## Foundations of Clinical Neuropsychology

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#### **Preface**

In the last decade, neuropsychology has grown from a small subspecialty to a major component in the practice of clinical and medical psychology. This growth has been caused by advances in psychological testing (such as the Halstead–Reitan neuropsychological battery, as discussed in Chapter 5) that have made evaluation techniques in the field available to a wider audience, by advances in neuroradiology and related medical areas that have enabled us to better understand the structure and function of the brain in living individuals without significant potential harm to those individuals, and by increased interest by psychologists and other scientists in the role that the brain plays in determining behavior. Many disorders that were believed by many to be caused purely by learning or environment have been shown to relate, at least in some cases, to brain dysfunction or damage.

With the growth of the field, there has been increased interest in the work of neuropsychologists by many who are not in the field. This interest has come from several major groups: first, from graduate and undergraduate students in psychology and related areas who are considering neuropsychology as a possible profession; second, from allied health professionals, rehabilitation workers, physicians, and others who are interested in the possible role that neuropsychology might play in their patients or setting; third, from the lay public about the role of neuropsychology in the assessment, understanding, and treatment of brain-injured children and adults; and finally, from students enrolled in classes in clinical psychology and neuropsychology in which there is an attempt to teach the role of the neuropsychologist within the health delivery system.

At present, there are few references (if any) available for these individuals. There is a plethora of books on how the brain functions, but most of these assume too much knowledge and background to be of interest to many readers not in the field. Furthermore, these books do not focus on what the neuropsychologist actually does, but on other more academic or clinical issues. While these are important, they most often offer at best a vague impression of the role of the neuropsychologist and the role of the field.

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The purpose of the present volume is to remedy these problems. The volume begins with a discussion on the history of neuropsychology, followed by chapters on assessment approaches and techniques commonly used in the field. The subsequent chapters, comprising the bulk of the volume, then examine the role of the neuropsychologist in a variety of populations, in several different settings, and in relationship to several major issues. Thus, these sections explore such topics as the role of the neuropsychologist in neurology, psychiatry, and medical populations, and with such populations as children and adults. The chapters also cover such issues as the role of the neuropsychologist in rehabilitation and in forensic (law) work, as well as such issues as the influence of a person's sex on neuropsychological performance. The final chapter is on the question of training and credentialing in neuropsychology, an issue growing in importance as the field expands.

There are several things that this book is not. Although there are numerous references throughout the book, this book is not intended as a comprehensive research review of the areas covered. Neither is it intended to break new theoretical ground in each area. The chapters are attempts to acquaint the individual not currently trained in neuropsychology with the field, how it has developed, what it does, and how it goes about performing its activities. It is our hope that the reader will acquire a balanced presentation of typical activities (although not all approaches to such activities or all tests related to these activities) and instruments associated with neuropsychology. The reader should come away with a feel for what the neuropsychologist does and how neuropsychology fits into the more general areas of psychological and medical care.

We have attempted to minimize as much as possible the use of jargon and vocabulary peculiar to neuropsychology. However, we have found that some basic minimum of neuroanatomy is necessary as well as some familiarization with the functions of the brain. For those with absolutely no familiarity with basic neuroanatomy, we have included an Appendix, which is a short (and somewhat oversimplified) view of this area. Several of the chapters (e.g., Chapter 7) also present some basic introductory material on such topics as hemispheric specialization.

In general, we have attempted to avoid most duplication among chapters, although sometimes we have left such material in to make each chapter more readable. Furthermore, because of the general attempt to avoid duplication, the book is intended to be read in the order in which the chapters are written. For example, later chapters may refer in examples to specific tests that are explained in Chapters 2 through 6.

We are highly appreciative of each author's contribution to this book. We are grateful also for the coordinating secretarial contributions of Ms. Paula Dinkel. And finally, we are most appreciative of the encouragement and forbearance shown to us throughout this effort by our family members, Ellen, Peg, Sean, Brian, and Kevin.

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