

CURRICULUM VITAE
BRADLEY C. LOVE
(January, 2018)

ADDRESS

University University College London
 Experimental Psychology
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EDUCATION

Ph.D. in Cognitive Psychology
Northwestern University, Evanston, IL

B.S. Cognitive and Linguistic Sciences
Brown University, Providence, RI

POSITIONS

2016 - Turing Fellow at the Alan Turing Institute

2011 - Full Professor in Experimental Psychology at University College
London (UCL)

2010 - Affiliate Member, DELTA Center
The University of Iowa

2010 - 2011 Full Professor in Psychology
The University of Texas at Austin

2005 – 2010 Associate Professor in Psychology
The University of Texas at Austin

1999 – 2005 Assistant Professor in Psychology
The University of Texas at Austin

GRANTS, FELLOWSHIPS, AND HONORS

6/2016 National Institute of Health P01 (linked R01s), “Linking Brain,
Behavior, and Development: Integrative Models of Category
Learning.”

3/2016 Inaugural Fellow at the Alan Turing Institute for data science.

6/2015 Wellcome Trust Senior Investigator Award, “Neural and
Computational Mechanisms of Categorisation.”

12/2014 Fellow, APS.

6/2014 The Leverhulme Trust, "Circumventing Limits in Memory Retrieval."

5/2014 Membership (elected) to the Memory Disorders Research Society.

7/2013 Adam Hornsby is awarded the W.H.R. Rivers Prize for best undergraduate in UCL Psychology.

4/2013 Brian Glass is awarded the Outstanding Dissertation Award from University of Texas at Austin.

9/2012 IMPACT fellowship award (dunnhumby corporation and UCL).

8/2012 Wellcome Trust New Start Equipment Award.

1/2012 Fellow, Psychonomic Society.

5/2011 Margaret "Megan" Sanders (undergraduate honours student) is a George H. Mitchell Fellowship award winner.

5/2011 NIH proposal R21 MH091523-01A1 "Model-Based fMRI of Dynamic Category Learning: The Memory and Attention Interface."

5/2010 AFOSR Gant #FA9550-10-1-0268, "A Dynamic Approach to Information Sampling and Learning."

9/2009 NSF Grant #0927315 (Co-PI, PI 2011-), "Predicting Disrupted Network Behavior."

7/2009 ARL Grant #W911NF-09-2-0038, "A Computational Learning Approach to Adaptive Information Displays for Enhancing Soldier Performance."

4/2009 Laura Holland, a graduate student in my lab, was awarded an NSF graduate fellowship.

3/2009 Gyslain Giguere, a postdoctoral researcher in my lab, was awarded a fellowship from Quebec, Canada.

2/2008 Aaron Hoffman, a postdoctoral researcher in my lab, was awarded an NRSA fellowship from NIMH.

5/2007 AFOSR Grant #FA9550-07-1-0178, "Category Learning by Clustering with Extension to Dynamic Environments."

1/2007 ARL Grant #W911NF-07-2-0023 Love (Co-PI), "Sustaining and Enhancing High Optempo Performance of Soldiers in the Transformed Military."

- 6/2004 AFOSR Grant #FA9550-04-1-0226, "Maximizing the Benefits of Training by Example and Direct Instruction."
- 4/2004 NSF CAREER Grant #0349101, "Flexible learning inside and outside the classroom."
- 10/2003 Matt Jones, a postdoctoral researcher sponsored jointly by me and Todd Maddox, had his NRSA training proposal funded with the top rating for the panel.
- 2/2003 Awarded a Research Internship from University of Texas to fund an entering graduate student.
- 12/2002 Awarded (along with Ahn, Goldstone, Markman, and Wolff) by the APA to host a conference honouring Doug Medin.
- 6/2002 Admitted and attended the APA's summer institute in fMRI at Harvard-MGH.
- 5/2002 Levi Larkey, a graduate student working with me, was awarded a three year fellowship through the National Defense Science and Engineering Graduate (NDSEG) fellowship program.
- 2/2002 J. S. McDonnell Foundation grant titled "Interdisciplinary Collaborative Consortium on the Cognitive Neuroscience of Category Learning." I am one of numerous co-investigators (Mark Gluck is the PI).
- 12/2001 Liran Elboym, an honours student working in my lab, was awarded a Undergraduate Research Fellowship to fund our project.
- 5/2001 AFOSR Grant #F49620-01-1-0295, "Adaptive Learning Across Task Environments."
- 10/2000 Awarded a Research Internship from University of Texas to fund an entering graduate student.
- 4/2000 Awarded a Summer Research Assistantship from the University of Texas.
- 1996 - 1999 Graduate Fellowship, NDSEG. Funded to pursue my research.
- 4/1996 National Science Foundation Graduate Fellowship. I received, but declined, an NSF fellowship.

SERVICE TO FIELD

journals *Acta Psychologica; Attention, Perception, & Psychophysics; Artificial Intelligence; Australian Journal of Psychology; Behavioral and Brain Sciences; Behavior Research Methods; Cerebral Cortex; Cognition; Cognitive Psychology (Associate Editor 2014-2017); Cognitive Science (Editorial Board 2006-2009); Current Directions in Psychological*

Science; Experimental Psychology; Decision; Frontiers in Cognitive Science (Editorial Board 2012-2014); Frontiers in Developmental Psychology (Editorial Board 2010-2014); Human Brain Mapping; International Journal of Science and Mathematics Education (Special Issue Editor, 2012-2014); JARMAC; Journal of Experimental Child Psychology; Journal of Cognitive Psychology; Journal of Experimental Psychology: General; Journal of Experimental Psychology: Human Perception and Performance; Journal of Experimental Psychology: Learning, Memory, and Cognition (Editorial Board 2006-2009); Journal of Experimental Social Psychology; Journal of Mathematical Psychology (Special Issue Editor 2014-2015); Journal of Memory and Language; Journal of Neuroscience; Journal of Vision; Journal of Vision; Language and Cognitive Processes; Memory & Cognition (Editorial Board 2006-2009; Associate Editor 2009-2012); Nature; Nature Communications; Nature Human Behaviour; Neural Computation; NeuroImage; Perception & Psychophysics; Perspectives on Psychological Science; PLoS ONE; Proceedings of the National Academy of Sciences; Psychological Bulletin; Psychological Review; Psychological Science; Psychonomic Bulletin and Review (Editorial Board 2006-2010); Science; Scientific Reports; Trends in Cognitive Sciences; Quarterly Journal of Experimental Psychology; Visual Cognition; Wiley Interdisciplinary Reviews.

conferences

AAAI 2006 (**senior program committee member**); Biologically Inspired Cognitive Architecture (BICA); FLAIRS; ICCM; ICONIP; NIPS; Awards Chair of 2007 Cognitive Science Society annual conference; **Co-Chair of 2008 Cognitive Science Society annual conference**, Cognitive Science Society Program Committee member (various years).

grants

AFOSR's Perception & Cognition Program; ANR (France); Canada Foundation for Innovation; ESRC; ESRC Rapporteur; EU Human Brain Project **panel member (2014)**; FONDECYT Siciologia (Chile); FNR (Luxembourg); FNRS (Belgium); FWO (Belgium); Leverhulme Trust; MRC; NASA's Intelligent Systems (Human-Centered Computing); National Endowment for the Humanities; Israeli Science Foundation **panel member (2011)**, National Endowment for the Humanities; NIMH Cognition, Language, and Perception (Fellowship) **panel member (2006-2007)**; National Science Foundation (Cognitive Neuroscience); National Science Foundation Perception, Action, and Cognition **panel member (2005-2007)**; National Science Foundation **program evaluator (2012)** for UCSD Science of Learning Center; NSERC (Canada); National Science Foundation (Decision, Risk and Management Sciences); Research Council of Leuven (Belgium); University of Texas at Austin Research Internship (RI) fellowship, the Wellcome Trust.

other

Comment of House of Lords request for feedback on how government should regulate Artificial Intelligence; Consultant for BBC Horizon (2014-2015, Episode 19) "Are Video Games Really That Bad?"; Outside evaluator on tenure and promotion cases, and Ph.D. dissertations. Consultant for Charles A. Dana Center academic youth development program. Air Force AMBR project

expert panel member (2002-2004), program committee member for FLAIRS 2002 Special Track “Categorization and Concept Representation: Models and Implications”; **Program evaluation for Oxford’s new Social Data Science programme; Program evaluation for Kingston’s new Decision Sciences MSc programme; Consultant on Scientific Content of BBC Horizon episode (2015); Programme evaluation for Oxford Internet Institute’s newly proposed MSc (2017), Programme evaluation for Warwick new Psychology and Data Science MSc (2016); Consultant for Ofgem, dunnhumby, the Take Five (<https://takefive-stopfraud.org.uk/>) public service.**

UNIVERSITY SERVICE

Mentor for Research Fellows at Turing (2017-)

Deputy Chair, (9/2014 -)

Head of the Cognitive Systems Area at Texas (7/2007- 8/2011)

Countless Masters and Ph.D. committees.

Member of numerous committees.

ADVISING

Postdoctoral

Christiane Ahlheim (2016-2018)

Sebastian Bobadilla-Suarez (2017-)

Kurt Braunlich (2016-)

Johan Carlin (2016-2017, now Cambridge CBU)

Gyslain Giguere (2009-2013, now a U. of Montreal)

Olivia Guest (2017-)

Giles Greenway (2018-)

Aaron Hoffman (2007- 2011)

Matthew Jones (2003-2007, now U. of Colorado Assoc. Prof.)

Mike Mack (2011- 2016, now U. of Toronto Asst. Prof)

Rob Mok (2017-)

Brett Roads (2018-)

Graduate

Eric Abel (2009-2010)

Sebastian Bobadilla-Suarez (2013-2017)

Tyler Davis (2005-2010, now Texas Tech Asst. Prof.)

John Dennis (2003-2004)

Brian Glass (2011-2012, now postdoc)

Todd M. Gureckis (2001-2005, now NYU Assoc. Prof.)

Laura Holland (2008-2009)

Alan Hornsby (2016-)

Lukas Kopec (2012-)

Levi Larkey (2002-2003)

Ross Otto (2007-2012, now McGill Asst. Prof.)

Katie Parker (2013-2016)

Paula Parpart (2012-2017)

Peter Riefer (2012-2016)
Yasuaki Sakamoto (2000-2005, now Research Asst. Prof. at Stevens
Institute of Technology)
Katherine Snyder (2007-2008)
Sebastian Suarez (2013-)
Marc Tomlinson (2004-2010)
Anne Warlaumont (2006-2007)

A lot (5+ per year) of MSc and BSc students (2012-)

PUBLICATIONS

Articles

- Ahlheim, C. & Love, B.C. (2017). Estimating the functional dimensionality of neural representations. *Biorxiv*, DOI: doi: <https://doi.org/10.1101/232454>
- Parpart, P., Jones, M. & Love, B.C. (in press). Heuristics as Bayesian inference under extreme priors. *Cognitive Psychology*.
- Guest, O., Kanayet, F.J. Love, B.C. (2017). Gerrymandering and Computational Redistricting. *arXiv*: (preprint), DOI: <https://arxiv.org/abs/1711.04640>
- Mack, M.L., Preston, A.R. & Love, B.C. (2017). Medial prefrontal cortex compresses concept representations through learning. *Pattern Recognition in Neuroimaging*, DOI: <https://doi.org/10.1109/PRNI.2017.7981500>
- Mack, M.L., Love, B.C., Preston, A.R. (2017). Building concepts one episode at a time: The hippocampus and concept formation. *Neuroscience Letters*, DOI: <https://doi.org/10.1016/j.neulet.2017.07.061>
- De Martino, B., Bobadilla-Suarez, S., Nouguchi, T., Sharot, T., & Love, B.C. (2017). Social Information is Integrated into Value and Confidence Judgments According to its Reliability. *Journal of Neuroscience*, 3880-16; DOI: <https://doi.org/10.1523/JNEUROSCI.3880-16.2017>
- Bobadilla-Suarez, S., & Love, B.C. (in press). Fast or Frugal, but not both: Decision Heuristics under Time Pressure. *Journal of Experimental Psychology: Learning, Memory, and Cognition*.
- Palmeri, T.J., Love, B.C., & Turner, B.M. (2017). Model-based cognitive neuroscience. *Journal of Mathematical Psychology*, 76, 59-64.
- Riefer, P.S., & Love, B.C. (2017). Coherency Maximizing Exploration in the Supermarket. *Nature Human Behaviour*, 1, 0017, DOI: 10.1038/s41562-016-0017.
- Guest, O., Love, B.C. (2017). What the Success of Brain Imaging Implies about the Neural Code. *eLife*, 6:e21397, <http://dx.doi.org/10.7554/eLife.21397>
- Mack, M.L., Love, B.C., Preston, A.R. (2016). Dynamic updating of hippocampal object representations reflects new conceptual knowledge. *Proceedings of the National Academy of Sciences (PNAS)*, 113(46), 13203–13208.. <http://dx.doi.org/10.1101/071118>.

- Spiers, H.J., Love, B.C., Le Pelley, M.E., Gibb, C.E., & Murphy, R.A. (in press). Anterior Temporal Lobe Tracks the Formation of Prejudice. *Journal of Cognitive Neuroscience*. DOI: 10.1162/jocn_a_01056
- Turner, B.M., Forstmann, B.U., Love, B.C., Palmeri, T.J. & Van Maanen, L. (in press). Approaches to Analysis in Model-based Cognitive Neuroscience. *Journal of Mathematical Psychology*. <http://dx.doi.org/10.1016/j.jmp.2016.01.001>.
- Love, B.C. (2016). Cognitive Models as Bridge between Brain and Behavior. *Trends in Cognitive Science*, 4, 247–248.
- Blanco, N.J., Love, B.C., Ramscar, M., Otto, A.R., Smayda, K. & Maddox, W.T. (2016). Exploratory Decision-Making as a Function of Lifelong Experience, not Cognitive Decline. *Journal of Experimental Psychology: General*, 3, 284-297.
- Love, B.C., Kopec, L., & Guest, O. (2015). Optimism Bias in Fans and Sports Reporters. *PLOS ONE*, 0(9):e0137685.
- Riefer, P.S., & Love, B.C. (2015). Unfazed by Both the Bull and Bear: Strategic Exploration in Dynamic Environments. *Games*, 6, 251-261.
- Newall, P., & Love, B.C. (2015). Nudging Investors Big and Small Toward Better Decisions. *Decision*, 2, 319-326.
- Blanco, N.J., Love, B.C., Cooper, J.A., McGeary, J.E., Knopik, V.S., & Maddox, W.T. (2015). A Frontal Dopamine System for Reflective Exploratory Behavior. *Neurobiology of Learning and Memory*, 123, 84-91.
- Love, B.C. (2015). The Algorithmic Level is the Bridge Between Computation and Brain. *Topics in Cognitive Science*, 7, 230-242.
- Patil, K., Zhu, X., Kopec, L., & Love, B.C. (2014). Optimal Teaching for Limited-Capacity Human Learners. *Neural Information Processing Systems (NIPS)*.
- Hornsby, A.N. & Love, B.C. (2014). Improved Classification of Mammograms Following Idealized Training. *Journal of Applied Research in Memory and Cognition*, 3, 72-76.
- Otto, A.R., Knox, W.B. Markman, A.B., & Love, B. C. (2014). Physiological and Behavioral Signatures of Reflective Exploratory Choice. *Cognitive, Affective, & Behavioral Neuroscience*, 14, 1167-1183.
- Davis, T., Xue, G., Love, B.C., Preston, A.R. & Poldrack, R.A. (2014). Global Neural Pattern Similarity As A Common Basis For Categorization and Recognition Memory. *Journal of Neuroscience*, 34 (22), 7472-7484.
- Ramscar, M., Hendrix, P., Love, B. C. & Baayen, H. (2013). Learning is not decline: The mental lexicon as a window into cognition across the lifespan. *The Mental Lexicon*, 8(3), 450-481.
- Mack, M.L., Preston, A.R. & Love, B.C. (2013). Decoding the Brain's Algorithm for Categorization from its Neural Implementation. *Current Biology*, 23, 2023-2027.

- Blanco, N.J., Otto, A.R., Maddox, W.T., Beevers, C.G. & Love, B.C. (2013). The Influence of Depression Symptoms on Exploratory Decision-Making. *Cognition*, 129, 563-568.
- Giguère, G. & Love, B.C. (2013). Limits in decision making arise from limits in memory retrieval. Proceedings of the *National Academy of Sciences of the United States of America* (PNAS), 110 (19), 7613-7618.
- Glass, B.D., Maddox, W.T. & Love, B.C. (2013). Real-Time Strategy Game Training: Emergence of a Cognitive Flexibility Trait. *PLOS ONE*, 8 (8).
- Sanders, M., Davis, T., & Love, B.C. (2013). Are Better Examples Beautiful or Are Beautiful Examples Better? Exploring the Relationship Between Beauty and Category Structure. *Psychonomic Bulletin & Review*, 20, 566-573.
- Knox, W.B., Glass, B.D., Love, B.C., Maddox, W.T., & Stone, P. (2012). How humans teach agents. *International Journal of Social Robotics*, 4 (4), 409-421.
- Davis, T., Love, B.C., & Maddox, W.T. (2012). Age-related Declines in the Fidelity of Newly Acquired Category Representations. *Learning and Memory*, 19, 325-329.
- Davis, T., Love, B.C., & Preston, A.R. (2012). Striatal and Hippocampal Entropy and Recognition Signals in Category Learning: Simultaneous Processes Revealed by Model-based fMRI. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 38, 821-839. (special issue on Theory and data in categorization: Integrating computational, behavioral, and cognitive neuroscience approaches).
- Knox, W.B., Otto, A.R., Stone, P., & Love, B.C. (2012). The Nature of Belief-Directed Exploratory Choice in Human Decision-Making. *Frontiers in Psychology*, 2, 398.
- Otto, A.R., Markman, A.B., & Love, B.C. (2012). Taking More, Now: The Optimality of Impulsive Choice Hinges on Environment Structure. *Social Psychological and Personality Science*, 3(2), 131-138.
- Davis, T., Love, B.C., & Preston, A.R. (2012). Learning the Exception to the Rule: Model-Based fMRI Reveals Specialized Representations for Surprising Category Members. *Cerebral Cortex*, 22, 260-273.
- Jones, M. & Love, B.C. (2011). Bayesian Fundamentalism or Enlightenment? On the Explanatory Status and Theoretical Contributions of Bayesian Models of Cognition. *Behavioral and Brain Sciences*, 34, 169-231. (target article and response to commentaries).
- Goldwater, M.B., Tomlinson, M.T., Echols, C.H., & Love, B.C. (2011). Structural Priming as Structure-Mapping: Children Use Analogies from Previous Utterances To Guide Sentence Production. *Cognitive Science*, 35, 156-170.
- Sakamoto, Y., & Love, B.C. (2010). Learning and Retention through Predictive Inference and Classification. *Journal of Experimental Psychology: Applied*, 16, 361-377
- Tomlinson, M.T., & Love, B.C. (2010). When Learning to Classify by Relations Is Easier Than by Features. *Thinking & Reasoning*, 16, 372-401.

- Otto, A.R., Gureckis, T.M., Markman, A.B., & Love, B.C. (2010). Regulatory Fit and Systematic Exploration in a Dynamic Decision-Making Environment. *Journal of Experimental Psychology: Learning, Memory, & Cognition*, 36(3), 797-804.
- Otto, A.R., & Love, B.C. (2010). You Don't Want To Know What You're Missing: When Information about Forgone Rewards Impedes Dynamic Decision Making. *Judgment and Decision Making*, 5, 1-10.
- Davis, T., & Love, B.C. (2010). Memory for Category Information is Idealized through Contrast with Competing Options. *Psychological Science*, 21, 234-242.
- Gureckis, T. M., & Love, B. C. (2010). Direct Associations or Internal Transformations? Exploring the Mechanisms Underlying Sequential Learning Behavior. *Cognitive Science*, 34, 10-50.
- Gureckis, T.M., & Love, B.C. (2009). Short Term Gains, Long Term Pains: How cues about state aid learning in dynamic environments. *Cognition*, 113, 293-313.
- Otto, A.R., Gureckis, T.M., Markman, A.B., & Love, B.C. (2009). Navigating through Abstract Decision Spaces: Evaluating the Role of State Generalization in a Dynamic Decision-Making Task. *Psychonomic Bulletin & Review*, 16, 957-963.
- Davis, T., & Love, B.C. (2009). Anticipatory Emotions in Decision Tasks: Covert Markers of Value or Attentional Processes? *Cognition*, 112, 195-200.
- Davis, T., Love, B.C., & Maddox, W.T. (2009). Two Pathways to Stimulus Encoding in Category Learning? *Memory & Cognition* 37, 394-413
- Gureckis, T. M., & Love, B. C. (2009). Learning in Noise: Dynamic Decision-Making in a Variable Environment. *Journal of Mathematical Psychology*, 150, 180-193.
- Sakamoto, Y., Jones, M., & Love, B. C. (2008). Putting the Psychology Back into Psychological Models: Mechanistic vs. Rational Approaches. *Memory & Cognition*, 36, 1057-1065.
- Maddox, W. T., Love, B. C., Glass, B. D., & Filoteo, J. V. (2008). When more is less: Feedback effects in perceptual category learning. *Cognition*, 108, 578-589.
- Love, B. C., & Gureckis, T. M. (2007). Models in search of a brain. *Cognitive, Affective, & Behavioral Neuroscience*, 90-108.
- Jones, M., & Love, B. C. (2007). Beyond common features: The role of roles in determining similarity. *Cognitive Psychology*, 55, 196-231.
- Sakamoto, Y., & Love, B. C. (2006). Vancouver, Toronto, Montreal, Austin: Enhanced oddball memory through differentiation, not isolation. *Psychonomic Bulletin & Review*, 13, 474-479.
- Jones, M., Love, B. C., & Maddox, W. T. (2006) Recency as a window to generalization: Separating decisional and perceptual sequential effects in category learning. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 32, 316-332.

- Love, B. C. (2005). Environment and goals jointly direct category acquisition. *Current Directions in Psychological Science*, 14, 195-199.
- Sakamoto, Y., & Love, B. C. (2004). Schematic influences on category learning and recognition memory. *Journal of Experimental Psychology: General*, 133, 534-553.
- Love, B. C., Medin, D. L., & Gureckis, T. M. (2004). SUSTAIN: A network model of category learning. *Psychological Review*, 111, 309-332.
- Gureckis, T. M., & Love, B. C. (2004). Common mechanisms in infant and adult category learning. *Infancy*, 5, 173-198.
- Larkey, L. B., & Love, B. C. (2003). CAB: Connectionist analogy builder. *Cognitive Science*, 27, 781-794.
- Gureckis, T. M., & Love, B. C. (2003). Human unsupervised and supervised learning as a quantitative distinction. *International Journal of Pattern Recognition and Artificial Intelligence*, 17, 885-901.
- Love, B. C., & Markman, A. B. (2003). The nonindependence of stimulus properties in human category learning. *Memory & Cognition*, 31, 790-799.
- Love, B. C. (2003). The multifaceted nature of unsupervised category learning. *Psychonomic Bulletin & Review*, 10, 190-197.
- Gureckis, T. M., & Love, B. C. (2003). Towards a unified account of supervised and unsupervised category learning. *Journal of Experimental and Theoretical Artificial Intelligence*, 15, 1-24.
- Love, B. C. (2002). Comparing supervised and unsupervised category learning. *Psychonomic Bulletin & Review*, 9, 829-835.
- Yamauchi, T., Love, B. C., & Markman, A. B. (2002). Learning non-linearly separable categories by inference and classification. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 28, 585-593.
- Love, B. C., Rouder, J. N., & Wisniewski, E. J. (1999). A structural account of global and local processing. *Cognitive Psychology*, 38, 291-316.
- Sloman, S. A., Love, B. C., & Ahn, W. (1998). Feature centrality and conceptual coherence. *Cognitive Science*, 22, 189-228.
- Wisniewski, E. J. & Love, B. C. (1998). Relations versus properties in conceptual combination. *Journal of Memory and Language*, 38, 177-202.

Peer Reviewed Proceedings

- Parpart, P., Schulz, E., Speekenbrink, M., & Love, B.C. (2015). Active learning as a means to distinguish among prominent decision strategies. Proceedings of the Cognitive Science Society.

- Hoffman, A.B., Love, B.C., & Markman, A.B. (2010). Selective Attention by Structural Alignment: An Eyetracking Study. *Proceedings of the Annual Meeting of Cognitive Science Society*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Tomlinson, M.T., Howe, M., Love, B.C. (2009). Seeing the world through an expert's eyes: Context-aware display as a training companion. *Proceedings of HCI International*, LNAI 5638, 668-677.
- Love, B. C., Jones, M., Tomlinson, M.T., & Howe, M. (2009). Learning to Predict Information Needs: Context-Aware Display as a Cognitive Aid and an Assessment Tool. *Proceedings of The ACM SIGCHI Conf. on Human Factors in Computing Systems (CHI 2009)*, 1351-1360.
- Sakamoto, Y., & Love, B.C. (2009). You Only Had to Ask Me Once: Long-term Retention Requires Direct Queries During Learning. *Proceedings of the Annual Meeting of Cognitive Science Society*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Otto, A.R., Gureckis, T.M., Markman, A.B., & Love, B.C. (2009). When Things Get Worse before they Get Better: Regulatory Fit and Average-Reward Learning in a Dynamic Decision-Making Environment. . *Proceedings of the Annual Meeting of Cognitive Science Society*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Love, B. C., Jones, M., Tomlinson, M.T., & Howe, M. (2008). Predicting information needs: Adaptive display in dynamic environments. *Proceedings of the Annual Meeting of Cognitive Science Society*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Davis, T., Love, B.C., & Maddox, W.T. (2008). How Goals Shape Category Acquisition: The Role of Contrasting Categories. *Proceedings of the Annual Meeting of Cognitive Science Society*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Gureckis, T. M., & Love, B. C. (2007). Behaviorism Reborn? Statistical Learning as Simple Conditioning. *Proceedings of the Cognitive Science Society*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Davis, T., Love, B. C., & Maddox, W. T. (2007). Translating From Perceptual to Cognitive Coding. *Proceedings of the Cognitive Science Society*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Tomlinson, M., & Love, B. C. (2007). Relation-Based Categories are Easier to Learn than Feature-Based Categories. *Proceedings of the Cognitive Science Society*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Rein, J. R., Love, B. C., & Markman, A. B. (2007). Feature Relations and Feature Salience in Natural Categories. *Proceedings of the Cognitive Science Society*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Gureckis, T. M., & Love, B. C. (2006). Bridging levels: Using a cognitive model to connect brain and behavior in category learning. *Proceedings of the Cognitive Science Society*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Love, B. C., & Jones, M. (2006). The emergence of multiple learning systems. *Proceedings of the Cognitive Science Society*. Mahwah, NJ: Lawrence Erlbaum Associates.

- Sakamoto, Y., & Love, B. C. (2006). Sizable sharks swim swiftly: Learning correlations through inference in a classroom setting. *Proceedings of the Cognitive Science Society*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Sakamoto, Y., Love, B. C., & Jones, M. (2006). Tracking variability in learning: Contrasting statistical and similarity-based accounts. *Proceedings of the Cognitive Science Society*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Jones, M., Maddox, W. T., & Love, B. C. (2006). The role of similarity in generalization. *Proceedings of the Cognitive Science Society*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Tomlinson, M., & Love, B. C. (2006). Learning abstract relations through analogy to concrete exemplars. *Proceedings of the Cognitive Science Society*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Tomlinson, M., & Love, B. C. (2006). From pigeons to humans: Grounding relational learning in concrete examples. *Twenty-First National Conference on Artificial Intelligence (AAAI-2006), USA, 21*, 136-141.
- Gureckis, T. M., & Love, B. C. (2005). A critical look at the mechanisms underlying implicit sequence learning. *Proceedings of the Cognitive Science Society*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Jones, M., Maddox, W. T., & Love, B. C. (2005). Stimulus generalization in category learning. *Proceedings of the Cognitive Science Society*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Sakamoto, Y., & Love, B. C. (2005). A novel approach to understanding novelty effects in memory. *Proceedings of the Cognitive Science Society*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Jones, M., & Love, B. C. (2004). Beyond common features: The role of roles in determining similarity. *Proceedings of the Cognitive Science Society*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Sakamoto, Y., & Love, B. C. (2004). Type/token information in category learning and recognition. *Proceedings of the Cognitive Science Society*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Love, B. C., & Gureckis, T. M. (2004). The hippocampus: Where a cognitive model meets cognitive neuroscience. *Proceedings of the Cognitive Science Society*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Sakamoto, Y., Matuska, T., & Love, B. C. (2004). Dimension-wide vs. exemplar-specific attention in category learning and recognition. In M. Lovett, C. Schunn, C. Lebiere, and P. Munro (Eds.), *Proceedings of the International Conference of Cognitive Modeling* (pp. 261-266). Mahwah, New Jersey: Lawrence Erlbaum.
- Sakamoto, Y., & Love, B. C. (2003). Category structure and recognition memory. *Proceedings of the Cognitive Science Society*. Mahwah, NJ: Lawrence Erlbaum Associates.

- Gureckis, T. M., & Love, B. C. (2002). Modeling unsupervised learning with SUSTAIN. In S. Haller & G. Simmons (Eds.), *Proceedings of the 15th international Florida artificial intelligence research society conference* (pp. 163-167). Menlo Park, California: AAAI Press.
- Gureckis, T. M., & Love, B. C. (2002). Who says models can only do what you tell them? Unsupervised category learning data, fits, and predictions. *Proceedings of the Cognitive Science Society, USA, 24*, 399-404.
- Love, B. C., Markman, A. B., & Yamauchi, T. (2000). Modeling classification and inference learning. *Seventeenth National Conference on Artificial Intelligence (AAAI-2000), USA, 17*, 136-141.
- Love, B. C. (2000). A computational level theory of similarity. *Proceedings of the Cognitive Science Society, USA, 22*, 316-321.
- Love, B. C. (2000). Learning at different levels of abstraction. *Proceedings of the Cognitive Science Society, USA, 22*, 800-805.
- Love, B. C. (1999). Utilizing time: Asynchronous binding. *Advances in Neural Information Processing Systems, 11*, 38-44.
- Love, B. C., & Medin, D. L. (1998). SUSTAIN: A model of human category learning. *Proceedings of the Fifteenth National Conference on Artificial Intelligence (AAAI-98), USA, 15*, 671-676.
- Love, B. C., & Medin, D. L. (1998). Modeling item and category learning. *Proceedings of the Twentieth Annual Conference of the Cognitive Science Society, USA, 20*, 639-644.
- Love, B. C. (1996). Mutability, conceptual transformation, and context. *Proceedings of the Eighteenth Annual Conference of the Cognitive Science Society, USA, 18*, 459-463.
- Love, B. C., & Sloman, S. A. (1995). Mutability and the determinants of conceptual transformability. *Proceedings of the Seventeenth Annual Conference of the Cognitive Science Society, USA, 17*, 654-659.

Publications – Other

- Love, B.C. (20-Oct 2016). Will AI spell the end of humanity? The tech industry wants you to think so. The Conversation.
- Love, B.C. (7-May 2015). Gaming improves your brain power - reality or hype? The Conversation.
- Gureckis, T.M., & Love, B.C. (2015). Computational Reinforcement Learning. Oxford Handbook of Computational and Mathematical Psychology (Eds. J.R. Busemeyer, J.T. Townsend, Z.J. Wang, A. Eidels). Oxford University Press.
- Love, B.C. (2015). Concepts, Meaning, and Conceptual Relationships. *The Oxford Handbook of Cognitive Science*.
<http://www.oxfordhandbooks.com/view/10.1093/oxfordhb/9780199842193.001.0001/oxfordhb-9780199842193-e-12>

- Love, B. C. (2013). Grounding quantum probability in psychological mechanism. *Behavioral and Brain Sciences*, 36, 296.
- Love, B.C. (2013). Category Learning, Computational Perspectives. In Hal Pashler (Ed.), *Encyclopedia of the Mind*, Sage.
- Love, B.C. (2013). Categorization. In K.N. Ochsner and S.M. Kosslyn (Eds.) *Oxford Handbook of Cognitive Neuroscience*, 342-358. Oxford Press.
- Love, B.C., & Jones, M. (2012). Bayesian Learning. In B. Seel (Ed.), *Encyclopedia of the Sciences of Learning*. Springer.
- Love, B. C., & Tomlinson, M. (2010). Rule-based vs. similarity-based concept learning. In Denis Mareschal, Paul Quinn, Stephen Lea (Eds.), *The Making of Human Concepts*. Oxford University Press, 54-74.
- Tomlinson, M.T., & Love, B. C. (2008). Monkey see, monkey do: Learning relations through concrete examples. *Behavioral and Brain Sciences*, 31, 150-151.
- Love, B.C., Tomlinson, M., & Gureckis, T.M. (2008). The concrete substrates of abstract rule use. In B.H. Ross, *The Psychology of Learning and Motivation*, 49, 167-207.
- Love, B. C. (2007). Method and System for Adapting Display to Match User-Specific Information Preferences. Provisional Patent filed through UT.
- Love, B. C. (2005). Method and apparatus for incorporating decision making into classifiers. US Patent #6,920,439.
- Love, B. C. (2005). In vivo or in vitro: Cognitive architectures and task specific models. In R. W. Pew and K. A. Gluck, *Modeling Human Behavior with Integrated Cognitive Architectures: Comparison, Evaluation, and Validation*. 351-364. Mahwah, NJ: Lawrence Erlbaum.
- Love, B. C., & Gureckis, T. M. (2005). Modeling learning under the influence of culture. In W. Ahn, R. L., Goldstone, B. C., Love, A. B., Markman, & P. Wolff (Eds.), *Categorization inside and outside of the lab: Festschrift in Honor of Douglas L. Medin*. 229-248. Washington, DC: American Psychological Association.
- Ahn, W., Goldstone, R. L., Love, B. C., Markman, A. B., & Wolff, P. (Eds.). (2005). *Categorization inside and outside of the lab: Festschrift in Honor of Douglas L. Medin*. Washington, DC: American Psychological Association.
- Love, B. C. (2003). Concept learning. In L. Nadel (Ed.), *Encyclopedia of cognitive science* (Vol. 1, pp. 646-652). London: Nature Publishing Group.
- Love, B. C. (2002). Similarity and Categorization: A review [Review of the book *Similarity and Cognition*]. *AI Magazine*, 23, 103-105.
- Love, B. C. (2002). Three deadly sins of category learning modelers. *Behavioral and Brain Sciences*, 24, 687-688.
- Love, B. C. (2001). Uncovering analogy [Review of the book *The Analogical Mind*]. *Trends in Cognitive Sciences*, 5, 454-455.

INVITED TALKS (not submitted conference papers, symposia, or abstracts)

- 6/2018 TBA keynote, for Multi-Disciplinary Developmental Dynamics (ETF2018).
- 5/2018 TBA, Santa Fe Institute, working group on "Distributed Decision Making: Universal features of decision making via collective computation".
- 5/2018 TBA, Cambridge CBU.
- 5/2018 TBA, SBDM, Symposium on Biology of Decision Making, Paris.
- 3/2018 "Attention as Uncertainty-Minimising Information Sampling", reinforcement learning workshop at COSYNE in Colorado.
- 2/2018 "Heuristics as Bayesian inference under extreme priors" keynote, for "Computational modeling of decision-making across scales: from neural coding to Policy-making", Paris.
- 8/2017 "Different Modes of Exploration", Invited to join a symposium at ICON, Amsterdam.
- 5/2017 "Exploration with Objective and Subjective Awards", Warwick Business School.
- 2/2017 "Predicting and Understanding Consumer Behaviour", Keynote, Microsoft Tech Days.
- 11/2016 "Predicting and Understanding Human Behaviour", keynote address at Big Data Analytics, London.
- 11/2016 "Tuning Conceptual Knowledge through Hippocampal-Prefrontal Interactions", University of Glasgow.
- 8/2016 "Coherency Maximizing Exploration in the Supermarket", Invited Symposium organised by Dan Bartels, Int. Conference on Thinking.
- 6/2016 "Psychology meets Big Data in the Supermarket", Knowledge Exchange Event, British Museum.
- 3/2016 "People's Inductive Biases in Learning and Decision Making", Keynote at Visual Analytics event at the Alan Turing Institute.
- 3/2016 "The Categorising Brain", University of Edinburgh.
- 3/2016 "The Categorising Brain", University of Sussex.
- 11/2015 Food Matters Live.
- 10/2015 "Optimal Teaching to Infer the Nature of the Human Learner and Knowledge Organisation", Conference on Complex Systems.

- 8/2015 Ogilvy Change Summer School.
- 5/2015 "Do People and Intelligent Machines Make Decisions in the Same Way?" Pint of Science, London.
- 5/2015 "Apparent attentional limits during learning as limits in memory retrieval", Workshop on Memory Processes in Judgment and Decision Making, hosted by University of Basel.
- 4/2015 "Do we make food choices rationally?" write-up in Lancet: <http://t.co/rTrFo87FnJ>, Edinburgh International Science Festival.
- 3/2015 "Decoding the Brain's Algorithm for Categorisation from its Neural Implementation", University of Plymouth.
- 1/2015 "Decoding the Brain's Algorithm for Categorisation from its Neural Implementation", Institute of Psychiatry, King's College London
- 1/2015 "Decoding the Brain's Algorithm for Categorisation from its Neural Implementation", 2015 EPS semantics symposium.
- 9/2014 "Decoding the Brain's Algorithm for Categorisation from its Neural Implementation", NYU.
- 5/2014 "Exploration and Exploitation: Converging Computational, Physiological, Psychiatric, Genetic, and Consumer-Choice Perspectives", University of Bristol.
- 9/2014 "Decoding the Brain's Algorithm for Categorisation from its Neural Implementation," NYU.
- 5/2014 "Exploration and Exploitation: Converging Computational, Physiological, Psychiatric, Genetic, and Consumer-Choice Perspectives," University of Bristol.
- 3/2014 "Decoding the Brain's Algorithm for Categorisation from its Neural Implementation," University of Lueven.
- 2/2014 "Limits in decision making arise from limits in memory retrieval," University of Basel.
- 2/2014 "Gaming as a Convergence Point of Cognitive Science Theory and Practice," HULT International Business School, London.
- 1/2014 "Decoding the Brain's Algorithm for Categorisation from its Neural Implementation", MRC-Cognition and Brain sciences Unit at Cambridge University.
- 11/2013 "Improving Cognitive Function Through Gaming", Decision-making in neurological rehabilitation Inaugural Symposium, Centre for Neurorehabilitation @UCLP.

- 8/2013 "Limits in Decision Making Reflect Limits in Memory Retrieval", dunnhumby Corporation, London, UK.
- 6/2013 AECT International Conference on the Frontier in e-Learning Research, Taipei, Taiwan.
- 5/2013 "Limits in Decision Making Reflect Limits in Memory Retrieval", Workshop on Integrating Approaches to Computational Cognition, Sponsored by the National Science Foundation, Arlington, VA, USA.
- 3/2013 "Limits in Decision Making Reflect Limits in Memory Literature", Computational Models of Cognition Workshop, Birkbeck.
- 2/2013 "Limits in Decision Making Reflect Limits in Memory Literature", London JDM group.
- 2/2013 "Linking Brain, Behaviour, and Computation in Category Learning", City University London
- 11/2012 "Cognitive Psychology in Service of Retail", dunnhumby corporation, London, UK.
- 9/2012 "Linking Brain, Behaviour, and Computation in Category Learning", Center for Cognitive Neuroscience. University of Pennsylvania.
- 8/2012 Talks at National Taiwan University of Science and Technology (NTUST), Taipei, Taiwan, and National Central University (NCU), Jhongli City, Taiwan.
- 8/2012 Invited symposium, "Thirty years of Marr's Vision: Levels of Analysis in Cognitive Science ", Annual Meeting of the Cognitive Science Society, Sapporo, Japan.
- 6/2012 "Boosting Executive Function through Video Game Training", Cognitive Control and Associative Learning workshop, Exeter, UK.
- 4/2012 "Linking Brain, Behaviour, and Computation in Category Learning", Swansea University.
- 3/2012 "Linking Brain, Behaviour, and Computation in Category Learning", Wellcome Functional Imaging Laboratory, UCL.
- 3/2012 "Linking Brain, Behaviour, and Computation in Category Learning", University of Oxford.
- 3/2012 "Linking Brain, Behaviour, and Computation in Category Learning", University of Warwick.
- 2/2012 "Linking Brain, Behaviour, and Computation in Category Learning", Birkbeck, University of London.

- 12/2011 "Learning the exception to the rule," Department of Linguistics, University of Texas at Austin
- 4/2011 Panellist, "Sustainable Design Symposium 2011," hosted by Kate Catterall.
- 2/2011 "The Memory and Attention Interface," Brown University.
- 2/2011 "Attention as a Consequence of Dynamic Decision Making," UNSW.
- 1/2011 "Attention as a Consequence of Dynamic Decision Making," UCL.
- 11/2010 "Looking to Learn, Learning to Look: Attention Emerges from Cost Sensitive Information Sampling", Workshop on Persistent & Generative Cognitive Models, funded and hosted by Air Force Research Laboratory (Mesa, AZ).
- 5/2010 "When Short- and Long-Term Rewards Conflict," Cognitive Science Program, Simon Fraser University.
- 3/2010 "Putting the Pieces Together: Contributions and Interactions of Various Learning Systems," University of Iowa.
- 10/2009 "The Bayesian Program as Progeny of Evolutionary Psychology and Behaviorism," CDS Pre-Conference talk, sponsored by the DELTA center and organized by John Spencer.
- 8/2009 "The not so abstract nature of concepts, rules, and grammar," address to Max Planck Institute for Psycholinguistics (Nijmegen, NL).
- 8/2009 "Connectionist Perspectives on the Development of Category Learning Abilities," development and modelling symposium organized by Maartje Raijmakers, Amsterdam, The Netherlands.
- 11/2008 "Category Learning by Clustering with Extension to Dynamic Environments," AFOSR Cognition & Decision Program Workshop, Washington, D.C. Hosted by Jun Zhang.
- 8/2008 "Where do we get new research ideas?" Connecting probabilistic models of cognition and neural networks workshop, Hosted by Tom Griffiths and Jay McClelland, Berkeley, CA.
- 6/2008 "The Role of Initial Conditions in Concept Organization," Concept Modelling Workshop, University of Lueven, Belgium.
- 5/2008 "Using Mechanistic (non-rational) Models of Learning to Link Behavior, Brain, and Body," Keynote, Perceptual Expertise Network (PEN) Workshop XVI in Banff, Canada.
- 5/2008 "Using Mechanistic (non-rational) Models of Learning to Link Behavior, Brain, and Body," Department of Psychology, Ohio State.

- 12/2007 "Anticipating Information Needs: Adaptive Display in Dynamic Environments," Sustaining Performance Under Stress Symposium, Center for Strategic and Innovative Technologies, Austin, TX.
- 9/2007 "Human Inference Mechanisms," Cowles Foundation for Research in Economics, Yale University, workshop on "Analogies, Rules, and Probabilities."
- 3/2007 "Learning by Example with Extension to Dynamic Environments," AFOSR Cognition & Decision Program Workshop, Washington, D.C.
- 2/2007 "The Emergence of Multiple Learning Systems," University of Arizona.
- 2/2007 "Putting the Psychology Back Into Psychological Models," AFOSR sponsored workshop in Dynamic Decision Making, Dayton, OH.
- 11/2006 "The Emergence of Multiple Learning Systems," University of Louisiana.
- 7/2006 "The Emergence of Multiple Learning Systems," ICOM, Sydney, Australia.
- 7/2006
Australia. "Models in Search of a Brain," workshop, Margaret River, Australia.
- 6/2006 "The Emergence of Multiple Learning Systems," UWA, Australia.
- 4/2006 "The Emergence of Multiple Learning Systems," AFOSR Cognition & Decision Program Workshop, Dayton, OH.
- 4/2006 "The Emergence of Multiple Learning Systems," APA Convention Invited Division 3 speaker, New Orleans, LA.
- 10/2005 Speaker/Symposium Organizer, "The Cognitive Neuroscience of Category Learning," at the Computational Cognitive Neuroscience Conference, Washington, D.C.
- 9/2005 "Acquiring Knowledge One Cluster at a Time," Department of Psychology, New York University, NYC.
- 7/2005 "Exemplar-based relational category learning," Annual Summer Interdisciplinary Conference (ASIC) 2005, Briançon, France.
- 6/2005 Workshop Participant, NSF sponsored "Dynamical and Connectionist Accounts of Development," University of Iowa, organized by John Spencer and Jay McClelland.
- 5/2005 "A Clustering Account of Human Categorization," Department of Psychology, University of Sydney, Australia.

- 4/2005 "Cluster-based Modeling of Human Learning: Joint Influences of Task and Environment," AFOSR Perception & Cognition Program Workshop, St. Augustine, FL.
- 4/2005 "Environment and goals jointly direct category acquisition," Department of Psychology, Texas A&M, College Station, TX.
- 2/2005 Keynote speaker for Lake Ontario Visionary Establishment Conference.
- 2/2005 "Beyond common features: The role of roles in determining similarity." Department of Psychology, The University of Western Ontario.
- 1/2005 "Clustering Account of Human Learning" Department of Psychology, Stanford University.
- 1/2005 "Clustering Account of Human Learning" Department of Psychology, UCSD.
- 10/2004 "Bridging Levels: A Cognitive Model of Hippocampal Mediated Learning," J. S. McDonnell Foundation meeting on the cognitive neuroscience of category learning, New York City, NY.
- 9/2004 "Bridging Levels: A Cognitive Model of Hippocampal Mediated Learning" Department of Communication Sciences and Disorders, The University of Texas at Austin.
- 6/2004 "Infants, amnesiacs, aging, and the MTL," Annual Summer Interdisciplinary Conference (ASIC) 2004, Dolomiti, Italy.
- 3/2004 "A Clustering Account of Human Learning," AFOSR Perception & Cognition Program Workshop, Phoenix, AZ.
- 2/2004 "Human Learning, Memory, and the Categories in and Imposed on Our World," UT Odyssey lecture, Austin, TX.
- 1/2004 "A Clustering Account of Human Category Learning," Caltech, Computation and Neural Systems, Pasadena, CA.
- 11/2003 "Infants, Amnesiacs, and the MTL," ARMADILLO, Texas A&M, College Station, TX.
- 9/2003 "Category Learning in Infants and Amnesiacs," J. S. McDonnell Foundation meeting on the cognitive neuroscience of category learning, New York City, NY.
- 6/2003 "The influence of culture on conceptual organization," talk given at a conference to honour Douglas Medin, Chicago Botanical Gardens, Chicago, IL.
- 9/2002 "Two systems or just one," J. S. McDonnell Foundation meeting on the cognitive neuroscience of category learning, New York City, NY.

- 8/2002 Invited Discussant, AMBR symposium at the Cognitive Science Society Conference, Washington, D.C.
- 11/2001 "Aging effects in category learning," Mind, Brain, & Behavior Forum Series, Harvard University, Cambridge, MA.
- 7/2001 "Inference and classification learning: Data and models," ICOM-3: Third International Conference on Memory. Valencia, Spain.
- 11/2000 "Modeling Human Category Learning," Forum for Artificial Intelligence, Department of Computer Science, The University of Texas at Austin, Austin, TX.
- 10/2000 "Inference and Classification Learning," Association for Research in Memory, Attention, Decision-making, Intelligence, Language, Learning & Organization (ARMADILLO), Texas A&M, College Station, TX.
- 2/1999 "SUSTAIN: A Clustering Account of Category Learning," Psychology Department, Columbia University, New York City, NY.