

François Grosjean and Krista Byers-Heinlein: The Listening Bilingual: speech perception, comprehension and bilingualism

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Language processing, a well-established phenomenon in bilingualism, is a field that requires further research. Previous studies have been limited to speech perception and comprehension in bilingual adults and in bilingual children, but they have not investigated both stages.

This book serves as a collection of research that incorporates various fields and studies of the realm of bilingualism.

The first edition was published on 30 October, 2018 by John Wiley & Sons, Inc. The main authors are Francois Grosjean and Krista Byers-Heinlein. Professor Grosjean is a Professor Emeritus of Psycholinguistics at Neuchatel University, currently engaged in language perception, comprehension, production with groundbreaking research results in the field of bilingualism. Krista Byers-Heinlein is an Associate professor of Psychology at Concordia University, whose one previous achievement was to examine cognitive and social development in bilingual infants and children. Expert guest authors are Mark Antoniou, who focuses on bilinguals' speech perception, Theresa Grüter, who does research on how language learners process structural aspects of language, Robert J. Hartsuiker, who studies production and comprehension of language in bilinguals, Elizabeth D. Pena, who examines the question of differentiating language impairment and language difference through dynamic assessment and development of standardized testing, Lisa M. Bedore, who investigates the nature of language impairment across languages, and Lu-Feng Shi, who focuses on speech perception in bilingual individuals and individuals with hearing or processing impairment.

The book covers the topics of speech perception and comprehension, spoken word recognition, speech processing, assessing perception and comprehension both in bilingual adults and children while, at the same time, successfully intertwines them. It offers a theoretical overview of these fields and collects and provides newer brain imaging techniques with numerous tasks for researchers. All the above mentioned research studies in the book are described and detailed with deep focus given to the advantages and shortcomings of the listed methods.

This publication is addressed to an audience interested in speech perception and comprehension and could fulfill educational purposes as university course material for lecturers and students alike, who wish to widen their knowledge on language processing of bilinguals. Moreover, as two chapters of the book focus on clinical assessment, it proves to be a helpful resource for those interested in clinical research in bilingualism. With its transparent language use and descriptive manner, the book is absolutely comprehensible for students and early stage researchers to acquire knowledge in the field of speech perception and

comprehension. It is organized in eleven chapters which are well-structured and systematically built on each other. Thus, the correspondence between the chapters is ideal. On the initial pages, followed by a brief preface, readers get familiar with the main and guest authors of the book. In the introduction, the main aims of the publication and the background motivation are detailed, followed by a brief summary of bilingualism.

Part I. serves as an establishment of the main theme, providing theoretical and historical background and the evolution of the definition of bilingualism. The significance of Grosjean's grid approach is stressed. It also discusses basic terms such as language mode, biculturalism and language dominance, and presents the similarities and differences in language acquisition processes and developmental patterns between bilingual children and adults.

Part II. provides an explanation of the complexity of the processing mechanisms and their levels and the influential factors in processing, first both in monolingual adults and children in general, then in bilingual adults and children, stressing the similarities and differences between monolinguals' and bilinguals' language processing and comprehension. Comprehensible and transparent examples are constantly provided at each step, complemented by explanations and clarifications of the relevant terms which might be unfamiliar to the reader.

In Part III. Mark Antoniou brings speech perception into focus by stressing the complicated nature of speech perception, its impacting factors on bilinguals and by presenting the instruments such factors can be measured with. The research methods and the most effective and favorable tasks used in analyzing speech perception are also discussed, and studies are presented with their results to demonstrate not only the effects of L1 on L2 (through Catalan-Spanish, Spanish-English bilinguals) but also the bidirectional effects between the two languages through examples of contemporary research among Greek-English bilinguals.

In Part IV. Francois Grosjean presents an overview of spoken word recognition among bilinguals. The author outlines the process with two processing mechanisms, the three main factors which contribute to the word recognition process, and the control or independent variables that are significant in the research of word recognition. Grosjean sheds light on the factors through research and at the end draws the conclusion on their efficiency, drawbacks and advantages. The problems that appear due to the deficit of speech perception that lead to misperceived sounds are also investigated. The author also introduces the world of candidates both inter-linguistic and intra-linguistic activation through research with different instruments.

After the reader gets familiar with the processing mechanism of word recognition in bilingual language comprehension, Robert J. Hartsuiker addresses the higher levels, namely the syntactic and semantic processes, in part V. The author comprehensively defines the three stages and three principles of sentence comprehension, as well as the way the processing of the stimulus can be affected.

To make these more transparent for the reader, Hartsuiker presents studies with different instruments, including ERP and eye-tracking instruments.

In Part VI. the focus shifts to an unexplored research area where Grosjean presents an overview on the processing of bilingual speech, while introducing the main terms and providing explanations. The chapter is well-built and transparent, the studies on processing time are presented in a chronological order with a highlight on the difference and evolution between the past and current studies in this field.

In Part VII. Lu-Feng Shi brings the clinical context of speech recognition of bilinguals into focus. First, the author lines up those affecting factors which must be taken into consideration when assessing bilinguals then she brings to the reader's attention the significance of selecting the right languages of the individuals for assessment. The author investigates how word and sentence recognition test types work and differ in silence and in noise in early and late and in dominant and simultaneous bilinguals. Several examples of studies and test types are mentioned here which have proved to be the most efficient measuring sentence processing in bilinguals. Shi also provides information on how the tests and paradigms should be modified to suit the assessing of bilinguals at different levels.

In Part VIII. and Part IX. Krista Byers-Heinlein brings speech perception in bilingual children into focus. Byers-Heinlein presents those methods which are used to measure and investigate the way infants discriminate sounds, such as high-amplitude sucking, looking-time paradigm and those with which consonant and vowel perception of infants can be measured as well, for instance, ERP, MEG and fNIRS. The different research methods are demonstrated with pictures to make them more understandable for the audience. After introducing us to the world of stupendous methods that are used to examine infants, Byers-Heinlein concentrates on children's perception of vowels and consonants. Spoken word recognition is discussed in Part IX, where the author investigates and presents, through several research, how bilingual children, from the age of 1, learn and recognize words and connect them with their meanings. The author introduces the methods such as MCDI and PPVT with which bilingual children's vocabulary size can be measured, and discusses their effectiveness.

In Part X. Theresa Grüter elaborates on processing at higher levels, namely the way bilingual children process utterances and sentences, as well as the factors that influence processing, and the importance of language comprehension and production to understand higher level processing better. The author presents different methods and paradigms of studying children's language processing and comprehension. The studies Grüter mentions in the first half of the chapter are of great importance for those who are engaged in studying the skills of bilingual children as the author highlights all the essential areas of assessment that must be taken into account. Various research methods and results examining cross-

linguistic influence and the impact of different factors, such as age of onset or exposure, are aligned. Grüter draws the attention to a gap in this field that requires further research by offering a great idea to university students and young researchers.

In Part XI. Elizabeth D. Pena and Lisa M. Bedore address the topic of assessing bilingual children “without and with speech and language impairment” (Grosjean, 2018:220). First, the authors explain the term language impairment with transparent language, then they point out the advantages of bilingualism when it comes to phonological perception and word learning. The complexity of assessing bilingual children is also a prominent topic of discussion in this chapter. The reader gets a clear insight into the reasons why bilinguals should not be assessed the way monolinguals are. Possible methods and test types are listed by the authors with which single word knowledge, receptive and expressive vocabulary, as well as semantic knowledge can be assessed.

This book is a perfect reading and could operate as a fundamental textbook for those university students who study bilingualism and are planning to start their PhD studies and do research in this field, as it presents a collection of earlier studies in a systematic order with their shortcomings and advantages. Whenever an unidentified term arises, the authors provide explanations and refer to the corresponding chapters. It could also be an interesting reading for university professors who would like to have an insight into some other, separate fields of bilingualism. The book gives prompts for further research and research methods, therefore it could also offer excellent ideas or concepts for young researchers. The purpose of writing it was accomplished as the book rightly serves as a professional guide and a collection of important research studies on bilingualism for researchers, university students and professors alike.

References

Grosjean J., (2018). *The Listening Bilingual: Speech Perception and Comprehension in Bilinguals*. New Jersey: John Wiley & Sons, Inc.

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