selected multiple authors from different disciplines, many of whom are internationally respected specialists. Each chapter covers a specific infection and addresses clinical manifestations, diagnosis, pathophysiology, and treatment. The areas dealt with in the text include infections encountered in both first world and developing countries. Several chapters deal with topics not usually covered in textbooks of neurological infections including facial palsy, Guillain-Barre syndrome, the utility of specific diagnostic tools including PCR, neurological complications of chemotherapy for infections, and acute management of neurological infections.

Most of the chapters are clearly written and well referenced, providing the reader with current reviews of rapidly evolving areas. For example, the chapters on bacterial meningitis, Lyme Disease, HTLV-1, fungal infections, AIDS-related infections, and CSF shunt infections give the reader a systematic approach to each topic. Each chapter varies widely in the extent to which pathophysiology is discussed. Herein lies the major shortcoming of the text; there is tremendous variability between chapters. Several chapters are lacking in sufficient references or overlook important references; notably, the chapters on subdural emphyema, epidural abscess, and viral encephalitis are surprisingly brief. In contrast, the chapter on rabies provides a lengthy review of the subject with a exhaustive bibliography but misses some important references. Another striking gap is in the chapter on spongiform encephalopathies. Although there is some description of the colorful characters in this tempestuous field and a very clear explanation of the pathogenesis of prion protein-related disorders, the new variant of Creutzfeld-Jakob receives scant attention. Despite the breadth and relative flux of the entire subject of CNS infections, all of the authors have attempted to critically assess the literature, pertaining to treatment.

I am pleased to recommend this book. The clinical focus of this text makes it an indepth and useful reference to neurologists, neurosurgeons, infectious disease, and intensive care specialists. Not only will the clinical descriptions be helpful to trainees but it will keep practioners abreast of the new developments in diagnostic tools and treatments of CNS infections.

Christopher Power
Winnipeg, Manitoba

PERSPECTIVES OF MOTOR BEHAVIOR AND ITS NEURAL BASIS. 1997. Edited by M.-C. Hepp-Reymond and G. Marini. Published by Karger. 138 pages. $C107.00

This book arose from a symposium held at the University of Fribourg in Switzerland in late 1994, in honor of Mario Wiesendanger's anticipated retirement as Chair of Physiology and Director of the Institute of Neurophysiology in Fribourg. Mario Wiesendanger made tremendous contributions to motor physiology with studies in both humans and primates; it is therefore quite fitting to have this book dedicated to him on the occasion of his retirement.

The book consists of 10 chapters from authors in Switzerland, France and Italy. The first chapter by Hepp-Reymond gives an elegant historical account of the investigations of the pyramidal tract, with emphasis on Wiesendanger's research and his views. This is followed by two chapters on grasping. Jeannerod discusses the contributions of anticipatory mechanisms and reflex adjustments to grasping in humans. The chapter by Rouiller and colleagues describes how the inactivation of the simian motor cortex by lidocaine injection affects the precision grip, while inactivation of the supplementary motor area (SMA) does not. They suggest that precision grip movements are overtrained, and suggest that the SMA may be more involved in learning or the execution of more complex movements. The chapter by Massion discusses the central mechanisms for control of balance during movement. Pedotti describes a system for analysis of movements in 3D, and Dietz discusses his work on locomotor training using a treadmill in paraplegic patients. Marini eloquently describes the physiology of normal motor phenomena of sleep, including changes in cortical excitability during NREM and REM sleep, and atonia of REM sleep. However, the section on motor disorders during sleep is disappointing, since there was little discussion on the pathophysiology of these disorders. Buser and colleagues provide interesting data on subdural recordings of slow cortical potentials preceding movements. Of particular interest is the contingent negative variation (CNV), a slow scalp negative potential occurring between a warning signal and a go signal in a reaction time paradigm, which is thought to represent motor preparation. While scalp recorded CNV show wide distribution, subdural recordings show that it arises from the contralateral primary motor cortex, contralateral premotor cortex and bilateral SMA. Hess and his co-authors give an useful account of the use of transcranial magnetic stimulation (TMS) in the study of motor system. However, in their discussion of the site of stimulation of TMS they fail to mention the work of Edgley which showed that TMS can activate corticospinal neurons directly, in addition to activating them via interneurons. They ascribe inhibition of motor response as a result of prior stimulation of the contralateral hemisphere to trancallosal inhibition without providing any evidence. I find the last chapter by Mario Wiesendanger most interesting. He discusses the evolution of motor control research from the traditions of physiology, neurology and psychology to the present day integration of three disciplines. Not only does he give an interesting historical account, he also illustrates how many of these findings are still highly relevant to motor control research today.

Overall, the book is well written and provides useful information for anyone interested in motor control. There are however a number of shortcomings. It is neither comprehensive nor authoritative. There is no central theme, but rather a collection of the topics that reflect the author's research interest. Although published in 1997, it appears that most of the chapters are written in 1994 or 1995. The high price for this small book makes it more appropriate for purchase by libraries rather than individuals. Nevertheless, it is a useful reference for neuroscientists and clinicians interested in motor control.

Robert Chen
Bethesda, Maryland

DRUG-INDUCED NEUROLOGICAL DISORDERS. 1996. By K.K. Jain. Published by Hogrefe & Huber Publishers. 389 pages. $C127.00

In an environment of increasing polypharmacy, drug toxicity must be considered in virtually every differential diagnosis. Physicians rapidly come to realize that the CPS (or PDR, for our US colleagues) is neither complete nor reliable, in addition to be lacking in specific references. In the CPS, peripheral neuropathy or at least "numbness" are listed under virtually every medication. Further, this is largely fossilized data reflecting clinical trial adverse drug reactions, which may not capture some rare but significant toxic disorders; these only become apparent when the medications are more widely used in the clinical setting.

The author of this book is a neurologist, neurosurgeon and also a medical advisor to the pharmaceutical industry. The first chapter succinctly reviews some very important concepts relating to the definition and epidemiology of Adverse Drug Reactions. The second chapter deals with the pathophysiology and risk factors for such reactions. In the next 23 chapters, drug induced neurological disorders are presented mainly according to clinical semiology: encephalopathy, seizures, neuropathy, myopathy, sleep disorders, etc. This approach is useful in the clinic where patients' symptoms often prompt physicians to explore the possibility of drug toxicity. For most potentially offending drugs, a paragraph lists references, key manifestations and prognosis. In many cases, suspected pathogonetic mechanisms are usefully discussed.

Dr. Jain has included an exhaustive list of references – in all about 3000 citations. Much of these are brief case studies, with the inherent biases and uncertainty that this information carries. For example, under the rubric "drug-induced Guillain-Barré Syndrome" steroids (or steroid withdrawal) are listed, as well as fansidar (based on a single case report). The author does try to point out in most cases whether the evidence is purely circumstantial, whether such reports are isolated occurrences, and whether there may be a rationale for the association. As expected, a book which serves as a repertoire of information which is rapidly accruing can never be quite up to date. Vigabatrin, for example, does not appear under the rubric "drug-induced retinopathy".

This book will serve as a useful quick reference for those who do not have ready access to electronic databases or a full complement of recent specialized monographs on specific areas of neurological disease. It is a very useful reference in a field of clinical neurology which is becoming increasingly relevant. One expects, however, that in the future this type of documentation will be best presented in a frequently updated electronic format.

Pierre R. Bourque
Ottawa, Ontario

SYRINGOMYELIA AND THE CHIARI MALFORMATIONS. 1997. Edited by John A. Anson, Edward C. Benzel, Issam A. Awad. Published by The American Association of Neurological Surgeons. 193 pages. $C124.00

This excellent publication is appropriately dedicated to Dr. Bernard Williams who has written extensively and contributed greatly to the understanding of Chiari Malformation, hindbrain herniation and syringomyelia. The book is divided into fifteen chapters, each with a large reference list. The majority of the contributors are neurosurgeons, and two are neuroradiologists.

Chapter One deals in depth with the history of the CNS anomaly. Many familiar and lesser known contributors are mentioned. Congenital, acquired and hydrodynamic theories are discussed, illustrated and we are brought up to date with the latest thinking on the pathogenesis of syringomyelia. This chapter also gives a review of available treatments, namely radiation and surgery.

Chapter Two proposes a classification of syringomyelia and Chiari Malformations. This is presented in a clear and comprehensive way. Chapter Three discusses the pathogenesis and developmental theories of hindbrain herniation, and the associated bony and soft tissues anomalies at the craniovertebral junction, with some clarification of the mechanism of extension and expansion of syringomyelia cavities.

In Chapter Four, neuroimaging of syringomyelia and Chiari Malformations is presented with excellent tips regarding the measurements of tonsilar position for Chiari I and II malformations. Dynamic pre- and post-operative imaging is discussed. Broad review of the Chiari I and II malformations is given in Chapters Five and Six, where one find, excellent reviews on the pathogenesis of associated CNS anomalies.

Chiari malformations III and IV are briefly but clearly defined in Chapter Seven. The relationship between Chiari malformations and syringomyelia is discussed in Chapter Eight. Two brief chapters (Nine and Ten) deals with post-traumatic and neoplastic syringomyelia. Chapter Eleven, written by Bernard Williams shortly before his death in 1995, underlines the basis of treatment of syringomyelia. Chapters Eleven, Twelve and Thirteen address the treatment of Chiari malformations and syringomyelia, with their associated complications. The final chapter summarizes the multifactorial nature of the pathological process underlying these disorders, provides food for thought for further basic and clinical research.

Despite some overlap in occasional chapters, this book is a must for any physician dealing with the complex Chiari-syringomyelia patient. It is long overdue.

Falah B. Maroun
St. John's, Newfoundland