BEHAVIORAL NEUROLOGY, 4TH EDITION
By Jonathan H. Pincus and Gary J. Tucker

The first edition of this book was published nearly 40 years ago in 1974. Along with subsequent editions in 1978 and 1985, this well-established text has been prominent in delineating the complex relationship between the brain and behaviour. This new paperback edition is long overdue, with both psychiatry and neurology having made significant advances over the last 15 years.

The fourth edition begins with a respectable, updated chapter on epilepsy. Complex partial seizures of both temporal and extra-temporal origin rightfully receive particular attention, in view of the evident diagnostic difficulties. The evidence for intellectual deterioration in epilepsy and the relationship between epilepsy and psychosis is reviewed. There is also a very pertinent discussion of violence in relation to the limbic system and epilepsy leading into a separate chapter on the neurobiology of violence bringing together evidence from biological, psychological and sociological studies.

The following chapter provides an update on the field of schizophrenia with a succinct and broadly helpful review of the extensive research efforts investigating this illness. However, it was somewhat disappointing that the relationship between schizophrenia and neurological conditions, with known regional neuropathological abnormalities that are associated with schizophrenia-like psychosis was a little too limited. In addition, the plethora of recent research focusing on first-episode schizophrenia could have featured a little more prominently. Schizophrenia-like psychosis in epilepsy is discussed in a previous chapter and movement disorders are briefly addressed in a subsequent chapter.

Despite acknowledging the increasing awareness of cognitive abnormalities in a diverse range of psychiatric disorders, the chapter on cognitive dysfunction concentrates on delirium, dementia and amnesic disorders. There is, of course, the obligatory review of signs associated with regional cortical dysfunction and functional hemispheric differences. Attached to the end of this chapter is a brief review of pervasive developmental disorders and Attention Deficit Hyperactivity Disorder. This, perhaps, deserves more prominence with the rapid increase in the diagnosis of these conditions over recent years.

Movement, mood and obsessive-compulsive disorders are combined, to my mind a little awkwardly, into a single chapter. The authors argue their case based on frontostriatal dysfunction and neurochemistry with catecholamine and indoleamine systems being implicated in these disparate conditions. A discussion of the importance of differentiating Parkinson’s Disease from other causes of parkinsonism is provided, with treatment and prognostic implications. The role of abnormal proteins in neurodegenerative disease is briefly discussed. The association of Tourettes’s Syndrome and Obsessive Compulsive Disorder with streptococcal infections is noted but not developed in terms of potential aetiological mechanisms in an interesting field of current research activity.

In the absence of diagnostic tests that adequately satisfy sensitivity and specificity criteria for most neuropsychiatric conditions, the authors rightly place particular emphasis on clinical skills. The penultimate chapter is devoted to differentiating neurological from psychiatric symptoms with a particular focus on somatisation disorders. However, the assessment and management of fatigue syndromes are notable omissions. The final chapter continues the practical theme with a review of the neuropsychiatric clinical assessment. These two chapters provide an admirable framework as the basis of the neuropsychiatric evaluation. In particular, the authors provide an excellent review of frontal lobe assessment.

Throughout the text, the authors provide a useful appraisal of the value and potential drawbacks of widely used neuropsychiatric investigations such as EEG and neurocognitive tests. The authors also recognise the currently limited clinical application of exciting functional imaging techniques although new structural techniques such as diffusion-weighted imaging and magnetisation transfer imaging may prove to be more clinically relevant.

A prevailing focus of the first three editions of this book was that mental illnesses were the clinical manifestations of predominantly inherited brain disease. The fourth edition expands on the central theme of brain–behaviour relationships but offers a more balanced view. The defining ethos of this text is summed up in the introduction to the chapter on cognitive dysfunction: ‘any change in behaviour must be the result of altered brain activity’. To support their view, the authors have reviewed and incorporated recent research data from the relevant fields of neuroscience including the mechanisms that control the migration, growth and differentiation of stem cells along with data from research studies suggesting that environmental events and emotions can alter brain structure and function. Thus, the authors highlight the complex interplay between social environment and heredity, which together they argue, influence brain connections and consequently determine behaviour and thought.
This is a concise, readable and well-referenced text offering an excellent introduction to the field of behavioural neurology. Illustrations are useful but have been used rather too sparsely. Tables, which are also used infrequently, are well-ordered and thankfully complement, rather than repeat, the text. The authors have extensive clinical experience in both neurology and psychiatry and this is apparent as one advances through the text. The authors do express some very unambiguous views on the assessment and management of many neuropsychiatric disorders. As a direct consequence, the book provides the reader with a clear, precise and clinically relevant source of reference. The drawback of this approach is that there is little scope for debate or alternative opinions. Inevitably, this approach may not find full consensus amongst all the readership of this journal.

I would unreservedly recommend this book as an excellent introduction to behavioural neurology for medical students, trainee psychiatrists, neurologists and neuropsychologists. In addition, for those partial to previous editions, it is certainly worth updating to the current version. However, for practising clinicians who may have recently updated their standard neuropsychiatric text, this book is highly readable but may not offer significant additional advantages and it cannot be considered a substitute for a more substantial text.

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