

BOOK REVIEWS

Aphasia: Opportunities to Consolidate Perspective and to Confirm or Reconfigure Principles Within Neuropsychology

Aphasia: A Clinical Perspective, by D. Frank Benson and Alfredo Ardila. 1996. New York: Oxford University Press. 456 pp., \$49.95. ISBN: 0-19-508934-0.

Reviewed by LESLIE J. GONZALEZ ROTH, Ph.D., *Staff Speech Pathologist, Gainesville VA Medical Center and Associate Professor of Neurology, University of Florida, Gainesville, Florida, U.S.A.*

Aphasia is a neuropsychological disorder of interest to a wide variety of professionals, making the insularity of their respective perspectives so surprising. This point becomes obvious when one looks at books on aphasia and finds that the authors' views are often narrowly provincial. Of course, viewpoints tend to be strongly influenced by what is familiar and comfortable; yet when seeking truth convergence of thought eventually becomes necessary. Aphasia is an area where much is known about the linguistics, the management, the neuropathology, and the psychology of the disorder. It is time to look for what is consistent across perspectives and to reconsider what is not. Hopefully we are moving in that direction, for Benson and Ardila state in the preface to their book that their intent was to combine approaches "from two major schools of thought on aphasia." One they term the "Boston school," and the other, the "Russian school." I can't think of any better people to represent these two approaches than Benson and Ardila.

In 1979 Frank Benson authored the monograph, *Aphasia, Alexia, and Agraphia*, presenting what he came to call the "clinical-neuroanatomical approach" to acquired language disorders. Benson notes that this book targeted a "neurologist's view." Just 2 years later, the Albert et al. book, *Clinical Aspects of Dysphasia*, offered much the same approach, but directed to a broader audience. Both books had as their basis a view of brain organization influenced by the authors' mentor, Norman Geschwind, by Geschwind's resurrection of the work of the German neurologists of the late 1800s, and by his wonderfully creative elaboration of disconnectionism. Twenty-six years later, the explosion of technological supports that confirmed the constructs proposed by Geschwind, warranted a restatement in the light of this new evidence.

It is unfortunate that Aleksandr R. Luria lived under political repression that prevented free communication with the Western world. Yet many of his written works eventually made their way through translation to wider audiences.

Differing from the disconnection approach, which seeks to uncover neuropsychological principles emanating from the study of brain structure, Luria's neuropsychological studies were much more functional and also more practical. Principles arising from his functional orientation successfully enhanced the understanding of his many traumatically brain injured soldier-patients. It is likely that this set the tone for his lifetime commitment to this approach. As a student of Luria, Alfredo Ardila provides us with a unique opportunity to learn more of Luria's thoughts on aphasia and how he might have reacted to or accommodated the structural disconnectionism of Geschwind.

This book consists of 21 chapters organized into four major groupings, and provides extensive references. An introductory section contains chapters on the history of aphasia studies; influences on aphasia such as degree of hemispheric specialization, age at onset, etc.; components of the normal language system; basic issues in the neuropathology of brain damage; and how one might assess language processing and dysfunction. The next section, "Syndromology," includes nine chapters. These chapters review the nature, neuropathology, and associated symptoms of all of the classical aphasia syndromes grouped anatomically (e.g., perisylvian vs. extrasylvian) as well as subcortical syndromes, and commonly co-occurring problems such as alexia, agraphia, acalculia, and anomia. The final chapter in this section presents the neural basis of language, drawn from the preceding review of the syndromes. The four chapters of the third section discuss aphasia-related disorders; e.g., speech disorders; associated problems such as pseudobulbar palsy, apraxia, agnosia; aging and dementia; and psychiatric disturbances that can appear with aphasia. The final—two-chapter—section deals with recovery and with aphasia management. This organization and chapter content are familiar and clearly driven by the structural view of aphasia implied in disconnectionism. However, interpretations of compatible work by Luria have been added where appropriate.

Because the authors were very specific about their intent to focus on combining the “Boston” and “Russian” approaches, they cannot be faulted for excluding (or deemphasizing) some of the many other current and popular approaches to aphasia such as those with psycholinguistic or cognitive neuropsychological emphases. However, these perspectives receive only passing reference in this book. The new information offered by Benson and Ardila serves to confirm or embellish concepts developed years back within the Geschwind and Luria “schools of thought.” Thus, this book offers the newcomer to aphasia (or to the disconnection approach to aphasia, specifically) a clear and current review of this more classical conceptualization. For the reader familiar with the Boston approach it provides an opportunity to consider how Luria’s thinking may have conformed or been confirmed. The authors promised to combine their experiences and incorporate recent advances and they delivered as promised.

Moving Beyond the Bender

Detecting Malingering and Deception: Forensic Distortion Analysis, by H.V. Hall and D.A. Pritchard. 1996. Delray Beach, FL: St. Lucie Press. 357 pp., \$89.95.

Reviewed by LOREN PANKRATZ, Ph.D., *Clinical Professor of Psychiatry, Oregon Health Sciences University, Portland, OR.*

The days of administering a Bender-Gestalt test to determine brain damage are over. So, too, are the days of administering an MMPI and a Rorschach to testify about the personality of a patient. Hall and Pritchard suggest that the psychologist going to court must review vast amounts of divergent information, and they recommend a process they call Forensic Distortion Analysis. Forensic distortion analysis is defined as a set of interlocking procedures designed to answer focal questions relevant to deception. It’s a lot of work, but the authors have no sympathy for anything less.

The authors review some common misperceptions about deception that still persist. The first is that patients are honest with professionals in clinical interviews. A corollary is that professionals can tell when patients are not telling the truth. In fact, clinicians usually do not screen for deception, and can’t do a good job if they try. Yet deception is so common that adults shade the truth daily, and high achievement-oriented children cheat more than their peers. Indeed, skill in faking may be adaptive. The usual question for the forensic evaluator, then, is to determine the individual’s credibility about a highly situation-specific issue or event.

This book contains some excellent guidelines in distortion analysis: use multi-model methods, create decision rules, avoid illusory associations, consider alternative hypotheses, seek feedback, etc. The assessor must consider faking good as well as faking bad, defensiveness as well as malin-

My challenge, stated in the first paragraph of this review, regarding the need to seek convergence has a two-pronged requirement: (1) to confirm principles emanating from one perspective as compatible with another; and (2) to reconsider principles in which incompatibility across “schools” occurs. While Benson and Ardila have met the first challenge, they did not pursue the second one. I would have enjoyed reading these authors’ thoughts on the inconsistencies between their two approaches as well.

REFERENCES

- Albert, M., Goodglass, H., Helm, N., Rubens, A., & Alexander, M. (1981). *Clinical aspects of dysphasia*. Vienna: Springer-Verlag.
- Benson, D.F. (1979). *Aphasia, alexia, and agraphia*. New York: Churchill-Livingstone.

gering. There are also excellent suggestions to help prepare, conduct, and conclude a deception analysis. The first five chapters contain instructive, even exciting, material.

However, the table on Page 52 started me wondering. Why did they select bereavement, pancreatitis (*sic!*), fever, myopia, porphyria, duodenal ulcer, renal colic, ecchymosis, and sepsis as representative of the “seriousness and diversity” of factitious disorders? Why is this full page table in the chapter on “Evaluation Process Guidelines” with no apparent relationship to the topic? Why do they recommend treatment for factitious disorders when most authors believe that the poor prognosis makes the traditional interventions useless?

My enthusiasm and eagerness waned as I read the final 15 chapters, although each had some helpful information. The chapter on pain lacked a crisp conceptualization of pain behavior, which is easily confused with malingering. The chapter on PTSD discussed neurotransmitters but failed to confront the massive abuse of this diagnosis in the forensic area. The chapter on children and deception failed to mention the monumental work of Stephen Ceci.

Experienced clinicians may also find serious problems with the chapters that cover areas of their own expertise. The question is whether this book will provide the reader additional forensic skills. Never walk into court with only a Bender!

A Resurgence of the Case Study Approach in Neuropsychology

Classic Cases in Neuropsychology, C. Code, C.-W. Wallesch, Y. Joannette, and A.R. Lecours (Eds.). 1996. Hillsdale, NJ: Lawrence Erlbaum Associates (Psychology Press). 408 pp., \$79.95.

Fractured Minds: A Case-Study Approach to Clinical Neuropsychology, by J.A. Ogden. 1996. New York: Oxford University Press. 304 pp., \$55.00.

Reviewed by ANNE L. HESS, Ph.D., ABPP. *Neuropsychology Service, Bangor, ME.*

Classic Cases in Neuropsychology is an absorbing and fascinating volume, bringing together many of the truly classic cases in the neurology/neuropsychology literature from the last 100 years. The original publication, if not included in its entirety, is excerpted or summarized in enough detail to give the flavor and background of the original. In addition, the medical and cultural contexts to the cases are also given, which greatly enriches our understanding of the importance of each case, and why they had such an impact on the field. The authors discuss the original articles in light of modern or recent findings to give a wonderful perspective on the creativity or limitations of the original paper. It is also fascinating to see the scientific embryos of phenomena that we now so much take for granted, or that have since been discarded or replaced. The sophistication of many of the original papers is humbling, especially to see the careful and thoughtful reasoning by the authors; that their conclusions could be reached before our modern neurodiagnostics and elaborate examinations is truly remarkable. On the other hand, there are examples where the original conceptualization of the syndrome has since been altered, or where the case was not adequately differentiated, and erroneous syndromes invoked or invented; for example, the Charcot-Wilbrand syndrome, discussed in two separate chapters, and Wernicke's model of letter-by-letter reading. In several cases, the evolution of a neuropsychological concept can be seen from its original inception, followed through subsequent important research developments, down to our present understanding. Some of the authors were wont to be very critical of some of the early papers, because hindsight has proven some of their work wrong; nonetheless, the classic cases represent a stride forward in research or understanding that had immense heuristic value, perhaps because subsequent research required such effort to prove them wrong.

The original Phineas Gage case study is excerpted as well as the follow-up; by examining it, it is obvious that his treating physician came slowly to the understanding of the effects on Phineas of his injury, who at first believed that his patient had recovered more fully than he actually had. This particular chapter could have been greatly enhanced had it included the functional MRI images published by Damasio et al. in *Science* in May 1994. Reexamination of H.M. leads to the conclusion that he may have been one of the abso-

lutely most important cases in the entire history of the profession, by a combination of "purity," the availability of Milner's excellent research laboratory, and the luck of good timing. It is also clear that some of the major paradigm shifts in the field occurred as a result of the exceptional case and a skeptical or unconventional attitude of the researcher.

The range of original papers is wide-ranging, sampling visual processes, language, praxes, memory, and representing diverse regions of the brain. There appears to be an overrepresentation of language cases. There are representative chapters on cerebral lateralization, localization of function, and psychosurgery. Seminal research by such people as Broca, Milner, Warrington and Shallice, Leipmann, Burkhardt among others, are included. Notably absent—in spite of the book including papers from recent years—are papers by Geschwind and A.R. Luria.

The authors of the various chapters in this volume take the opportunity to discuss the history of the cases, integrate the early data with modern theory and recent findings, and critique the approaches or conclusions of the original authors. In most cases, these discussions contribute to our understanding of the phenomena, but in a few it seems but an excuse for the author to lobby for his/her own favorite theory, or simply to appear erudite. In all cases, the original work and the discussions are immensely provocative, informative, and entertaining. The goals of the editors were accomplished in fine fashion, and this volume—although certainly not breaking new ground—is delightful; it will be quite useful in a course on the history of neuropsychology or neuroscience.

According to the author, *Fractured Minds* results from and is designed to be an introductory text in clinical neuropsychology, a compilation of her lectures in New Zealand. After a general introduction and overview of the field, there are individual chapters covering the usual divisions of the field, including basic neuroanatomy, basic neuropsychological assessment, basic syndromes such as hemineglect, epilepsy, aphasia, agnosia, and dysexecutive syndrome. There are additional chapters focusing on subarachnoid hemorrhage, major and minor head injury, hemispheric disconnection, dementia, hemispheric agenesis, neurotoxins, and the role of rehabilitation. Each chapter attempts to blend basic neuropathology and very brief reviews of pertinent

literature with detailed and compassionate clinical case presentation. The topics selected represent some of the syndromes of high current interest, notably head injury and neurotoxicity. The blend of classic syndromes with more modern ones offers a pleasant balance.

The selected cases are extremely well presented, rich in detail, and unmatched in the presentation of the human aspect of neurological disease. Dr. Ogden provides details of the person's premorbid history, the clinical presentations and history, medical findings, the methods of cognitive assessment, and specific test results. The cases are well-described samples of typical syndromes, and thus contribute significantly to clinical training. Almost every chapter begins with a first-person account of her encounter with a patient; her clinical, almost chatty discussions and personal character descriptions were refreshing and almost novel-like. "Luke," "Janet," "Rangi," etc., all come vividly to life to the reader. Most of the case studies are from her own clinical practice, but she includes the classic HM case. Her discussion of HM includes observations and information about his emotional reactions, specific non-test behaviors and his own observations not usually included in a basic text, and certainly not to be found in research papers. They will entice any clinician into reading them hungrily. Her approach, reminiscent of A.R. Luria's *Higher Cognitive Functions in Man*, is nevertheless systematic, logical, and illustrates sound clinical reasoning. Although quite appealing in this regard to the seasoned clinician, her approach may present an undisciplined and subjective model to the new student rather than the objective, disciplined, and research-based approach that is so highly favored by US neuropsychologists. This may play very well in Auckland, but it may be questioned in Chicago.

As an introductory volume, it must be compared with other standard introductory texts, such as Kolb & Whishaw; Ogden's book is much less thorough in presenting the neuroscience basis of clinical neuropsychology, with much greater emphasis on the clinical manifestations of neuropathology. To a clinician, the latter may be greatly preferable; but to those with a more traditional research bent, the absence of

strong reviews of pertinent literature will be perceived as a serious shortcoming. It is much more similar in its explicit clinical–research blend to Walsh's *Neuropsychology: A Clinical Approach* (1987), or McCarthy and Warrington's 1990 *Cognitive Neuropsychology* text.

As the author intended, this book will appeal to students and non-neuropsychologists, such as family practice physicians, physical therapists, or other professionals with a superficial interest in the neuro–cognitive field. It may be rather complex for families or patients, depending on their education and background in health-related subjects; but her presentation of both theory and research pertinent to each clinical syndrome will give them the clear message that our understanding of these syndromes derives solidly from research and not solely from entertaining clinical reports.

Considered together, these two volumes illustrate contrasting applications of case studies; in the first, the classic cases served a strong heuristic role in stimulating decades of research to understand the clinical phenomena. The second uses cases to teach about clinical syndromes, and as such draws on great detail of clinical presentation. It seems unlikely to have the same enduring value to research, as it demonstrates classic syndromes rather than offering novel or perplexing ones. As a text, it would be a very strong supplement to a solid foundation in neurosciences. The *Classic Cases* volume may well become a classic in itself.

REFERENCES

- Kolb, B. & Whishaw, Q. (1990). *Fundamental of neuropsychology* (3rd ed.). New York: W.H. Freeman.
- Luria, A.R. (1966). *Higher cortical functions in man*. New York: Basic Books.
- McCarthy, R.A. & Warrington, E.K. (1990). *Cognitive neuropsychology: A clinical introduction*. San Diego, CA: Academic Press.
- Walsh, K. (1987). *Neuropsychology: A clinical approach* (2nd ed.). Edinburgh, UK: Churchill Livingstone.

Pediatric Neuropsychology in the Medical Setting, by Ida Sue Baron, Eileen B. Fennell, and Kytja K.S. Voeller. 1995. New York: Oxford University Press. 451 pp., \$55.00. ISBN: 01-9506345-7.

Reviewed by H. GERRY TAYLOR, Ph.D., *Department of Pediatrics, Rainbow Babies and Children's Hospital, Cleveland, OH.*

It is fitting that this book should begin with an emphasis on the diversity of backgrounds and disciplines involved in pediatric neuropsychology, the expanding role of the pediatric neuropsychologist in the medical setting, and the features that make this field distinctly different from adult neuropsychology. In this reviewer's experience, these themes not only ring true but provide an appropriate point of departure for a book that defines the expanding boundaries of pediatric psychology as currently practiced. Pediatric neuropsychology

is neither an offshoot of adult neuropsychology nor a collection of procedures for investigating brain dysfunction *per se*. As evident from the topics covered in this text, the field is best characterized as a developmental science. The issues, theories, and methods of this science are complex and unique to developing organisms. Day-to-day practice, moreover, requires substantial clinical experience with children, families, and schools, as well as knowledge of a variety of disorders that are specific to children.

The primary purpose of the text is to provide a guide or source book for persons interested in learning more about applications of neuropsychological procedures. Following an excellent introductory chapter that would be useful to anyone seeking a brief overview or some good points to include in a lecture on the topic, the book is divided into three sections. The first section (Chapters 2 and 3) provides an in-depth discussion of normal and abnormal brain development. The topics covered in this section include brain development, factors known to affect neuronal connectivity and lesion outcomes, neuromigrational and genetic disorders, and disorders due to acquired injury or in utero exposure to toxins or hormones. This section, like the rest of the book, is richly referenced and sophisticated in its treatment of the neurobiological aspects of developmental processes and abnormalities. At the same time, the authors are careful to introduce and define basic concepts and terms. Examples include their discussion of the stages of brain development, and basic genetics principles. Considerable detail is provided with respect to both underlying pathophysiological mechanisms and neuropsychological correlates. The highlights of the first section for this reviewer included the wealth of information presented on neuromigrational processes and genetic syndromes, and the concept of “lesions” in the young organism as involving genetic and metabolic disturbances in addition to outright brain lesions.

The second section (Chapters 4–6) describes the pediatric neurologic exam, the components of pediatric neuropsychological assessment, and methods for providing oral and written feedback to parents and others regarding evaluation findings. These three chapters offer information and clinical pointers rarely found in neuropsychological texts. The clinical expertise and insights of the authors shine through this section. The “review of systems” approach to the neurologic examination introduces many useful neurologic concepts and provides a bird’s eye view of the methods of clinical neurology. The chapters on neuropsychological assessment and feedback reflect years of hard-earned experience and are chock full of useful clinical tips that simply can not be found elsewhere. A strong sense of respect for children and families is evident in these chapters. The emphasis placed on collaborative working relationships represents the highest standards of professionalism.

The final section (Chapters 7–13) consists of a series of chapters, each on a specific type or category of clinical disorder. The conditions included in this series are hydrocephalus and myelomeningocele, epilepsy, head trauma, cancer, cardiovascular disease, renal disease, and neuropsychiatric disorders. Each chapter reviews the pathophysiology and subtypes of the disorder, neurobehavioral manifestations, and treatment methods. The chapters are comprehensive, summarizing both the medical aspects of the condition and the current status of neuropsychological research findings. The chapters on childhood epilepsy, cardiovascular disease, renal disease, and neuropsychiatric disorders may be the most unique offerings in this section.

One of the limitations of the book is that there is a tendency in some sections for the authors to provide listings of neuropsychological findings, rather than to integrate results within a theoretical framework or to critique studies in terms of methodological rigor. This is no doubt inevitable in a book that covers such a wide array of topics. However, this criticism does not apply to the book as a whole. Many topics, particularly in the third section, are reviewed in depth, with substantial attention to methodological issues and analysis of research themes. In all sections, moreover, the authors’ research citations are extensive and up-to-date.

Another potential limitation, depending on one’s perspective, is that the book is somewhat selective. Despite the excellent chapters on assessment, valuable commentary on testing philosophy and interpretation, and reference to many useful clinical procedures, the authors do not review neuropsychological assessment procedures or measurement issues in detail. By design, the book also excludes the topics of attention deficit disorders and learning disabilities. One could make the argument that the latter conditions are no less “medical” than the neuropsychiatric disorders discussed in Chapter 13. On the other hand, the topics of learning disabilities and attention deficits have been covered in other texts, and it would have been impossible to review these subjects with any sophistication in a single volume without sacrificing other content.

In summary, *Pediatric Neuropsychology in the Medical Setting* is true to its goals. It is best used as a source book in the area for persons who work or are being trained in children’s hospitals or other tertiary care centers for children. The authors, two pediatric neuropsychologists (Drs. Baron and Fennell) and a pediatric neurologist (Dr. Voeller), have a wealth of experience in such settings. Persons who work in pediatric settings will find the book to be a compendium of useful information and helpful clinical advice. The efforts of the authors to define basic neurobiological and neuropsychological concepts and to outline disease classifications and correlates will be of special benefit to persons who seek advanced training and professional certification in clinical neuropsychology. Because so many of the key concepts and disorders encountered by practitioners are reviewed in the book, it is an especially valuable resource for post-doctoral fellows. Although the book is not an introductory text on child neuropsychology, it would also be useful in teaching at the graduate or even undergraduate level, particularly as a supplement to courses in this area and as a reference for practicum students.

However, the most important contribution of this book is the emphasis it places on the biological as well as behavioral foundations of this emerging new field. Child neuropsychology as practiced in the medical setting is an essentially interdisciplinary endeavor, and one that is quite distinct from its adult counterpart. While helping us to keep pace with recent medical and behavioral advances, the text informs our students and colleagues about the fundamental nature and challenges of our field.

The Organism: A Holistic Approach to Biology Derived from Pathological Data in Man, by Kurt Goldstein. 1995. New York: Zone Books. 422 pp., \$26.95. (US). ISBN: 0-942299-96-5.

Reviewed by DONALD T. STUSS, Ph.D., *Director, Rotman Research Institute, Baycrest Centre for Geriatric Care; Professor of Psychology and Medicine (Neurology), University of Toronto.*

I agreed to do this book review for several reasons. The older I get and the more I do research, the more I realize how important history is and how few of our ideas are truly original. We build on the past, and Goldstein was a major influence in neurology, psychology, and psychiatry. A second reason was my previous experience in reading Kurt Goldstein's journal publications. Each time I read an original article I realized that my interpretation of his ideas, often derived second hand from the interpretations of others, was incomplete if not incorrect. Moreover, reading the original papers always clarified my own research ideas. Third, to read an entire volume of Goldstein's was an opportunity to experience personally the "vitality" and "largeness of vision" that Oliver Sacks described in his foreword.

Kurt Goldstein (1878–1965) was a neurologist, psychologist, and philosopher who trained in the German tradition before moving to the United States in 1935. The details of his life and influences are articulately presented by Oliver Sacks, in an excellent introduction and framework for Goldstein's book. Goldstein's formative influences likely provide the base for both the negative and positive features of *The Organism*. The negative features are easily summarized. The prose is often stylized and heavy. The examples are historical and not in today's neuroscience mainstream. As expected, considering the time of writing, more current knowledge would alter certain interpretations. For example, for Goldstein, the concept of inhibition was unacceptable. The content was also very philosophical. Reading *The Organism* was, in many respects, a reliving of earlier years of reading difficult philosophy texts.

The positive far outweigh the negative. Like the holistic theory Goldstein proposed, it is the lessons of the whole book that are important. Thus, contrary to the structure of most book reviews, listing the specific content or chapter headings would be largely irrelevant in this review. Rather, the following theme presented itself: "If Kurt Goldstein lived today," how would some of his main ideas fit? Let me summarize some of my reflections on Goldstein's relevance for modern neuroscience.

1. *Rehabilitation*: Goldstein, by virtue of his holistic philosophy and background in Gestalt psychology, understood that the totality of a person including his or her physical and social environment was extremely important for understanding the individual's success or failure in adaptation and rehabilitation. In fact, Goldstein went so far as to enlist the "spiritual sphere" (p. 342) to understand human behavior. Diagnosis and medical understanding alone were insufficient for Goldstein. Moreover, a simple "plus or minus" analysis, looking at the overt achievements or failures of a patient, does not do adequate service in analyzing how a neurologically impaired person is responding to his or her current situation. Goldstein espouses a more dynamic active attitude. This philosophy reveals itself in his

discussion of actualization: "The organism has definite potentialities, and because it has them it has the need to actualize or realize them" (p. 168). This multidisciplinary holistic approach is gaining in importance today.

2. *Theoretical approach*: As aptly summarized by Sacks, Goldstein starts with detailed observations and facts, and then develops conceptual explanations. Goldstein postulated that theorizing alone was insufficient. He emphasized the inductive approach. This combination of detailed analysis and ability to conceptually stand back to obtain a holistic overview permeates Goldstein's approach. For me, at least, this grounding in data, and the interaction between data and theory, is appealing as a scientist-practitioner.
3. *Brain organization*: It is often emphasized that Goldstein was against localization. As frequently stated by Norman Geschwind in rounds, that was a narrow rendering of Goldstein's position. *The Organism* would seem to support Geschwind's interpretation. Goldstein clearly was against a strict and limited localizationist approach, against the idea that "circumscribed centers controlled those particular functions" (p. 33). Such an approach would limit the investigator. In Goldstein's opinion, "performance is not bound to specific anatomical connections" (p. 190). Yet, he also accepted that various areas of the cortex are heterogeneous and that "we have large sections that, judging by their structure as well as by their relatively loose connection within the projection system, undoubtedly have a significance of their own relatively independent of the peripheral cortex" (p. 201). What Goldstein is against, consistent with his holistic approach, is a narrow interpretation. He presents a middle ground. Goldstein, in my opinion, would likely be more a "systems" person today in his interpretation of brain-behavior relations. However, even this would be too narrow for Goldstein, since such an approach does not consider the entirety of a person. The individual's reaction and the person in his or her total context must also be considered: Localization of a performance no longer means to us an excitation in a certain place, but a dynamic process that occurs in the entire nervous system, even in the whole organism. . . . A specific location is characterized by the influence a particular structure of that area exerts on the total process (pp. 208–209).

Goldstein indeed would be a major force in today's investigations of brain-behavior relations. How he would express these ideas would undoubtedly differ, but their central message would not. These three examples illustrate the lasting impact of his major concepts, properly understood. While this was not particularly easy reading, the messages were well worth the effort. What will be gained from reading *The Organism* is a philosophical approach to our science, our methods, and especially to our patients, an approach that may be too much lacking even today.

Neuropsychology from A(blation) to Z(ellweger)

The Blackwell Dictionary of Neuropsychology, J.G. Beaumont, P.M. Kenealy, and M.J.C. Rogers (Eds.). 1996. Cambridge, MA: Blackwell Publishers. 788 pp., \$80.00. ISBN: 0-631-17896-1.

Reviewed by MURIEL D. LEZAK, Ph.D., *Department of Neurology (L226), Oregon Health Sciences University, Portland, OR 97201.*

To prepare for this short review (it would be difficult to do a long one on the first dictionary in a discipline) I opened this 5.5 cm (2") thick book at random and found myself in "Cerebellum" (pp. 194–209). This section, written by M.I. Botez, Robert Lalonde, and Thérèse Botez, is as representative as any of the outstanding quality of this dictionary. A listing of the sequence of subtopics within "Cerebellum" will give an idea of the depth and breadth of coverage of major topics: "Anatomophysiological background," "Chemical neuroanatomy," "Behavioral and neuropsychological studies in humans," "Is replacement therapy possible in cerebellar neurobehavioral disorders?" "The cerebellum and language," "Memory and learning," "Timing sense and somatosensory discrimination," "Psychiatric diseases and mood disorders," "Experimental studies in animals," "Behavioral evaluation of cerebellar mutant mice," and "PET and SPECT studies." This section is graced with six figures, three tables, and 24 references of which 19 date from 1985 or later. I was pleased to see that the grand old master of the cerebellum, Robert S. Dow, is included among the authors cited.

Rather than providing more data on more sections, I can assure potential readers that, while not every major topic has illustrative figures (79 in all) or tables (18 of them), all that I've sampled are broadly covered with appropriate detail and current references. Moreover, the writing—although by at least

114 different authors—appears to be consistently clear and relatively jargon-free, given the subject matter. The major sections (in the hundreds) are all signed and referenced. A number of topics with minor status are described or defined without benefit of references or authorship (e.g., "Denervation hypersensitivity," "Lesion," "Palmomental reflex," "Scotoma"). Cross referencing that I have sampled appears to be reasonable and appropriately economical (e.g., "interthalamic connexus *See* MASSA INTERMEDIA"; "color agnosia *See* AGNOSIA; VISUOPERCEPTUAL DISORDERS"). Because of the alphabetical layout of the dictionary, much of the 15-page, 2-column index in fine print appears to be redundant, but it will be used for some cross-referencing and references to senior authors cited in subsections.

While almost any neuropsychologist might take issue with the editors' selection of one or another subsection author, on the whole these choices have been not only appropriate but often the best in their area. The quality of the product demonstrates that Blackwell made not only an appropriate decision in commissioning Drs. Beaumont, Kenealy, and Rogers to edit this major contribution to neuropsychology, but these author–editors should be counted among the best that could possibly carry out such a complex, technical project so effectively.

OTHER BOOKS OF INTEREST

Albert, M.L. & Knoefel, J.E. (Eds.). 1994. *Clinical neurology of aging* (2nd ed.). New York: Oxford University Press. 704 pp., \$120.00. ISBN: 0-19-507167-0.

Bostock, H., Kirkwood, P.A., & Pullen, A.H. (Eds.). 1996. *The neurobiology of disease*. New York: Cambridge University Press. 443 pp., \$110.00. ISBN: 0-521-45132-9.

Clark, A. 1996. *Being there, putting brain, body, and world together again* (editor's note: i.e., cognitive psychology). Cambridge, MA: MIT Press. 280 pp., \$30.00. ISBN: 0-262-03240-6.

Storandt, M. & Vanden Bos, G.R. (Eds.). 1994. *Neuropsychological assessment of dementia and depression in older adults: A clinician's guide*. Washington, D.C.: American Psychological Association. 219 pp., \$40.00. ISBN: 1-55798-245-7.

Tovée, M.J. 1996. *An introduction to the visual system*. New York: Cambridge University Press. 202 pp., \$55.00 (\$22.95 paperback). ISBN: 0521-48339-5 (0521-48339-5 ppbk).