

Ramesh Kumar Mishra: Bilingualism and Cognitive Control

(Switzerland: Springer International Publishing AG, 2018, 186 p.)

The bilingual advantage has been a focus of research into bilingualism since the 1960s.

Published by Springer International Publishing AG, *Bilingualism and Cognitive Control* is the 6th volume of The Bilingual Mind and Brain Book Series. This 186 page-long book was written by Ramesh Kumar Mishra, a cognitive scientist, in 2018. Mishra is the chair of the Center for Neural and Cognitive Sciences at the University of Hyderabad, India, with an extensive research interest in bilingualism, processing and cognition.

This volume was inspired by the significance of bilingual cognitive advantage, continuous improvement in types of tests and research in this field. Beyond providing an unbiased overview of the existing knowledge and research results on bilingual advantage, the aim of this book is to uncover further factors that shape bilingualism.

The preface introduces the book in which the author presents his aims and the main areas that are covered. It is followed by the Acknowledgements section and a well-organised table of contents. Preceding the Introduction, a brief professional biography of the author is presented. The book consists of 8 logically compiled chapters; from the bases of bilingualism through the bilingual brain itself to cognitive mechanisms and processing with the last chapter providing an overall summary of the previously discussed subjects. The content and language of the book requires a basic knowledge of bilingualism, cognitive control and types of tests.

In the Introduction, readers gain a valuable insight into the evolution since the 1960s of points of view with regard to bilingualism as an advantage or disadvantage for children. The style and manner of the author is neutral, moreover, the research and results presented are in favour of the bilingual advantage, however, a null result is given as well where the existence of the bilingual advantage is questioned. Mishra's style on this matter is purely narrative, but further unanswered questions are continuously added, methods as well as test types questioned and his own personal opinion on the previously discussed research results given.

In Chapter 2, entitled The Evolution of Bilingualism, the author discusses the putative better cognitive reserve of bilinguals as opposed to monolinguals as well as elaborates on the emergence of language and the evolution of complex cognition. This chapter provides an opportunity to thoughtfully consider the emergence of language, the evolution of the human cognition and how it made language acquisition possible, as well as the contribution of the aforementioned points to the emergence of bilingualism. The author conjointly mentions different perspectives on how language has evolved. Figures present the evolution of the human brain over the past 6 million years.

Chapter 3 proceeds concerning the core cognitive mechanisms and cognitive basis of bilingualism. Critical components of executive control; translation in different types of bilingualism; inhibitory mechanisms, switching and the most common types of tests for these; as well as how the aforementioned could contribute to the understanding of the bilingual advantage are discussed in this chapter. Mishra adds thoughtful and substantial questions, the answers to which are trivial when the bilingual advantage is studied based on translation, switching or monitoring due to the countless factors that influence these mechanisms as well as which types of tests and paradigms are measured.

In Chapter 4, Mishra brings the cognitive advantages of bilingualism and criticism of them into focus. The author points out the fact that the results of the foregoing studies raise more questions rather than provide solid answers. What makes this chapter impressive and thought-provoking is that it is founded on lesser-known issues such as publication bias in research into the cognitive advantages of bilingualism and challenges against the bilingual advantage theory.

In Chapter 5, the focus shifts to the neuroscience of bilingualism and the cortical representation of L2, moreover, studies related to the neural activation and representation of L1 and L2 as well as the factors that influence both are discussed. In this chapter, further specific features of bilingualism, e.g. switching and how culture can shape bilingualism, are discussed. Both culture-variant and culture-invariant control mechanisms of language management for bilinguals are investigated.

After gaining a deep insight into the neuroscience of bilingualism, Chapter 6, entitled Bilingualism, Context and Control, focuses on the sensitivity of bilinguals, namely how efficiently and quickly they can adapt to changes in the environment and interlocutors. In this chapter, how linguistic controls are affected by linguistic and non-linguistic contexts as well as dual and single language contexts of bilinguals is presented through numerous cross-cultural studies.

The primary focus of Chapter 7 is on attention due to its importance in understanding inhibitory control and bilingual language control as well as how it might be influenced by bilingualism. The author provides a valuable definition of attention and evaluates types of tests used to study attentional mechanisms such as the Stroop task, tracking eye movement and the Posner cueing task.

In Chapter 8, the conclusion is provided where first the previous seven chapters are briefly summarized. Mishra strengthens the significance of finding clear answers to questions concerning the bilingual advantage through further research. While outlining future directions of research in this field, followed by the conclusion, research gaps with regard to the bilingual advantage and cognitive control in bilinguals are highlighted as well as the author's personal concerns and thoughts on different types of tests explained.

By continuously questioning, Mishra generates interest and provokes readers to think, therefore, this book offers beneficial and motivational guidance for

young and advanced researchers alike who share an interest in this discipline as well as for those seeking to continue their studies in this field. Furthermore, researchers can profit from the questions raised as guidelines for future research in the field of bilingualism and cognitive control. The author explicates the methodology behind different types of tests and lists more studies with a given paradigm to present more results as well as the advantages and disadvantages of the given test, thus provides beneficial reading for experts and researchers in the field. Furthermore, the visual presentation of data and types of tests perfectly aids understanding. The book presents, in a natural manner, a valuable resource and offers a rich collection of studies in the field of bilingual advantage.

References

Mishra, R. K. (2018) *Bilingualism and Cognitive Control*, The Bilingual Mind and Brain Book Series, Springer International Publishing AG

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