

the Columbia University Department of Neurological Surgery. Its stated purpose is to update, improve and more comprehensively follow-up the first edition of 2002. In my view, these objectives have been realized.

With some 40 new procedures and about 200 new illustrations, it is nevertheless over 100 pages shorter than the earlier edition due to a somewhat more compact layout of the text and figures and smaller type neither of which cause any readability problems. While shorter overall the volume benefits from expansion of some sections particularly the chapters on endovascular/interventional techniques and radiosurgery.

A very extensive segment on operating room supplies, instruments and equipment which appeared in the first edition is now eliminated. In my view this is a useful deletion. In this second edition, the equipment needs are briefly listed at the beginning of each chapter.

The layout of chapters starts with the general approach to a given procedure and continues to more detailed regional modifications or pathology specific instructions and illustrations.

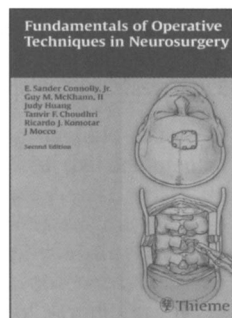
The authors have wisely chosen to retain the practice of listing complications and "management pearls" in highlight boxes at the end of each chapter where the information can be readily located.

The matter of illustrations, how many to include, how much detail and so forth is always difficult in a compendium type volume such as this. By and large however the authors, though adding hundreds more illustrations, have struck a very reasonable balance of anatomic detail with instructive clarity. Graphics are obviously no substitute for the detailed depictions to be found in many fine surgical atlases currently available but are useful nonetheless and may be helpful to show to patients as well.

In summary, this handbook in its earlier edition has for neurosurgery residents already become a well thumbed companion to Greenberg's Handbook of Neurosurgery from the same publisher.

The second edition will I'm sure continue to be popular with trainees at all levels and probably with consultants as well.

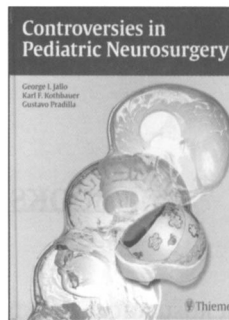
*Peter B. Gorman  
Moncton, New Brunswick, Canada*



**CONTROVERSIES IN PEDIATRIC NEUROSURGERY.** 2010. By George I. Jallo, Karl F. Kothbauer, Gustavo Pradilla. Published by Thieme Medical Publishers, Inc. 263 pages. C\$145 approx.

Rated ★★★★★

The field of pediatric neurosurgery is not dissimilar from many other surgical disciplines, where surgical decision-making is influenced by many factors. These decisions (surgical philosophy, surgical techniques, surgical approaches) are often tempered by the local experience.



I can distinctly remember reading a similar book, published years ago, that tackled controversies within general adult neurosurgical practice. As a trainee at the time, I was disheartened that by the end of each chapter, the "right" answer did not seem to exist. Those reading this book will face the same conclusion at the end of each section. This is not a criticism of the book but simply a fact that exists when

discussing difficult pediatric neuro-surgical issues. Each chapter however does attempt to present a balanced approach to each side of the controversy being addressed. This format allows the reader to gain a broader understanding of both sides of many issues. The target audience for this book appears to be the neurosurgical resident, neurosurgical fellow and junior neurosurgical consultant.

The following textbook tackles every day problems that a pediatric neurosurgeon may encounter. Since this book has multiple authors for each chapter, the style and content of each chapter differs considerably. What is consistent is the attempt of the authors to bolster their opinions with peer-reviewed references on the subject being discussed. In addition a nice touch at the end of the chapter is a section entitled "Lessons Learned". This is an attempt to "tie everything together for the reader" and is a nice touch.

The first five chapters focuses on problems associated with cerebrospinal fluid dynamics. These chapters tackle issues surrounding the treatment of arachnoid cysts, communicating and non-communicating hydrocephalus, shunt constructs, multi-compartmental hydrocephalus and slit ventricle syndrome. The following chapters do a nice job in laying out the issues.

The book then touches on three chapters within the field of pediatric neuro-oncology. The chapter on craniopharyngiomas, hypothalamic-optic pathway gliomas and ependymomas are well done. The topic of craniopharyngiomas is particularly well done and highlights the critical issues in the treatment of these difficult lesions.

The topic of craniosynostosis is touched on in terms of sagittal synostosis and deformational plagiocephaly. I suspect topics such as metopic synostosis, coronal synostosis, and syndromic craniosynostosis are not touched on because of space issues.

The next three chapters touch on intracranial suppuration, Chiari malformations and intractable epilepsy. The chapter on intracranial infections touches on when is neurosurgical drainage versus conservative management required. Often neurosurgery is involved when contiguous spread of infection from the mastoid or paranasal sinuses develops. Often these collections are not large

and the patient not critically ill and critical decisions about antibiotics, sinus drainage and intracranial drainage need to be addressed. The chapter on Chiari malformations focuses on the importance of individualizing each case. Since these patients often have a heterogeneous presentation it makes sense that the type of operation may have to be tailored to each individual patient.

Vascular paediatric neurosurgery is touched by the chapters on Moyamoya disease and pediatric intracranial aneurysms. The management of cavernous angiomas and true pial vascular malformations are not mentioned.

Various spinal issues such as myelomeningoceles, lipomyelomeningoceles, tethered spinal cords, syringomyelia and intramedullary spinal cord tumors are also touched on. The chapter on myelomeningoceles mainly focuses on the controversy regarding fetal repair versus the standard postnatal repair. Since this book has been published the results of the MOMS trial has given us their results on this topic. The chapter on tethered spinal cords addresses prophylactic untethering of various conditions (fatty filum, myelomeningoceles, lipomyelomeningoceles). This chapter does a very good job in trying to decipher a complex topic. Some spinal issues that seem to be lacking include craniocervical instability and the management of traumatic injury to the lumbar spine.

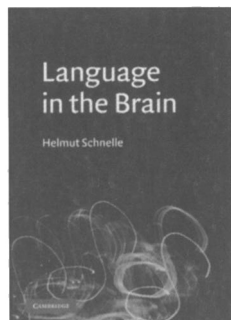
The chapter on spasticity does a nice job in enlightening the reader about the role of intrathecal baclofen and selective dorsal rhizotomy. This book is an appealing educational tool. The price point on this book, coupled with its length will make it attractive to many different readers.

Vivek Mehta  
Edmonton, Alberta, Canada

**LANGUAGE IN THE BRAIN.** 2010. By Helmut Schnelle. Published by Cambridge University Press. 220 pages. C\$50.00 approx.

Rated ★★★★★

This small paperback volume is an integrative, philosophical approach to neuroscience and language. In essence, Schnelle, a physicist and linguist by training and the long-time editor of "Theoretical Linguistics", takes a shot at the mind-body problem. He is an admirer of Jacobson, the granddaddy of linguists, who became interested in neuroscience and aphasiology, unlike Chomsky, who stayed aloof and remained sceptical of the possibility, or even the need for integrating formalistic linguistic analysis with neural organization. It was Jacobson who originally suggested "language and the brain" as the title. Language of course is not in the brain regardless of what anyone may tell you, no matter how refined a technology you may use to look for it. Language is the product of the brain, just like locomotion, or emotional expression,



or the Gothic Madonna, and it also exists independently outside the brain as in print and sound and image. It has rules expressed as phonology, grammar, semantics and pragmatics and there is an army of theoretical linguists explaining and debating how these rules evolved phylogenetically, historically, geographically, socially and ontogenetically.

The author takes on the integration of formal linguistics with neurobiology. He calls for taking off the blinkers of monism and dualism and for the integration of interdisciplinary knowledge—a job worthy of Sisyphus. He is undaunted, and believes explaining neuroscience to linguists and linguistics to neuroscientists with the plaster of philosophy will really place language in the brain. The duality of language and brain becomes a trinity when the mind-brain problem is considered along with the brain-language relationship. Can we think without language? Most people, like the author, have answered "yes" at some time in their lives, but he can not let go of the importance and infinite extension of complex nonverbal cognition; he embraces it all in his schema. So it is easy to draw a triangle, which the author obliges us to do, joining the indomitable crowd of diagram makers. The premise is that elements of knowledge (limited and fleeting as they are) can be dissected and analysed, and these correspond to (so far undefined) neural elements in the brain which the author (after Fuster) calls *cognits*. How to integrate several controversial systems of linguistic and cognitive structures with just as complex and evolving neurophysiological and neuroimaging representations of brain activity is the philosophical issue the author tackles with erudition. How successfully, it is for the reader to decide.

Recently much has been made of the discovery of the mirror neurons, the phenomenology of creativity, the "theory of mind", the brain mechanisms of the "self" and the role of the prefrontal cortex (a widely-used misnomer—there is nothing in front of the frontal lobes except your nose). These are reviewed in the first half of the book and the complexity of the perception-action organization of the mind and its integration with the organism through the PFC is a recurrent theme. Much of the modeling in the last 25 years has been developed in current computer dialect, but Schnelle takes a half-hearted stand against it. Whatever the idiom, technology and neuroscience find new models for the "enchanted loom" of Sherrington, but none of them are actual representations of your grandmother or a Volkswagen or the use of the gerund, even though a hundred or so cells can be found to respond to a certain stimulus. In the first few chapters, the author provides a summary of the columnar organization of the cortex, the vertical and horizontal connectivity and functional clustering of networks, the developmental migration and myelination of neuronal systems and the discoveries that are more or less relevant for language. He rightfully warns that not only what is dealt with in linguistics but the whole of brain activity contributes to language. Certain models, such as Fuster's ladder, recur repeatedly. Buzzwords such as *mutual functionality*, *neural network binding*, or *dynamic time* are marshalled. "*The cognit complex changes into the momentary actual state of energetic executive operation. It is caused by internal interactions of the neural networks*"—Bingo, the philosophical-linguistic concept is turned into a physical state! It is still as invisible as the Emperor's new clothes. He goes on to admit that there is no one-to-one mapping of psychological or mental functions assigned to separate brain areas.

One of the grand issues, whether we are genetically programmed to produce language, as the notoriously political