PRACTICAL RESOURCES for the Mental Health PROFESSIONAL

Clinical Interpretation of the WAIS–III and WMS–III

Edited by

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Donald H. Saklofske
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Robert K. Heaton
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Robert Bornstein
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PHOTO 1. David Wechsler circa 1942. Photo courtesy of the New York University Library Archives. Used with Permission.

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ACADEMIC PRESS

An imprint of Elsevier Science

Amsterdam Boston London New York Oxford Paris
San Diego San Francisco Singapore Sydney Tokyo

This book is printed on acid-free paper. ∞

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Orlando, Florida 32887–6777

Academic Press
An imprint of Elsevier Science.
525 B Street, Suite 1900, San Diego, California 92101–4495, USA
http://www.academicpress.com

Academic Press
84 Theobalds Road, London WC1X 8RR, UK
http://www.academicpress.com

Library of Congress Catalog Card Number: 2002109947

International Standard Book Number: 0–12–703570–2

PRINTED IN THE UNITED STATES OF AMERICA
03 04 05 06 07 MM 9 8 7 6 5 4 3 2 1

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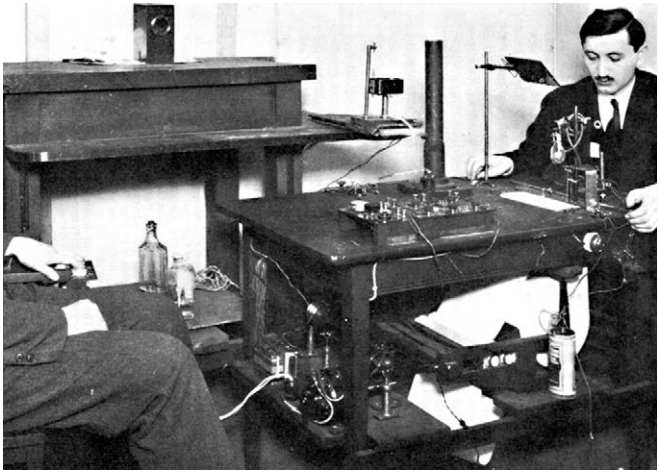

PHOTO 2. David Wechsler in his late 20's. This photo shows David Wechsler at work on an apparatus that recorded galvanometric excursions for his dissertation research. This photo was obtained from Wechsler, D. (1974). *The Selected Papers of David Wechsler.* A. Edwards (Eds). New York: Academic Press. The article was originally published in American Journal of Psychology, 1928, 40, 600–606.

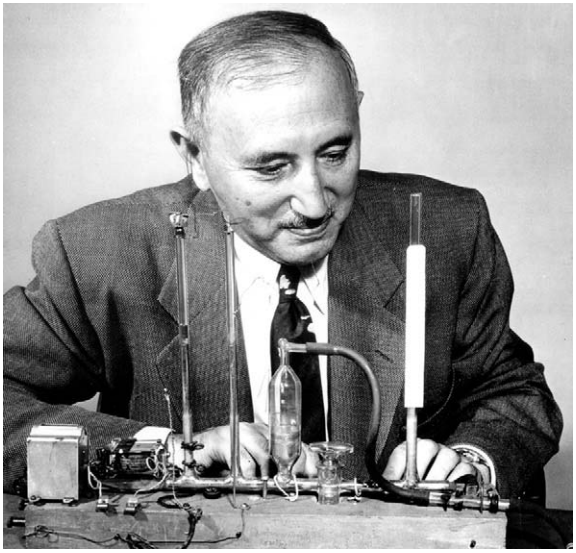

PHOTO 3. David Wechsler using a "home made" polygraph apparatus. Dr. Wechsler interest in the measurement of galvanometric skin response lasted throughout his career. Photo courtesy of New York University School of Medicine

PHOTO 4. David Wechsler circa 1960. Photo courtesy of the Bellevue Hospital Center. Used with Permission.

Introduction

In 1992 The Psychological Corporation formed an external advisory board, under the leadership of Nelson Butters, to consult with their WMS-III project development team. The role of this panel was later expanded to embrace the WAIS—III project as well. The members of this external panel came together because we hoped to have the opportunity to share our experience as clinicians and to improve the utility of the WAIS–III and WMS–III that would be used by the next generation of psychologists. For the four of us who remained on the advisory panel until the release of the WAIS—III and WMS—III in 1997, it quickly became apparent that changing widely accepted standards such as the WAIS-R and WMS-R to better reflect current scientific knowledge was complex and no easy matter.

The Wechsler tests are part of a lengthy tradition of psychological testing that can trace its roots back to the beginnings of modern psychology and are used by the majority of clinicians. However, over time, there have been advances in our knowledge about constructs like cognition, intelligence, memory, as well as our knowledge about clinical conditions, neurocognitive dysfunction and psychoeducational deficits. In view of such advances, it is unclear whether the same approaches to testing can continue to meet demands in the field. Today, psychologists expect and need more from their assessment instruments than was available at the time the WAIS–III and WMS–III revisions were being planned. We all would like to better use our test data in a time efficient manner for differential diagnosis, prediction and prognosis, and development of rehabilitation strategies in a variety of educational, neuropsychological, and rehabilitation settings. Those of us

who joined the advisory panel did so with the hope of bringing issues that we believed are clinically important to the forefront of assessment practice.

While consulting on the advisory board, several of our suggestions were adopted. For instance, the WAIS–III and WMS–III were co-normed and the projects were linked; new visual memory subtests were created with an emphasis on those that appeared ecologically valid. The WAIS–III subtest scaled scores were age corrected rather than allowing this correction to occur at the more global index score level (as had been done with WAIS–R), and greater emphasis was placed on base rate data. Other suggestions such as incorporating demographic normative information, aggregating the best parts of the WAIS–III and WMS–III into a single battery to measure cognitive functioning, and development of normative information for use in serial testing were not adopted or included in the Technical Manual. While the final revisions of the time-honored Wechsler tests were an improvement over their predecessors, we nonetheless felt that there were questions left unanswered and clinical needs that were not yet addressed. Indeed, it was our persisting curiosity and lack of a sense of closure that sparked the post-publication research that forms much of the basis of this volume

As members of the advisory panel, we came to believe that there was a need to reformulate some of our original views to better improve the practice of assessment. In a planning meeting shortly after the official publication of the WAIS—III and WMS—III, we discussed a variety of ideas—looking a the joint factor structure of the WAIS—III and WMS—III, demographically adjusted norms, clinical utility of base rate data and discrepancy scores, use of tests in the context of serial assessments, etc. Unifying these individual ideas and interests was a common theme or desire in our clinical use of the WAIS–III and WMS–III – how can we better understand and account for sources of individual variation in cognitive performance? What follows is our attempt to address the lingering questions and concerns we had about the latest revisions of the Wechsler tests. To be sure, the latest Wechsler tests are not perfect instruments. However, tests are merely tools, and it is incumbent on the test user to employ these tools wisely and in an informed manner.

From the beginning, it was our desire that this book have broad clinical appeal and applicability to users of the Wechsler scales. While at times this volume may have a neuropsychological tone to its content, we believe that the issues examined are relevant to all clinicians practicing assessment and diagnosis. The material that follows goes beyond what was published in the WAIS–III and WMS–III Technical Manual and presents a view of how these

two tests can be used in clinical practice. It is our hope that the material and procedures delineated in the following pages will foster more focused, efficient, and accurate uses of these instruments.

Gordon J. Chelune
Robert K. Heaton
Robert J. Ivnik
Robert Bornstein
October, 2002

PHOTO 5 David Wechsler giving a lecture at Hebrew University entitled: "Intelligence in a Changing World." Photo by David Harris and provided courtesy of Hebrew University. Used with Permission.

Preface

The genesis of this book can be traced back to 1995 when the standardization studies for the newest editions of the Wechsler Adult Intelligence Scale (WAIS-III) and Wechlser Memory Scale (WMS-III) were just getting underway. The WAIS–III/WMS–III scientific advisory board had raised questions around the general issue of how much change could be introduced into the new revisions of these tests. One specific question posed by the board members asked if the two tests could or should be published as a single battery, combining select subtests across the scales, rather than the two traditionally separate intelligence and memory tests. This raised the related question of whether such merging would allow the WAIS–III and WMS–III to continue to be recognized as the separate instruments that Wechsler had originally designed. Thus, the issue became one of how much weight should be given to preserving history versus how "radical" could the revision efforts afford to be? These questions weighed in heavily on the development team and, as will be described by Tulsky, Saklofske, & Zhu (Chapter 2), these questions were often difficult to answer. Frequently, compromises needed to be found.

At the same time, the advisory board was developing a view of assessment that would push the bounds of traditional diagnostic practices that had become commonplace in the field. Could new scores, norms, and methods help the clinician to reduce some previously unexplained variance when testing with the WAIS–III and WMS–III? What began to evolve was a model of assessment that placed emphasis on the index scores within a more comprehensive model of cognitive functioning that also included variables across both tests, demographically adjusted test scores, a more systematic and informed use of base rate data, and reliable change index scores when

conducting serial testing. Furthermore, the team believed that these scores should be interpreted within the tenets of evidence-based psychological science and practice. Applying these new scores and methods would result in more informed practice and improve the diagnostic capabilities of the clinician.

It is from these discussions that the core idea for the book formed. Could new procedures in testing be introduced with the Wechsler scales that offered methods and procedures that differed from those offered in the separately published WAIS–III and WMS–III? Could additional normative information help reduce the variance in making clinical decisions? Our answer to these questions was a resounding *YES* and the second section of this book presents this new information.

The advisory team was also sensitive to the unusual conditions that frequently present to the clinician and wanted to provide additional empirical data to guide decisions or, at the very least, discuss what is commonly done in practice. Unusual circumstances, such as testing an individual whose first language isn't English or who has a disability, tend to increase the unexplained variance in a testing session and are thus, very pertinent to clinical practice. At other times, a subtest may be spoiled or can not be administered and the examiner may then substitute another subtest or prorate a score. Decision rules or at least guidelines are needed to assist the clinician in deciding what should be done in these situations. Before this publication, there had not been a systematically conducted study testing the impact on score variance when an optional subtest is used as a substitute score or the total score is based upon a prorating method. Another purpose of the book was to answer such relevant clinical questions. Additionally, we sought to provide practical suggestions for the most "frequently asked questions" and offer some essential tips for professionals who are in the position of training new examiners.

In preparing this book to address the above needs, it became increasingly important that clinicians understand and appreciate the rich history of the Wechsler scales, which is heavily derived from the earliest efforts of testing. These historical vignettes are fascinating, in their own right, and serve as critical background information against which to evaluate the new information that is presented in the remainder of the book. Though the themes and stimuli used in the original Wechsler scales were commonplace and mainly were derived from other tests and sources, the modifications that Wechsler made in the creation of his tests were truly "revolutionary". Wechsler's tests had the impact of changing the way practitioners would

measure intellectual functioning and memory to this very day. For example, co-norming tasks and other tests into a single battery using a large and representative adult standardization sample had a profound effect on psychological testing practices, and may well be the most important factor that resulted in the ultimate success of the Wechsler scales. In order to appreciate the true value of co-norming the WAIS–III and WMS–III, it is important to remember how valuable it had been for David Wechsler to "co-norm" the common verbal and performance tests of the era.

The final decision to pursue this book was reinforced when it became apparent that the WAIS–III and WMS–III would not include these new ideas about testing and approaches to assessment discussed by the advisory team. In fact, we are convinced that this follow-up book to the WAIS–III—WMS–III Technical Manual is absolutely necessary to fulfill the goals and objectives of the advisory board. Active planning for the book began in the spring of 1999 when David Tulsky met with members of the advisory board in Chicago, IL to map out the content and identify potential contributors to this project. Shortly, thereafter, the project was officially launched and Don Saklofske was invited to play a pivotal role in writing and editing chapters. From its initial stages, a peer review process was established. Members of the editorial team served as reviewers, and each chapter was reviewed by a minimum of 2 members from the team. In practice, however, the peer review process was even more rigorous. Several outside reviewers were also solicited to assist us in the process because of their particular expertise in a specific content area. Hence, the majority of the chapters were read by 3 or 4 expert reviewers.

This book should serve the reader in several ways. It will provide a rich historical and contemporary perspective on the assessment of intelligence and memory with the WAIS-III and WMS-III. It will address the issues raised by the advisory panel members during the development of these tests and which have been further supported by the research literature and practice needs. The book is grounded in the scientist-practitioner model where empirically supported findings are then placed in the context of clinical practice but also informed by such practices. For example while the joint factor model describes 6 core factors made up of the WAIS-III and WMS-III subtests, secondary factors made up of immediate and delayed memory were also retained because of their diagnostic value in the assessment of clinical populations. We strove to ensure that good practice has been balanced with empirical evidence in presenting the new normative information in section two of this book. We trust that both researchers and

practicing psychologists who employ the WAIS-III and WMS-III in their work will find this book of value.

David S. Tulsky, Ph.D.
Donald H. Saklofske, Ph.D.
October, 2002

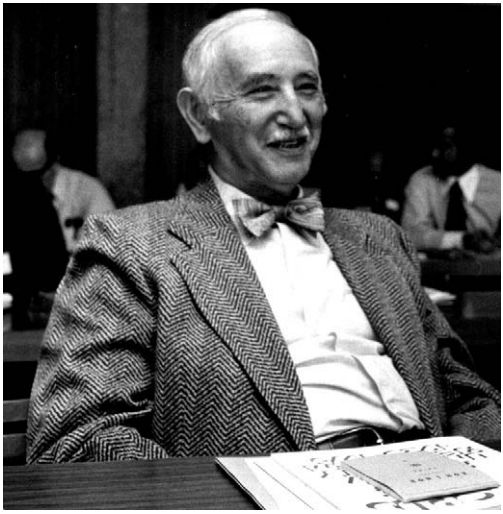

PHOTO 6. David Wechsler participating in one of the plenary sessions of the Board of Governors at Hebrew University in Jerusalem. Dr. Wechsler was an active member of the American Friends of the Hebrew University. Photo by David Harris and provided courtesy of Hebrew University. Used with Permission.

PHOTO 7. David Wechsler is pictured at the right of this photo at an unveiling of a plaque at the Center for Human Development, Hebrew University, which was funded by the American Friends of the Hebrew University. The photo is by "Photo Emka" and provided courtesy of Hebrew University. Used with Permission.

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Dedication

This book is dedicated to:

Sindy, for her unwavering love, support, patience, and loyalty.
This book could not have been prepared without her encouragement.
D.S.T.

and

Vicki, my beautiful wife and colleague, and inspiration
D.H.S.

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Acknowledgements

This book represents the contributions of many individuals. On behalf of the editorial team, we extend our profound appreciation to the following individuals and organizations.

First, and foremost, we thank the contributors for their hard work and significant contributions. Our goal was to attract talented and dedicated authors who would prepare a definitive chapter in their respective topic area. No better group could have assisted us in achieving this goal.

Second, we acknowledge The Psychological Corporation (TPC) for providing unrestricted access to the WAIS–III and WMS–III data sets. This allowed us to develop new normative information, perform new analyses, and reprint outdated items–important work that could not have been accomplished without the assistance of TPC. Larry Weiss, Ph.D. (Director of the Psychological Measurement Group) was particularly helpful with many aspects of this project.

Each chapter underwent rigorous peer-review and we often called upon individuals outside of our editorial team. Reviewers whose time and expertise helped ensure a quality text included Corwin Boake, Bruce Caplan, Nancy D. Chiaravalloti, Brigida Hernandez, Jennifer Manly, Scott R. Millis, Barton W. Palmer, Glenn Smith, and Susana Urbina. Other individuals who provided invaluable feedback, suggestions, and other assistance in key aspects of this project included John DeLuca, Glenn Larrabee, Carolann Murphy, Joseph Ricker, John Richardson, Maria Schultheis, John Wasserman, and Gary Zerbe.

Certain support personnel at Kessler Medical Rehabilitation Research and Education Corporation (KMRREC) also deserve recognition. Special thanks to Robb Mackes and Marita Delmonico at the KMRREC library,

who spent many hours acquiring much needed, but often quite obscure, reference material, and Michael Platt, media specialist, for his professional assistance with photographs and images. Senior management at KMRREC provided vital support for this project. In particular, we thank Mitchell Rosenthal for his guidance and advice and Joel DeLisa for authorizing the space and support required to complete this project.

Libraries throughout the country assisted us in this project. Particularly helpful were the library staff and archivists at the following institutions who performed photographic research services and provided reproductions:

- *Ellis Island Immigration Museum*. George Tselos, Eric Byron, Janet Levine, Jeffrey Dosik, and Barry Moreno graciously let us search through their archives and reproduced important photographs of antique psychological tests.
- *Archives of the History of American Psychology*. David Baker, Dianna Ford, and other staff searched their archives for photographs.
- And *National Archivists*, *Stanford University Archives*, *New York University Archives*, *New York University School of Medicine, Teachers' College – Columbia University Archives*, *Hebrew University*, *University of Minnesota Archives*, *the City College of the City University of New York*, the *Judge Baker Foundation*, *Harvard University Archives*, *The University of Illinois at Chicago*, *Bellevue Hospital*, *Yale University Library*, and the *British Psychological Society*.
- Several publications allowed us to reprint material including the *Buros Institute of Mental Measurement*, *Cambridge University Press*, the *American Psychological Association, Scientific American*, *Clark University Press*, *Lippincott, Williams, & Wilkins*, *Pacific* Books, and the *New Yorker Magazine – cartoonbank.com*. Finally, two photo archive companies, Brown Brothers and Culver Photos, granted permission for us to reprint important pictures taken at Ellis Island in the early days of the 20th century.

Finally, we extend our appreciation to Brad Bielawski, Barbara Makinster, Trevor Dahl, Nikki Levy, and the rest of the staff at Academic Press for working so diligently on this project. Their expertise and dedication helped make this a reality. Mr. Bielawski deserves special mention because he never backed away from a challenge and persevered to ensure that we achieved our mutual goal—a state-of-the-art text on psychological testing.

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West Orange, NJ
February, 2003