BARBARA J. SAHAKIAN
JULIA GOTTWALD

SEX, LIES, & BRAIN SCANS

HOW fMRI REVEALS WHAT REALLY GOES ON IN OUR MINDS

SEX, LIES, & BRAIN SCANS

'One is tempted to pick up *Sex, Lies, & Brain Scans* simply for its enticing title. However, once picked up, this book is not easy to put down. This volume provides an introduction to advances in brain science related to the most human of foibles including prejudice, lying, impulsive decision-making, and lapses in moral behaviour. It introduces the reader to insights arising predominately from the application of functional magnetic resonance imaging (fMRI). It highlights the power of this technique to illuminate previously hidden aspects of human brain function, essentially generating data that speaks in some ways to the neural codes that the brain uses to generate complex behaviours. It also highlights challenges involved in this research that complicate the interpretation of fMRI data. Lastly, the book highlights new, and potentially questionable, applications of fMRI, including its potential use as a lie detector or as an adjunct to the effective marketing of commercial products. *Sex, Lies, & Brain Scans* is written by Professor Barbara Sahakian of the University of Cambridge, a leading figure in this area of research, and her graduate student, Ms Julia Gottwald. It provides an important introduction to breakthroughs emerging from neuroimaging for people who are wondering what all the recent fuss regarding the brain is all about.'

JOHN H. KRYSTAL, MD, ROBERT L. MCNEIL, JR.
Professor of Translational Research and Chair,
Department of Psychiatry,
Yale University

BARBARA J. SAHAKIAN
JULIA GOTTWALD

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I dedicate this book to friends and family and especially to Trevor, Jacqueline, and Miranda Robbins and Richard Sahakian, who have always inspired and encouraged me.
Barbara J. Sahakian

To my family, who shower me with love and support.
To my friends, whose wonderful weirdness I need.
To Carl, who makes life truly brilliant.
Julia Gottwald

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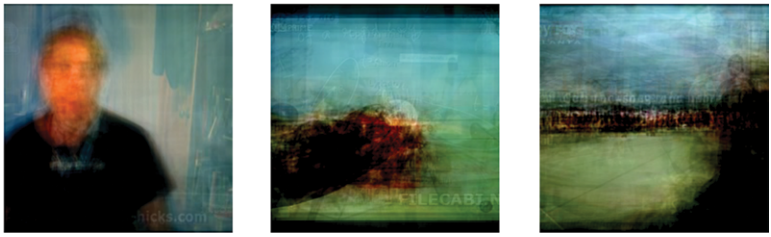
CONTENTS

LIST OF FIGURES

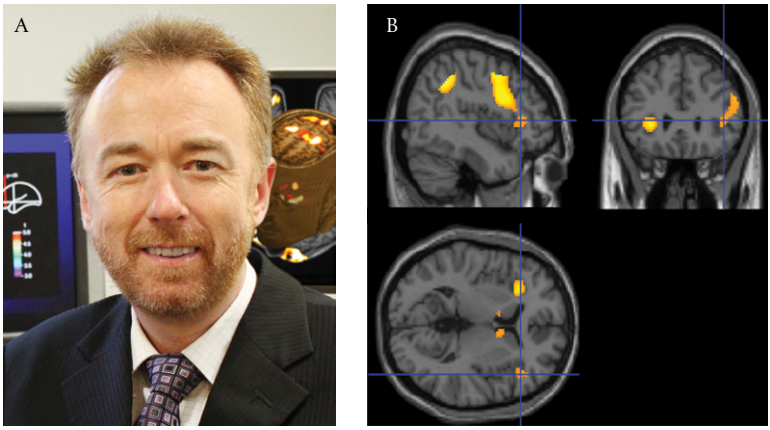
LIST OF PLATES

5. A phrenological chart, showing the alleged location of certain personality traits (a), vs the more visionary approach of mapping the semantic atlas of the human cerebral cortex (b).
   Image (a) Wellcome Library, London. Image (b) reprinted by permission from Macmillan Publishers Ltd: Figure 2: Principal components of voxel-wise semantic models, copyright, from Alexander G. Huth, Wendy A. de Heer, Thomas L. Griffiths, Frédéric E. Theunissen, and Jack L. Gallant Natural speech reveals the semantic maps that tile human cerebral cortex. *Nature* **532**, 453–8 (2016).

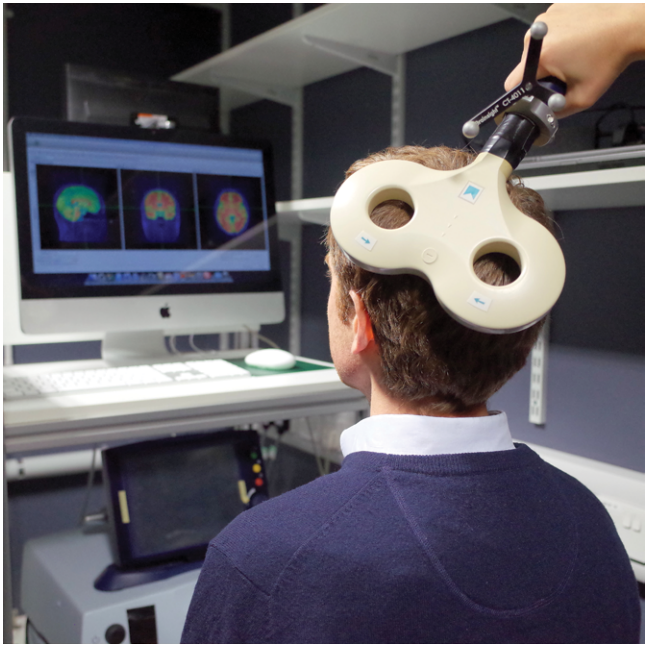
6. Top and right lateral views of change in cortical volume.
   Image kindly provided by Jay Giedd and Lara Wierenga.



1. Segments of Hollywood film trailers reconstructed from brain activity that was measured using fMRI. The original trailers showed Steve Martin, an elephant in the desert, and an aeroplane.



2. Adrian Owen—as we know him and an fMRI scan of his brain at work.



3. A participant in a transcranial magnetic stimulation experiment.

Easy: GREEN YELLOW RED BLUE

Hard: GREEN YELLOW RED BLUE

4. Illustration of the Stroop effect: Name the colour of the ink, not the word!