

## Preface

The initial idea for this book emerged following an international symposium on nonverbal learning disabilities (NLD) held in Padua, Italy. Embraced by the historical rooms frequented by Nicolaus Copernicus, Giovanni Morgagni, Galileo Galilei, and many other distinguished scholars who once resided within the University of Padua, we found ourselves deep in conversation regarding how best to characterize children with NLD more than 800 years after the university was established. We were attending the International Academy for Research in Learning Disabilities (IARLD) annual convention, which brings together researchers from 30 countries around the world. Our symposium included several experts on NLD: John M. Davis, Jessica Broitman, Kenneth Adams, and Bonny Forrest. Our common interests brought us together for a traditional meal in a charming downtown old “trattoria,” where we shared many ideas and intentions. We all agreed that an effort to organize and unify knowledge on NLD and to develop a broad perspective was necessary from both a scientific and a clinical point of view.

Decidedly lacking in modern times, a coherent, unified description of the NLD profile is critical for developing sound systematic analyses for researchers of NLD. Additionally, more clinical clarity for diagnostic assessment and empirically tested interventions is needed to guide practitioners. Such a systematic approach would address the current paradoxical situation whereby a large majority of clinicians working with

neurodevelopmental disorders recognize the syndrome of NLD but the clinical specification for NLD remains vague or even questionable. Thus, a major impetus for the book is that despite the lack of a full consensus, the diagnosis of NLD is rather frequent, either alone or in association with other formally recognized diagnoses. This situation can only be improved with the introduction of well-identified criteria.

The present book represents a progressive maturation of knowledge based on research, discussion, and collaboration among researchers and clinicians from various countries around the world. It attempts to unify and formalize the many common ideas in the field of NLD that have accompanied our work for many years. The book is organized in eight chapters. Chapter 1 provides an in-depth historical background on NLD. We illustrate how the field started and found traction in the pioneering work of Helmer Myklebust, Doris Johnson, and Byron Rourke. The chapter lays out both the origin and the challenges inherent in the label of NLD and provides a rationale for an updated synthesis of the field.

Chapter 2 reviews the cognitive and academic weaknesses and strengths of children with NLD. In particular, we evaluate evidence concerning visual perception, motor coordination, visuoconstruction, spatial abilities, language, visuospatial working memory, mental imagery, executive functions, long-term memory, and reasoning. Researchers have used slightly different populations, so we offer a table that helps the reader recognize the research methods and sample sources for the studies. A similar table is presented for research on academic learning difficulties, where reading, decoding, and spelling are consistently seen as strengths, but there is variation on reading comprehension, handwriting, calculation, and other mathematics aspects. Chapter 3 similarly reviews evidence concerning emotional and social difficulties of children with NLD with particular reference to social cue encoding and interpretation, attention, social functioning, and psychological adjustment.

NLD appears to be a neurodevelopmental disorder with genetic influences and early indicators, so Chapter 4 presents neurological and anatomical evidence found to date. Because of the small amount of neurobiological research conducted on NLD thus far, the chapter also presents a historical perspective.

Early work on the biological bases of learning disabilities in general and of NLD that initiated the old label of “right-hemisphere learning disability” is discussed. Then recent studies are presented illustrating the role of better-defined neurological structures, including the hypothesis the smaller splenium of the corpus callosum may play a critical role.

Chapter 5 utilizes a systematic overview of literature and clinical reports to synthesize a proposal for diagnostic criteria that could form the basis for both research and clinical recognition of NLD. The criteria outlined are consistent with current diagnostic methods, such as the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders*. We view consistency in diagnosis as critical to moving the field forward in terms of both research and clinical practice.

Assessment issues are the subject of Chapter 6. We examine assessment from the practitioner’s point of view, discussing important issues for differential diagnosis. Interviews, questionnaires, and standardized tests recommended for NLD are presented with particular attention to the most useful procedures. Most importantly, we take an international perspective, considering the experiences collected not only in the historically dominant-for-the-field North America but also in European countries. Specific procedures not easily available to the practitioner are described and also included.

Chapter 7 illustrates intervention strategies. We begin with a review of the small body of existing literature followed by a presentation of general guidelines. Policies and procedures appropriate to supporting children with NLD in school, family, and community settings are presented. Finally, we suggest approaches that might be taken for psychological intervention. Included in our discussion are general guidelines for clinical intervention with the child with NLD, noting that this involves systematic planning, accurate assessment, establishment of priorities for intervention, and use of a multimodal approach to intervention that considers the child, the school, the family, and social contexts. Ideas for supporting cognitive, psychological, academic, communicative, and executive skills are presented.

To better illustrate our thoughts on assessment and intervention, Chapter 8 presents three case studies. These cases are taken from clinical evaluations and interventions provided to children

(of various ages) in the United States and in Europe. Specific diagnostic procedures and instruments are discussed along with thoughts regarding rehabilitation for the children.

In summary, we have tried to offer an updated overview of the field of NLD that is as complete as can be, given the current state of the science and clinical wisdom. At the same time, we have considered the needs of both the researcher and the clinician, offering a systematic, consultable, and readable review not only of research evidence but also of good practices. We hope our readers will appreciate and share our deep interest in NLD. We further hope that our readers use our work to serve this fascinating and underserved population.

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