

**Tobias Morville**

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**Profile:** My research triangulates between applied mathematics, computational biology and theoretical decision-making. The central motivation of my PhD project is to develop and improve a fundamental theory of choice based subject to normative constraints from physiology and evolution. Through my PhD I've tested the predictions from this theory via axiomatic methods using behavioural and neural measurement using magnetic resonance (in humans), optogenetics, and fibre optometry (in mice).

**Academia:**

November 2013 – present: **PhD student**, Neuroscience Graduate Programme, Copenhagen University

October 2012 – November 2013: **Research assistant**, Danish Research Centre for Magnetic Resonance (DRCMR)

**Teaching:**

Feb 2014 – Juli 2014: **TA, Neuroimaging Foundations**, DRCMR

December 2010 – July 2013: **Part-time lecturer in statistics and external supervisor**, PH-Metropol

**Education:**

2010 – 2013: **M.Sc. in Economics**, University of Copenhagen

2006 – 2010: **B.Sc. in Economics**, University of Copenhagen

**PhD Courses & Summer Schools:**

August 2016 – *Semi Supervised Learning*, DTU

June 2015 – *Complex Systems Summer School*, Santa Fe Institute

Sept 2012 – *The emotional brain*, University of Copenhagen CIMBI

Oct 2012 – *Statistical parametric mapping of MRI*, University of Copenhagen

**Research Stays:**

August 2015 – February 2016: *London Mathematical Laboratory*, Dr. Ole Peters. *The Francis Crick Institute*, Professor Denis Burdakov.

**Invited Talks:**

May 2016 – The 38<sup>th</sup> Symposium of Neuroscience of Decision Making: *Decision Making and the Dynamics of Death*

November 2014 – Society For Neuroscience: *The Homeostatic Logic of Reward*

June 2014 – Conference for Artificial Life: *The Homeostatic Logic of Reinforcement Learning*

March 2013 – CNEE Experimental Economics Workshop: *Autocorrelation Biases in a Sequential Gambling Task*

May 2013 – CNEE Neuroeconomics Workshop: *Homeostatic Reinforcement Learning*

**Publications in Peer-Reviewed Journals:**

- *Tuning the Brake While Raising the Stake: Network Dynamics during Sequential Decision-Making*. D. Meder, B. N. Haagensen, **T. Morville**, S. Gelskov, D. Herz, B. Diomsina, M. S. Christensen, K. H. Madsen, O. Hulme, H. R. Siebner. **J Neurosci**. doi: 10.1523/JNEUROSCI.3191-15.2016

- *Patient profiling for success after weight loss surgery (GO Bypass Study): An interdisciplinary study protocol*. J. Schmidt, B. Christensen, M. Nielsen, L. Tækker, L. Holm, S. Lunn, W. Bredie, C. Ritz, JJ Holst, T. Hansen, A. Hilbert, C. le Roux, O. J Hulme, H. R Siebner, **T. Morville**, L. Naver, A.K. Floyd, A. Sjödin, **BMC Public Health** (In review)

**Working papers:**

**T. Morville**, A. Sebal, O. Hulme. *Heterogeneity of Autocorrelation Biases in a Sequential Gambling Task*. | **T. Morville** & O. Hulme. *Towards a Fundamental Theory of Homeostatic Choice Theory*. | **T. Morville** & O. Hulme. *Homeostatic Choice Theory*. | **T. Morville**, M. Koudahl, O. Hulme. *Phenotyping Losers*

**Grants and funding:**

**1 mio. d.kr.** Lundbeck Foundation. Travel grants: **50.000 d.kr.** Personal grants: **15.000 d.kr.**

**Professional experience in industry:**

August 2010 – January 2015: Freelance consultant at **Weekendavisen**. April 2009 - March 2012: Student Researcher at **DAMVAD consultancy agency**. May 2008 - March 2009: Student Researcher at Wealth Management, **SEB Enskilda**. Feb 2007 - May 2008: Student Researcher at **Danish Oil Industry Association** (EOF).

**Press material:**

Rational som på savannen (Rational, as on the savannah. Danish article) – Weekendavisen #47 | Ideer | 22. Nov – 28. Nov 2013