Free Will and the Brain

Neuroscientific, Philosophical, and Legal Perspectives

Edited by

Walter Glannon

CAMBRIDGE
UNIVERSITY PRESS

Contents

Preface *page* vii
Contributors ix

Part I Introduction 1

1 Free will in light of neuroscience 3
WALTER GLANNON

Part II Conceptual issues 25

2 Is free will an observer-based concept rather than a brain-based one? A critical neuroepistemological account 27
GEORG NORTHOFF

3 Evolution, dissolution and the neuroscience of the will 44
GRANT GILLETT

4 The experience of free will and the experience of agency: an error-prone, reconstructive process 66
MATTHIS SYNOFZIK, GOTTFRIED VOSGERAU, AND AXEL LINDNER

Part III Mental capacities and disorders of the will 81

5 Being free by losing control: what obsessive-compulsive disorder can tell us about free will 83
SANNEKE DE HAAN, ERIK RIETVELD AND DAMIAAN DENYS

6 Psychopathy and free will from a philosophical and cognitive neuroscience perspective 103
FARAH FOCQUAERT, ANDREA L. GLENN, AND ADRIAN RAINE

7 How mental disorders can compromise the will 125
GERBEN MEYNEN

8 Are addicted individuals responsible for their behaviour? 146
WAYNE HALL AND ADRIAN CARTER

9 Assessment and modification of free will via scientific techniques: two challenges 168
NICOLE A VINCENT

Part IV Neural circuitry and modification of the will 189

10 Implications of functional neurosurgery and deep-brain stimulation for free will and decision-making 191
NIR LIPSMAN AND ANDRES M. LOZANO

11 Reducing, restoring, or enhancing autonomy with neuromodulation techniques 205
MAARTJE SCHERMER

Part V Legal implications of neuroscience 229

12 Neurobiology collides with moral and criminal responsibility: the result is double vision 231
STEVEN E. HYMAN

13 Neuroscience, free will, and criminal responsibility 251
STEPHEN J. MORSE

Index 287