Making Seminar Series, City University London, London, United Kingdom
- Nov 2014 **Parpart, P.**, Heuristics as special cases of Bayesian Inference. Invited Talk at the London Judgement and Decision Making Seminar Series (LJDM), University College London, London, United Kingdom
- March 2012 **Parpart, P.**, Can Simple Heuristic Judgments Sometimes Match Optimal Bayesian Inference? Invited Talk at the Center for Cognitive and Decision Sciences (CDS), University of Basel, Basel, Switzerland

## Machine Learning Talks

- May 2018 **Parpart, P.**, Advances in machine learning and artificial intelligence. Invited keynote speaker at the 25th Anniversary of Kx Systems (Big data technology kdb+), New York City, New York
- Feb 2018 **Parpart, P.**, Who owns artificial intelligence? Invited Talk at the Digital Economy Network CDT Symposium by the EPSRC, Digital Catapult Centre, London, UK
- Jan 2018 **Parpart, P.**, Will Al be restricted by capitalism or is Al communist? Talk at the Al World Congress 2018, London, UK
- Dec 2017 **Parpart, P.**, Democratization of Al. Invited Talk at Telegraph DEN Live Conference, London, UK
- Nov 2017 **Parpart, P.**, Brainpool Revolutionizing healthcare and the NHS with Al. Invited Talk at the Al Stage GIANT Healthcare Conference, London, UK
- Nov 2017 **Parpart, P.**, The future of data science. Invited Talk at the Doctoral Training Centre for Financial Computing & Analytics, UCL, London, UK
- Nov 2017 **Parpart, P.**, Brainpool democratizes access to elite AI and ML scientists. Invited Talk at Emerging Technologies: Machine Learning Academy, IDEA London, UK
- Oct 2017 **Parpart, P.**, The future of science-industry collaboration. Invited Talk at the Moore-Sloan Lunchtime talks (Tassos Noulas), Center for Data Science, NYU, New York

Sept 2017 **Parpart, P.**, A new model for Al consulting. Invited Talk at the EPSRC Entrepreneurship Workshop, Digital Catapult Center, London, UK

#### Theses

- 2017 Why less can be more: A Bayesian framework for heuristics, *PhD Thesis*, University College London, Department of Experimental Psychology, Grade: zero corrections, Link.
- 2013 Improving Fraud Detection: A Rational Bayesian Model for Heuristic Decision Making, MRes Dissertation, University College London, Department of Computer Science, Project grade: Distinction.
- 2011 Recognize Bayes? Bayesian Modeling of the Recognition Heuristic, *MSc Dissertation*, University College London, Department of Experimental Psychology, Project grade: Distinction.

#### Awards & Funding

- 2017 **Teaching Award for Outstanding Reseacher Development & Outstanding Personal Support**, 2017 Student Choice Teaching Awards, UCL, Department of Experimental Psychology.
- 2017 **Teaching Award for Outstanding Personal Support**, 2017 Student Choice Teaching Awards, UCL, Department of Experimental Psychology.
- 2014 Sully Scholarship for Best PhD Upgrade (£1000), UCL Department of Experimental Psychology.
- 2014 **PPG Conference Best Presentation Award (£150)**, Award for best oral presentation at the annual conference of UCL's postgraduate peer group, Windsor, United Kingdom.
- 2012-2016 **EPSRC Financial Computing Grant (£79,600)**, Full 4-year scholarship for PhD at UCL, Centre for Doctoral Training in Financial Computing and Analytics, London, United Kingdom.
- 2010-2011 **DAAD Graduate Scholarship (£16,000)**, Full scholarship for MSc at UCL, German Government Exchange Service, London, United Kingdom.
  - 2009 **NYU Studentship (\$30,000)**, Full scholarship for study abroad term at New York University, Humboldt University, Berlin, Germany.
  - 2008 **Best Student Poster Award**, Second Biennial Conference on Personality and Social Psychology, awarded by Prof. Michael W. Eysenck, Prof Maruszewski und Prof Gerald Matthews, Warsaw, Poland.
  - 2007 **Winner of Best Student Experiment**, *Student competition for Experimental study design*, Humboldt University, Berlin, Germany.

## Research visits & workshops

- Nov 2016 **Invited Participant**, Isaac Newton Institute for Mathematical Sciences, University of Cambridge, Cambridge, UK,
  - 4-week workshop on "Probability and Statistics in Forensic Science"
  - Organized by: Norman Fenton, Leila Schneps, David Balding, Richard Gill & David Lagnado.
- 2011, 2018 **Visitor**, *Center for Adaptive Rationality (ARC)*, Max Planck Insitute for Human Development, Berlin, Geramany.

#### Teaching

- 2016 2017 **Teaching Fellow in Computational Decision Making**, Department of Experimental Psychology, UCL.
  - Designed curriculum for core modules on Msc Cognititive and Decision Sciences
  - o PSYCGD04: Knowledge, Learning & Inference
    - Computational Models of Decision
    - Heuristics as Bayesian Inference
    - Active learning
  - PSYCGD02: Principles of Cognition
    - The Cognitive Science Approach
  - PSYCG201: Applied Decision-making
    - Medical Decision Making
    - Consumer Decision Making
    - Expertise
  - MSc Cognitive Science Seminar
  - Decision Making Labs
  - First Year Seminar in Psychology
  - o Admissions Officer for 2017 intake; Personal Tutor for Msc students
  - Feb 2016 **Ad-hoc Lecturer on the CODES course**, *Knowledge, Learning and Inference module*, Lectures on "Bayesian Approaches to Heuristics", Department of Experimental Psychology, UCL.
- 2014-2015 **Statistics Tutorials**, *Department of Experimental Psychology*, UCL. Graduate Course on statistics with a model comparison approach.
  - 2014 **Msc Cognitive Science Seminar**, *Department of Experimental Psychology*, UCL. Weekly seminars. Discussing research papers with Master students, and dissertation projects.

#### Supervision

- Kate MSc 2017 The illusion of understanding in the context of Brexit.
- Mumford
- Pablo Guarda MSc 2017 Understanding Risk Attitudes Toward Waiting and Travel Time Variability in Public Transport.
- Matt Bodien MSc 2017 Ideologue Over Ideology: The Dominating Influence of Political Affiliations over Personal Values.
  - Samantha **BSc 2014** Heuristics in a Real-World setting: An Example of Gambling. Mead

1 Abbleville Road — N8 8QU London — United Kingdom ② +44 74 2846 2899 • ☑ paula.parpart@gmail.com Web: https://paulaparpart.github.io/ Ghinescu

Sabina BSc 2015 Heuristics as a special case of Bayesian inference - Experimental study

#### Programming

Software R, Matlab, Python, JavaScript, HTML, CSS, LaTEx, Java, SQL, MySQL, Teradata, Aster, PhP, SPSS, WinBugs, Mechanical Turk, Unipark, Qualtrics, psiTurk

## Languages

English Advanced

German Native

French Intermediate

Spanish Basic

## Scientific Reviewing

Ad hoc Journal of Experimental Psychology: LMC reviewer Cognitive Science Society Conference

Book Review In Two Minds (Jonathan St. Evans)

#### References

**Prof Neil Stewart** 

Behavioural Sciences Warwick Business School Coventry CV4 7AL +44 24 76522456 neil.stewart@wbs.ac.uk

**Prof Nick Chater** Behavioural Sciences Warwick Business School Coventry CV4 7AL +44 24 765 24506 Nick.Chater@wbs.ac.uk