CURRICULUM VITAE
BRADLEY C. LOVE
(March, 2022)

Contact Information

Post	University College London Experimental Psychology 26 Bedford Way, Room 314 London, UK WC1H 0AP
E-mail	b.love@ucl.ac.uk
Website	http://bradlove.org
Citizenship	UK and US

EDUCATION

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

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

POSITIONS

2020-	Programme Leader in Human-Machine Teams at the Alan Turing Institute
2016 -	Inaugural Turing Fellow at the Alan Turing Institute
2011 -	Professor of Cognitive and Decision Sciences at University College London (UCL)
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

8/2020	Best paper award, *Computational Brain & Behavior* for Hornsby et al. (2020).
9/2019	ELLIS.eu Fellow in the Natural Intelligence Programme
5/2019	Royal Society Wolfson Fellowship, “Integrating Embedding Spaces”.
10/2018	Turing Institute flagship project with Intel.
7/2018	ESRC fellowship funding for a PhD studentship in AI.
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.
9/2012	IMPACT fellowship award (dunnhumby corporation and UCL).
8/2012	Wellcome Trust New Start Equipment Award.
1/2012	Fellow, Psychonomic Society.
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.”
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.”
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.
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).
5/2001	AFOSR Grant #F49620-01-1-0295, “Adaptive Learning Across Task Environments.”
4/1996	Graduate Fellowship, NDSEG.

4/1996 National Science Foundation Graduate 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; eLife; 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: Language, Cognition and Neuroscience; 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; Language, Cognition and Neuroscience; Memory & Cognition (**Editorial Board 2006-2009; Associate Editor 2009-2012**); Nature; Nature Communications; Nature Human Behaviour; Nature Machine Intelligence; Neural Computation; Neurobiology of Learning and Memory; NeuroImage; Neurons, Behavior, Data analysis, and Theory; Perception & Psychophysics; Perspectives on Psychological Science;PLoS Computational Biology; PLoS ONE; Proceedings of the National Academy of Sciences; Psychological Bulletin; Psychological Review; Psychological Science; Psychonomic Bulletin and Review (**Editorial Board 2006-2010**); Science; Scientfic 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); Expert Panel for IEEE VIS 2020 Workshop on Visualization Psychology

grants AFOSR's Perception & Cognition Program; ANR (France); BBSRC; Canada Foundation for Innovation; EPSRC, ESRC; ESRC Rapporteur; EU Human Brain Project **panel member (2014)**; FONDECYT Sicologia (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); UKRI Future Leaders Fellowships; University of Texas at Austin Research Internship (RI) fellowship, the Wellcome Trust.

other

Advisory board of IEEE VIS2020 Workshop of Visualization Psychology; **Assisting Brain Imaging Data Structure (BIDS) group extend standard to computational modelling**; 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. **Royal Society mentoring programme**. 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;** REF consultant for WBS.

UNIVERSITY SERVICE

Mentor for Research Fellows at Turing (2017-)

Deputy Chair, (9/2014 - 1/2019)

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, now at Google)
Daniel Barry (2019-)
Sebastian Bobadilla-Suarez (2017-)
Kurt Braunlich (2016-2019, now at NIH)
Johan Carlin (2016-2017, now Cambridge CBU)
Gyslain Giguere (2009-2013, now a U. of Montreal)
Olivia Guest (2017-2020, now Asst. Prof at Donders)
Giles Greenway (2018-2019)
Aaron Hoffman (2007- 2011)
Matthew Jones (2003-2007, now U. of Colorado Assoc. Prof.)
Mike Mack (2011- 2016, now U. of Toronto Assoc. Prof)
Rob Mok (2017-2020, Leverhulme Fellowship at Cambridge)
Brett Roads (2018-)
Nick Sexton (2019-)

Graduate

Eric Abel (2009-2010)
Kaarina Aho (2020-)
Sebastian Bobadilla-Suarez (2013-2017, now postdoc in lab)
Franziska Bröker (2019-, secondary advisor)

Nikolay Dagaev (2021-)
Tyler Davis (2005-2010, now Texas Tech Asst. Prof.)
John Dennis (2003-2004)
Brian Glass (2011-2012)
Todd M. Gureckis (2001-2005, now NYU Full Prof.)
Laura Holland (2008-2009)
Adam Hornsby (2016-)
Lukas Kopec (2012-2016)
Levi Larkey (2002-2003)
Xiaolang "Ken" Liu (2018-)
Ross Otto (2007-2012, now McGill Asst. Prof.)
Katie Parker (2013-2016)
Paula Parpart (2012-2017, now postdoc at Warwick)
Peter Riefer (2012-2016)
Yasuaki Sakamoto (2000-2005, now Research Asst. Prof. at Stevens Institute of Technology)
Katherine Snyder (2007-2008)
Marc Tomlinson (2004-2010)
Anne Warlaumont (2006-2007)

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

PUBLICATIONS (including selected preprints)

Sexton, N. J., & Love, B. C. (2022). Reassessing hierarchical correspondences between brain and deep networks through direct interface. *Science Advances* (second revision).

Barry, D. N., & Love, B. C. (2022). A neural network account of memory replay and knowledge consolidation. *Cerebral Cortex*, bhac054. https://doi.org/10.1093/cercor/bhac054

Bobadilla-Suarez, S., Jones, M., & Love, B. C. (2022). Robust priors for regularized regression. *Cognitive Psychology*, *132*, 101444.

Bröker, F., Love, B. C., & Dayan, P. (2022). When unsupervised training benefits category learning. *Cognition*, *221*, 104984.

Hornsby, A. N., & Love, B. C. (2022). Sequential consumer choice as multi-cued retrieval. *Science Advances*, *8*(8), eabl9754. https://doi.org/10.1126/sciadv.abl9754

Aho, K., Roads, B., & Love, B. C. (2021). *System alignment supports cross-domain learning and zero-shot generalisation*. *PsyArxiv*.

Barry, D. N., & Love, B. C. (2021). *Human learning follows the dynamics of gradient descent*. *PsyArxiv.*

Braunlich, K., & Love, B. C. (2021). Bidirectional influences of information sampling and concept learning. *Psychological Review*. https://doi.org/10.1037/rev0000287

Broschard, M. B., Kim, J., Love, B. C., & Freeman, J. H. (2021). Category learning in rodents using touchscreen-based tasks. *Genes, Brain and Behavior*, *20*(1), e12665.

Broschard, M. B., Kim, J., Love, B. C., Wasserman, E. A., & Freeman, J. H. (2021). Prelimbic cortex maintains attention to category-relevant information and flexibly updates category representations. *Neurobiology of Learning and Memory*, *185*, 107524.

Dagaev, N., Roads, B. D., Luo, X., Barry, D. N., Patil, K. R., & Love, B. C. (2021). A too-good-to-be-true prior to reduce shortcut reliance. *ArXiv Preprint ArXiv:2102.06406*.

Love, B. C. (2021). Levels of biological plausibility. *Philosophical Transactions of the Royal Society B*, *376*(1815), 20190632.

Love, B. C., & Roads, B. D. (2021). Similarity as a Window on the Dimensions of Object Representation. *Trends in Cognitive Sciences*, *25*(2), 94–96.

Luo, X., Roads, B. D., & Love, B. C. (2021). The costs and benefits of goal-directed attention in deep convolutional neural networks. *Computational Brain & Behavior*, *4*(2), 213–230.

Luo, X., Sexton, N. J., & Love, B. C. (2021). A deep learning account of how language affects thought. *Language, Cognition and Neuroscience*, 1–10.

Roads, B. D., & Love, B. C. (2021). Enriching imagenet with human similarity judgments and psychological embeddings. *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition*, 3547–3557.

Smith, F. B., Roads, B. D., Luo, X., & Love, B. C. (2021). Understanding top-down attention using task-oriented ablation design. *ArXiv Preprint ArXiv:2106.11339*.

Bickford Smith, F., Luo, X., Roads, B. D., & Love, B. C. (2020). The perceptual boost of visual attention is task-dependent in naturalistic settings. *ArXiv E-Prints*, arXiv-2003.

Bobadilla-Suarez, S., Ahlheim, C., Mehrotra, A., Panos, A., & Love, B. C. (2020). Measures of neural similarity. *Computational Brain & Behavior*, *3*(4), 369–383.

Bobadilla-Suarez, S., Guest, O., & Love, B. C. (2020). Subjective value and decision entropy are jointly encoded by aligned gradients across the human brain. *Communications Biology*, *3*(1), 1–9.

Botvinik-Nezer, R., Holzmeister, F., Camerer, C. F., Dreber, A., Huber, J., Johannesson, M., Kirchler, M., Iwanir, R., Mumford, J. A., Adcock, R. A., & others. (2020). Variability in the analysis of a single neuroimaging dataset by many teams. *Nature*, *582*(7810), 84–88.

Hornsby, A. N., Evans, T., Riefer, P. S., Prior, R., & Love, B. C. (2020). Conceptual organization is revealed by consumer activity patterns. *Computational Brain & Behavior*, *3*(2), 162–173.

Hornsby, A. N., & Love, B. C. (2020). How decisions and the desire for coherency shape subjective preferences over time. *Cognition*, *200*, 104244.

Love, B. C. (2020a). Linking Models with Brain Measures. In *An Introduction to Model-Based Cognitive Neuroscience (to appear)* (2nd ed.). OSF Preprints.

Love, B. C. (2020b). Model-based fMRI analysis of memory. *Current Opinion in Behavioral Sciences*, *32*, 88–93.

Mack, M. L., Preston, A. R., & Love, B. C. (2020). Ventromedial prefrontal cortex compression during concept learning. *Nature Communications*, *11*(1), 1–11.

Mok, R. M., & Love, B. C. (2020). Abstract neural representations of category membership beyond information coding stimulus or response. *Journal of Cognitive Neuroscience*, 1–17.

Roads, B. D., & Love, B. C. (2020). Learning as the unsupervised alignment of conceptual systems. *Nature Machine Intelligence*, *2*(1), 76–82.

Smith, F. B., Luo, X., Roads, B. D., & Love, B. C. (2020). The perceptual boost of visual attention is task-dependent in naturalistic settings. *ArXiv Preprint ArXiv:2003.00882*.

Braunlich, K., & Love, B. C. (2019). Occipitotemporal representations reflect individual differences in conceptual knowledge. *Journal of Experimental Psychology: General*, *148*(7), 1192.

Broschard, M. B., Kim, J., Love, B. C., Wasserman, E. A., & Freeman, J. H. (2019). Selective attention in rat visual category learning. *Learning & Memory*, *26*(3), 84–92.

Guest, O., Kanayet, F. J., & Love, B. C. (2019). Gerrymandering and computational redistricting. *Journal of Computational Social Science*, *2*(2), 119–131.

Guest, O., & Love, B. C. (2019). Levels of representation in a deep learning model of categorization. *BioRxiv*, 626374.

Mok, R. M., & Love, B. C. (2019). A non-spatial account of place and grid cells based on clustering models of concept learning. *Nature Communications*, *10*(1), 1–9.

Poldrack, R. A., Feingold, F., Frank, M. J., Gleeson, P., de Hollander, G., Huys, Q. J., Love, B. C., Markiewicz, C. J., Moran, R., Ritter, P., & others. (2019). The importance of standards for sharing of computational models and data. *Computational Brain & Behavior*, *2*(3), 229–232.

Schulz, E., Bhui, R., Love, B. C., Brier, B., Todd, M. T., & Gershman, S. J. (2019). Structured, uncertainty-driven exploration in real-world consumer choice. *Proceedings of the National Academy of Sciences*, *116*(28), 13903–13908.

Ahlheim, C., & Love, B. C. (2018). Estimating the functional dimensionality of neural representations. *NeuroImage*, *179*, 51–62.

Bobadilla-Suarez, S., & Love, B. C. (2018). Fast or frugal, but not both: Decision heuristics under time pressure. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *44*(1), 24.

Inhoff, M. C., Libby, L. A., Noguchi, T., Love, B. C., & Ranganath, C. (2018). Dynamic integration of conceptual information during learning. *PloS One*, *13*(11), e0207357.

Love, B. C. (2018). Model comparison, not model falsification. *Behavioral and Brain Sciences*, *41*.

Mack, M. L., Love, B. C., & Preston, A. R. (2018). Building concepts one episode at a time: The hippocampus and concept formation. *Neuroscience Letters*, *680*, 31–38.

Parpart, P., Jones, M., & Love, B. C. (2018). Heuristics as Bayesian inference under extreme priors. *Cognitive Psychology*, *102*, 127–144.

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*, *37*(25), 6066–6074.

Guest, O., & Love, B. C. (2017). What the success of brain imaging implies about the neural code. *ELife*, *6*(e21397), http-dx.

Love, B. C. (2017). Concepts, meaning, and conceptual relationships. *The Oxford Handbook of Cognitive Science*, 137–150.

Love, B. C., Guest, O., Slomka, P., Navarro, V., & Wasserman, E. (2017). Deep Networks as Models of Human and Animal Categorization. *CogSci*.

Mack, M. L., Preston, A. R., & Love, B. C. (2017). Medial prefrontal cortex compresses concept representations through learning. *2017 International Workshop on Pattern Recognition in Neuroimaging (Prni)*, 1–4.

Palmeri, T. J., Love, B. C., & Turner, B. M. (2017). Model-based cognitive neuroscience. In *Journal of Mathematical Psychology* (Vol. 76, pp. 59–64). Academic Press.

Parpart, P., Schulz, E., Speekenbrink, M., & Love, B. C. (2017). Active learning reveals underlying decision strategies. *BioRxiv*.

Riefer, P. S., Prior, R., Blair, N., Pavey, G., & Love, B. C. (2017). Coherency-maximizing exploration in the supermarket. *Nature Human Behaviour*, *1*(1), 1–4.

Spiers, H. J., Love, B. C., Le Pelley, M. E., Gibb, C. E., & Murphy, R. A. (2017). Anterior temporal lobe tracks the formation of prejudice. *Journal of Cognitive Neuroscience*, *29*(3), 530–544.

Turner, B. M., Forstmann, B. U., Love, B. C., Palmeri, T. J., & Van Maanen, L. (2017). Approaches to analysis in model-based cognitive neuroscience. *Journal of Mathematical Psychology*, *76*, 65–79.

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*, *145*(3), 284.

Love, B. C. (2016). Cognitive models as bridge between brain and behavior. *Trends in Cognitive Sciences*, *20*(4), 247–248.

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*, *113*(46), 13203–13208.

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.

Gureckis, T. M., & Love, B. C. (2015). Computational reinforcement learning. *The Oxford Handbook of Computational and Mathematical Psychology*, 99–117.

Love, B. C. (2015). The algorithmic level is the bridge between computation and brain. *Topics in Cognitive Science*, *7*(2), 230–242.

Love, B. C., Kopeć, Lukasz, & Guest, O. (2015). Optimism bias in fans and sports reporters. *Plos One*, *10*(9), e0137685.

Love, B. C., Ramscar, M., Griffiths, T. L., & Jones, M. (2015). Generative and Discriminative Models in Cognitive Science. *CogSci*.

Newall, P. W., & Love, B. C. (2015). Nudging investors big and small toward better decisions. *Decision*, *2*(4), 319.

Parpart, P., Schulz, E., Speekenbrink, M., & Love, B. C. (2015). Active learning as a means to distinguish among prominent decision strategies. *CogSci*.

Riefer, P. S., & Love, B. C. (2015). Unfazed by both the bull and bear: Strategic exploration in dynamic environments. *Games*, *6*(3), 251–261.

Anderson, O. R., Love, B. C., & Tsai, M.-J. (2014). Neuroscience perspectives for science and mathematics learning in technology-enhanced learning environments. In *International Journal of Science and Mathematics Education* (Vol. 12, Issue 3, pp. 467–474). Springer Netherlands.

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.

Hornsby, A. N., & Love, B. C. (2014). Improved classification of mammograms following idealized training. *Journal of Applied Research in Memory and Cognition*, *3*(2), 72–76.

Love, B. C. (2014). Categorization. *Oxford Handbook of Cognitive Neuroscience.*

Love, B. C., Jarecki, J., Busemeyer, J. R., Taatgen, N. A., Griffiths, T. L., & Mirjam, J. (2014). Moot Point Process Models. *Proceedings of the Annual Meeting of the Cognitive Science Society*, *36*(36).

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*(4), 1167–1183.

Parpart, P., Jones, M., & Love, B. (2014). Heuristics as a special case of Bayesian Inference. *Proceedings of the Annual Meeting of the Cognitive Science Society*, *36*(36).

Patil, K. R., Zhu, J., Kopeć, Lukasz, & Love, B. C. (2014). Optimal teaching for limited-capacity human learners. *Advances in Neural Information Processing Systems*, *27*.

Riefer, P. S., & Love, B. C. (2014). Choice exploration and exploitation in purchase decisions: A longitudinal study of customers' exploration and exploitation of supermarket products. *Proceedings of the Annual Meeting of the Cognitive Science Society*, *36*(36).

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*(3), 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*, *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), e70350.

Kopec, L., & Love, B. C. (2013). Are forgetting processes crucial to category learning? *CogSci*.

Kusev, P., Love, B. C., & van Schaik, P. (2013). Decision-Network Context: Dynamics and Learning in Preference Formation. *Paper Presented at the 54th Annual Meeting of the Psychonomic Society, Canada. Abstracts of the Psychonomic Society.*

Love, B. C. (2013). Grounding quantum probability in psychological mechanism. *Behavioral and Brain Sciences*, *36*(3), 296–296.

Mack, M. L., Preston, A. R., & Love, B. C. (2013). Decoding the brain's algorithm for categorization from its neural implementation. *Current Biology*, *23*(20), 2023–2027.

Parpart, P., Jones, M., & Love, B. C. (2013). When is it rational to rely on heuristics? *CogSci*.

Ramscar, M., Hendrix, P., Love, B., & Baayen, R. H. (2013). Learning is not decline: The mental lexicon as a window into cognition across the lifespan. *The Mental Lexicon*, *8*(3), 450–481.

Richardson, D. C., Riefer, P., Love, B., Lotto, B., Clarke, R. C., Dale, R., Rogers, J., & Ireland, J. (2013). Experiments in dynamic group action and decision making: How crowds of people can walk a tightrope together and survive a zombie attack. *Proceedings of the Annual Meeting of the Cognitive Science Society*, *35*(35).

Sanders, M., Davis, T., & Love, B. C. (2013). Is better beautiful or is beautiful better? Exploring the relationship between beauty and category structure. *Psychonomic Bulletin & Review*, *20*(3), 566–573.

Davis, T., Love, B. C., & Maddox, W. T. (2012). Age-related declines in the fidelity of newly acquired category representations. *Learning & Memory*, *19*(8), 325–329.

Davis, T., Love, B. C., & Preston, A. R. (2012a). Learning the exception to the rule: Model-based fMRI reveals specialized representations for surprising category members. *Cerebral Cortex*, *22*(2), 260–273.

Davis, T., Love, B. C., & Preston, A. R. (2012b). 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*(4), 821.

Dixit, V., Alsup, R., Waller, S., Love, B. C., & Tomlinson, M. (2012). A STATIC MODEL FOR PREDICTING DISRUPTED NETWORK BEHAVIOUR. *TRANSPORTATION & LOGISTICS MANAGEMENT*, 3–10.

Love, B. C., & Jones, M. (2012). Bayesian Learning. In N. M. Seel (Ed.), *Encyclopedia of the Sciences of Learning* (pp. 415–417). Springer US. https://doi.org/10.1007/978-1-4419-1428-6_255

Eliasmith, C., Griffiths, T., Hardcastle, V. G., Love, B., Bechtel, W., Cooper, R. P., & Peebles, D. (2012). Thirty years of Marr's Vision: Levels of Analysis in Cognitive Science. *Proceedings of the Annual Meeting of the Cognitive Science Society*, *34*(34).

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.

Knox, W. B., Otto, A. R., Stone, P., & Love, B. (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.

Giguere, G., & Love, B. C. (2011). Determinants of learning difficulty and boundary uncertainty in unidimensional category learning. *Proceedings of the Annual Meeting of the Cognitive Science Society*, *33*(33).

Glass, B. D., Tomlinson, M. T., Maddox, W. T., & Love, B. C. (2011). Becoming a Gamer: Cognitive Effects of Real-Time Strategy Gaming. *CogSci*.

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*(1), 156–170.

Jones, M., & Love, B. C. (2011a). Bayesian fundamentalism or enlightenment? On the explanatory status and theoretical contributions of Bayesian models of cognition. *Behavioral and Brain Sciences*, *34*(4), 169.

Jones, M., & Love, B. C. (2011b). Pinning down the theoretical commitments of Bayesian cognitive models. *Behavioral and Brain Sciences*, *34*(4), 215–231.

Love, B., & Spencer, J. (2011). Moving Beyond Where and What to How: Using Models and fMRI to Understand Brain-Behavior Relations. *Proceedings of the Annual Meeting of the Cognitive Science Society*, *33*(33).

Davis, T., & Love, B. C. (2010). Memory for category information is idealized through contrast with competing options. *Psychological Science*, *21*(2), 234–242.

Gureckis, T. M., & Love, B. C. (2010). Direct associations or internal transformations? Exploring the mechanisms underlying sequential learning behavior. *Cognitive Science*, *34*(1), 10–50.

Hoffman, A., Love, B., & Markman, A. (2010). Selective Attention by Structural Alignment: An Eyetracking Study. *Proceedings of the Annual Meeting of the Cognitive Science Society*, *32*(32).

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SELECTED POPULAR WRITINGS (see http://bradlove.org/#press for press coverage)

The lab's blog, https://bradlove.org/blog/#blog

Love, B. C. (2019). BBC homepage for a week (500k hits first day). Do supermarkets know more about us than we do? https://www.bbc.co.uk/news/business-47357292

Love, B. C. (2016). Will AI spell the end of humanity? The tech industry wants you to think so. *The Register* from *The Conversation*, https://www.theregister.co.uk/2016/10/25/will_ai_spell_the_end_of_humanity_the_tech_industry_wants_you_to_think_so

Love, B. C. (2015). Gaming improves your brain power – reality or hype? *IFL* from *The Conversation*, https://theconversation.com/gaming-improves-your-brain-power-reality-or-hype-41002

INVITED TALKS

6/2023	Workshop on the "Neurobiology of statistical learning". Kavli Institute for Theoretical Physics, Santa Barbara, USA.
4/2022	"Multilevel theories for completeness", Symposium at CNS on Marr's levels, organised by Tomaso Poggio.

4/2022	TBA, University of Pennsylvania’s MindCORE Seminar.
10/2021	“Embedding Spaces for Decision Making”, University of Basel.
10/2021	“Embedding Spaces for Decision Making”, Max Planck for Adaptive Rationality.
10/2021	“Embedding Spaces for Decision Making” University of Zurich, Neuroeconomics.
9/2021	“Bridging Brain and Behaviour with Process Models”, Max Planck for Human Cognitive and Brain Sciences.
2/2021	"Integrating Embedding Spaces", University of Tübingen.
3/2021	"Do you make decisions or do your decisions make you?", Who's in control? UCL human sciences symposium.
2/2021	"Integrating Embedding Spaces", University of Trento.
2/2021	"Integrating Embedding Spaces", University of Wisconsin at Madison.
11/2020	“Large-scale embeddings from human behaviour”, The Alan Turing Institute.
9/2020	"Category Learning as Compression", Max Plank Centre for Computational Psychiatry and Ageing Research.
6/2020	“From Bayesian models to heuristics and back again”, Max Planck Institute for Intelligent Systems.
5/2020	Role of Bayesian Models in Neuroscience. Neuromatch 2.0 (4.5k in attendance; https://www.crowdcast.io/e/neuromatch2/23)
5/2020	“Big data, smart analyses”, UCL Changing Minds webinar.
5/2020	“A clustering account of spatial and non-spatial concept learning”, University of Bristol.
5/2020	“Category Learning as Compression” Cognitive Neuroscience Society (CNS).
6/2023	Workshop on the “Neurobiology of statistical learning”. Kavli Institute for Theoretical Physics, Santa Barbara, USA.
10/2021	“Embedding Spaces for Decision Making”, University of Basel
10/2021	“Embedding Spaces for Decision Making”, Max Planck for Adaptive Rationality.
10/2021	“Embedding Spaces for Decision Making” University of Zurich, Neuroeconomics.
9/2021	“Bridging Brain and Behaviour with Process Models”, Max Planck for Human Cognitive and Brain Sciences

3/2021	"Do you make decisions or do your decisions make you?", Who's in control? UCL human sciences symposium.
2/2021	"Integrating Embedding Spaces", University of Tübingen (Felix Wichmann).
2/2021	"Integrating Embedding Spaces", University of Trento.
2/2021	"Integrating Embedding Spaces", University of Wisconsin at Madison.
9/2020	"Category Learning as Compression", Max Plank Centre for Computational Psychiatry and Ageing Research
6/2020	“From Bayesian models to heuristics and back again” Max Planck Institute for Intelligent Systems.
5/2020	Role of Bayesian Models in Neuroscience. Neuromatch 2.0 (4.5k in attendance; https://www.crowdcast.io/e/neuromatch2/23)
5/2020	“Big data, smart analyses”, UCL Changing Minds webinar
5/2020	“A clustering account of spatial and non-spatial concept learning” University of Bristol.
5/2020	“Category Learning as Compression” Cognitive Neuroscience Society (CNS) symposium.
2/2020	“Concept learning as compression”, Hamburg Center of NeuroScience at UKE.
1/2020	“A common mechanism for spatial and concept learning”, Max Planck Institute for Human Cognitive and Brain Sciences.
9/2019	ELLIS, “Top-down attention in the human brain and convolutional networks,” Berlin.
7/2019	DoD Future Directions Workshop on Human-Machine Learning, Arlington, VA.
7/2019	General AI discussion panel, Royal Institution.
5/2019	“Levels of Representation in a Deep Learning Model of Categorisation,” University of Bristol.
5/2019	“Concept Learning as Compression,” Control Processes 2019, Brown University.
4/2019	“Coherency Seeking as a Driver of Preferences,” Wharton Business School.
4/2019	Working group on Brain Imaging Data Structure (BIDS) extension for computational modelling. Princeton University.
3/2019	“A deep learning account of shape and colour biases in categorisation,” SRCD Biennial, Baltimore.
3/2019	“Concept Learning as Compression,” ICPS, Paris.

9/2018	Workshop presentation at “Interpreting BOLD: Furthering the dialogue between cellular and cognitive neuroscience” at Oxford.
9/2018	“Evaluation of the predictive value of the HoNOS,” St Andrew's Healthcare.
6/2018	“Predicting when consumers will be unpredictable “, Cheltenham Science Festival - How Predictable Are You? Hosted by Hannah Fry.
6/2018	“Building useful representations based on human activity patterns”, UBEL DTC, UCL Innovation event.
6/2018	“A deep learning account of shape and colour biases in categorisation”, for Multi-Disciplinary Developmental Dynamics (ETF2018).
5/2018	“Distinct Accumulation and Aggregation Stages or Processes?”, Santa Fe Institute, working group on “Distributed Decision Making: Universal features of decision making via collective computation”.
6/2018	“Concept Learning as Compression”, Cambridge CBU.
5/2018	“Selective Attention for Dimensionality Reduction”, SBDM, Symposium on Biology of Decision Making, Paris.
4/2018	“Concept Learning as Compression”, Brain and Behaviour Institute at the Research Centre Jülich.
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 Corportation, 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	“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.