Essential Psychopharmacology: Neuroscientific Basis and Practical Applications (2nd edn)
By Stephen M. Stahl. Cambridge: Cambridge University Press. 2000. 601 pp. £39.95 (pb); £110.00 (hb). ISBN 0 521 64615 4 (pb); 0 521 64154 3 (hb)

Rather like a low dose of a conventional neuroleptic, books on psychopharmacology can sometimes engender a sense of mild anergia and dysphoria. The second edition of Stephen Stahl’s well-received textbook has a quite opposite effect, although literary stimulants too need to be employed judiciously. Perhaps the main problem facing this literary genre is the growing scope of the field with which a psychopharmacology text might grapple. The traditional format of classificatory lists of drugs with their indications and adverse effects and a nod to acute pharmacological properties is now insufficient. The growth of neuroscience means that we need to understand the neurobiology of the brain systems with which psychotropic drugs interact. Most psychotropic drugs act on neurotransmitters, but these actions produce changes in fundamental properties of neurons, including intracellular signalling, gene expression and synaptic plasticity. Such changes have important implications for our understanding not only of drug action but also for every other kind of therapeutic intervention, including psychotherapies.

This is exciting stuff, but the application of psychopharmacology to clinical psychiatry requires practical, safe and cost-effective prescribing. The lean figure of evidence-based medicine beckons here, together with topics such as pharmacokinetics, drug interactions and toxicology. All this is probably too much for any normalized volume, and Stahl explicitly states in his preface that his book is written at a conceptual and not a pragmatic level. This is not a book on practical prescribing. However, on the conceptual level, particularly when describing the neurobiology of brain system and drug action, Stahl has no peer.

The opening four chapters deal with the principles of neurotransmission and expound current concepts of molecular neuropharmacology. Recent developments in second-messenger elaboration, intracellular signalling and gene expression are not all that easy to understand but I have never seen them explained better. Stahl has the verve of a true enthusiast and this, together with his experience as a practising clinician, enables him to move effortlessly between fundamental neuroscience and clinical realms of disease and drug action.

The following sections deal with psychiatric disorders and the drugs used to treat them. For a psychopharmacology textbook psychiatric syndromes are covered unusually well, which makes the book excellent value for health care professionals and academics without a postgraduate training in psychiatry. The descriptions of the pharmacology of traditional and newer psychotropic drugs are particularly clear, with ingenious linking of pharmacological properties with clinical therapeutics. The coverage extends to include drugs of abuse, cognitive enhancers and the psychopharmacology of sexual function. If you wanted to know how sildenafil citrate works but were afraid to ask, the answer (inhibition of phosphodiesterase V, which increases cyclic guanosine monophosphate thereby causing penile vasodilatation) is here.

Like its predecessor, this new edition is illustrated with numerous, accessible colour diagrams, which by themselves are sufficient to serve as a parallel text and act as valuable aids to revision (and teaching). What the book sets out to do, it does brilliantly. What practitioners will need from elsewhere is guidance on the practical art of prescribing. While this topic is not exactly neglected, some of Stahl’s more innovative proposals, for example, “California rocket fuel” (combined venlafaxine and mirtazapine) for the treatment of resistant depression, suggest that a copy of the Maudsley Prescribing Guidelines would be a reassuring companion on this exciting ride.

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The Madness of Adam and Eve: How Schizophrenia Shaped Humanity

The purpose of this book is to expound a long chain of hypotheses: (a) that Homo sapiens evolved from a previously unremarkable hominid as the result of two
crucial mutations, the first, between 0.6 and 0.15 million years ago, affecting phospholipid metabolism and resulting in a sudden rise in brain size and an enormous increase in synaptic complexity, the second, perhaps 150 000 to 130 000 years ago, involving the phospholipase A$_2$ cycle and producing, as a package deal, both the technological and artistic creativity and the ruthlessness that are the essence of our humanity, and also schizophrenia, bipolar illness and dyslexia; (b) that thereafter the balance between the beneficial and harmful elements in this package depended on the essential fatty acid (EFA) content of Homo sapiens’ diet: so long as this was high, psychotic illnesses were mild and inconspicuous, but with the advent first of agriculture and later of urbanisation, psychoses became more common and more florid; and (c) that re-establishing an adequate intake of EFAs is the key to the prevention and treatment of these disorders and that eicosapentaenoic acid is probably the crucial substance. Not for nothing was Horrobin the founding editor of the journal Medical Hypothesis.

Perhaps because the author has already lost hope of influencing the scientific establishment, the book is written for a general readership. Much of its text consists of descriptions of basic clinical, genetic and biochemical processes, but it is written in a fluent, engaging style. I do not know enough about anthropology, lipid metabolism or human genetics to know how plausible his various hypotheses are from the vantage points of those disciplines, but I do know that Horrobin’s key assumption that there is a striking excess of highly intelligent, creative high achievers in the families of people suffering from schizophrenia or bipolar illnesses is far from proven. The idea goes back at least to Galton, but apart from Karlsson’s studies in Iceland, it is based almost entirely on clinical impressions, not on defined populations and certainly not on blind ratings.

Reactions to this book are likely to be very diverse. It will probably be acclaimed with delight by many patients and their families, because it gives them hope and restores their dignity, and dismissed as fantasy by many psychiatrists and neuroscientists, because it has almost no points of contact with contemporary aetiological theories and research. As Horrobin disarmingly admits, it may all be a Kipling-esque ‘Just-so story’ but, as he also points out, it does contain testable elements.

In my view, the clinically relevant elements in his chain of hypotheses ought to be taken seriously, if only because our understanding of the causes of schizophrenia and bipolar illness, and our ability to help people with these disorders, have hardly advanced in the past 40 years. It may seem unlikely that schizophrenia is fundamentally a disorder of phospholipid metabolism exacerbated by a dietary deficiency of EFAs, but the example of the Mensa & Dougie mice demonstrates that modifying a single gene in the N-methyl-D-aspartate phospholipase A$_2$ pathway can produce a massive increase in intellectual performance, and if eicosapentaenoic acid or some other EFA is indeed an effective therapeutic agent in the treatment of schizophrenia that would be very, very important.

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Of Two Minds: The Growing Disorder in American Psychiatry

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This book suggests a diagnosis for the ailing condition of American psychiatry. In the early part of the 20th century, the author argues, psychoanalysis ruled the psychiatric world, but its reign was challenged by the rise of the neurosciences. There ensued a bitter conflict, in which the opposing camps eventually settled into what an American clinician has called a ‘happy pluralism’. However, with the recent emergence of ‘managed care’, insurance companies have been able to dictate the nature of the treatment given to patients. They have favoured pharmacology over psychotherapy, because it seems cheaper and more like the rest of medicine. As a result, the psychodynamic approach is being excluded and may become extinct. These trends have serious implications. Trainee psychiatrists no longer possess the skills to communicate with patients. Those with mental illnesses feel that they are not being understood, and the imperatives of managed care mean that patients are being discharged from hospital long before they have recovered. Clinicians are being forced to confront the moral dilemma of whether to prescribe treatment they consider inappropriate. Finally, the adoption by the general public of a vulgarised neurobiological model of mind has led to a simplistic view of humanity which ignores meaning and complexity.

T. M. Luhmann is an anthropologist and, in reaching her diagnosis, she has spent several years observing and interviewing psychiatrists in a variety of clinical settings. She has paid particular attention to psychiatrists in training, and records their attempts to master the often confusing and contradictory nature of clinical practice. We learn that trainees who take their work too seriously are considered a liability and that young clinicians read little in the way of psychiatric theory. We also learn that research is seen as superior to mere clinical work and that psychotherapy is considered an unsuitable job for a man.

Luhmann views with alarm the disappearance of the art of listening, and repeatedly advocates the nostrum that it takes both pills and talk to make a patient better. Like many millennial commentators, she calls for a reconciliation between the opposing forces of neuroscience and psychotherapy – between what Eisenberg (2000) has called ‘mindless’ and ‘brainless’ psychiatry. There have, of course, been other perspectives on contemporary American psychiatry. A bleak account is provided by Samuel Shem’s (1999) satirical novel, Mount Misery, which trainees in Luhmann’s book recommend as a true picture of their experience. A more upbeat
assessment is given by Nancy Andreasen (2001) in a recent editorial, although she too worries that the ability to talk to the patient is diminishing as the emphasis on symptom checklists increases.

Rather curiously, given that the writer is not a psychiatrist, the book lacks critical distance and frequently takes psychiatry at its own estimation. Perhaps this is to be expected, because the author is not only the daughter of a psychiatrist but has also been in therapy. A much more searching anthropological account of psychiatry is to be found in Barrett’s (1996) The Psychiatric Team, in which he questions the ‘taken-for-granted’ assumptions of clinicians. Luhrmann is hindered by a verbose and repetitive prose style, and readers who do not share her enthusiasm for Freud or Christianity may have reservations about her conclusions. Despite this, and despite its concentration on the American experience, many of the concerns of the book are of fundamental importance to British psychiatry. It is, therefore, well worth reading.


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Psychiatric Intensive Care


This book is addressed to “All healthcare and related professionals working in, or interacting with, psychiatric intensive care units, as well as managers with a responsibility to commission, provide and monitor such units”. In addition to the three editors, there are 19 contributors. This useful book shows the strengths and weaknesses of a work written by a committee and for everybody. On the positive side, it is comprehensive and multi-disciplinary. It is clinically oriented and most chapters will be of interest to clinical staff working on intensive care units. Chapters deal with important issues such as seclusion, physical restraint and rapid tranquillisation.

On the negative side, it lacks the unity, simplicity and clarity that reflects the practice and experience of a single author or, at most, of a small team. The standard of individual chapters is uneven, and jargon and acronyms (such as PICUs, SCIPs and NAPICUs) abound. Also, it is difficult for this type of ‘comprehensive’ multi-author book to be really up to date. For instance, the otherwise useful sections on pharmacology and rapid tranquillisation do not do justice to recently published evidence on the risk of cardiac complications and sudden death from high-dose medication. The internet affords easy access to journal articles and reviews, and books trying to provide current information and reviews of the literature have an increasingly short shelf-life.

The potentially enduring chapters in this volume are those that provide some sort of manual for clinical procedures and practice. A useful section is devoted to the setting up and management of intensive care units. Such units require clear leadership and lines of responsibility. I would endorse the recommendation that there should be only one or, at the most, two clinical teams – although this often entails transfer of consultant responsibility when patients are admitted or discharged from the unit. A chapter on good practice raises the question of whether units should be mixed or single-gender. The move towards mixed-gender wards that gathered momentum in the 1960s was part of a well-intentioned effort to ‘normalise’ the culture of psychiatric hospitals. However, female patients are in a minority on intensive care units and are vulnerable to intimidation, violence and sexual harassment. At the very least, a newly designed unit should afford the possibility of very substantial segregation of women and men.

Unfortunately, the book does not deal with the important issue of resources. Standards are inevitably low in an overcrowded and dilapidated unit, unable to recruit or keep capable permanent staff and relying instead on locum and agency staff. Sadly, this is the situation throughout much of the country.

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Anxiety Disorders in Children and Adolescents: Research, Assessment and Intervention


This multifaceted volume is based on the papers presented at an international conference on child and adolescent anxiety disorders, and it covers a broad range of approaches and perspectives. The 16 chapters range from the more theoretical (on affective-cognitive mechanisms, behavioural inhibition, neuropsychiatry and attachment theory) to the more clinically oriented (phenomenology and assessment, epidemiology, and both pharmacological and psychosocial interventions).

A historical introduction raises the interesting idea that child and adolescent anxiety disorders may be viewed as forerunners of later pathologies. Esquiroi viewed anxiety as a sign of vulnerability - a ground on which psychopathology can develop. It is refreshing to think that a life-course view on psychopathology was alive many years ago.
For the psychologically minded, a comprehensive chapter on affective-cognitive processes leaves unanswered the question of causation, as most work on cognition in child and adolescent anxiety is characterised by lack of consistency in methods and theory. This shortcoming highlights the need for further observational and experimental studies that can go beyond the self-report questionnaire, to inform on affective-cognitive mechanisms.

For the neurobiologically inclined, the detailed chapter on neuropsychiatry is interesting, although the range of studies and quality of evidence provide no clear message regarding neuropsychiatric underpinnings. The developmental view, although largely based on animal models, is nevertheless refreshing, particularly the significance of early maternal deprivation, which can promote changes in the hypothalamo-pituitary axis that persist into childhood, and can influence stress reactivity and affect regulation in later life. Such evidence might lead to the fruitful integration of psychodynamic ideas, developmental psychopathology and neurobiological perspectives.

From a treatment perspective, psychosocial approaches are reviewed. Most evidence relates to cognitive–behavioural therapies (CBT), and the intriguing finding that educational support is as efficacious as elements of CBT raises the unanswered question of what it is about psychosocial treatments that is effective. Pharmacological approaches are also assessed; here I was concerned at the detailed discussion of the prescription of medications such as benzodiazepines for children, despite the absence of controlled trials supporting their use.

Clinicians will be satisfied with the review chapters on a developmental approach to assessment. Issues for future research are raised, again stressing the need for greater attention to the assessment of ‘cognition’ in anxiety and calling for more experimental studies to inform on affective-cognitive processes such as attention and memory biases in anxiety disorders.

Yule’s fluent chapter on post-traumatic stress disorder (PTSD) provides a fascinating update and is complemented by a chapter on preventive approaches to anxiety disorders that focuses on PTSD as an example of prevention.

The most important message arising from this book is that anxiety disorders are common, start early in life and are more persistent than previously recognised. Although there are few follow-up studies, it is concluded that “child and adolescent anxiety disorders, with or without depression, raise the risk of adjustment problems and anxiety disorders later in life”. Its comprehensive coverage of both theoretical and clinical issues make this recent volume in the Cambridge Child and Adolescent Psychiatry series a valuable addition to departmental libraries and to the personal reference shelves of both clinicians and researchers.

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Unmet Need in Psychiatry: Problems, Resources, Responses

This valuable book arose from a conference held in Sydney in 1997 under the auspices of the World Psychiatric Association’s Section of Epidemiology and Public Health. Its underlying theme is the applicability of the findings of psychiatric epidemiology in shaping a policy response to meeting the needs of people with a ‘mental disorder’ (those disorders listed in DSM–IV and Chapter V of ICD–10). The scale of the problem is enormous. The World Bank Global Burden of Disease project has reported that mental disorders account for about 10% of the burden of disease worldwide – and over 20% in the otherwise much healthier West. Compare this with the negligible spending on mental health by developing nations and the 5–10% of health budgets typically devoted to mental health services in advanced industrial countries. A series of careful epidemiological studies using refined methodologies carried out over the past 20 years in the USA, Canada, UK and, most recently, Australia have identified a 1-year-period prevalence of mental disorder in between 20% and 30% of the adult population. (The UK is scolded for adopting a non-standard methodology in its national psychiatric morbidity survey but its findings are broadly similar.) Anxiety, depression, substance misuse and personality disorder are overwhelmingly more prevalent than psychosis (which tends to be underreported in community surveys). Roughly a quarter of cases will be continuously ill throughout the year, with onset cases and remitted cases balancing out.

The epidemiology maps poorly onto real life, with only a small proportion of identified cases receiving treatment and a significant proportion of those receiving treatment failing to meet diagnostic criteria for mental disorder. Treatment resources are overwhelmingly devoted to in-patient care, which in turn is predominantly for people with psychosis (and in some countries substance misuse). Part of the gap between epidemiology and real life is explained by a discordance between diagnosis and disability: many people who meet diagnostic criteria for mental disorder function well (and not a few who do not meet the criteria function badly). Symptoms do not equate to need. Just as important in explaining the gap between epidemiology and service use are the choices of the individual to label their experience a mental disorder and to seek help. Many health care systems actively discourage help-seeking in an effort to contain costs or (what is in effect the same thing) deal with overwhelming demand. There is a further discordance, rather shocking for those who espouse evidence-based medicine, between the public and professionals about what constitutes
an appropriate response to a perceived mental disorder. For example, medication comes low down the public list as an effective treatment for schizophrenia. In contrast, there is enormous enthusiasm, in both developed and developing countries, for ‘alternative’ therapies, which are rarely provided by mainstream mental health services. This reflects a chasm between the conceptual frameworks currently adopted by professionals and the public, a chasm that cannot be bridged by recourse to epidemiology alone.

So, what to do? This book vindicates the broad UK strategy for mental health, which combines an emphasis on health promotion with an acknowledgement of the crucial role of primary care in the management of common mental disorders and a requirement of secondary services to deploy evidence-based treatments that can deliver demonstrable health gain. A fuller dialogue between researchers, practitioners, service users and carers might help untangle some of the knots revealed in this book.

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