Researching the Autism Spectrum

Contemporary Perspectives

This selection of contemporary studies provides up-to-date perspectives from leading investigators who are at the cutting edge of research into Autism Spectrum Disorders. The book allows readers to grasp new approaches to understanding the autism spectrum. Key areas of theory and research are covered, from classification and diagnosis, genetics, neurology and biochemistry, to socio-cognitive, developmental and educational perspectives, essential to a broader understanding of the autism spectrum. In addition, it introduces new emphases on MEG, epilepsy and memory. In highlighting both biomedical and psychological perspectives, this book reflects the multi-level focus of contemporary thinking about autism. By addressing key unanswered questions, Researching the Autism Spectrum acts as a guidepost for future research and provides an authoritative and multi-disciplinary perspective.

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Contemporary Perspectives

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### Contents

**Preface**  page xi  
**Foreword**   xiii  
*List of Contributors*  xiv

**Introduction**  1  
*Ilona Roth and Payam Rezaie*

**Part I Classification and Diagnosis**  17  

1  Early assessment and diagnosis of children  19  
*Ann Le Couteur*  
1.1 Definition  20  
1.2 Epidemiology  24  
1.3 Assessment and diagnosis  25  
1.4 Best Estimate Clinical Diagnosis (BEC) and research diagnosis  33  
1.5 Conclusions and challenges for the early assessment and diagnosis of ASD  38  
1.6 References  39

**Part II Genetics, Neurology and Biochemistry**  51  

2 Unravelling the genetics of autism spectrum disorders  53  
*Inês de Sousa, Richard Holt, Alistair Pagnamenta and Anthony Monaco*  
2.1 Evidence for genetic liability and the multifactorial model for autism  53  
2.2 Linkage studies  57  
2.3 Association studies  61  
2.4 Rare single gene mutations in autism  74
vi Contents

2.5 Epigenetics 78
2.6 Copy number variation (CNV) associated with ASD 81
2.7 Final remarks 91
2.8 References 93

3 Brain imaging and the neuroanatomical correlates of autism 112
Michael Spencer, Andrew Stanfield and Eve Johnstone

3.1 Background 112
3.2 Important considerations relating to autism spectrum literature 114
3.3 Qualitative MRI findings 117
3.4 Quantitative structural MRI image analysis techniques 119
3.5 Quantitative structural MRI imaging findings, grouped by brain region 124
3.6 Diffusion tensor imaging studies 137
3.7 Neuroanatomical findings in females with ASD 138
3.8 'Low-functioning' autism, 'high-functioning' autism, Asperger syndrome and non-specific pervasive developmental disorders 138
3.9 Conclusions and future directions 140
3.10 Final remarks 142
3.11 Acknowledgements 142
3.12 References 142

4 Magnetoencephalography (MEG) as a tool to investigate the neurophysiology of autism 156
Sven Braeutigam, Stephen Swithinby and Anthony Bailey

4.1 Instrumentation and measurements 156
4.2 Analytical approaches 159
4.3 MEG studies of autism spectrum disorders (ASD) 161
4.4 Discussion 170
4.5 References 172

5 Autism and epilepsy 176
Christopher Gillberg and Brian Neville

5.1 Introduction 176
5.2 Prevalence aspects 177
5.3 Gender aspects 178
5.4 Diagnostic/differential diagnostic aspects including EEG 179
5.5 Autistic regression and epilepsy 179
5.6 Types of seizures 180
5.7 Early onset epilepsy syndromes with developmental regression 182
5.8 The phenotype of ASD with epilepsy 184
5.9 Investigation and management 185
5.10 Place of EEG in the investigation of autism 185
5.11 Pathogenesis of autistic regression in epilepsy 186
5.12 References 186

6 Biochemistry of autism: changes in serotonin, reelin and oxytocin 190
  ELIZABETA B. MUKAETOVA-LADINSKA, JODIE WESTWOOD AND ELAINE PERRY

6.1 Introduction 190
6.2 Serotonin neurochemistry in autism 191
6.3 Reelin 200
6.4 Oxytocin neurochemistry in autism 203
6.5 Conclusions 207
6.6 Acknowledgement 208
6.7 References 208

Part III Cognition, Development and Education 217

7 Psychological models of autism: an overview 219
  ELIZABETH PELICCANO

7.1 Introduction 219
7.2 Criteria for explanatory accounts of autism 222
7.3 The Theory of Mind Hypothesis 222
7.4 The Executive Dysfunction Hypothesis 228
7.5 Central Coherence Theory 236
7.6 Beyond single-deficit models of autism 243
7.7 References 249

8 Cognitive flexibility in autism: a social-developmental account 266
  PETER HOBSON AND JESSICA HOBSON

8.1 Introduction 266
8.2 Frameworks of understanding 268
8.3 A social-developmental account of flexible, creative symbolic thinking 271
8.4 Studies in autism: flexibility in attitude and stance 273
8.5 Symbolic thinking in autism 276
8.6 The case of congenital blindness 277
8.7 Executive dysfunction reconsidered 278
8.8 Acknowledgement 280
8.9 References 280
## Contents

### 9 Language in autism spectrum disorders  284  
**Jill Boucher**  
- 9.1 Introduction  284  
- 9.2 Patterns of language abilities and impairments across the spectrum  285  
- 9.3 Causes of language impairment across the spectrum  299  
- 9.4 Summary  307  
- 9.5 References  307

### 10 Memory in autism: binding, self and brain  316  
**Dermot Bowler, Sebastian Gaigg and Sophie Lind**  
- 10.1 Preliminary remarks  316  
- 10.2 Empirical findings  319  
- 10.3 Wider conceptual themes  327  
- 10.4 Memory and the brain  334  
- 10.5 Conclusions  338  
- 10.6 Acknowledgements  338  
- 10.7 References  339

### 11 Measuring executive function in children with high-functioning autism spectrum disorders: what is ecologically valid?  347  
**Ayla Humphrey, Ofer Golan, Barbara Wilson and Sara Sopena**  
- 11.1 Introduction  348  
- 11.2 Participants  350  
- 11.3 Materials  351  
- 11.4 Procedure  354  
- 11.5 Results  354  
- 11.6 Limitations of study  358  
- 11.7 Discussion  358  
- 11.8 References  361

### 12 Autism spectrum disorders in current educational provision  364  
**Rita Jordan**  
- 12.1 The role of education  364  
- 12.2 The particular challenges of the autism spectrum  365  
- 12.3 Core issues in learning in ASD  366  
- 12.4 Features of learning style  376  
- 12.5 Access to the curriculum  378  
- 12.6 Parental support, homework and the ‘24 hour’ curriculum  381  
- 12.7 Anxiety and stress  382  
- 12.8 Relationships with peers  383  
- 12.9 Information and communication technologies (ICT)  383
The colour plates are to be found between 208 and 209.
Preface

There is widespread concern about the apparently growing prevalence of autism, although this increase may be due, in large part, to factors such as changes in diagnostic criteria and ascertainment practices. Public and scientific interest in the causes and fundamental nature of autism has never been stronger. Research in this field has grown exponentially in the last twenty years, with significant financial support in this area provided by Governments, Research Councils and private charities. Studies spanning a whole range of disciplines share the goals of elucidating the core phenomena and underlying aetiology, thereby informing therapeutic interventions, as well as offering valuable insights into normal functioning. Research by individuals and groups in the UK has played a leading role in addressing key unanswered questions about autism, including its causes and psychological substrates, the underlying brain mechanisms, and the most effective ways to work with and support people with autism and their families.

A major conference which we were privileged to organise in 2007, entitled: ‘Autism Research UK: from diagnosis to intervention’ hosted by the Open University and sponsored by the Medical Research Council, Wellcome Trust, Autism Speaks and a number of other organisations, provided an effective backdrop to this book. At this first national meeting of this scope, internationally renowned speakers and chairpersons convened with representatives from the Medical Research Council, the Wellcome Trust, Economic and Social Research Council, National Autistic Society and Autism Speaks for two days of discussion and debate aimed at elucidating ways forward in understanding the autism spectrum and helping affected individuals and their families. A series of themed scientific sessions charted the way UK-based investigations have shaped and developed our understanding of the autism spectrum over recent years. This provided a strong rationale for an edited volume which would present a selection of ‘cutting edge’ contributions to theory and practice in this important, rapidly moving field.
Preface

This book, encompassing three main sections, presents an authoritative and multi-disciplinary perspective on autism from leading UK-based investigators who are active at the forefront of research in this field. A selection of key areas of research and theory covering classification and diagnosis, genetics, neurology and biochemistry, through to socio-cognitive, developmental and educational perspectives, including new emphases (MEG, autism and epilepsy, memory in autism) are highlighted, and provide the fundamental basis for a broader understanding of the autism spectrum. We are confident that this collection of works will serve as a balanced, authoritative and contemporary reference that will inform current understanding of the science of autism and act as a guidepost for research over the next few years. We expect that this book will appeal to, and inform a wide readership from clinical and academic professionals, to educators, healthcare providers, and policy makers. It will also be of interest to the substantial and growing body of parents and family members of those who are affected by autism.

We are deeply indebted to our colleagues and especially to the authors and contributors for their encouragement, their support and their commitment. We hope that you will find the contents stimulating and informative.

Ilona Roth
Payam Rezaie
Foreword

The editors of this volume, Ilona Roth and Payam Rezaie, have assembled a valuable collection of chapters providing an excellent overview of a wide range of areas relevant to autism research. The book tackles the challenge of early detection; the complex biology of autism, including genetics (from linkage, to association, to CNVs), the autistic brain (from the perspectives of MRI, DTI, MEG, neuroanatomy and epilepsy) and molecular aspects of autism (from serotonin to oxytocin); the complex psychology of autism (from cognitive models, language, memory and executive function); and the challenge of education in autism.

Autism research is currently enjoying considerable growth, with hundreds of researchers joining in the hunt to understand this important set of conditions. This book showcases some of the best autism scientists in the UK who are contributing to this international effort. The editors are to be congratulated on pulling this collection together, since this will inspire a new generation of autism scientists among contemporary students. The hope is that an anthology of this kind will be produced every few years, so we can track this fast-changing field. This multidisciplinary book nicely illustrates how autism is a multi-level phenomenon that will need integration across levels. This book exemplifies how each level must be represented and contributes to the bigger picture.

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