

Cognitive Systems Monographs

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The Cognitive Systems Monographs (COSMOS) publish new developments and advances in the fields of cognitive systems research, rapidly and informally but with a high quality. The intent is to bridge cognitive brain science and biology with engineering disciplines. It covers all the technical contents, applications, and multidisciplinary aspects of cognitive systems, such as Bionics, System Analysis, System Modelling, System Design, Human Motion, Understanding, Human Activity Understanding, Man-Machine Interaction, Smart and Cognitive Environments, Human and Computer Vision, Neuroinformatics, Humanoids, Biologically motivated systems and artefacts Autonomous Systems, Linguistics, Sports Engineering, Computational Intelligence, Biosignal Processing, or Cognitive Materials as well as the methodologies behind them. Within the scope of the series are monographs, lecture notes, selected contributions from specialized conferences and workshops, as well as selected PhD theses.

Jeremy L. Wyatt · Dean D. Petters
David C. Hogg
Editors

From Animals to Robots and Back: Reflections on Hard Problems in the Study of Cognition

A Collection in Honour of Aaron Sloman

 Springer

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Foreword

This collection of papers is based on talks and papers given at a symposium organised to celebrate Aaron Sloman's 75th birthday. The event took place at the University of Birmingham on 12 and 13 September 2011. Approximately 70 attendees came from major AI research centres where Aaron has worked such as Birmingham, Edinburgh and Sussex, as well as from many universities around the world where his former students and collaborators now work. These included colleagues from as far afield as Canada and California. The symposium included both academic talks and a lively dinner where many delegates were able to testify to Aaron's impact on their work to date. A common theme among the speakers was that their academic lives have never been quite the same again since working with him.

Aaron has made a remarkably wide ranging impact in the disciplines of artificial intelligence and cognitive science. He has worked in the fields of artificial intelligence and cognitive science since 1972, when he worked as a Senior Visiting Fellow in Edinburgh for a year. He comments on that time: *I think I learnt more in that year than in any other year of my life since about the age of 4* and that he was converted to A. I. as the best way to do philosophy (Sloman 2012, p. 2). His unusually broad interests and papers are detailed on his homepage (Sloman 2014a) and the websites for the Cognition and Affect Project (Sloman 2014b) and the Meta-Morphogenesis Project (Sloman 2014c). Additionally, in this collection, Maggie Boden's contribution provides an overview of his work. He has supervised or worked with many people in the field. From the editors and contributors in this collection are included six former Ph.D. students of Aaron: David Hogg, Tom Khabaza, Tim Read, Luc Beaudoin, Ian Wright, Nick Hawes, and Dean Petters. Also represented are former postdocs: Brian Logan, Matthias Scheutz, and Michael Zillich. Other contributions come from Aaron's current or former faculty colleagues: Maggie Boden, Manfred Kerber, Jeremy Wyatt, and Jeremy Baxter. In addition to his prodigious and wide ranging research output, Aaron has also had a profound influence in shaping two university departments: at Sussex University developing a Cognitive Studies Programme in the School of Social Sciences into the School of Cognitive and Computing Sciences (COGS) and at the University of

Birmingham laying the foundations for successful research and teaching in artificial intelligence and cognitive science. Both of these have interdisciplinary and notably friendly cultures, and these are hallmarks of Aaron's influence.

Jeremy L. Wyatt
Dean D. Petters
David C. Hogg

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Acknowledgments

We extend our sincere thanks to all the contributors to this collection. They enthusiastically engaged with the spirit of the original symposium, authoring papers on a bewildering range of topics that does at least some justice to the enormous range of Aaron's interests and achievements. The attendees at the symposium itself were of an equally broad range: including not only academics, but also industrialists and entrepreneurs.

We also thank all who helped with the organisation of the symposium. In particular, we would like to extend our thanks to David Lodge and Stephanie Dale who joined us to read a delightful excerpt from a play based on David's novel "Thinks", featuring Professor of Cognitive Science Ralph Messenger engaging in a lively debate with an academic colleague on the nature of cognition. David edited the excerpt especially for the event, and also spoke about how Aaron had helped him with much of the science and philosophy expressed in the book.

We also thank all our families, in particular Dean would like to thank Cath, Lauren and Beth for support during the process of editing this book.

Finally, there is one person to whom we owe the biggest thank you of all. Aaron, you have challenged us, changed us, provoked new ideas, new research programmes and taught us much about how to be better academics. We are much richer for the experience, and this collection is our thank you to you.

Jeremy L. Wyatt
Dean D. Petters
David C. Hogg

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