Book Review/ Évaluation de livre

Aphasia Rehabilitation: the impairment and its consequences
Edited by Nadine Martin, Cynthia K. Thompson and Linda Worrell (2008)

Publisher: Plural Publishing Inc., San Diego, California
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This book is the product of a meeting of the minds, involving a number of prominent researchers in aphasia rehabilitation. The underlying premise of the book is that there is a competition (real or perceived) in the field of aphasia rehabilitation between proponents of impairment-level treatment and proponents of the 'consequences approach'. The term 'consequences approach' incorporates treatments that have previously been called 'functional', 'social', 'life participation' or 'psychosocial'. Fifteen experts in aphasia rehabilitation were invited to participate in two meetings to discuss this dichotomy in aphasia treatment. As a result of these discussions, they wrote this book, with the goal of teaching each other their respective approaches and treatment philosophies.

The book includes a preface and seven sections. The first section, written by Cynthia Thompson and Linda Worrall, serves as an introduction, and includes a history of the two different approaches to aphasia rehabilitation. The following five main sections consist of four chapters each. The first chapter in each section is a case description of a patient with aphasia. In the following two chapters, a researcher representing each of the two approaches presents a complete assessment and treatment plan, including the appropriate outcome measures. The final chapter of each of these five sections summarizes the similarities and differences in the two approaches of the treatment plans for the given client. It should be noted that the treatment plans are hypothetical in nature, meaning that the presented treatments were not actually provided to the five patients described in the book. Some may see this as a flaw, however the book was not written to directly contrast the effectiveness of the two treatment approaches, but rather to "clarify the real differences and similarities between the two approaches" (p. x). In general, the proposed treatments have been evaluated in the aphasia literature, and the relevant references are provided. The final section of the book serves as a summary of the lessons learned by the various researchers involved in the project.

Across the five main sections, the reader is presented with assessment and treatment plans for patients with fluent aphasia, apraxia with aphasia, nonfluent aphasia, agrammatism, and letter-by-letter reading. The treatment plans are quite detailed, including information such as timelines, treatment intensity, and word lists, such that a clinician would be able to implement the suggested interventions for a client on her caseload. In most cases, the authors have incorporated the realities of clinical life into their plans. As an example, in the chapter by Anna Basso, she acknowledges the limited time clinicians may have for assessment, and derives the diagnostic impression from the limited initial case description, without further testing. A side benefit, derived especially from the impairment approach chapters, is the level of explanation provided regarding the assessment and diagnostic processes. Most of the authors describe very systematically how they arrived at their diagnoses, generally adhering to a cognitive neuropsychological model. This means that the authors have effectively provided a tutorial on the use of such a model in the assessment of aphasia, which many practicing clinicians or students may find valuable. As the authors work in different countries (including Canada, Australia, England, Italy and the US), the book also provides an interesting glimpse into the care for people with aphasia in different health care systems.

The final section of the book attempts to summarize the current state of affairs regarding the co-existence of the impairment and consequences approaches in aphasia treatment. This may have been a difficult task given the relative novelty of this collaboration. Indeed, this seems to be the weakest section of the book, as though the authors were not clear how to present their case. Nevertheless, the authors reach two main conclusions. The first conclusion is that most of the researchers involved in this project practice treatments that fall within both approaches, which is evident in the treatment plans provided in the preceding five sections. Their second conclusion is that "helping individuals with aphasia requires both [approaches]" (p. 266). This claim is less well substantiated because the question of the relative contributions and/ or combination of the two approaches is not addressed. Perhaps this comment is meant as an indication that we shall see continued collaboration on this question.

Practicing clinicians may not be as polarized on the matter of their treatment philosophy for aphasia rehabilitation as the researchers in the book have depicted the field to be. Nevertheless, this book provides an interesting insight into the motivations of experts in the field regarding their preferred approach to treatment. The case presentation format provides the reader with a unique view of the two approaches. Overall, this book can serve as a great resource for any clinician who provides assessment and treatment for people with aphasia, given the wide array of ideas provided within both the impairment and consequences approaches.

Neuroimaging in communication sciences and disorders
Roger J. Ingham, Editor (2008)

Publisher: Plural Publishing Inc., San Diego, California
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The book *Neuroimaging in communication sciences and disorders* is a summary of the relevant literature covering the emerging use of neuroimaging in the fields of speech-language pathology and audiology. The editor, Roger J. Ingham, states that the objective of the book is to provide a "knowledge base (that) can provide for our discipline's science and its quest for the alleviation of communication disorders." In his introduction to the volume he makes an impassioned argument that advances in neuroscience are greatly influencing our field and that it is crucial that researchers and clinicians improve their understanding of these influences in order to better serve our patient populations. It is a timely argument and one that is difficult to disagree with given the increasing evidence that most communication disorders are intertwined with the central nervous system.

The book is intended for anyone who is concerned with the current state of neuroimaging in the communication sciences and its disorders. In order to make the information accessible to a wide audience, each chapter summarizes the background of neuroscience relevant to its subject matter (e.g., speech production, aphasia, etc.) and then quickly transitions to more advanced discussions of the developments in the area related to neuroimaging, pertinent methodological issues and advances that will influence future research in the area. The early chapters do a reasonable job of orienting novice readers to neuroimaging jargon and some of the current controversies. Readers new to neuroscience may find that they require this background information to understand later chapters.

The book is organized into six chapters, each covering neuroimaging contributions to a specific area of practice in the communication sciences. A very thorough and well-written review of the neuroimaging of normal speech production, written by Dr. Frank Guenther, comprises the first chapter. This review discusses the historical theories of brain function, the development of neuroscience, and ends with a critical integration of lesion studies and recent research involving structural and functional neuroimaging at both the cellular and the systems levels. Along the way, Guenther poses important questions for future investigations of both normal and disordered speech production.

The next chapter, by Dr. Roger Ingham et al., opens with a brief review of neurophysiological findings and their impact on theorization in developmental stuttering. The review of functional neuroimaging studies is held to a suitably brief summary as more complete reviews of this literature have been published elsewhere (see De Nil, 2004, Ingham, 2003). The authors discuss how advances in neuroimaging techniques have furthered our understanding of developmental stuttering. The authors conclude with description of their own research on cortical folding.

The third chapter, by Dr. Christy Ludlow et al., is a detailed and thorough assessment of the state of neuroimaging of voice, swallowing, and other upper airway functions. The authors do an excellent job of reviewing and critiquing broad content areas, including some with very little available research evidence. The outline of each upper airway function is followed by a summary of the current knowledge gleaned from lesion studies. The chapter then methodically describes a wide range of neuroimaging techniques and the challenges the study of upper airway function presents for each one. The authors make a critical distinction between learned and innate upper airway functions and go on to explain what neuroimaging has taught us about the neural control of phonation, singing, laughter, crying, shrieking, coughing, sniffing, sneezing, throat clearing, nose blowing, and swallowing. Ludlow et al. discuss how neuroimaging can be used to provide evidence for therapeutic interventions via the study of neural plasticity.

Chapter 4 by Dr. Don Robin et al., discusses neuroimaging related to apraxia of speech. The authors outline the ongoing controversy over the definition of apraxia of speech. They state that some of the earlier lesion and neuroimaging studies of apraxia of speech must be interpreted with caution, as participant selection based on less-than-ideal determinants of apraxia of speech may have implications for the results. The chapter concludes with a review of structural and functional brain imaging studies of speech production in adult speakers with either acquired or neurodevelopmental apraxia of speech.

The fifth chapter of the book addresses the role of neuroimaging in aphasiology and is written by Dr. Amy Ramage et al. The most interesting aspects of this chapter cover our evolving understanding of the long-term reorganization of language areas and the recovery of language function after treatment. The chapter concludes with a review of promising neuroimaging techniques including perfusion and diffusion-weighted imaging, and the use of transcranial magnetic stimulation to emulate lesions or to increase activation in otherwise inactive areas in brain-damaged patients.

The book concludes with a chapter by Frank Musiek on auditory neuroscience and the advances of brain imaging related to clinical audiology. The authors describe the neuroanatomical organization of the auditory cortex into core, belt, and parabelt regions. This argument is supported

with evidence from human studies utilizing non-invasive neuroimaging techniques such as functional magnetic resonance imaging and electroencephalography. Unlike the previous chapters that focused on cortical motor control of the speech mechanism, this chapter is able to draw on a wealth of information on both subcortical and cortical anatomy and function of the auditory pathway.

In summary, the book is an excellent summary of the status of neuroimaging within the field of speech-language pathology and audiology. The chapters are authored by some of the most eminent researchers in the chosen topic areas. Each chapter guides the reader quickly from a basic review of introductory material on the relevant topic area to advanced discussions of the current controversies. The book, however, is not without its weaknesses. A chapter exploring the use of neuroimaging in the study of children with language disorders is an obvious omission that is acknowledged by the editor, and an appropriate reference for further reading is provided. Also missing are chapters summarizing infant language development and the communication disorders associated with autism, epilepsy, and traumatic brain injury. In addition, an additional introductory chapter explaining the basics of the main neuroimaging techniques could be considered for future editions. This would allow the contributors to avoid repetition in the introductory sections of their chapters. The book is a valuable contribution to our field and an indispensable reference for researchers and clinicians specializing in neuroimaging.

References

De Nil, L. F. (2004). Recent developments in brain imaging research in stuttering. In B. Maassen, H. F. M. Peters & R. Kent (Eds.), *Speech motor control in normal and disordered speech. proceedings of the fourth international speech motor conference* (pp. 150-155). Oxford: Oxford.

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Auditory Processing Disorders: Assessment, Management and Treatment

Editors - Donna Geffner, PhD, CCC-SLP/A,
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This 25 chapter, 576-page text is a pleasure to read. The relatively short chapters and current hot topics of interest make it easy for the reader to become immersed. The book lends itself to be picked up for a quick read over lunchtime. The generous use of figures and tables adds visual appeal. Each chapter starts with an overview and ends with a bulleted 'Key Points Learned' section, making it easy for the reader to peruse all of the chapters first before settling in for more serious reading.

The text is a compilation of the current perspectives of renowned audiologists and speech-language pathologists, including many well-known researchers in the field of auditory processing disorders (APD). The book is divided into 3 sections: I. Identification and Assessment; II. Management; and III. Treatment and Intervention. Overall, the text provides a comprehensive look at this complex and controversial body of study. The main premise of the text is that the assessment and treatment of auditory processing disorders should be a collaborative effort involving both audiologists and speech-language pathologists. The authors argue that clinicians are often too narrow in their focus, thus losing sight of the big picture. This in turn can lead to an inaccurate diagnostic impression and ineffective or inappropriate intervention.

Of particular interest in the first section on identification and assessment' are Hamaguchi's chapter on the co-morbidities of APD and Rance's chapter on CAPD vs Auditory Neuropathy/ Auditory Dysynchrony. The assessment and diagnosis of APD is a challenge that faces both audiologists and speech-language pathologists. Richard's chapter on the continuum of auditory processing and Burns' chapter on the APD and literacy link add more substance to the need for an interdisciplinary approach.

The second section on management will be a valuable read for graduate students and new clinicians, but more of a review for experienced audiologists. Some of the assistive devices described in Geffner's chapter are already obsolete. Also confusing is Geffner's inclusion of personal FM-transmitters for hearing impaired children in a text focusing on APD. Kelly's chapter on parenting a child with APD provides good practical information (including a

resource list of websites and chat lines) to pass along to parents, although the legal references pertain exclusively to US law and are mostly irrelevant to Canadians.

The last half of the text is devoted to 'Treatment and Intervention'. The authors (in most cases, the actual developers) provide extensive detail about the better-known programs. There is also a description of some unconventional, alternative approaches that are currently available. Of particular interest are Medwetsky's chapter on the use of computer software aimed at CAPD and Burn's chapter on the neuroscientific approach to treatment. Both authors address the controversy surrounding the much-publicized 'Fast ForWord' program. The Canadian reader will gain little from Lipp's chapter on educational implications, as it is restricted to a discussion of the U.S. education laws. Particularly disappointing is Ross-Swain's chapter on sample reports, which recommends a format that I found difficult to wade through. The text ends with an excellent appendix on web references and resources, which will be very useful to the reader.

Having read this text from beginning to end, I am in agreement with Charles Berlin, the author of the foreword, who praises the text by stating that… "Compiling this book was a serious undertaking, fraught with sturm and drang, hidden pitfalls, internal contradictions, turf wars, and even some physiologic and anatomic data. The reflective reader will appreciate with me the inherent problems involved and the sincerity of the authors in their attempts to bring more order and more solid framework to this and related fields when the professions of audiology and speech-language pathology may once again work in concert for the benefit of our CAPD as well as AN/AD patients."

I have found this text to be extremely useful for my own practice. I would recommend the book to graduate students in both audiology and speech-language pathology programs, new and established clinicians, and related professionals such as psychologists, occupational therapists, educators, and school administrators.