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# Preface

In the first and second editions of *Retraining Cognition: Techniques and Applications*, we integrated the existing theories of cognitive psychology, cognitive remediation, and neuropsychology with various published applications of cognitive rehabilitation. In this third edition, we continue this focus and incorporate a number of new and revised features. We have added new chapters and updated others with new information. During the brief interval between the second and third editions, a great deal of published research has either validated or disconfirmed much of the conventional wisdom in the field. Therefore, in this third edition, we present techniques that have stood the test of time, have been confirmed by a research database, and have proven especially effective in our clinical experience.

We have divided the chapters in this book into two sections. Chapters 1–8 deal with various theoretical issues that are relevant to the field of cognitive rehabilitation. Chapters 9–26 and the epilogue deal with the clinical issues that are necessary for the practice of cognitive rehabilitation therapy. Although clinicians may gravitate more to the later chapters, we emphasize that the former chapters provide a crucial groundwork for the later chapters. That is, the techniques and applications discussed in Chapters 9–26 will make much more sense to readers after reading the earlier chapters that present their underlying theory.

New chapters underscore important changes in emphasis in the field that have occurred since the last edition of this book was published. For example, during that time, cognitive rehabilitation therapists have progressed in treatments designed to help persons forget traumatic memories. Chapter 7 is a summary of research and theories of forgetting; Chapter 22 builds on this information and presents different techniques for helping a person learn to forget.

Revised Chapter 9 builds on the discussion of attention theory presented in Chapter 4 and describes various procedures for retraining the attention process. Chapter 20 has been revised to elaborate on a critical need for teaching social skills after traumatic brain injury. Chapter 21 is a new chapter that presents techniques for treating emotional issues and posttraumatic stress, two critical areas of therapy that are especially relevant for therapists who may work with military personnel returning from war zones around the world. The epilogue to this third edition has been added to present a structured therapy program for training and maintaining hope after trauma. Having hope largely determines whether a person will continue with treatment or regress into a state of de-

pression. Training hope is therefore a necessary component of any cognitive rehabilitation training program.

Many of the chapters in the third edition were also part of the second but have been updated or consolidated. For example, Chapter 3 summarizes recent research on neuropsychology and cognitive psychology as they pertain to cognitive rehabilitation therapy. Chapter 5 presents the recent theory concerning the physiological and cognitive processes that underlie recovery after brain injury. Chapter 6 summarizes the principles of transfer and generalization as they apply to treatment of cognitive deficits. In Chapters 10–13, we have updated the research on retraining different memory processes. We begin this section with a discussion of rehearsal, a crucial process that is necessary to maintain information in memory. A person's ability to rehearse is perhaps the first process that requires therapy after brain injury. We discuss the process of maintenance rehearsal and provide specific activities that a therapist can use to retrain it (Chapter 10); discuss techniques for improving a person's ability to manipulate information in memory (Chapter 11); present training techniques for teaching memory strategies, such as mnemonics and imagery (Chapter 12); and revisit the concept of rehearsal as it interacts with these memory-training techniques (Chapter 13). Therapists can use the procedures in this section to immediately enhance a person's ability to form durable memories.

In Chapters 14 through 19, we elaborate on issues discussed in the second edition regarding the training of higher cognitive skills and the core elements of what we call thinking. Retraining organization (Chapter 14), problem solving (Chapter 15), concept learning (Chapter 16), decision making (Chapter 17), reasoning and comprehension (Chapter 18), and executive skills (Chapter 19) are topics that have not been addressed in the literature on brain injury rehabilitation, except in the second edition of this book.

The final group of chapters covers indirect methods for improving cognition. Chapter 20 describes the optimal state of physical, social, and environmental fitness for enhancing cognition. Chapter 21 presents techniques for improving a person's emotional state while in treatment, and Chapter 23 builds on this information with a discussion of nutrients and drugs that may enhance cognition. Chapter 22 concerns techniques for teaching a person to forget traumatic experiences. Because lack of motivation is a common problem after brain injury, in Chapter 24, we describe an incentive-based model of cognitive rehabilitation therapy that therapists can use to motivate clients to apply their newly learned thinking skills. Chapter 25 provides a virtual library of external aids that patients can use to obviate memory and cognitive problems. Chapter 26 summarizes the literature on efficacy of cognitive rehabilitation therapy.

Appendix A is a treatment planner that therapists and family members can use to generate therapeutic interventions. Appendix B will help to identify the reasons a person may not be motivated to pursue treatment.

The third edition of this text includes a wealth of information for professionals who treat persons with brain injuries, strokes, developmental delays, and learning disabilities. These populations share similar problems with memory, attention, and cognitive processing. We discuss the latest information for treatment of people with neurological impairments that interfere with cognition. This edition also includes information that may be useful for those professionals who treat service men and women who return from war zones with a head injury. The authors are especially sensitive to the problems that

result from head injury due to combat. Dr. Herrmann, a Naval Academy graduate and Marine Corps veteran of the Vietnam War, led a research project into the effects of brain damage of Vietnam veterans, which was part of the Vietnam Head Injury Project, and reported the latest information about how head injury due to war interferes with cognition (Herrmann et al., 2001). Dr. Parenté has worked with clients who have a variety of brain injuries due to motor vehicle accidents, strokes, drug overdoses, gunshot wounds, and progressively degenerative diseases. Their combined expertise has been amassed to create the third edition of *Retraining Cognition: Techniques and Applications*.

## Reference

Herrmann, D. J., Schooler, D., Caplan, L. J., Darby-Lipman, P., Grafman, J., Schoenback, C., et al. (2001). The latent structure of memory: A confirmatory factor-analytic study of memory distinctions. *Multivariate Behavioral Research*, 36, 29–51.

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