The Neuroscience of Psychological Therapies

The Neuroscience of Psychological Therapies summarizes knowledge of brain function and brain behavior relationships within the context of psychotherapy implementation. It describes how specific locations in the brain carry out specific activities, how the different activities are combined to yield normal and pathological behavior, and how knowledge of brain activities can guide psychological assessment and intervention. Specific topics include the influence of neural networks on discovery and change, the therapist’s neuroscience, communicating with patients using the brain as reference, and using neuroscience concepts to compare and integrate traditional schools of psychotherapy. Applying a neuroscience framework to conceptualization and treatment of depression is offered as an example, and specific issues associated with trauma and false memories are discussed. The book is aimed at anyone who is working within a psychotherapy framework and wishes to discover more about brain function and brain/behavior relationships.

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The Neuroscience of Psychological Therapies

Rowland W. Folensbee

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Baylor College of Medicine
To my wife, Flossy,

to my children, Tre, Tyler, Matt, and Meredith,

to my father, Rowland,

and in memory of my mother, Adelaide
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Acknowledgements

This book is the culmination of 20 years of somewhat meandering exploration of connections between the brain and behavior. During those years my understanding of the brain has been cobbled onto and worked into my ongoing clinical practice. The path toward the future of this enterprise was often poorly defined, although it rested firmly on an intuition that understanding connections between the brain and experiences of psychotherapy could guide clinical activity. I want to acknowledge those who contributed to this exploration, often in ways not directly tied to neuroscience.

The graduate training program in clinical psychology at The Pennsylvania State University offered a milieu in which students were encouraged to find their unique paths into the field, and this approach set the stage for my subsequent exploration of neuroscience and psychotherapy. Tom Borkovec, Steve Danish, and Juris Draguns were Penn State mentors who supported my personal explorations, offering models of respectful competence within individual fields of clinical study while simultaneously encouraging learning outside their own approaches to therapy. Beyond the realm of clinical application, Paul Cornwell demonstrated that exuberance and exploration of the brain belonged together.

I was in the audience during two presentations that particularly stimulated the subsequent development of my ideas related to clinical application of neuroscience. Gordon Bower offered the concept of neural networks during a visit to Penn State in the early 1980s. He was careful not to describe networks as biological fact, but the concept took root in my initial conceptualizations of how the brain supports experience. Daniel Siegel’s presentation to the American Association of Directors of Psychiatric Residency Training in 1996 offered a description of how memory processes, trauma, and psychotherapy could interact. His ideas added to mine and simultaneously encouraged my own continuing exploration along similar paths.

More recently, the positive responses and suggestions of two clinical researcher/practitioners guided me to specific sources of information and, more importantly, offered the encouragement I needed to pursue the
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