

# Clinical Neuropsychology

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(editors)

**Boom**

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## Preface

### *Why this book?*

During the last few decades there has been a major expansion in the field of neuropsychology. This is not only due to increased interest in the brain and modern insights into brain-behaviour relationships, but is also related to the application of neuropsychology in clinical practice. Today, clinical neuropsychologists are established health-care professionals working in general hospitals, psychiatric hospitals, rehabilitation centres, centres for learning and developmental disorders, and private practice, and they are often members of multidisciplinary teams. Traditionally, clinical neuropsychology has focused on the assessment of cognitive dysfunction, but interventions aimed at ameliorating the consequences of brain dysfunction, cognitive impairment, and developmental disorders have also found a place in modern-day healthcare.

From an academic perspective, neuropsychology courses have a central place in most undergraduate and graduate programmes in psychology, and the formerly strict boundaries that existed between the different fields of psychology, such as clinical psychology, gerontology, social psychology, developmental psychology, and neuropsychology, have now been largely removed. At the time of writing, all psychologists who want to work in a clinical setting must have a basic understanding of cognitive theories and all the main neurological and psychiatric disorders in which cognitive dysfunction is prominent.

Most neuropsychology textbooks focus primarily on the neurocognitive models of organisation of the brain (e.g. Kolb & Wishaw's *Fundamentals of Human Neuropsychology*), only discuss assessment and clinical, provide an overview of tests and their interpretation (e.g. the seminal work by Lezak and colleagues *Neuropsychological Assessment*), or adopt a cognitive-syndromal approach. Our book, *Clinical Neuropsychology*, is

unique in that not only does it cover the cognitive-neuroscientific theories that are used within the field of clinical neuropsychology, but also it discusses the clinical aspects of neuropsychology and the major brain disorders and diseases that are most prevalent in adults and that are characterized by cognitive deficits. Although the frame of reference of this volume is clinical practice, it must be emphasised that this book does not focus on neuropsychological assessment or treatment. For instance, we do not provide information on which tests to use in which patients, or which treatments or rehabilitation approaches have the strongest evidence base.

*Clinical Neuropsychology* is aimed first and foremost at psychology undergraduate students. It does not require any background knowledge of the field of neuropsychology, but merely a first-year undergraduate knowledge of the organisation of the brain and a basic understanding of cognitive psychology. The chapters on neuropsychological methods in clinical practice and on the major disorders are also relevant to students on Masters programmes, and to those who have completed their training and already work with patients. Thus *Clinical Neuropsychology* is intended to serve both as a textbook for students and as a reference book for practising psychologists.

*How is the book organised?*

The book begins with an introductory section, followed by a discussion of the various cognitive domains, and then a discussion of the main neuropsychological syndromes and disorders. This enables the reader to study the syndromes and disorders using the knowledge they have gained from the first two parts of the book, namely the role of the neuropsychologist in clinical practice, the theories underlying the cognitive domains, and how this knowledge can be applied to the management of the specific diseases and disorders.

In Part I, 'An Introduction to Neuropsychology', we focus on the clinical neuropsychology discipline and its methods, including neuroimaging in relation to behaviour, methodologies in clinical practice, and theories on recovery and plasticity. In Part II, 'Cognitive Domains', we discuss the various cognitive processes, which for the reader's convenience are grouped into cognitive domains as follows: visual perception, spatial cognition, memory, language (including speech), attention and executive functions, emotion and social cognition, motor control and action, and intelligence. The cognitive processes and theoretical models of each domain are highlighted, deficits in these processes are discussed, and localisation of cognitive functions is addressed using lesion studies and neuroimaging findings. Case reports are also used to illustrate the findings. In Part III, 'Disorders of the Brain', we discuss the most important neurological dis-

orders and psychiatric syndromes. For each disorder or disease, we first describe the clinical presentation, diagnostic criteria, and epidemiology. Then we discuss the aetiology and neuropathology, if these are known, as well as the role of genetics and the medical treatment options. The main focus of each chapter is on the cognitive impairments associated with the particular disease or disorder. In addition, we address the question of whether the impairments are highly selective in nature or whether there is a global cognitive decline. We also highlight whether the cognitive impairments are related to lesion localisation and severity, and whether other behavioural and mood changes need to be considered, too. Each chapter includes a historical box that describes, for example, a ‘classic’ case study, or the person after whom a disease or disorder is named. The book also contains anatomical charts of the most important brain areas and circuits, which can be referred to when reading those chapters that assume a basic knowledge of neuroanatomy.

In writing a textbook on clinical neuropsychology we inevitably had to be selective, as it would have been impossible to comprehensively cover all aspects of the cognitive domains and clinical disorders. Each chapter of this book really warrants a book in itself. Nor was it possible to address every limitation, criticism, and development in detail, and it should also be borne in mind that this book is about a field that is still developing. Although there may be consensus about certain topics at this moment in time, the perspectives may change even within a few years. This is especially relevant when discussing clinical criteria that are almost entirely based on consensus (for example, the *Diagnostic and Statistical Manual of Mental Disorders* is currently in its fifth edition, *DSM-5*, but these criteria may well be revised in the future). Each chapter of *Clinical Neuropsychology* concludes with a discussion of future developments that can be anticipated in that field.

The experienced clinician or researcher may notice some omissions in the discussion of specific topics, or have a more nuanced perspective on certain issues. Furthermore, clinical neuropsychological practice may vary from one country to another, although we have made every effort to address clinical aspects from a perspective that is applicable not only to the Netherlands but also to other European countries. It is our hope that this book will provide an overview of the state of the art of clinical neuropsychology, and that it will enable the reader to integrate cognitive theories into clinical practice.

*The history of this title*

*Clinical Neuropsychology* is the revised edition of a book that was first published in Dutch in 1997, edited by Betto Deelman (University of Groningen), Paul Eling (Radboud University), Edward de Haan (Utrecht Uni-

versity), Aag Jennekens-Schinkel (University Medical Center Utrecht), and Ed van Zomeren (University Medical Center Groningen). Those editors wanted to increase the level of general knowledge of neuropsychology among psychologists working in clinical practice. The editors invited a group of mainly academic neuropsychologists to write chapters that aimed to bridge the gap between theory and practice. This book became a standard work of reference and was reprinted five times before it was revised in 2004. This revised edition again became widely used and was reprinted seven times. In 2009 the original editor stepped down, but not before a new editorial board had been formed. The new editors, who are also the editors of this book, completely revised the volume, and most of the contributors to the chapters were also new. Care was taken to include both authors working in clinical practice and those with academic research backgrounds. This completely revised version was published in 2012, which is in almost every respect a new book compared with the 1997 and 2004 editions, has been reprinted 6 times. Most psychology programs in the Netherlands now include English-language courses that attract international students. This obviously requires books written for English-speaking students. Due to the above-mentioned limitations of the available English-language textbooks on neuropsychology, the editors and publisher decided to have this book translated into English and slightly updated. We are proud of the revised and translated version, and hope that it, too, will become a widely used textbook for students and a reference book for practising psychologists.

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