

Contents

List of Contributors	v
Foreword by S. Dehaene	ix
Foreword by E. Wijdicks	xi
Preface	xiii
Acknowledgements	xv
1. What in the world is consciousness? A. Zeman (Edinburgh, UK)	1
2. A neuroscientific approach to consciousness S.A. Greenfield and T.F.T. Collins (Oxford, UK)	11
3. Functional neuroimaging during altered states of consciousness: how and what do we measure? J. Hirsch (New York, NY, USA)	25
4. Global workspace theory of consciousness: toward a cognitive neuroscience of human experience B.J. Baars (San Diego, CA, USA)	45
5. Skill, corporality and alerting capacity in an account of sensory consciousness J. Kevin O'Regan, E. Myin and A. Noë (Boulogne-Billancourt, France, Antwerp and Brussels, Belgium and Berkeley, CA, USA)	55
6. Methods for studying unconscious learning A. Destrebecqz and P. Peigneux (Dijon, France and Liege, Belgium)	69
7. Computational correlates of consciousness A. Cleeremans (Brussels, Belgium)	81
8. Machine consciousness I. Aleksander (London, UK)	99
9. Consciousness, information integration, and the brain G. Tononi (Madison, WI, USA)	109

10.	Dynamics of thalamo-cortical network oscillations and human perception U. Ribary (New York, NY, USA)	127
11.	From synchronous neuronal discharges to subjective awareness? E.R. John (New York and Orangeburg, NY, USA)	143
12.	Genes and experience shape brain networks of conscious control M.I. Posner (Eugene, OR, USA)	173
13.	Visual phenomenal consciousness: a neurological guided tour L. Naccache (Paris, France)	185
14.	The mental self H.C. Lou, M. Nowak and T.W. Kjaer (Aarhus and Copenhagen, Denmark)	197
15.	Posterior cingulate, precuneal and retrosplenial cortices: cytology and components of the neural network correlates of consciousness B.A. Vogt and S. Laureys (Syracuse, NY, USA and Liege, Belgium)	205
16.	Human cognition during REM sleep and the activity profile within frontal and parietal cortices: a reappraisal of functional neuroimaging data P. Maquet, P. Ruby, A. Maudoux, G. Albouy, V. Sterpenich, T. Dang-Vu, M. Desseilles, M. Boly, F. Perrin, P. Peigneux and S. Laureys (Lyon, France and Liege, Belgium) . . .	219
17.	General anesthesia and the neural correlates of consciousness M.T. Alkire and J. Miller (Irvine, CA, USA)	229
18.	Brain imaging in research on anesthetic mechanisms: studies with propofol P. Fiset, G. Plourde and S.B. Backman (Montreal, QC, Canada)	245
19.	The cognitive modulation of pain: hypnosis- and placebo-induced analgesia R. Kupers, M.-E. Faymonville and S. Laureys (Aarhus, Denmark and Liege, Belgium) . . .	251
20.	Consciousness and epilepsy: why are patients with absence seizures absent? H. Blumenfeld (New Haven, CT, USA)	271
21.	Two aspects of impaired consciousness in Alzheimer's disease E. Salmon, P. Ruby, D. Perani, E. Kalbe, S. Laureys, S. Adam and F. Collette (Liege, Belgium, Milan, Italy and Cologne, Germany)	287
22.	Functional brain imaging of symptoms and cognition in schizophrenia T.T.J. Kircher and R. Thienel (Aachen, Germany)	299
23.	Hysterical conversion and brain function P. Vuilleumier (Geneva, Switzerland)	309
24.	The out-of-body experience: precipitation factors and neural correlates S. Bünning and O. Blanke (Lausanne and Geneva, Switzerland)	331

25.	Near-death experiences in cardiac arrest survivors C.C. French (London, UK)	351
26.	The concept and practice of brain death J.L. Bernat (Hanover, NH, USA).	369
27.	The minimally conscious state: defining the borders of consciousness J.T. Giacino (Edison, NJ, USA).	381
28.	Behavioral evaluation of consciousness in severe brain damage S. Majerus, H. Gill-Thwaites, K. Andrews and S. Laureys (Liege, Belgium and London, UK).	397
29.	Evoked potentials in severe brain injury J.-M. Guérit (Brussels, Belgium).	415
30.	Event-related potential measures of consciousness: two equations with three unknowns B. Kotchoubey (Tubingen, Germany).	427
31.	Novel aspects of the neuropathology of the vegetative state after blunt head injury D.I. Graham, W.L. Maxwell, J.H. Adams and B. Jennett (Glasgow, UK)	445
32.	Using a hierarchical approach to investigate residual auditory cognition in persistent vegetative state A.M. Owen, M.R. Coleman, D.K. Menon, E.L. Berry, I.S. Johnsrude, J.M. Rodd, M.H. Davis and J.D. Pickard (Cambridge and London, UK).	457
33.	Modeling the minimally conscious state: measurements of brain function and therapeutic possibilities N.D. Schiff (New York, NY, USA)	473
34.	The locked-in syndrome: what is it like to be conscious but paralysed and voiceless? S. Laureys, F. Pellas, P. Van Eeckhout, S. Ghorbel, C. Schnamers, F. Perrin, J. Berré, M.-E. Faymonville, K.-H. Pantke, F. Damas, M. Lamy, G. Moonen and S. Goldman (Liege and Brussels, Belgium, Nimes, Boulogne-Billancourt and Lyon, France and Berlin, Germany)	495
35.	Brain-computer interfaces — the key for the conscious brain locked into a paralysed body A. Kübler and N. Neumann (Tubingen, Germany)	513
36.	Neural plasticity and recovery of function N.S. Ward (London, UK)	527
37.	Thirty years of the vegetative state: clinical, ethical and legal problems B. Jennett (Glasgow, Scotland)	537
38.	Assessing health-related quality of life after severe brain damage: potentials and limitations C. Petersen and M. Bullinger (Hamburg, Germany).	545

39.	Outcome and ethics in severe brain damage J.-L. Vincent (Brussels, Belgium)	555
40.	Clinical pragmatism and the care of brain damaged patients: towards a palliative neuroethics for disorders of consciousness J.J. Fins (New York, NY, USA)	565
	Subject Index	583

See Colour Plate Section in the back of this book