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NEUROLOGICAL EXAMINATION IN CLASSIC STATES OF IMPAIRED CONSCIOUSNESS; NEUROLOGICAL EXAMINATION IN OTHER STATES OF IMPAIRED CONSCIOUSNESS; STATES RESEMBLING IMPAIRED CONSCIOUSNESS; SUMMARY AND CONCLUSIONS; ACKNOWLEDGEMENTS; REFERENCES; Chapter 3. Functional Neuroimaging; POSITRON EMISSION TOMOGRAPHY; SINGLE PHOTON EMISSION COMPUTED TOMOGRAPHY; FUNCTIONAL MAGNETIC RESONANCE IMAGING; ELECTROENCEPHALOGRAPHY; EVOKED POTENTIALS; MAGNETOENCEPHALOGRAPHY; TRANSCRANIAL MAGNETIC STIMULATION; MAGNETIC RESONANCE SPECTROSCOPY; FUNCTIONAL NEUROIMAGING STUDY DESIGN; ANALYSING BRAIN IMAGING DATA MULTI-MODALITY AND REAL-TIME INTEGRATION; ACKNOWLEDGEMENTS; REFERENCES; Chapter 4. Consciousness and Neuronal Synchronization; TWO REPRESENTATIONAL STRATEGIES; THE SIGNATURE OF DISTRIBUTED CODES; EXPERIMENTAL EVIDENCE FOR GROUPING BY SYNCHRONY; RESPONSE SYNCHRONIZATION AND BEHAVIOURAL STATES; PERCEPTION AND RESPONSE SYNCHRONIZATION; THE GENERALITY OF SYNCHRONICITY; SYNCHRONIZED GAMMA OSCILLATIONS AND CONSCIOUS PERCEPTION; AN ATTEMPT OF SYNTHESIS; REFERENCES; Chapter 5. Neural Correlates of Visual Consciousness; BRAIN ACTIVITY ASSOCIATED WITH VISUAL STIMULI THAT DO NOT REACH AWARENESS UNPROMPTED (INVOLUNTARY) CHANGES IN THE CONTENTS OF VISUAL AWARENESS; DELIBERATE CHANGES TO THE CONTENTS OF VISUAL AWARENESS; NECESSARY AND SUFFICIENT CORRELATES OF CONSCIOUSNESS; OVERALL SUMMARY AND FUTURE DIRECTIONS; ACKNOWLEDGEMENT; REFERENCES; Chapter 6. The Relationship Between Consciousness and Attention; INTRODUCTION; FUNCTIONAL CONSIDERATIONS; THE FOUR-FOLD WAY OF PROCESSING VISUAL EVENTS AND BEHAVIOURS; ATTENTION WITHOUT CONSCIOUSNESS; CONSCIOUSNESS IN THE ABSENCE OF ATTENTION; PROCESSING WITHOUT TOP-DOWN ATTENTION AND CONSCIOUSNESS; ATTENTION AND CONSCIOUSNESS CAN OPPOSE EACH OTHER; PHYSIOLOGICAL TECHNIQUES THAT DEMONSTRATE DISSOCIATIONS BETWEEN ATTENTION AND CONSCIOUSNESS; RELATIONSHIP TO OTHER CONCEPTUAL DISTINCTIONS; NEURONAL SUBSTRATE TO CONSCIOUSNESS WITHOUT ATTENTION; DO THESE CONCLUSIONS HOLD FOR REAL LIFE?; QUESTIONS FOR FURTHER RESEARCH; ACKNOWLEDGEMENTS; REFERENCES; Section II: Waking, Sleep and Anaesthesia; Chapter 7. Intrinsic Brain Activity and Consciousness; BACKGROUND; BRAIN IMAGING; ACTIVITY DECREASES; 'NOISE' IN THE FMRI BOLD SIGNAL; A CONCEPTUAL FRAMEWORK; FUTURE QUESTIONS; REFERENCES; Chapter 8. Sleep and Dreaming; SLEEP STAGES AND CYCLES  
BRAIN CENTRES REGULATING WAKEFULNESS AND SLEEP

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### Sommario/riassunto

Understanding consciousness is the major unsolved problem in biology. One increasingly important method of studying consciousness is to study disorders of consciousness, e.g. brain damage and disease states leading to vegetative states, coma, minimally conscious states, etc. Many of these studies are very much in the public eye because of their relationship to controversies about coma patients (e.g. Terry Schiavo case in the US recently), and the relationship to one of the major philosophical, sociological, political, and religious questions of humankind. This is the first book to summarize

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