
Oliver James Hulme

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Academic Research and Employment

2011-Present Senior Researcher, Group leader of Reward & Homeostasis Group, Research Area leader of Cognitive and Computational Neuroimaging, Danish Research Centre for Magnetic Resonance, Hvidovre Hospital, Denmark

2010-2011 Visiting Researcher, Psychology Department, University of British Columbia, Canada

2008-Present Honorary Fellow, Department of Anatomy and Developmental Biology, University College London, UK

2010-Aug 2011 Lecturer, Zoology Department & Psychology Department, University of British Columbia, Canada
Comparative Neurobiology: Cellular, Systems and Cognitive Neuroscience, Introductory Statistics

2009 Visiting Scholar, Welsh Institute of Cognitive Neuroscience, Bangor University, UK
Foundations of Hedonic Psychology and Neuroscience

2007-2008 Wellcome Trust Postdoctoral Fellow in Cognitive Neuroscience, University College London, UK
Neural and Computational Basis of Sensorial, Motivational and Emotional Salience in the Visual System

Education

2003-2006 PhD in Neuroimaging, with Prof. S. Zeki FRS and Prof. K. Friston FRS, University College London, UK
Neuroimaging of Visual Consciousness: Visibility, Invisibility, and Reportability
Examiners: Prof Mike Morgan FRS, Dr Daniel Glaser

2001-2002 Special Status Student, Harvard University and Massachusetts Institute of Technology, USA
Affective Neuroscience, Visual Neuroscience, Psychology Methods, Philosophy of Mind, Cognitive Psychology

1998-2001 M.A. Physiological Sciences, Lady Margaret Hall, University of Oxford, UK
Equivalent of major in Neuroscience and Experimental Psychology (2:1)

1985-1998 A-levels, Cheadle Hulme School, Manchester, UK
Physics (A), Chemistry (A), Biology (A), General Studies (A), Prizes awarded in all science subjects

Scholarships and Grants

£563K (Group 5.4 mill kr) ARLA Food & Health Excellence Centre, OmniSam: The Omnibus Satiety Metric, *Project Grant*

£101K (1.1 mill kr) Lundbeck Fonden, Bypassing Appetite, *Project Grant*

£113K (1 mill kr) Lundbeck Fonden, *Funding for PhD studentship*

£170K (1.55 mill kr) Danish Research Council (FSS), *Postdoctoral fellowship*

£2K (17,000 kr) Welsh Institute of Cognitive Neuroscience, Bangor University, UK, *Visiting Scholarship*

£440K (3.75 mill kr) Wellcome Trust Project Grant, UK, *Researcher Co-investigator*

£1K (8,500 kr) Advanced Centre for Computational Neuroscience, Germany, *Workshop Scholarship*

£3K (25,500 kr) Bogue Fellowship, University College London, UK, *Travel Scholarship*

£1.5K (12,700 kr) Brain Trust Travel Awards (x3), University College London, UK, *Travel Scholarship*

£1.5K (12,700 kr) Institute for Pure and Applied Math, UCLA, USA, *Workshop Scholarship*

£500 (4,250 kr) Economic Social Research Council, Math. of Complex Systems, Warwick University, UK, *Scholarship*

£42K (360,000 kr) Medical Research Council, UK, *PhD Studentship*

Publications

- Morville, T., Friston, K., Burdakov, D., Siebner, H.R., Hulme, O.J., The Homeostatic Logic of Reward. *bioRxiv*, doi.org/10.1101/242974
- Morville, T., Madsen, K., Siebner, H.R., Hulme, O.J., Reward signaling in brainstem nuclei under glyceimic flux . *bioRxiv*, doi.org/10.1101/243006
- Hallsson, B.G., Siebner H.R., Hulme O.J. Fairness, fast and slow: A review of dual process models of fairness (2018). *Neurosci Biobehav Rev.* 2018 [Epub ahead of print]
- Christensen, B.J., Schmidt J.B., Nielsen, M.S, Tækkerd, L., Holm, L., Lunn, S., Brediee, W.L.P., Ritz, C., Holst J.J., Hansenf, T., Hilbert A., le Roux, C.W., Hulme, O.J., Siebner, H.R., Morville, T., Naver, L., Floyd, A.K., Sjödin, A. Patient profiling for success after weight loss surgery (GO Bypass study): An interdisciplinary study protocol (In press) *Contemporary Clinical Trials Communications*
- Larsen, K.M., Mørup, M., Birknow, M.R., Fischer, E., Hulme, O.J., Vangkilde, A., Schmock, H., Baaré, W.F., Didriksen M., Olsen, L., Werge, T., Siebner, H.R., Garrido M.I., Altered auditory processing and top-down connectivity in 22q11.2 Deletion Syndrome (2018), *Schizophrenia Research*
- Meder, D., Kolling, N., Verhagen, L., Wittmann, M.K., Scholl, J., Madsen, K.H., Hulme, O.J., Behrens, T.E.J., Rushworth, M.F.S., (2017) Simultaneous representation of a spectrum of dynamically changing value estimates during decision making, *Nature Communications*
- Friis-Olivarius, M., Hulme, O.J., Skov, M., Ramsøy, T.Z., Siebner, H.R. (2017) Imaging the Creative Unconscious: Reflexive Neural Responses to Objects in the Visual and Parahippocampal Region Predicts State and Trait Creativity, *Scientific Reports*
- Hulme, O.J., Webb, E., Sebald, A., (Forthcoming) Neuroeconomics and Physiological Measurement: in *Handbook of Research Methods and Applications in Experimental Economics*, Edward Elgar Publishing
- Hulme, O.J., & Madsen, K.M. (2016) Reward and the Predictive Brain, in “The Predictive Brain”, *Hjerne Forum (Danish)*
- *Meder, D., *Haagensen, B., Hulme, O.J., Morville, T.M., Gelskov, S., Herz, D., Diomsina, B., Christensen, M., Madsen, K.M., Siebner, H.R., (2016) Tuning the Brake While Raising the Stake: Network Dynamics During Sequential Decision-Making, *Journal of Neuroscience*
- Meder, D., Madsen, K.M., Hulme, O.J., Siebner, H.R., (2016) Chasing Probabilities - Signaling negative and positive prediction errors across domains, *Neuroimage*
- Schmock H, Vangkilde A, Larsen KM, Fischer E, Birknow MR, Jepsen JR, Olesen C, Skovby F, Plessen KJ, Mørup M, Hulme O, Baaré WF, Didriksen M, Siebner HR, Werge T, Olsen L. (2015) The Danish 22q11 research initiative. *BMC Psychiatry*
- Laursen, H.R., Siebner, H.R., Haren, T., Madsen, K., Grønlund, R., Hulme, O.J., Henningsson, S., (2014) Variation in the oxytocin receptor gene is associated with behavioral and neural correlates of empathic accuracy. *Frontiers in Behavioural Neuroscience*
- Hulme, O.J., Skov, M., Chadwick M., Siebner, H.R., Ramsøy, T.Z. (2014) Sparse encoding of Associative Density in the Hippocampus. *Neuroimage*
- Chumbley, Köchli, Hulme, Stan Van Uum, Evan Russel, Koren, Engelman, Pizzagalli & Fehr (2014) Stress and reward: long term cortisol exposure predicts the strength of sexual preference. *Physiology and Behavior*
- Herz, D.M., Christensen, M.S., Bruggemann, N., Hulme, O. J., Ridderinkhof, R.K., Madsen, K.H., Siebner, H.R., (2014) Motivational tuning of fronto-subthalamic connectivity facilitates control of action impulses, *Journal of Neuroscience*
- Herz, D.M., Hulme, O.J., Florin, E., Christensen, M.S., Timmermann, L., Siebner, H.R., (2013) Levodopa reinstates connectivity from prefrontal to premotor cortex during externally paced movement in Parkinson's disease. *Neuroimage*
- van der Vegt, J.P.M., Hulme, O.J., Zittel, S., Madsen, K.H., Weiss, M.M., Buhmann, C., Bloem, B.R., Münchau, A., Siebner (2013) Attenuated neural response to gamble outcomes in drug-naive patients with Parkinson's Disease. *Brain*

- Bach, D., Hulme, O., Penny, W., and Dolan, R. (2011). The Known Unknowns: Neural Representation of Second-order Uncertainty and Ambiguity. *Journal of Neuroscience*.
- Hulme, O.J., Whiteley, L.E., and Shipp, S. (2010). Spatially Distributed Encoding of Covert Attentional Shifts in Human Thalamus. *Journal of Neurophysiology*
- Fleming, S., Whiteley, L.E., Hulme, O., Sahani, S., and Dolan, R., (2010). Effects of Category-specific Costs on Neural Systems for Perceptual Decision-making. *Journal of Neurophysiology*
- Kirk, U., Hulme, O.J., Skov, M., and Christensen, M.S. (2009). Modulation of aesthetic value by semantic context: an fMRI study. *Neuroimage*.
- Hulme, O.J. Friston, K. and Zeki, S. (2009). Neural Correlates of Stimulus Reportability. *Journal of Cognitive Neuroscience*
- Zeki, S., Hulme, O.J., Roulston, B., and Atiyah, M. (2008). The encoding of temporally irregular and regular visual patterns in the human brain. *PloS One*
- Friston, K., Chu, C., Mourão-Miranda, J., Hulme, O.J, Rees, G., Penny, W., and Ashburner, J. (2008). Bayesian Decoding of Brain Images. *Neuroimage*
- Hulme, O.J., and Whiteley, L. (2007). The “Mesh” as Evidence - Model Comparison and Alternative Interpretations of Feedback. *Behavioural and Brain Sciences*
- Hulme, O.J. and Zeki, S. (2006). The Sightless View: Neural Correlates of Occluded Objects. *Cerebral Cortex*