Mind, Brain and Adaptation in the Nineteenth Century: Cerebral Localization and Its Biological Context from Gall to Ferrier

by

Robert M. Young

The mind-body problem has lain at the heart of the way we think about human nature throughout modern thought. It became a problem for science in the early nineteenth century when efforts were first made to provide systematic observations on the relationship between mind and brain. This work became increasingly experimental as researchers sought to localise functions in the brain. This study in the history of ideas traces the problem of localisation of function from the first empirical to the first experimental work on the topic.

However, it is much more that, which is why it has been reprinted in a series of neurological classics. The author has cast his net widely and framed his account in terms of the history of ideas about human nature and the movement of the psychological aspect of the problem from philosophical questions framed in terms of epistemology to those considered as apart of a biological approach to human nature. The crucial question on which he focuses is that of how we decide what the functions of the brain are to be: ‘The history of various concepts of function is the history of psychology’. Particular attention is paid to the disciplines which fed into modern approaches to mind and brain: phrenology, sensory-motor physiology, associationist psychology and the theory of evolution as applied to the study of psychology. In a new preface the author links this monograph to his ongoing investigations of the three great founders of the modern understanding of humanity: Darwin, Marx and Freud.

Robert M. Young, PhD is Professor of Psychotherapy and Psychoanalytic Studies at the Centre for Psychotherapeutic Studies, University of Sheffield and Co-Director of the Institute of Human Relations, New Bulgarian University, Sofia. He is the Editor of the quarterly journals Free Associations: Psychoanalysis, Groups, Politics, Culture and Science as Culture, Co-Editor of Human Relations, Authority and Justice and Associate Editor of Psychoanalytic Studies. He is also a psychoanalytic psychotherapist in private practice.

Some comments:

'Everyone recognises Mind, Brain and Adaptation as a reference point, and it is always cited in histories of brain... It is not just an account of nineteenth-century brain theories but uncovers the central arguments in an attempt to construct a science of mind.'

Roger Smith, historian of science, author of Inhibition: History and Meaning in the Sciences of Mind and Brain and The Fontana History of the Human Sciences

'His book as a whole seems a model for the writing of the history of science. As, perhaps, a good historian of science must be, he is much more than a historian. Of the continuing and current conceptual problems of psychology he shows an awareness which neuro-physiologists who write on mind and brain might be encouraged, by reading his book, to share.'


'This is a volume of unusual excellence. Read it.'

Mary A. B. Brazier, neurophysiologist (writing in Science)

'It must be the most important work upon the evolution of thought upon the results of cerebral function written in the decade now ending.'

Denis Williams (writing in Brain)

[Mind, Brain and Adaptation] 'is 'a modern classic.'

Peter Gay, author of Freud: A Life for Our Time

Contents

New Preface vii and Preface xix

Introduction 1

1 Gall and Phrenology: Speculation versus Observation versus Experiment 9

2 Experimental Sensory-Motor Physiology and the Association Psychology 54

3 Alexander Bain: Transition from Introspective Psychology to Experimental Psychophysiology 101

4 Pierre Paul Broca and the Seat of the Faculty of Articulate Language 134

5 Herbert Spencer: Phrenology, Evolutionary Associationism and Cerebral Localization 150
6 Spencer, Jackson, Carpenter and the Application of Sensory-Motor Localization to the Cerebral Cortices 197

7 Fritsch and Hitzig and the Localized Electrical Excitability of the Cerebral Hemispheres 224

8 David Ferrier: Localization of Sensory-Motor Psychophysiology 234

9 Conclusion 249

Bibliography 253 and Index 273