

## **LF Koziol and DE Budding, Subcortical Structures and Cognition: Implications for Neuropsychological Assessment**

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Clinical psychologists and neuropsychologists have been taught for years that cognitive processes are mainly mediated by the cortex (the cortico-centric approach) and that subcortical brain regions mainly contribute to planning and coordination of movement, without a clear involvement in cognitive processes. In this book, the authors explain the functional neuroanatomy of cortical-subcortical circuitries and highlight the key contributions of basal ganglia and cerebellar structures on motor behavior, cognition, and affect.

The book is divided into 12 chapters. Each chapter is discussed in a logical way and comes with a list of well-selected references. The chapters are easy to read, bringing contemporary knowledge to the reader. Throughout the chapters, it appears obvious that Koziol and Budding have made a fruitful effort to provide a practice-oriented rethinking of the contributions of subcortical structures to cognitive operations. Case studies and empirical data greatly help in delineating

the numerous interactions between cerebral cortex, basal ganglia, and cerebellar modules. The link between learning and the ability of the brain to make predictions is particularly well explained. Overall, this book is an excellent synthesis on the literature on subcortical contributions to cognition. The authors demonstrate in a lucid way the importance of adopting an integrated model for cognition.

The book is primarily written for clinical neuropsychologists, but it can be recommended for any scientist dealing with cognition, including clinicians. Given its broad coverage and the clarity of writing, it should be very valuable for graduate students and in courses.

This book opens the door to creativity by inviting neuropsychologists to develop new methodologies of investigations, following the demonstration that the cortico-centric model of cognition is no longer tenable. The authors have made a great job in bringing complex issues into simple and meaningful lines.

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